
Documentation and Analysis of Microsoft® Access Databases

Total Access
AnalyzerTM

For Microsoft® Access



<http://fmsinc.com>

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Acknowledgments

We would like to thank the entire Microsoft Access community for their many years of support for Total Access Analyzer. Over the years, Total Access Analyzer has won numerous “Best Access Add-in” awards and rave reviews, and we are deeply in debt to all the people who trust us to solve their Access database needs.

As our first Access add-in, Total Access Analyzer is what made it possible for us to offer our extensive line of products for Access. Our success would not be possible without the strong endorsement of Access users and developers from around the world.

Thanks to the many existing users who provided valuable feedback and suggestions, and to all of our beta testers for their diligence and feedback.

Many people at FMS, Inc. contributed to the completion of Total Access Analyzer, including:

- Product Design: Luke Chung
- Development: Luke Chung, Dan Haught and David Juth
- Quality Assurance and Technical Support: John Litchfield, Molly Pell, Aparna Pophale, Madhuja Vasudevan, and Paul Short
- Documentation: Luke Chung, Molly Pell, Aparna Pophale, and Angela Peterson

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Welcome to Total Access Analyzer!

Thank you for selecting Total Access Analyzer. Total Access Analyzer is the world's premier database analysis and documentation program for Microsoft Access, and has won more awards than any other Access product. We would like to thank all of our loyal customers, and we trust that you'll find this version more valuable than ever.

Total Access Analyzer is developed by FMS, the leading developer of Microsoft Access products. In addition to Total Access Analyzer, we offer a wide range of products for Microsoft Access developers, administrators, and users:

- [Total Access Admin](#) (database maintenance control)
- [Total Access Components](#) (ActiveX controls)
- [Total Access Detective](#) (difference detector)
- [Total Access Emailer](#) (email blaster)
- [Total Access Memo](#) (rich text format memo fields)
- [Total Access Speller](#) (spell checker)
- [Total Access Statistics](#) (statistical analysis program)
- [Total Access Startup](#) (version launcher)
- [Total Visual Agent](#) (database maintenance and scheduling)
- [Total Visual CodeTools](#) (code builders and managers)
- [Total Visual SourceBook](#) (code library)
- [Total Zip Code Database](#) (city and state lookup lists)

Visit our web site, <http://fmsinc.com>, for more information. We also offer Sentinel Visualizer, an advanced data visualization program that identifies relationships among people, places and events through link charts, geospatial mapping, timelines, social network analysis, etc. Visit our Advanced Systems Group at <http://fmsag.com> for details.

Please make sure you sign up for our free email newsletter. This guarantees that you will be contacted in the event of news, upgrades, and beta invitations. Once again, thank you for selecting Total Access Analyzer.



Luke Chung
President

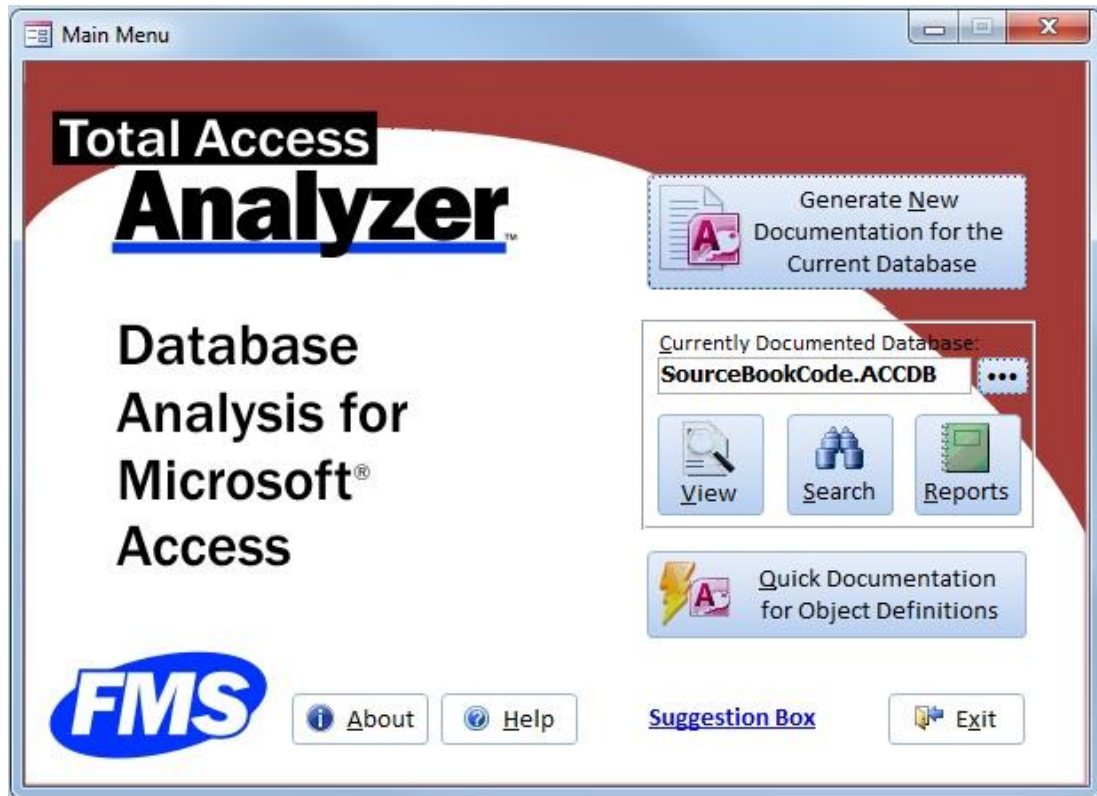
Chapter 1: Introduction

Total Access Analyzer provides comprehensive documentation and analysis of your Access database objects. Documentation for ACCDBs, MDBs, and ADPs is generated for tables, fields, indexes, relationships, queries, views, database diagrams, stored procedures, forms, reports, controls, macros (regular and embedded), modules, command bars, users, groups, security, import/export specifications and more. You can view and search the documentation using the treeview display, or print the output using any of the program's 430+ reports. Since all output is stored in Access tables, you can also query or export the data for further analysis.

Topics in this Chapter

- **Product Highlights**
- **Enhancements in This Version**
- **Enhancements in Previous Versions**
- **Visit Our Web Site**

Product Highlights



Total Access Analyzer Main Menu

Rave Reviews and Awards

The most popular Access add-in ever, Total Access Analyzer has received rave reviews and numerous awards, including every “Best Access Add-in” award since 1994. It is recognized as the premier tool for generating comprehensive documentation and analysis of Access databases, and many developers won’t ship their databases without running them through Total Access Analyzer first.

Comparison to the Built-in Documenter

Microsoft Access includes a built-in database documenter; however, its features are lacking for most Access users and developers. The built-in documenter only examines objects individually. It does not answer the critical question “Where is this object used?”, nor does it perform code analysis on your macros and VBA modules.

In addition to documenting individual objects, Total Access Analyzer is designed to analyze the entire database. Each object isn’t just considered by itself, but in relation to all the other objects in the database. It performs sophisticated analysis to show everywhere an object is used and the complex relationships between them. By examining the entire database, hidden information (such as references to fields or objects that don’t exist and objects that aren’t used) is revealed. Additionally, Total Access Analyzer documents offers 325 errors and improvement suggestions, and the ability to search for values across all your objects.

For more detailed comparisons, visit our web site:

<http://fmsinc.com/MicrosoftAccess/Documentation/documenter.htm>

Product Overview

Here are some highlights of Total Access Analyzer.

- Documents your Access databases and generates detailed views and 430+ reports of what's in your database
- Detects and recommends almost 325 specific types of ways to fix, improve and speed up your application, including unused object and code analysis
- Detailed VBA code analysis with recommendations for applying coding Best Practices
- Generates diagrams to illustrate how your code and data flow across objects
- A powerful Search feature to locate strings, property values, and code within the documentation
- Runs as an Add-in Wizard within Microsoft Access
- Offers a variety of filterable views and reports
- All results are stored in tables in a separate Access database that can be referenced in the future
- A Quick Doc feature to document basic information for individual objects and generate formatted module printouts

Basic Documentation

- Documents table fields, indexes, linked table information, and properties (including descriptions).
- Documents query type, SQL, included tables and fields, parameters, joins, and properties.
- Documents forms and reports with sections, controls, and properties including embedded macros.
- Generates form and report blueprints, showing their layout with annotated controls.
- Documents saved import/export specifications.
- Generates macro and module code listings with line numbers.
- Documents table relationships with tables, fields, join type, and referential integrity settings.
- Documents workgroup, security, and permission settings.
- Documents ADP objects such as views, stored procedures, and diagrams.

Object Cross Reference

- Documents where and how objects reference each table, field, query, form, report, macro, sub-macro and ribbon

Module Analysis

- Generates bracketed source code printouts showing where each loop begins, ends, and exits. Standardizes code indentations.
- Extensively analyzes modules, documenting definitions and usage of procedures, properties, variables, constants, user defined types, library declarations, events, classes, VBA functions, DoCmd, labels, TempVars, etc.

Hierarchical Diagrams

Cross reference documentation is only one level (what references an object). The diagrams in Total Access Analyzer illustrate the complex, multi-level hierarchy of those relationships.

For instance, the data flow diagram not only shows which objects reference a table, but also all the objects that reference those objects. Easily see how a table flows through a query, into another query, and into a subform that's referenced by a master form. See the objects that are impacted by modifying a table.

Total Access Analyzer offers three diagrams:

- **Application flow diagram**
Shows how your application flows across macros, objects, events, and procedures.
- **Data flow diagram**
Shows how your tables flow through the entire family of queries, forms, reports, and modules.
- **Object diagram**
Shows the family of objects referenced directly and indirectly by a form, report, or query.

Diagrams show the entire application hierarchy, and can be "redrawn" to display the hierarchy of one object.

Errors, Suggestions and Performance Tips



Tip

A complete list of Errors, Suggestions and Performance Tips is available in Total Access Analyzer's System Reports.

Errors

One of Total Access Analyzer's most valuable features is its ability to detect errors in your database, including many hidden bugs that cause your database to crash when it is run. While no automated tool can catch every possible bug, Total Access Analyzer finds many types of problems and offers suggestions about how to resolve them. In fact, many developers won't ship a database until it passes Total Access Analyzer's analysis.

Suggestions Offered

Based on our experience developing Access applications and feedback from our customers, we've discovered a wide range of "Best Practices" techniques. Many of these tips can be detected and are offered to help users and developers improve their databases and learn better styles.

Suggestions are issues that are not likely to cause the database to crash, but that should be addressed to clean up the database and simplify future maintenance.

Performance Tips

Total Access Analyzer includes several Performance Tips to help you optimize your database. The Performance Tips detected by Total Access Analyzer include:

Output Reports

Over 430 presentation quality reports are available with a variety of sorting options, including:

- Database summary (overview)
- Lists and detailed reports of every object type
- Table structure reports including field descriptions
- Field dictionary reports to see where and how the same field name is defined across different tables
- Report Page Setup summary report to quickly see the orientation and margins of all the reports
- Module printouts including a basic listing and a formatted, bracketed source code report clearly showing every loop
- Summary for each module and class revealing their public interface and summary of private items
- Detailed module cross reference reports for procedures, variables, DoCmd, VBA functions, events, labels, user defined types, and many other parts of module code
- Diagram reports for Application, Data, and Object Flows

Enhancements in This Version

Total Access Analyzer 2019, Version 17.1 and Versions X.7

The latest version of Total Access Analyzer is for Microsoft Access 2019 /365 and is our 13th major release of Total Access Analyzer. It is built on our growing knowledge, experience and customer feedback on the best practices for Microsoft Access database development. It includes the 32 and 64 bit versions.

New Releases for Older Access Versions

In addition to Access 2019, we also created updates for earlier versions with the new features:

- Version 16.7 for Microsoft Access 2016 (update from 16.1)
- Version 15.7 for Microsoft Access 2013 (update from 15.6)

- Version 14.7 for Microsoft Access 2010 (update from 14.6)
- Version 12.97 for Microsoft Access 2007 (update from 12.96)

Ribbon Documentation

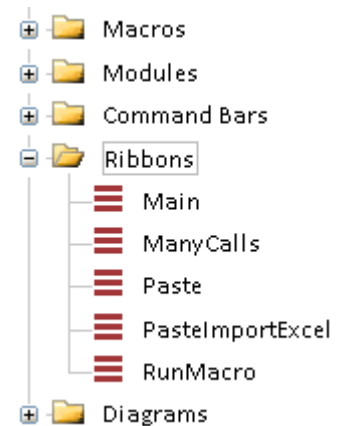
Introduced with Access 2007, you can create custom ribbons for your application and/or individual forms and reports. Ribbons are defined in the UsysRibbons table as separate records in XML format. Total Access Analyzer documents each ribbon, their references to other Access objects, where ribbons are used, and unused ribbons.

Each ribbon appears in the Treeview as a separate item.

If a ribbon references another object (like a table or procedure), it appears in the cross-reference reports for those objects and on the XREF tab on the View Explorer.

Three new reports are available under Database:

- Ribbons List
- Ribbons XML (Landscape)
- Ribbons XML (Portrait)



Data Macro Analysis

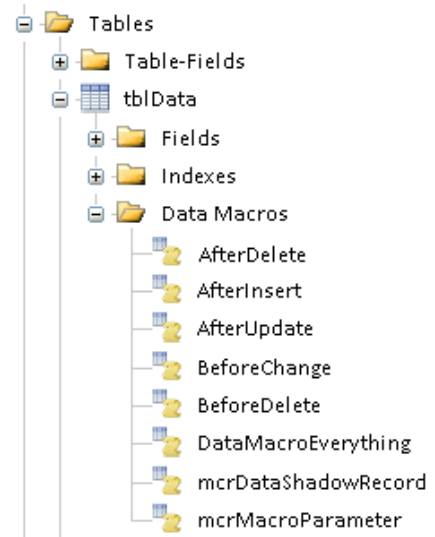
Data Macros were introduced in Access 2010. Data macros are triggers that execute when table events occur. They have logic, can update other tables, and run other data macros.

Total Access Analyzer now parses data macro code to document what they do and the objects they use. Data macros now appear on the View Explorer in a folder under its table with each data macro listed.

Three new reports are available:

- Table Data Macro Events
- Table Data Macro Events and Lines
- Table Data Macro References, Sorted by Table Name

The Database Summary report add a new section for the number of data macros and data macro lines in the database.



SQL Cross-Reference and Validation of Subform References

Our SQL parser detects more references to tables, queries, fields and controls across your database objects and table aliases. References to fields or controls in subforms are also analyzed to make sure they exist.

New Errors and Suggestions

These issues are now detected:

- Report View with Section Format Event, for reports that allow report view and have a Format event which may not run in Report View. This can result in displaying confidential or bad data.
- Ribbon Unused
- Form References to Undefined Ribbons
- Report References to Undefined Ribbons
- Ribbon References to Undefined Macros/Functions
- Data Macro Could Not Be Analyzed

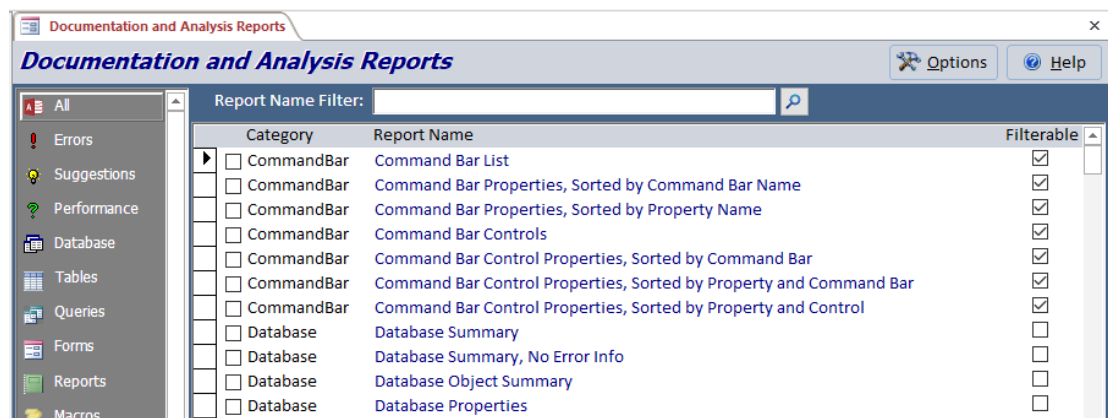
- Improved resolution of form and report control references to fields in subforms/subreports, expressions and undocumented objects
- ReplicationID (GUID) fields are no longer flagged as invalid for primary keys or needing to be AutoNumber
- Improved unused variable analysis

Additionally, previous suggestions to convert VBA string command to explicit string functions (e.g Mid\$ instead of Mid) are no longer suggested.

Report Enhancements

Report List has Report Name Filter

The report list for the Main Documentation and Quick Doc, adds a text filter for report name. Type a few letters to narrow down the list of reports:



The Category column is also enabled so you can select and filter on it.

New Reports for Queries with Form Control, VBA and Procedure References

We've added two new reports for queries that reference forms and controls:

- Queries with Form Control References
- Queries with Form References

When migrating Access databases to other platforms like SQL Server, it's helpful to know which queries have dependencies on VBA functions and your own procedures. Total Access Analyzer has four new reports to show which queries have these dependencies:

- Queries with Procedures
- Queries with VBA Functions, Count
- Queries with VBA Functions, Sorted by Query
- Queries with VBA Functions, Sorted by Function

New Reports for Form and Report ControlSource Property

Four new reports are available to show the ControlSource of controls on forms and reports. This makes it easy to see direct field references and expressions (calculated fields) placed on your forms and reports:

- Form ControlSource Values
- Form ControlSource Expressions
- Report ControlSource Values
- Report ControlSource Expressions

New Reports for Form Combo Box/List Box and Validation

Three new reports are available to see the properties associated with Combo Box and List Box controls, and controls with validation properties:

- Form Control Type Combo Box and List Box Properties
- Form Control Validation Properties
- Report Control Type Combo Box and List Box Properties

New Reports for Object XREF

Two new reports show where controls are referenced from other objects. For instance, a form may reference a control in subform, or a report referencing a value from a currently opened form's control:

- Control References from Forms and Reports, Sorted by Calling Object
- Control References from Forms and Reports, Sorted by Referenced Control

Additionally, we capture module variables that reference other object like opening a form or recordset:

- Object References by Variable, Sorted by Calling Object

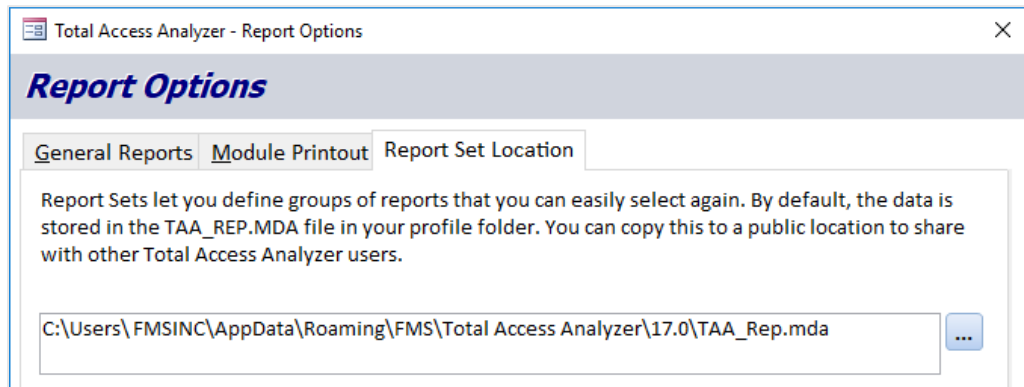
Many Reports Updated to Support Report View Filtering

Total Access Analyzer reports can be displayed in Print Preview or Report View. For Report View, you can filter the data while you view it. Some of our reports used expressions to combine fields (e.g. Object Type and Object Name) which prevented the ability to filter them. Where possible, the object type and object name are separated into their own controls so they can be filtered in Report View.

Report Sets can be Saved in a New Location

Report sets let you define multiple reports in a group for easy retrieval and printing. By default, these settings are saved in the TAA_Rep.mda database in the user's Total Access Analyzer's folder. You can now point to a database on a shared network drive so multiple users and machines can reference the same set of reports.

Copy the TAA_Rep.mda then point to it under Report, Options, Report Set Location tab:



View Explorer Enhancements

In addition to Ribbons and Data Macros, the View Explorer supports resizing better and offers more features:

Datasheet Column Widths are Saved

While viewing the documentation results, if you adjust column widths, the settings are saved and applied the next time you view it. Your columns widths are similarly preserved when viewing the Search results.

Filter for Errors, Suggestions and Performance Tips Shows Reviewed Count

When viewing the list of issues (on the Errors, Suggestions and Performance tabs), you can check off the items that are Reviewed to focus on the remaining ones. The status is maintained if you document the database again. There is a Filter button to select the list by issue type. The filter shows the number of instances discovered for each type. It now shows the number you've reviewed and not reviewed to make it easier to select.

Select	Issue	Total	Reviewed	Not Reviewed	ErrorCode
<input checked="" type="checkbox"/>	Database Field Data Type and Size Inconsistency	1		1	10100
<input checked="" type="checkbox"/>	Database Identical SQL in Queries and RecordSources	1		1	10250
<input checked="" type="checkbox"/>	Database Always Use Event Procedures	1		1	10180
<input checked="" type="checkbox"/>	Database Four-Digit Year Formatting	1		1	10160
<input checked="" type="checkbox"/>	Form Unused	1		1	3300
<input checked="" type="checkbox"/>	Form Caption Missing	34	3	31	3110
<input checked="" type="checkbox"/>	Form Navigation Bar Caption Missing	23		23	3310
<input checked="" type="checkbox"/>	Form Allows Datasheet and Form views	9	1	8	3120
<input checked="" type="checkbox"/>	Form Unassociated Label and Control	19	1	18	3240
<input checked="" type="checkbox"/>	Form Tab Order Does Not Match Default Order	17		17	3150
<input checked="" type="checkbox"/>	Form AutoCenter Disabled	9	1	8	3190
<input checked="" type="checkbox"/>	Form AutoResize Disabled	2	1	1	3195
<input checked="" type="checkbox"/>	Form Not Moveable	25	1	24	3340
<input checked="" type="checkbox"/>	Form ComboBox AutoExpand Disabled	1		1	3702
<input checked="" type="checkbox"/>	Form Command Button Should Show Hyperlink Hand	3		3	3320
<input checked="" type="checkbox"/>	Form Subform LinkMasterFields References a Field Rather	8		8	3400
<input checked="" type="checkbox"/>	Macro Unused	1		1	5100
<input checked="" type="checkbox"/>	Module Unused Procedures	14		14	6007
<input checked="" type="checkbox"/>	Module Unused Class Property	1		1	6090
<input checked="" type="checkbox"/>	Module Unused Enum Element	20		20	6046
<input checked="" type="checkbox"/>	Module Unused Procedure Parameters	1		1	6012
<input checked="" type="checkbox"/>	Module Unused Labels	13		13	6160
	Total	56	8	533	

Details
 The same field name should have the same Data Type and Size in all the tables it is used. For instance, a CustomerID should be a long integer always, and not a Double, Integer, etc., similar a LastName field should always be Text 50, and not Text 100 or 255 in different tables. Total Access Analyzer has detected identically named fields with different Data Type and/or Size settings. A report is available listing the fields with inconsistent settings under Suggestions ("Table Field with Different Types")

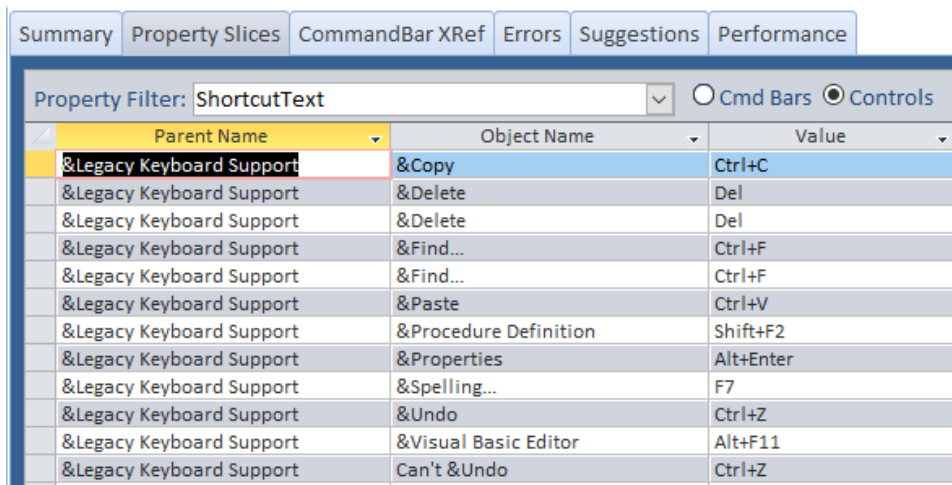
Select All Clear All OK Help

Issue Filter with New Reviewed and Not Reviewed Counts by Issue Type

Relationship folder has a Relationship XREF tab showing joined tables and fields

Referenced Type	Referenced Name	Referenced Field	Calling Type	Calling Name	Calling Child Type	Calling Child Name
Table	Order Details	OrderID	Table	Orders	Field	OrderID
Table	Order Details	ProductID	Table	Products	Field	ProductID
Table	Orders	CustomerID	Table	Customers	Field	CustomerID
Table	Orders	EmployeeID	Table	Employees	Field	EmployeeID
Table	Orders	ShipVia	Table	Shippers	Field	ShipperID
Table	Products	CategoryID	Table	Categories	Field	CategoryID
Table	Products	SupplierID	Table	Suppliers	Field	SupplierID

Command Bars, Property Slices tab adds a Control option to show a property value across all the controls



The screenshot shows the 'Property Slices' tab in the software interface. At the top, there are several tabs: 'Summary', 'Property Slices', 'CommandBar XRef', 'Errors', 'Suggestions', and 'Performance'. Below these, there is a 'Property Filter' section with a dropdown menu set to 'ShortcutText' and two radio buttons: 'Cmd Bars' (unselected) and 'Controls' (selected). The main area is a table with three columns: 'Parent Name', 'Object Name', and 'Value'. The table contains 13 rows of data, with the first row highlighted in blue.

Parent Name	Object Name	Value
&Legacy Keyboard Support	&Copy	Ctrl+C
&Legacy Keyboard Support	&Delete	Del
&Legacy Keyboard Support	&Delete	Del
&Legacy Keyboard Support	&Find...	Ctrl+F
&Legacy Keyboard Support	&Find...	Ctrl+F
&Legacy Keyboard Support	&Paste	Ctrl+V
&Legacy Keyboard Support	&Procedure Definition	Shift+F2
&Legacy Keyboard Support	&Properties	Alt+Enter
&Legacy Keyboard Support	&Spelling...	F7
&Legacy Keyboard Support	&Undo	Ctrl+Z
&Legacy Keyboard Support	&Visual Basic Editor	Alt+F11
&Legacy Keyboard Support	Can't &Undo	Ctrl+Z

Quick Documentation Enhancements

Quick Doc is enhanced in many ways:

- Database now includes an overview of table and query objects along with container documentation
- Workgroup security is now a separate item
- When documentation is finished, the elapsed time is shown

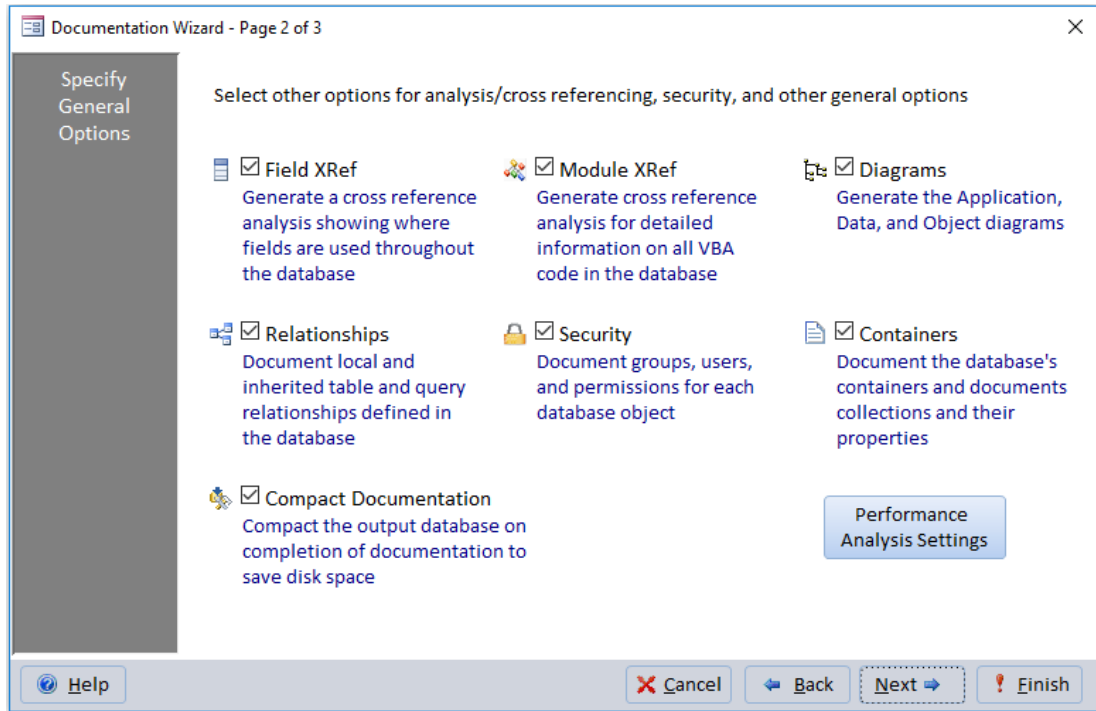
About Box has Check for Updates

A new [Check for Updates] button contacts our website to see if the current version of Total Access Analyzer is the latest version. You may be eligible for a free update.

Improved User Interface

New icons, larger fonts, and larger forms are used where appropriate to provide a more modern and readable user experience.

For instance, the database name on the main forms is enlarged, icons on the View Treeview updated, and the second page of the Documentation Wizard uses icons and shortened option names:



Revised User Manual and Help File

The user manual and help file are updated.

Enhancements in Previous Versions

Total Access Analyzer 2019, Version 17.0 and Version X.6

The latest version of Total Access Analyzer is for Microsoft Access 2019 /365 and is our 12th major release of Total Access Analyzer.

Microsoft Access 2019 is available as a perpetual license or part of the Office 365 subscription and automatically updates existing versions of Access 2016 installed by online click-to-run.

Microsoft Access 2019 Support

Total Access Analyzer 2019 runs as an add-in for the 32 and 64 bit versions of Microsoft Access 2019. It documents all Access database formats supported by Access 2019 including ACCDB and MDB formats. It also includes new controls like the chart and connection types.

New Releases for Older Access Versions

In addition to Access 2019, we also created updates for earlier versions with the new features:

- Version 16.1 for Microsoft Access 2016 (update from 16.0)
- Version 15.6 for Microsoft Access 2013 (update from 15.0)
- Version 14.6 for Microsoft Access 2010 (update from 14.5)
- Version 12.96 for Microsoft Access 2007 (update from 12.95)

Improved Blueprint Documentation

Form and report blueprints are enhanced to capture very large reports (up to 22 inches), complicated designs with large number of controls, ActiveX controls, and layouts with many groupings.

Additional Cross-Reference and Validation including Subform References

Our SQL parser detects more references to tables, queries, fields and controls across your database objects. References to fields or controls in subforms are also analyzed to make sure they exist.

Improved Memory Management

Very large databases sometimes caused Access to run out of memory during the documentation process. Errors like "Cannot open any more databases" would appear. These problems are minimized in the latest version.

Data Macro Documentation

Data macros, introduced in Access 2010, are documented including cross-references to the underlying tables.

Document Workgroup Security in ACCDBs

Even though workgroup security is part of MDB databases, if your ACCDB was converted from an MDB database that has workgroup security, those settings remain. Total Access Analyzer now documents them in ACCDBs.

Better Support of Documentation for Multiple Databases

Documenting the same database or multiple databases without exiting Access is improved, along with loading previously generated documentation.

Improved User Interface to Show Progress

More information is shown while documentation is occurring. For instance, the current control number and the total number of controls is displayed.

Revised User Manual and Help File

The user manual and help file are updated.

Total Access Analyzer 2016, Version 16.0

Total Access Analyzer for Microsoft Access 2016 was our 11th major release of Total Access Analyzer.

Microsoft Access 2016 Support

Total Access Analyzer 2016 runs as an add-in for the 32 and 64 bit versions of Microsoft Access 2016. It documents all Access database formats supported by Access 2016 including ACCDB and MDB formats.

Detect Incorrect Link to Subforms

The LinkMasterFields of a subform should be to a control on the master form and not directly to a field in the form's recordsource. This lets the subform refresh when the user edits the control's value rather than waiting for the record to be saved. Total Access Analyzer detects this mistakes and offers a new suggestion to when it's discovered. See our paper [Microsoft Access Subforms Should Reference the Control Rather than Field for Master Link Fields](#) for details.

Enhanced Cross-Reference of Aliased Tables in Queries

Total Access Analyzer 2016 performs more advanced SQL parsing to capture table names aliased in SQL Joins. Previously, only tables aliased in the FROM clause were resolved.

Relationship Field Cross-Reference and Field Type Comparison

Total Access Analyzer generates field cross-reference for the relationship joins and makes sure they are defined with the same data type. If not, a suggestion is offered to review this

Pass-Through Queries are Not Cross-Referenced

Pass-through queries are processed by the back-end linked server that they are passed to and not Microsoft Access. Since Access and Total Access Analyzer cannot “see” the objects and functions there, table and field cross-reference errors were being identified. To avoid such noise, Total Access Analyzer no longer cross-references pass-through queries. It can still document its SQL and other properties including columns if the connection string is provided. If the connection string is not provided, it flags the omission as an error.

Windows 10 Support

Total Access Analyzer 2016 supports all operating systems supported by the desktop version of Microsoft Access 2016. For Windows 8 and 10, the product’s Windows shortcut menu is under “Total Access Analyzer 2016”. In earlier versions, it’s under “FMS”, then “Total Access Analyzer 2016”.

Total Access Analyzer 2013, Version 15.0

In addition to Access 2013, we also created updates for earlier versions with the new features:

- Version 15.0 for Microsoft Access 2013
- Version 14.5 for Microsoft Access 2010 (update from 14.0)
- Version 12.95 for Microsoft Access 2007 (update from 12.90)
- Version 11.95 for Microsoft Access 2003 (update from 11.90)

Some new features are only applicable to the Access 2013 or 2010 versions.

Microsoft Access 2013 Support

Total Access Analyzer 2013 runs as an add-in for the 32 and 64 bit versions of Microsoft Access 2013. It documents all Access database formats supported by Access 2013 including ACCDB and MDB formats. Access 2013 does not support Access Data Project (ADP) formats.

The new version supports the new object properties, macro commands, module VBA commands, and Access options in Access 2013. Accordingly, data types are now Short and Long Text rather than Text and Memo.

Search Bar for Selecting Objects

A search bar, similar to what’s available on the Navigation Pane, is added to the places where you select objects.

- Documentation Wizard
- Quick Doc Wizard
- Report Filter, Objects Tab



Search Bar to Filter Names for Selection

Report Filter Shows Count of Issues

For the issue reports, you can specify a filter to limit which issues are included. The Errors, Suggestions, and Performance tabs show the count for each issue to make it easier to decide which issues to include:

Objects	Errors	Suggestions	Performance	Reviewed Status
Select	Issue	Count		
<input checked="" type="checkbox"/>	Database Field Data Type and Size Inconsistency	1		
<input checked="" type="checkbox"/>	Database Four-Digit Year Formatting	1		
<input checked="" type="checkbox"/>	Database Identical SQL in Queries and RecordSources	1		
<input checked="" type="checkbox"/>	Database TempVars Unused	2		
<input checked="" type="checkbox"/>	Form Allows Datasheet and Form views	3		
<input checked="" type="checkbox"/>	Form Caption Missing	66		
<input checked="" type="checkbox"/>	Form Command Button Calls No Actions	6		
<input checked="" type="checkbox"/>	Form Command Button Should Show Hyperlink Hand	9		
<input checked="" type="checkbox"/>	Form Filtering is Not Allowed	7		
<input checked="" type="checkbox"/>	Form has Duplicate Shortcut Keys	115		
<input checked="" type="checkbox"/>	Form Navigation Bar Caption Missing	1		
<input checked="" type="checkbox"/>	Form Not Moveable	95		
<input checked="" type="checkbox"/>	Form Scroll Bars are Unnecessary	6		
<input checked="" type="checkbox"/>	Form Shortcut Menu Disabled	3		
<input checked="" type="checkbox"/>	Form Tab Order Does Not Match Default Order	29		
<input checked="" type="checkbox"/>	Form Unassociated Label and Control	25		
<input checked="" type="checkbox"/>	Form Unused	18		
<input checked="" type="checkbox"/>	Macro Unused	21		
<input checked="" type="checkbox"/>	Module Class Variables Should be Property Statements	5		
<input checked="" type="checkbox"/>	Module Debug Statements	70		
<input checked="" type="checkbox"/>	Module Empty Procedures	10		
<input checked="" type="checkbox"/>	Module Missing Option Compare	3		
<input checked="" type="checkbox"/>	Module Procedures Conflict with Reserved Word	2		
<input checked="" type="checkbox"/>	Module Procedures Could be Private	28		
<input checked="" type="checkbox"/>	Module Procedures Could Move to Calling Module	51		
<input checked="" type="checkbox"/>	Module Procedures Without Error Handling	224		
<input checked="" type="checkbox"/>	Module Properties Without Error Handling	88		
<input checked="" type="checkbox"/>	Module Stop Statements	21		

When Filtering Issues for Reports, You Can Now See the Count for Each Issue

Enhanced VBA Module Parser for Compiler Conditionals

The VBA module parser for the 2010 version added support for compiler conditionals in the declarations section or procedures as defined in #IF...#ELSE...#END IF statements. This is particularly common when using the VBA7 constant to manage 32 versus 64 bit code:

```
#If VBA7 Then
    < 64 bit specific code >
#Else
    < 32 bit specific code >
#End If
```

The VBA parser in Total Access Analyzer 2013 supports entire procedures defined by compiler conditionals to avoid triggering duplicate procedure definition issues. The duplicate procedures should be paired together:

```
#If VBA7 Then
    Sub ProcName ()
        ...
    End Sub
#Else
    Sub ProcName ()
        ...
    End Sub
#End If
```

Documentation of Conditional Formatting

On forms and reports, controls may have conditional formatting to use colors for different values. Total Access Analyzer documents those settings and performs cross-reference analysis to determine if fields, code and other references are valid. These new reports are available:

- Form Controls with Format Conditions
- Report Controls with Format Conditions



Documentation of Navigation Control and Buttons

Total Access Analyzer documents the navigation controls and buttons. References to subforms are documented and cross-referenced for validation. Additionally, an error and two suggestions are offered:

- **Navigation Control Button Has No Action**
A navigation control has a navigation button that does not have any events and its NavigationTargetName property is not defined. This means if the user clicks on the button, the navigation subform is not updated and nothing happens.
- **Navigation Control Button has No Caption**
A navigation control button doesn't have a caption or picture, so it's just blank.
- **Navigation Control Button Should Show Hyperlink Hand**
Display a hyperlink hand rather than the default mouse arrow when the cursor is over the button. This provides a user experience similar to a web browser. Set the button's Cursor On Hover property to Hyperlink Hand to get this feature.

Documentation Enhancements

Documentation is enhanced to:

- Document Web Browser control type properties
- Improve analysis of embedded macros on form events
- Improve parsing of SQL statements
- Improve VBA parsing to preserve control names in parameters
- Flag additional bad characters in object names
- Verify output database can be created before documentation starts
- Verify objects aren't open before documentation starts

Open Database Form Enhanced

The list of documented databases now shows when each database documentation process started and how long it took. In addition to the report listing the databases by name, two new reports are available:

- Output Databases, Sorted by Analysis Time
- Output Databases, Sorted by Start Time

New Reports for Control Types

New reports are available to see, by control type for forms and reports, how many and where they are used in your project. The new reports include:

- Form Control Type Summary
- Form Controls, Sorted by Control Type
- Form Control Types 2010 and Later, Sorted by Control Type
- Report Control Type Summary
- Report Controls, Sorted by Control Type
- Report Control Types 2010 and Later, Sorted by Control Type

Support Procedure Calls to Libraries

Total Access Analyzer added the ability to avoid flagging procedure calls to libraries as errors by letting you keep a list of those procedures. See Support Procedure Calls to Libraries on page 29 for more details.

New Suggestions

Over the years, as we encounter mistakes in our own work, when possible, we add their detection to Total Access Analyzer. This version includes many new Best Practices:

- **Unused DLL and Windows API Declare Procedures**
DECLARE statements let you use procedures defined in DLL files and Windows API commands. Procedures defined in DECLARE statements that are not called are flagged as unused.
- **Property or Procedure Name Conflicts with Parameter**
Parameters shouldn't be the same name as the property or procedure name since it creates confusion when referencing it.
- **Unused Constants, Variables, and Parameters are Separated**
Previously, all of these unused definitions were categorized into one Unused Variables group. They are now separated into three separate issues so you can manage them differently. Unused Parameters are particularly important to address because the calling procedure may be expecting different behavior from the procedure based on that parameter, but it's completely ignored.

New Reports

Many new reports were added for a total of 400+ reports from 380+. They include these items listed earlier:

- 6 Control Type reports
- 4 Control Format Conditions reports
- 2 Output Database reports

Two new system reports are available:

- Total Access Analyzer New Reports Added Since 2010 Version
- New Errors, Suggestions, and Performance Tips Since 2010 Version

New Treeview and Graphics

The hierarchical treeview is used in the View Explorer and Diagrams. A new treeview interface is provided with more modern graphical icons and font, more responsive expand and collapse behavior in the diagrams, and support for 32 and 64-bit versions of Microsoft Access.

Improved Module Display and Opening to the Current Module

When viewing module results, the Module Tab now shows the entire module rather than separate records for each procedure.

When viewing module results, you can press the Design icon to open the module editor at the current procedure. This feature is enhanced to better handle property Get, Let, and Set definitions, and to move to the first line of the procedure (after any comment lines) and highlight it.

User Interface Enhancements

With higher resolution monitors, larger fonts are used.

Revised User Manual and Help File

The user manual and help file are updated with the new features.

Total Access Analyzer 2010, Version 14.0

Microsoft Access 2010 Support

Total Access Analyzer 2010 runs as an add-in for the 32 and 64 bit versions of Microsoft Access 2010. It documents all Access database formats supported by Access including ACCDB, MDB and ADP formats.

This version supports the new object properties, macro commands, module VBA commands, and Access options in Access 2010.

VBA Module Parser Supports Compiler Conditionals

The VBA module parser now supports compiler conditionals as defined in #IF...#ELSE...#END IF statements. This is particularly common when using the VBA7 constant to manage 32 versus 64 bit code:

```
#If VBA7 Then
    < 64 bit specific code >
#Else
    < 32 bit specific code >
#End If
```

Duplicate definitions of constants, variables, declare statements, user defined types, enum, procedures, and other constructs are properly documented and handled for the code analysis.

Conditionals are displayed in many of the module XREF documentation views and reports. A new Compiler Conditions item is added.

Partial Module Cross-Referencing

Previously, all modules needed to be selected for Module XREF to be performed. This version lets you choose a subset of modules for faster processing. The code analysis may be incomplete if important modules are not included. If some modules are not selected, a warning message appears, but you can proceed at your own risk.

New Errors, Suggestions and Performance Tips

Over the years, as we encounter mistakes in our own work, when possible, we add their detection to Total Access Analyzer. This version includes many new Best Practices:

- **Advanced Macro Analysis**
Macro actions with missing arguments are flagged. Missing arguments for RunMenuCommand items are also detected.
- **Undefined and Unused TempVars Detected**
Temporary variable cross-referencing detects TempVars referenced but not created, and TempVars created and not used.
- **Timer Interval and Timer Event Mismatch**
Forms with a timer interval (not 0) but no Form_Timer event are flagged. Similarly, forms with a Form_Timer event but timer interval property set to zero are documented.
- **Queries Using Other Queries with Both having GroupBy Clauses**
Queries with GROUP BY clauses take longer to process. Queries with Group By clauses based on other queries with Group By clauses may perform better if the Grouping were only done at the final level.
- **Action Queries Opened by OpenQuery Command**
Use the Execute command to run action queries.
- **SQL Server list of reserved words updated for SQL Server 2012**
The list of SQL Server reserved words is updated for SQL Server 2012 along with the new list of anticipated future reserved words.
- **Check for Truncated Number Fields**
Set this option so users are not confused by truncated numbers.

Enhanced Macro Documentation

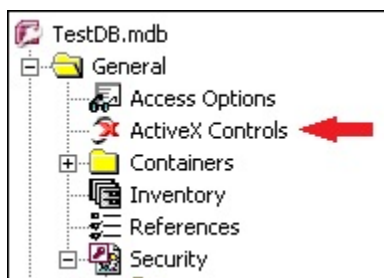
IF..ELSE..END IF syntax in macros are displayed with indentations in the Macro Dictionary reports.

Displaying Results Enhancements

Many enhancements were made to show more data and make it easier to use.

ActiveX Controls added to the General Folder

A new item for ActiveX Controls makes it easy to see the types of ActiveX controls used in the database and where they are used.

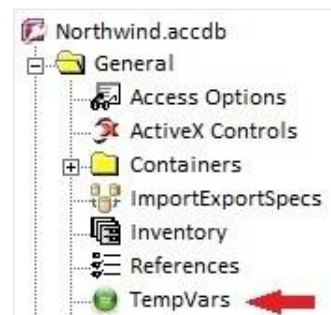


This does not appear if there are no ActiveX controls in your database.

Temporary Variables (TempVars) added to the General Folder

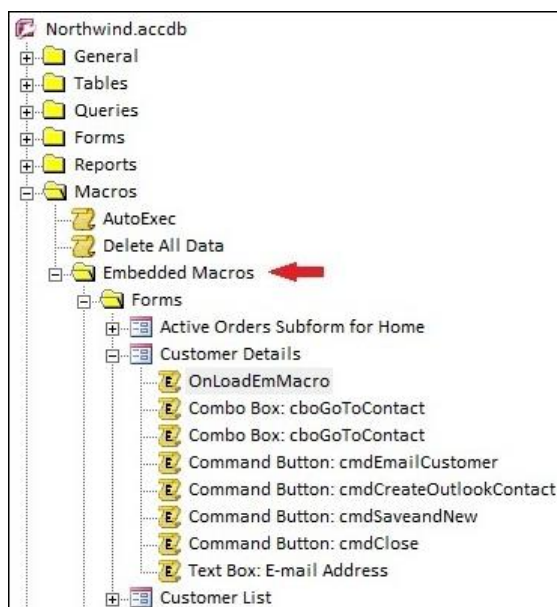
In Access 2007 and later, temporary variables can be assigned from macros and modules, including embedded macros on forms and reports. They can be used on many object types including queries. A new TempVars item provides the list of temporary variables and where they are used.

This makes it easy to see how temporary variables are used across your entire database.



New Embedded Macros Folder added to Macros Folder

All your Embedded Macros can now be seen in one place. Scattered across form and report properties and control events, it has been difficult to see all the automation code in a database. The Embedded Macros folder consolidates this:



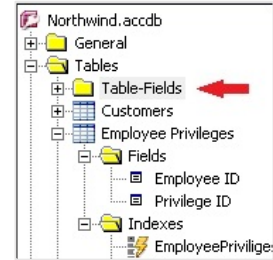
Look at all the embedded macros or filter down to a specific object and event.

The display of macro lines are also enhanced to show indentation of IF..ELSE..END IF syntax.

New Table-Fields Folder added to Tables Folder

The new Table-Fields folder lists the fields across all the tables.

This makes it easy to filter and sort field names and types across all your tables.



Explorer Tab Captions are Context Sensitive

The Explorer has many tabs which vary based on the selected folder or object in the treeview. To make it easier to know what's available, the captions change to better describe what's available. For tabs that never have data to display, the captions are blank.

Enhanced Opening of Referenced Object in Design Mode

For modules, when viewing the Module XREF tab, pressing the Design button now opens the referencing (parent) object. Previously, it was opening the called object which can still be opened from the other tabs, but the XREF opens the calling side which makes it more convenient to see where your code is used.

Report Enhancements

Preview Multiple Reports

Previously, only one report could be previewed or opened in report view. Now, multiple reports can be opened simultaneously so you can see more reports at once. The only exception is when the same report is used with different filters where only one instance of that report can be opened at a time.

Color Customization for Reports

Colors can be applied to sections of the report under Report Options. Text and background colors can be selected for the title, sub-title, headers, footer, and group shading.

The settings are automatically applied to all the reports. See Colors on page 120 for more information.

New Reports

Many new reports were added for a total of 380+ reports. They include database level documentation:

- ActiveX Controls: Summary and Cross-References
- Import Export Specifications details
- Temporary Variables
- Workgroup Security Summary of Groups and Users

Module Cross-Reference reports were added, especially with the documentation of compiler conditions:

- Compiler Conditions, Summary
- Compiler Conditions, Sorted by Condition
- Compiler Conditions, Sorted by Module and Procedure
- Compiler Conditions, Sorted by Module and Line
- Variable List Condition, Sorted by Module and Procedure
- Variable Constants Condition, Sorted by Module and Procedure
- Debug and Stop Statements

Reports were also added for where DoCmd is used:

- DoCmd, Action Summary
- DoCmd, Action and Argument Summary

Many of the existing reports were modified to show where conditionals are used.

Macro Dictionary Reports

For regular and embedded macros, the macro action is moved to the top of the line and bolded, followed by each of its argument labels and values, similar to the way it appears in the macro editor. IF..ELSE..END IF blocks are indented. There are two macro dictionary reports. One has a page break between every macro, and the other doesn't.

User Interface Enhancements

The look and feel of the add-in supports Office 2010 themes and other appearances expected in a modern Access application. Maximized forms are used where appropriate to display as much data as possible.

Microsoft Access can be Minimized During Documentation

While Total Access Analyzer is performing database documentation, it can now be minimized.

Revised User Manual and Help File

The user manual and help file are updated with the new features.

Total Access Analyzer 2007, Version 12

General Enhancements

- User interface supports the sleeker Office, Vista/XP look and feel including support for Tabbed views
- Main screen shows the currently documented database and opening previous documentation
- Use of transparent buttons with graphics
- Datasheet filtering for object selection and viewing results
- Improved module syntax analysis
- Rather than storing output databases for your documentation in the Total Access Analyzer folder by default, it stores it in your Application Data folder

Documentation Wizard Enhancements

- Documentation of databases that are not compiled is allowed after accepting a warning message, but your code should still compile
- Addition of a Finish button once objects are selected to bypass the last two wizard pages

New Module VBA Documentation

- Detect table/query references from the open command of ADODB recordsets in the Object XREF views and reports
- Detect control references from code (e.g. Form_MyForm.txtValue) with new Object XREF reports

Viewing Documentation Results

- Enhanced switching to design view for the current object whether it's from the Diagrams, XREF, Errors, Suggestions, and Performance Tips tabs
- Significantly improved performance when viewing results, and looking at detailed property lists for one object or across all objects of one type

New Suggestions and Performance Tips

- Eliminate/Consolidate duplicate queries: Identical SQL Analysis to determine if the same SQL string is used across multiple queries, or the recordsource of forms and reports

- Checking and recommending the settings of the new Access options like tabbed view, Search Bar, datasheet design change option, etc.
- Forms with navigation bars should have a Navigation Caption
- Command Buttons should show Hyperlink Hand on mouse hover
- Datasheet and continuous forms should take advantage of alternating background color option
- Unused forms and reports
- Module analysis:
 - Use of old constants from pre-Access 97 syntax
 - Procedures with exits in the middle of its body
- New Access option for database picture property storage to reduce database size

Report Enhancements

- Reports can be sent to the new Report View which supports filtering the results interactively
- Individual or multiple reports can be exported to formats such as HTML, PDF, RTF, Snapshot, Text, and XPS files to a folder
- The list of reports excludes reports with no data

New Reports

There are over 430 professional quality reports with the option to Preview, Print, Report View, or export. Here are some of the new reports:

- New Access Options reports
- Import Export Specifications
- Embedded macros and what they cross-reference
- TempVars assignments and cross-reference
- Objects with Identical SQL and RecordSource
- Unused forms, reports, and code
- Enhanced Database Summary reports
- Table field property slice reports

Search Enhancement

- Search lets you view results and jump directly into design view of the currently selected item

Support for the New Features of Access 2007

Total Access Analyzer 2007 supports the new features in Access 2007, including:

- Supports the new ACCDB database format
- Documents and cross-references the new embedded macros in Access forms and reports
- Supports new Access 2007 macro commands
- Supports new Access 2007 VBA commands
- Documents saved import/export specifications
- Documents links to SharePoint
- Documents the use of variables tied to the TempVars object

Visit Our Web Site

FMS is constantly developing new and better developer solutions. Total Access Analyzer is part of our complete line of products designed specifically for the Access developer. Please take a moment to visit us online at <http://fmsinc.com/> to find out about new products and updates.

Product Updates

FMS is committed to quality software. When we find problems in our products, we fix them and post the new builds on our web site. Check our Product Updates page in the Technical Support area for the latest build.

Product Announcements

Read the latest information on new products, new versions, and future products.

Product Descriptions and Demos

Detailed descriptions for all of our products are available. Each product has its own page with information about features and capabilities. Demo versions for most of our products are also available.

Technical Papers, Tips and Tricks

FMS personnel often speak at conferences and write magazine articles, papers, and books. Copies and portions of this information are available to you online. Learn about our latest ideas and tricks for developing more effectively.

Social Media: Blog, Facebook, Twitter

- Signup for our blog: <http://blog.fmsinc.com/>
- Like our Facebook page: <https://facebook.com/MicrosoftAccessProducts>
- Follow us on Twitter: <http://twitter.com/fmsinc>

Links to Other Development Sites

Jump to other locations, including forums, user groups, and other sites with news, techniques, and related services from our [website](#).

Chapter 2: Installation and Startup

Total Access Analyzer comes with an automated setup program to get you up and running as quickly as possible. This chapter describes the system requirements, installation steps, and instructions for uninstalling. It also provides information about running the program for the first time, and tips for troubleshooting startup errors.

Topics in this Chapter

- **System Requirements**
- **Upgrading from Previous Versions**
- **Installing Total Access Analyzer**
- **Using the Update Wizard**
- **Uninstalling Total Access Analyzer**
- **Preparing for Documentation**
- **Starting Total Access Analyzer**
- **Microsoft Visual SourceSafe (VSS)**
- **Startup Errors**

System Requirements

Total Access Analyzer is a Microsoft Access library database that runs within Access. Its system requirements are similar to the requirements of Microsoft Access:

- A copy of the Microsoft Access version corresponding to the Total Access Analyzer version.
- Hardware and operating system supported by Microsoft Access.
- 90 MB free disk space to install the product, and additional disk space to store your documentation.

Total Access Analyzer can only be opened by its version of Access, and works with any database format supported by that version of Access.

Upgrading from Previous Versions

Just like multiple versions of Microsoft Access can reside on the same machine, multiple versions of Total Access Analyzer can be installed if you install them in separate folders.

Note that Access 2019 and 2016 cannot reside on the same machine so you can only have one of them. Similarly, there are conflicts between the 32 and 64 bit versions of the same version of Office/Access.

Each version of Total Access Analyzer is a completely separate program, and files are not shared between versions. If you no longer use a version of Total Access Analyzer, you can remove it without affecting other installations (see page 27 for details). Documentation results, in *.TDB databases, are stored separately.

Installing Total Access Analyzer

Where to Install Total Access Analyzer

For best performance, install Total Access Analyzer on a local hard drive. Installing to a network drive hurts performance.

By default, Total Access Analyzer creates temporary files and stores its output in your Windows Application Data folder (you can change this). Regardless of where you install the program, it can document databases stored locally or on a network.

If you install Total Access Analyzer on a network drive, each user must have full rights to that folder. Do not make the folder read-only. Microsoft Access add-ins cannot be installed in a Read Only folder.

Installing Total Access Analyzer on a network drive allows you to save space on your local system and allows multiple network users to run Total Access Analyzer (but not at the same time). You must purchase a copy of Total Access Analyzer for each developer who uses the program. FMS offers quantity discounts to economically add developer counts.

Installation Steps

Total Access Analyzer is installed with a professional setup program.

1. Run the setup program.
2. When prompted, enter your registration information and product key (serial number).
3. Select whether to install for This Machine or Current User. Choose This Machine to let any user on the PC run it. Select Current User if your permissions do not allow you to install programs for the machine.
4. Specify the destination folder for the program. We recommend a local hard disk. More information in the following section.
5. Confirm the setting and press Next to install the program.
6. When installation is completed, be sure to review the readme file for any late breaking news that is not included in the manual or help file.

Using the Update Wizard

Total Access Analyzer includes a built-in mechanism to check the availability of updates via the Internet. From the add-in, open the About form and press the [Check for Updates] button.

You can also use the Total Access Analyzer Update Wizard outside of Microsoft to check for the latest version. Press the Windows Start button and select Total Access Analyzer, Update Wizard.

Uninstalling Total Access Analyzer

Total Access Analyzer follows standard Windows installation protocol, so uninstalling is straightforward.

From the Windows Start Menu, select Control Panel, then

Windows Vista, Windows 7, 8, 10 and Later

1. Select Uninstall a Program (in Programs section)
2. Select FMS Total Access Analyzer from the list of installed programs
3. Click on Uninstall/Change
4. Follow the prompts to uninstall.

Windows XP

1. Select Add/Remove Programs
2. Select FMS Total Access Analyzer from the list
3. Press the Change/Remove button
4. Follow the prompts to uninstall.

Please note that uninstalling does not delete any documentation databases that you created with Total Access Analyzer. If you want to remove these files, use Windows Explorer to locate and delete the files, which all have the *.TDB file extension.

Preparing for Documentation

Before documenting your database with Total Access Analyzer, make sure your database is ready. By understanding the issues listed here, you can document your databases more rapidly and effectively.

Have permissions for all objects

In order for Total Access Analyzer to document objects, it needs to open them in design mode. Ideally, you should open Access as the owner of the database with sufficient permissions for all objects. You must have at least **Read Definitions** permission for each object that you wish to document.

Make sure the database is not being used

You should be the only one in the database when you document it. This ensures that you have full access to all objects that Total Access Analyzer examines, and that your results are consistent. If this is not possible because your database is shared on the network, make a local copy to document. Total Access Analyzer can still run in a shared situation, but may generate incomplete results in cases where users are modifying objects or have objects open.

The best way to avoid this situation is to open your database in Exclusive mode (by selecting the Open Exclusive option on the [Open] button in the Open Database dialog).

Make sure your database is not corrupt

Total Access Analyzer cannot document corrupt or damaged database objects. We recommend compacting and repairing your database before running Total Access Analyzer.



For optimal performance, your databases should be regularly compacted and backed up. If you do not have an automated process in place, consider Total Visual Agent from FMS, which automates these administrative chores. For more information and a trial version, visit <http://fmsinc.com/MicrosoftAccess/Scheduler.html>

Verify linked tables for MDB and ACCDBs

If your Jet database contains linked tables, check your table links before generating documentation. Broken links often occur when linked databases or their objects are renamed or moved. Total Access Analyzer flags tables that are not linked properly, but it cannot document its properties, child objects, etc. It will also have problems documenting objects referencing those tables. You should make sure that all the links to external tables are valid by using the Linked Table Manager available from the Navigation Pane when you right click on table.

Special Handling for Linked SharePoint and Office365 Tables

If you have tables linked to a SharePoint lists (which may be hosted by Office365), make sure you are logged into the server before starting documentation. If not, when Total Access Analyzer documents the table, Access may prompt for the login and not allow it to continue until you do so. Unfortunately, we are unable to trap this, so skip and go to the next table, so the entire process pauses until you log in.

Verify connection for ADPs

If your database is a Microsoft Access Project (ADP), you must ensure that it is properly connected to its back-end server (the SQL Server, SQL Express, or other database containing its data objects). If a connection cannot be established, Total Access Analyzer cannot document the database. Access 2013 no longer supports ADP files.

Make sure your code compiles

Your module code must contain valid syntax if you want Total Access Analyzer to perform module cross referencing, which documents your procedures, variables, etc. Open one of your modules or press [Alt-F11] and select Debug|Compile <project name> from the menu. After correcting any syntax errors, select File|Save <project name>. This instructs Microsoft Access to compile and save all of your module code, including code behind forms and reports. Your project remains in a compiled state until you make additional changes to your database's VBA project.

Have sufficient disk space for output

Make sure the drive containing the Total Access Analyzer output folder has enough free space. By default, this is in your Application Data folder under Total Access Analyzer, 17.0, Output.

If you are generating blueprints, cross reference documentation, or all properties for all objects, a larger amount of disk space is required. The amount of space is based on the documentation options, the number and complexity of the objects selected. It is not based on the amount of data stored in your database. Unfortunately, Total Access Analyzer cannot determine the amount of space required before documenting your database. It is not unusual for the output database to be many times larger than the database being documented.

Make a backup copy of your database

We have tried to anticipate every possible situation that could cause unwanted results in your database during documentation. However, unexpected problems with Microsoft Access, Windows, or your hardware can cause

problems that damage your database. You should always have a backup copy of your database before you run any utility program, including Total Access Analyzer. This ensures that you can recover from a system failure.

Support Procedure Calls to Libraries

Total Access Analyzer performs module analysis and cross-referencing to identify invalid procedure calls. If your database uses functions stored in a library, those functions are not detected and procedure calls to them are incorrectly flagged as undefined.

Total Access Analyzer cannot detect the procedures in your referenced library databases. However, if you create a table in your database listing the procedure names from your library or libraries, Total Access Analyzer will avoid flagging those procedure calls as undefined.

Simply create a table name `usysTAnalyzerLibraryProcs` in your database with two text fields: Procedure and Library. Fill the table with the procedure names you call. The library value isn't required, but provided for easier tracking. Total Access Analyzer checks the list to avoid identifying those procedures as undefined.

Starting Total Access Analyzer

Total Access Analyzer runs from within Microsoft Access. The program is a Microsoft Access Add-in and uses Microsoft Access forms, reports, tables, and queries. If you are familiar with Microsoft Access, you should feel very comfortable using Total Access Analyzer.

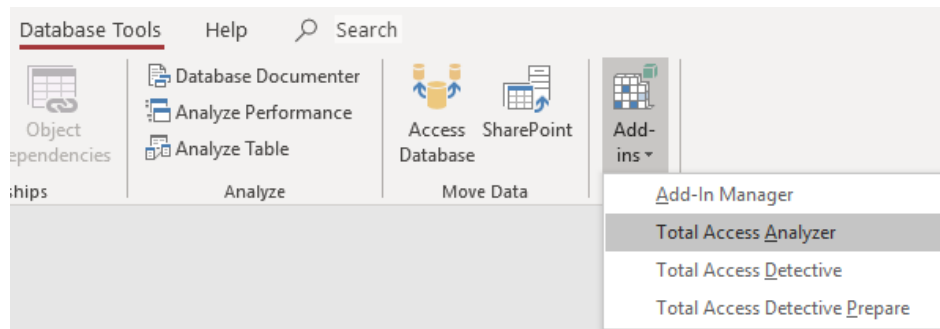
First, start Microsoft Access and open the database to document. Select the Open Exclusive option if there's a chance that someone else may modify it during the documentation process. You do not need to enable the code in your database for Total Access Analyzer to document it.



Tip

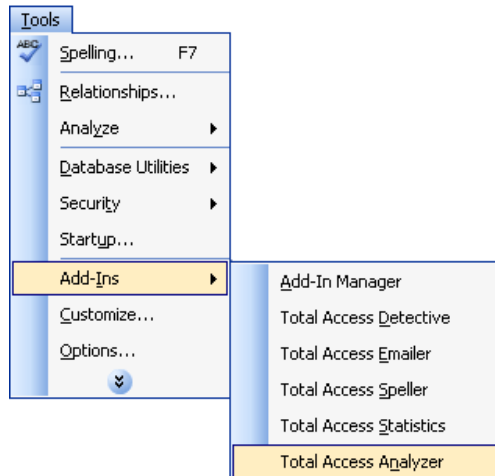
If you have an AutoExec macro or Startup form in your database, other objects may be automatically opened. To ensure that these objects do not interfere with Total Access Analyzer, close any open objects except the database window, or hold down the [Shift] key while opening the database to prevent these objects from opening.

Next open Total Access Analyzer. In Access 2007 and later, open Total Access Analyzer from the Database Tools ribbon, Add-ins menu:



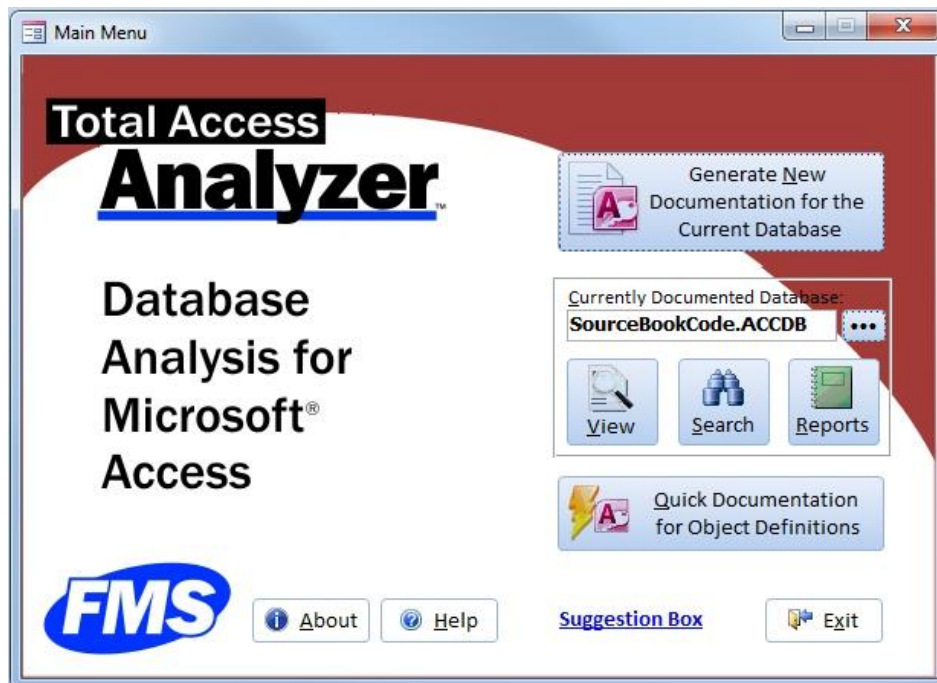
Starting Total Access Analyzer in Access 2019, 2016, 2013, 2010 or 2007

In Access 2003 and earlier, open Total Access Analyzer from the Tools, Add-ins menu:



Starting Total Access Analyzer in Access 2003 and Earlier

When Total Access Analyzer opens, the main form appears:



Initial Screen

Documenting Databases on a Network

Total Access Analyzer allows you to document a database that resides on a network drive, but we recommend documenting local copies of these databases for a couple of reasons:

1. When you document a database, make sure no other users are using or designing objects. Total Access Analyzer cannot document objects that other users have open or locked.
2. Performance over a network connection is substantially slower than accessing a local drive. Total Access Analyzer is a disk-intensive program—it needs to open your objects in design view and read all properties and definitions. Because of this, running across a network connection may cause slower performance in Total Access Analyzer and may affect other users on the network.

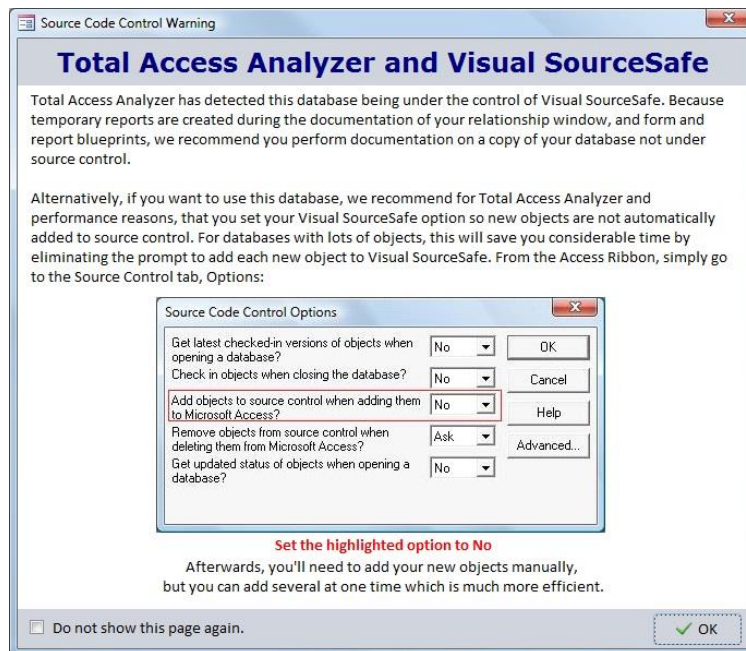
Context Sensitive Help

Throughout Total Access Analyzer, you can press the [Help] button or [F1] to view context-sensitive help. The help system is fully indexed with many jumps between topics. Most of this manual is in the online help system, which may also include more up-to-date information.

Microsoft Visual SourceSafe (VSS)

Microsoft Visual SourceSafe (VSS) is part of MSDN and can be used with Microsoft Access for version control. It is installed with the Access developer extensions program and lets you manage changes to your database objects with features such as check-in/check-out, rollback, version control, etc. It's great for multi-developer environments but also helpful for individual developers. VSS was deprecated in Access 2013.

If your database is under Microsoft Visual SourceSafe control, a warning message appears when you launch Total Access Analyzer. The warning message recommends that a VSS option be set to No, so that you are not prompted when a new object is created.



Visual SourceSafe Warning

In the course of generating some of the documentation (form and report blueprints, and the relationship window reports), temporary objects get created in your database. If VSS is managing your database, and is set to prompt when new objects are created, a warning message will disrupt the documentation process, and require you to manually answer it each time. To avoid this, follow the instructions in the form and set your VSS option to No. Check the “Do not show this page again” box to avoid this form in the future.

Disabling Visual SourceSafe

There are situations where a database under Visual SourceSafe (VSS) control may take a long time to document. To improve performance, create a copy of your database and remove that copy from VSS control. You can do this by compacting your database to a new name and answering “Yes” when prompted to remove the new database from VSS. Run Total Access Analyzer on that copy.

Startup Errors

Most errors that occur with Total Access Analyzer happen when you first start it. This section explains the most common problems how to fix them.

The Wizard you've requested is not installed or is in a bad state. Please install or reinstall the wizard.

This error is caused by a problem in the Microsoft Access registry setting for the Total Access Analyzer add-in. When you install Total Access Analyzer, it places entries in the Windows Registry to identify the location and name of the Total Access Analyzer library database and the name of the main Total Access Analyzer function.

If these entries are incorrect, or if the Total Access Analyzer program becomes corrupt, this error message appears. To resolve this issue, make sure the Windows user logged on has permissions to write to the Windows Registry, and re-install Total Access Analyzer from its setup program.

Current database is not updateable

This error indicates that you have opened the current database in read-only mode, or another condition has forced the database to be read-only (such as a read-only operating system attribute set for the database file or folder). Total Access Analyzer cannot document a database opened in read-only mode. To resolve this issue, either open the database in normal (not read-only) mode, or create a copy of the database with update rights for documentation purposes.

This copy of Total Access Analyzer is currently in use.

Total Access Analyzer can be installed on a shared or network drive, but can only be used by one user at a time. If more than one user attempts to start Total Access Analyzer at the same time, the second user sees a dialog box saying the copy of Total Access Analyzer is already in use.

This message also appears if you attempt to run Total Access Analyzer in two instances of Access on the same workstation. Press [OK] to return to Microsoft Access and try again after closing the other instance of Total Access Analyzer.

If Microsoft Access exits abnormally while Total Access Analyzer is running, an LDB lock file may be left in place that erroneously reports that Total Access Analyzer is in use, even though no one is using the program. If this happens, you should manually delete the lock file by following these steps:

1. Ensure that no other users are running Total Access Analyzer. This step is very important—if you manually delete the lock file while a user is running Total Access Analyzer, you may cause that user's copy of Analyzer and/or Access to crash.
2. Exit all instances of Microsoft Access.
3. Locate the folder in which you installed Total Access Analyzer, and delete the lock file (TAA_C.laccdb).
4. Restart Microsoft Access, and run Total Access Analyzer again.

Total Access Analyzer cannot be called from this database

This error occurs if you try to load Total Access Analyzer while the database (TAA_C.ACCDE) is open in another instance of Microsoft Access. Close the Total Access Analyzer database, open another database from Microsoft Access and restart Total Access Analyzer from the Database Tools | Add-Ins ribbon.

If you encounter other problems, please be sure to read Chapter 9: Product Support for more information about troubleshooting and obtaining technical support.

Chapter 3: Documentation Basics

This chapter explains the importance of documentation and how Total Access Analyzer can help you build better applications. This chapter provides an overview of using Total Access Analyzer, and the difference between documentation and analysis. Make sure you read the Limitations section to understand what Total Access Analyzer cannot do.

Topics in this Chapter

- **Why Document?**
- **ACCDB/MDB vs. ADP Documentation**
- **Documentation Process**
- **Documentation Limitations**
- **Documentation Limitations for ADPs**

Why Document?

Documentation is an essential part of application development and maintenance. Microsoft Access provides a great deal of control over the appearance and behavior of objects and controls. As your application grows, objects, properties, code, and relationships between objects become more numerous and complex. Without a consistent, automated documentation and analysis tool, development and maintenance becomes a major chore. Total Access Analyzer is designed to reduce and eliminate many of the tedious and difficult parts of documentation. You can use Total Access Analyzer in a variety of situations:

During Development

As you design new objects and relate them to other objects, documentation and analysis can be invaluable when selecting fields, creating expressions, and calling forms, reports, and queries. As you develop your application, you can run Total Access Analyzer to generate reports of table structures, form properties, modules, etc. for quick reference. Such information is vital for maintaining consistency across objects. Total Access Analyzer also detects errors and suggests specific ways to help you write better and faster solutions.

Maintaining an Inherited System

One of the most difficult aspects of taking over an existing database is determining what is in the database. Because Total Access Analyzer provides comprehensive analysis of your database, you can quickly get up to speed on an unfamiliar project. The application diagrams are particularly useful.

Providing System Documentation

As a developer, you are probably responsible for creating detailed system documentation. Total Access Analyzer eliminates much of the work, making it easy to provide professional, comprehensive documentation in both printed and electronic formats. You can customize the header and footer of the Total Access Analyzer reports to include your project name, your name, and/or your firm's name. See page 118 for details.

Increasing Application Quality

Before you start using or distributing your Access application, you need to test it. Done manually, this is a time-consuming, incomplete, and error-prone task. Total Access Analyzer automatically finds many types of errors and performance problems in your application, and provides suggestions for improvement, minimizing what you need to test. Examples include:

- Invalid references to tables, fields, queries, forms, reports, macros, and procedures
- Linked tables with incorrect connections
- Queries with errors in their SQL strings
- Form controls with identical hotkeys
- Forms controls not in default tab order
- Reports tied to explicit printers rather than the default printer
- Procedures called with the wrong number of parameters
- Unused tables, queries, forms, reports, macros, sub-macros, procedures, variables, classes, and user defined types
- Global procedures that should be private
- Debug and Stop statements in your code
- Variables and functions that are not typecast
- Variable names that conflict with global and module-level variables
- Performance problems in your tables, queries, forms, reports, macros, and modules
- Performance problems with your database, your installation of Windows, and your computer

For more information about the Errors, Suggestions, and Performance items detected by Total Access Analyzer, see page 67.

ACCDB/MDB vs. ADP Documentation

Access 2000 to 2010 offered a database type called Access Data Projects (ADPs). This type of database uses SQL Server for its data storage rather than the Jet Engine ACCDB/MDB format. ADPs were discontinued in Access 2013. This ADP information is provided for Access 2000 to 2010 versions of Total Access Analyzer.

The ACCDB format is the MDB format introduced with Access 2007. When compared against ADPs, MDBs and ACCDBs should be considered similar (they are both Access Jet Engine databases), so rather than referring to both ACCDB and MDB, we'll simply use MDB or Jet.

Because of the many differences between ADPs and MDBs and the way add-ins work with them, there are significant differences with the documentation Total Access Analyzer generates and the way it behaves.

Certain object types are similar between MDBs and ADPs. For instance, forms, reports, macros, modules, and command bars are essentially the same and the documentation for those objects is identical.

Some objects only exist in one and not the other:

Type	ACCDB/MDB Jet Databases	Access Data Projects (ADPs)
Objects	Queries	Views, Database Diagrams, Stored Procedures
SQL Syntax	Access SQL can reference objects/controls and VBA	Transact SQL (TSQL)
Data	Local or linked tables	Links to SQL Server tables
Table Features		Keys, Triggers

Total Access Analyzer generates the appropriate documentation for all of these objects.

Both MDBs and ADPs have tables, but they are different. Fields in MDBs are called Columns in ADPs. ADP tables also have Keys and Triggers. Again, these are documented based on the database type.

Due to the differences, the way documentation is displayed and the reports available differ for ACCDBs/MDBs and ADPs. Details of these differences are provided in Chapter 5: Viewing Documentation. See Documentation Limitations for ADPs on page 39 for information about the limitations of ADP documentation.

Documentation Process

Total Access Analyzer works by examining the objects in your database. As it documents the database, Total Access Analyzer writes the results to tables in an output database you specify. Although the documentation process may create temporary objects in your database, no changes or permanent additions are made.

To generate documentation, you need to follow a series of steps. Before starting, decide if you need quick documentation or full documentation.

Quick Doc Documentation

Quick Doc documentation is a subset of Full Documentation that quickly provides basic information about individual objects. It does not perform analysis across multiple objects (including cross reference information and diagramming). You can use Quick Doc to document:

- Database Information and Object Inventory
- Table Structures and Properties
- Query Properties
- Relationships

- Form Properties and Blueprints
- Report Properties and Blueprints
- Macro Line Listings
- Module Code Printouts
- Command Bar Properties
- ADP Views
- ADP Database Diagrams
- ADP Stored Procedures

Follow these basic steps to generate Quick Doc documentation:

1. Open the database you want to document
2. Start Total Access Analyzer
3. Choose [Quick Documentation...] from the main menu
4. Select the object(s) to document
5. Generate the documentation
6. Preview, print, or export reports

For more information about Quick Doc, see Chapter 8: Quick Documentation.

Full Documentation

Full Documentation includes the Quick Doc features, but goes much further by providing extensive analysis. Because of this, full documentation takes more time.

Full documentation provides:

- Cross reference information showing where and how objects are referenced throughout your database
- Module analysis including listings and cross referencing of procedures, variables, constants, labels, etc.
- Hierarchical diagrams of how your application works
- Errors and suggestions to fix and improve your database
- Performance tips

Follow these basic steps to generate Full documentation:

1. Open the database you want to document
2. Start Total Access Analyzer
3. Choose [Document] and select the objects to document
4. Select the documentation options
5. Generate the documentation
6. View the documentation
7. Preview, print or export reports

Total Access Analyzer makes these steps easy with the Documentation Wizard. A principal design goal of the program is to allow you to generate documentation as quickly and easily as possible. For more information on Full Documentation, see Chapter 4: Generating Full Documentation.

Difference between Documentation and Analysis

Total Access Analyzer generates two distinct types of information: documentation and analysis. Documentation consists of information about an individual object's design. Table structures, form and report properties, query SQL strings, permission settings, and user and group information are examples of this type of information. The documentation provided by Total Access Analyzer is information about how each object is structured. It is very comprehensive and covers every object you select for documentation.

Analysis shows more complex information such as how objects are related to each other, module code details, and errors in your application. Much of the analysis is based on the Documentation results, but Analysis also includes the module cross reference information. This involves searching through a lot of data to reveal where

objects are used, and to find other highlights or discrepancies. Examples include the diagrams, cross reference information, module details, and the list of errors, suggestions, and performance tips.

Documentation Limitations

Total Access Analyzer documents and analyzes most objects in your database, but there are some limitations:

Errors with Objects

- Your VBA module code should compile for Total Access Analyzer to run. To compile your code, open any module, and select Debug|Compile <project name>. This performs a syntax check on all of your module code. As syntax errors are highlighted, fix them and continue invoking the Debug|Compile <project name> command until all errors are gone, then select File|Save <project name> to save the compiled state of your VBA project.
- If an object cannot be opened for documentation, the references it makes to other objects are not documented.
- If a query's SQL property has a syntax error, the query and its references are not documented.

Library Databases

References to variables, procedures, or objects in Library Databases or databases linked to your database with the References menu are not automatically resolved. Only references to objects in the database being documented can be resolved.

You can manually maintain a list of calls to library procedures with a feature introduced in the Access 2013 version (and updates for earlier versions). Simply create a table with the list of procedure names in your libraries and they are not be flagged as undefined procedures. For more information, see Support Procedure Calls to Libraries on page 29.

Object References

Total Access Analyzer effectively detects explicit object references, but there are some cases where it cannot determine which object is referenced, and therefore cannot verify that the reference exists.

References that are Resolved

These references are always documented properly for MDB and ACCDBs:

- Tables used by queries
- Tables, queries, and fields used by forms, and reports
- Macros called from events and other macros
- Objects opened by macros including embedded macros
- Command bars linked to forms and reports

Explicit object references in code are also documented, including references using constants:

```
Const cstrTableName = "MyTableName"  
Set rst = db.OpenRecordSet(cstrTableName)  
DoCmd.RunMacro "MyMacroName"  
DoCmd.RunQuery "MyQueryName"  
DoCmd.OpenForm "MyFormName"
```

When Total Access Analyzer detects a field or object reference, it checks whether the object exists. If it does not exist, the reference is stored as an error. This is an extremely powerful feature, since it validates all of your application's object references.

References that are Not Resolved

There are situations where Total Access Analyzer is unable to determine the referenced objects.

In module code, references to objects within an expression, variable, or function are documented but flagged as unresolved. Because the value of expressions, variables, and function return values is only known at runtime, Total Access Analyzer cannot determine the name of the referenced object. This is particularly important if you have a “table-driven” or “registry-driven” system where object names are stored in tables or the registry and not your code.

When an object is referenced with a variable, Total Access Analyzer records the reference in the cross reference documentation, and sets the [Variable] field to “Yes” and the [Resolved] field to “No.” This allows you to find the references that you need to manually resolve. The following are some examples that cannot be resolved:

```
DoCmd.RunMacro "Sales " & x
DoCmd.OpenTable "Customers For " & "2015"
DoCmd.RunQuery strQueryName
DoCmd.OpenForm MyTestFunction()
```

The following is another reference (to MyTable) that cannot be detected:

```
strSQL = "SELECT * FROM MyTable"
set rs = db.OpenRecordSet(strSQL)
```

Due to the inability to document data access pages, table and query references in data access pages are not documented. Similarly, field references in VBA code are not resolved.

Hyperlinks in Tables

Total Access Analyzer does not document or verify hyperlinks stored in hyperlink fields in Access tables.

Hyperlinks on forms or in code using the FollowHyperlink command are documented.

EVAL Statements

Total Access Analyzer cannot document references to procedures, variables, or other types of objects if the reference is made within an EVAL() function.

Class Module References

Most class module references are properly documented. If you explicitly invoke a class module’s method or refer to its property, the reference is documented:

```
Dim varName As New ClassName
Form_MyForm.MyMethod
Forms("MyForm").MyMethod
```

These references are not documented:

```
Dim varName As Object
Forms(MyFormVariable).MyMethod
```

Additionally, class references from elements of user-defined types are not documented.

Problems with Unresolved References

Unresolved references cause two major problems:

- The referenced object cannot be verified (it may or may not exist).
- Objects may be incorrectly flagged as unused. Unused objects are objects with no references from other objects. If an object is referenced in a way that Total Access Analyzer cannot detect, it may be incorrectly flagged as unused. Check the Object XRef reports for variable references to understand the references in the database that could not be resolved (see page 127 for more information).

VBA Code in Conditional Compilers

The VBA module parser in Total Access Analyzer does a great job reading and understanding how your code works. However, with conditional compilers (#IF..#ELSE..#END IF syntax), the syntax can become difficult to decipher.

If entire procedures are defined within branches of the conditional compiler, the VBA parsing is successful:

```
#If VBA7 Then
    Sub ProcName ()
        ...
    End Sub
#Else
    Sub ProcName ()
        ...
    End Sub
#End If
```

However, the analysis is less successful if a procedure definition is split:

```
#If VBA7 Then
    Sub ProcName ()
#Else
    Sub ProcName ()
#End If
    ...
End Sub
```

In the first case, we can treat each procedure separately, even though they are named identically. In the latter, the duplicate procedure definition line makes it more challenging.

Total Access Analyzer treats the first portion (from #IF to #ELSE) as one procedure and the second part to the End Sub as a separate procedure. In general this does not affect the documentation but depending on the differences in definitions, it may.

Documenting MDE, ADE, and ACCDE Databases

Databases that are converted to MDE, ADE, or ACCDE files do not allow viewing of the code-bearing objects: forms, reports, and modules. Because of this, Total Access Analyzer cannot analyze these objects in these files.

Data Access Pages Not Documented in Access 2007 and Later

Data Access Pages can exist in MDB and ADP files, and Access 2007 and 2010 can run them. However, you cannot put Data Access Pages in design mode in Access 2007 or later. If you try, it instructs you to use Access 2003 instead. As a result, Total Access Analyzer cannot document Data Access Pages in Access 2007 or later.

Documentation Limitations for ADPs

In addition to the limitations listed above, there are some additional limitations associated with the documentation of ADPs:

Transact SQL Syntax

The Transact SQL (TSQL) syntax of ADPs is not examined for references to other objects. Therefore, references to data objects such as Tables, Views, and Stored Procedures in Views, Stored Procedures, and TSQL used in Form and Report RecordSource or RowSources are not available.

Direct references (without TSQL) to objects from form and report RecordSource and RowSources are documented.

Field Cross Referencing

Because Transact SQL is not analyzed, field cross referencing is not performed for ADPs.

Object Cross Referencing

Because Transact SQL is not analyzed, table and view cross reference is incomplete in ADPs. Therefore, the documentation of unused tables and views is not generated for ADPs. Similarly, the Data Diagram and Object Diagrams are not available.

For module cross reference, procedures passed through Input Parameters are not documented.

Security Documentation

Security settings for the underlying SQL Server/MSDE database are not documented.

MDB Only Objects

Certain objects, such as Queries, Documents, Containers, and Relationships, are unique to MDBs and ACCDBs. Because of this, these types of objects do not appear in the documentation for an ADP.

Chapter 4: Generating Full Documentation

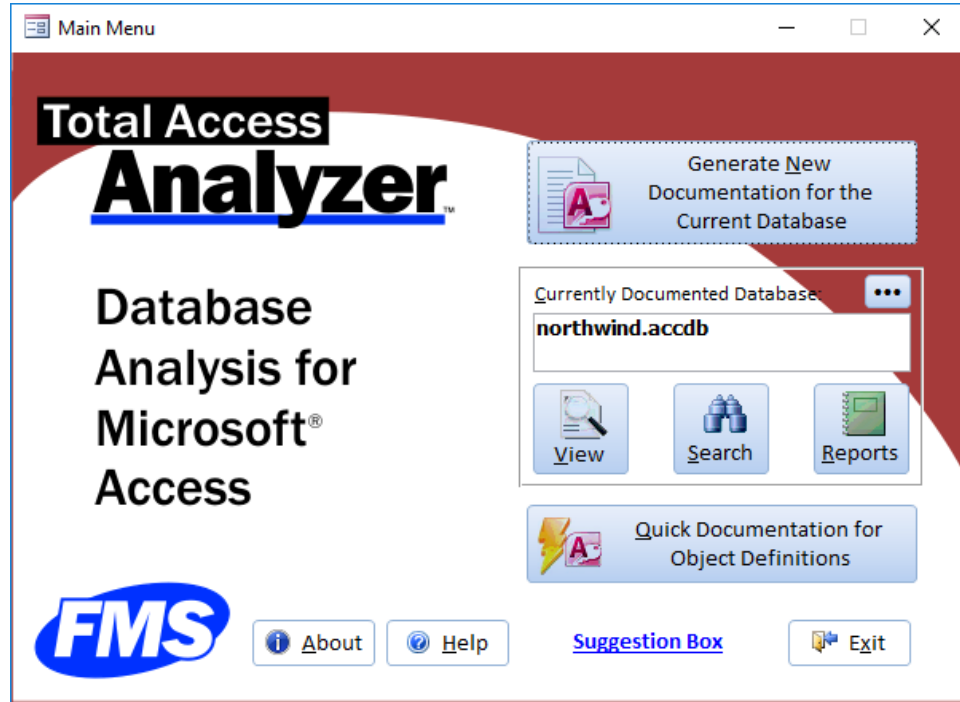
Now that you have a basic understanding of what Total Access Analyzer does, you are probably eager to generate full documentation of your databases. This chapter shows you how to generate the results you want with Total Access Analyzer. It explains how to select objects and documentation options, specify an output database, generate results, and troubleshoot problems that may occur. The Quick Start section is available to get you running quickly, and a more detailed description follows to explain all of the available options.

Topics in this Chapter

- **Main Form**
- **Documentation Wizard Quick Start**
- **Page 1: Selecting Objects to Document**
- **Page 2: Specifying General Options**
- **Page 3: Output Database and Scheduling**
- **Generating Documentation**
- **Troubleshooting Documentation Failures**

Main Form

After preparing your database for documentation (explained on page 27), you're ready to start using Total Access Analyzer. With the database you want to document open, start Total Access Analyzer from the Database Tools | Add-ins ribbon. After a moment, the screen appears:



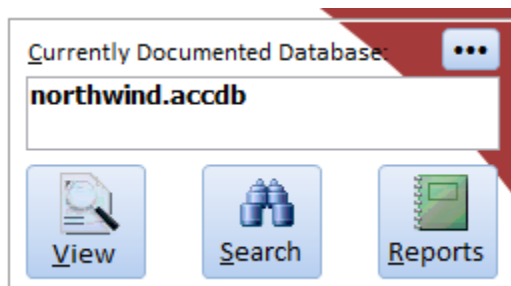
Total Access Analyzer Main Form

The buttons on this form guide you through the process:

Generate New Documentation

This launches the Wizard that generates full documentation of your database. From this wizard you can select the objects to document, set documentation options, specify the output database name, and start or schedule documentation. When documentation finishes, you return to this Main Menu form.

Currently Document Database



Current Documentation Options

The currently documented database is displayed. You can change this by selecting the [...] button. The View, Search, and Reports buttons apply to the currently selected documentation.

View

After you generate the documentation and analysis, this button lets you browse the results in the Documentation Explorer. You can also retrieve and view documentation previously generated for other databases.

Search

After you generate the documentation and analysis, the Search feature lets you find all places that a string (word or phrase) occurs in the documented objects properties or lines of code (macro and modules).

Reports

After you generate the documentation and analysis, the [Print] button lets you access the Total Access Analyzer reports. You can preview any report and send multiple reports to your printer. You can also filter many of the reports to include only a subset of the documented objects.

Quick Documentation

The [Quick Documentation..] button launches a Wizard that quickly generates basic documentation of individual objects in the current database. This is performed without the full documentation and analysis features under the [Generate New Documentation...] button. See Chapter 8: Quick Documentation for more information.

Exit

This button closes Total Access Analyzer and returns you to Microsoft Access. Your database remains open and your workspace is reset to its original state. All settings and documentation in Total Access Analyzer are automatically saved.

Help

The online help system is available by pressing the [Help] button or [F1].

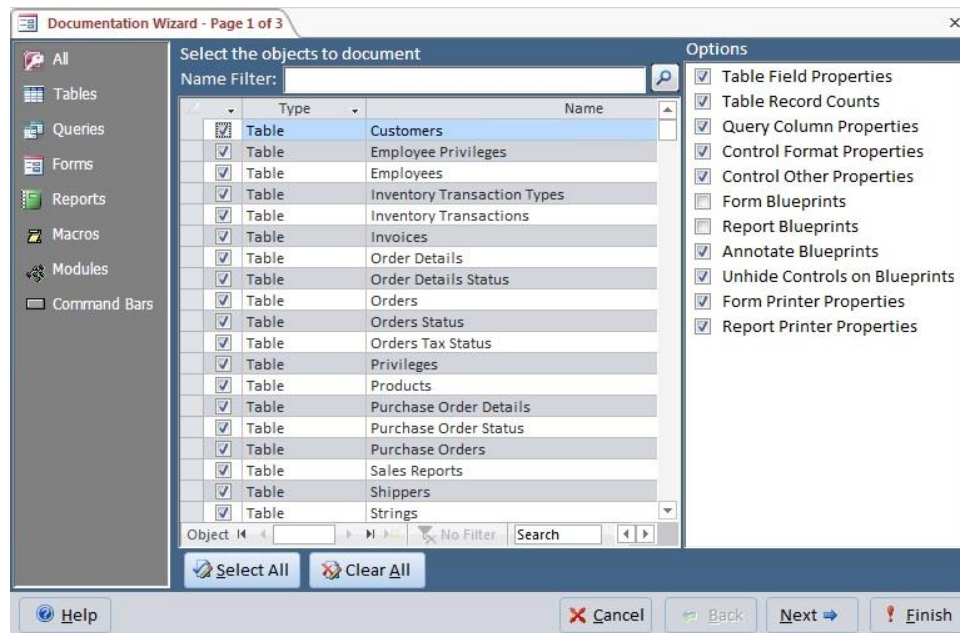
About

This button displays information on your version of Total Access Analyzer. It also allows you to generate a log file that includes information about your installation.

Documentation Wizard Quick Start

After pressing the [Generate New Documentation...] button, a Wizard guides you through the process of specifying the desired documentation. A summary of each screen is listed with suggestions for how to use it quickly. More detailed information is provided for each option in the following sections.

Page 1: Select the Objects to Document



Documentation Wizard (Page 1)

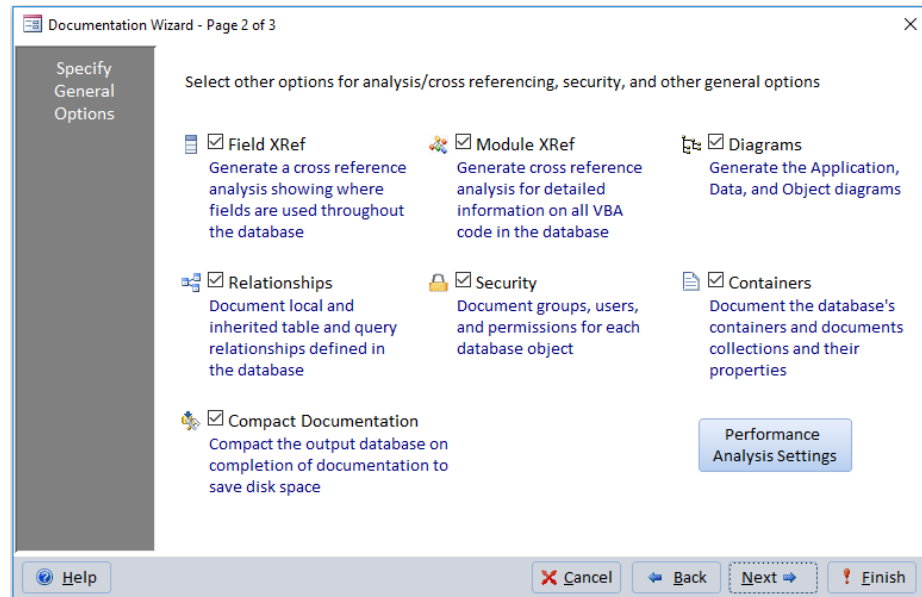
All database objects are displayed, and the icon menu on the left lets you display the items and options by object type. Basic documentation is generated for every object selected, and the options in the right column let you specify optional documentation. For more detailed information, see page 46.

Quick Tips

The more items you select, the more time it takes to document your database. If time is not an issue or if your database is relatively small, we suggest that you select these options:

- Choose all objects:
 - Select [All] from the icon menu to display all objects.
 - Press the [Select All] button to choose all objects.
- Eliminate built-in command bars unless you've customized them:
 - Select [Command Bars] from the icon menu.
 - Click on the option button "Built-In" and press the [Clear All] button to deselect the built-in command bars.
- Choose all the options except for these:
 - "Control Format Properties" only if you need information on the format properties of every control on your forms and reports (height, width, color, font, etc.).
 - "Form Blueprints" and "Report Blueprints" only if you want the blueprint reports since these take a while to generate
- Press [Next] to go to page 2 of the Wizard.
- If you don't want to make changes on the remaining pages of the Wizard, you can just press [Finish] and start documenting.

Page 2: Specify General Options



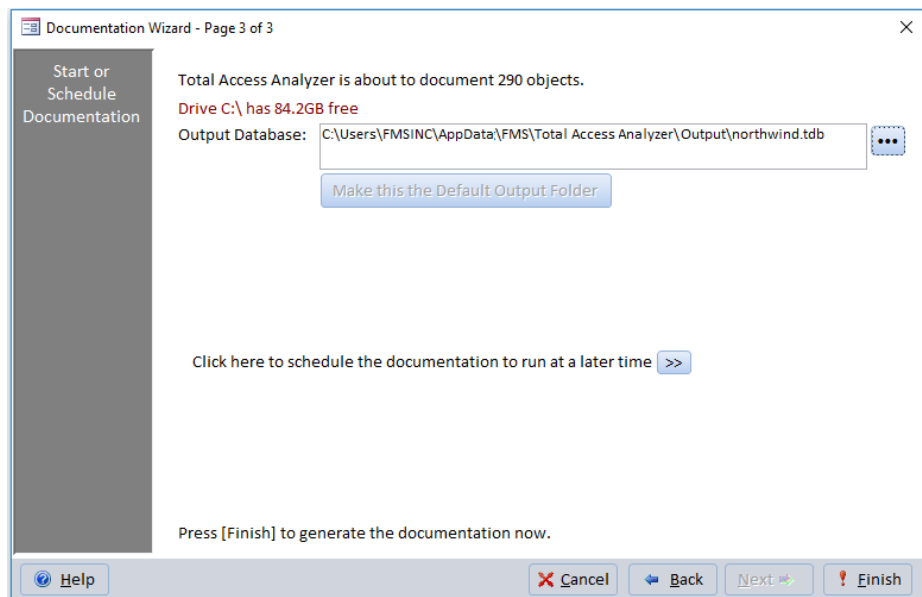
Documentation Wizard (Page 2)

Some documentation options apply to the entire database, not just the individual objects you selected on the previous screen. This page lets you select those options and specify settings under performance analysis. For more detailed information, see page 51.

Quick Tips:

- Select all options
- Ignore the [Performance Analysis Settings] button
- Press [Next] to go to that last page of the Wizard

Page 3: Start or Schedule Documentation



Documentation Wizard (Page 3)

The final page of the Wizard allows you to specify the output database name, and whether to start documenting the database immediately or schedule it for a later time (e.g. at night when the database is not used). By default, the output database is put in your Application Data folder and given the same name as your database with a “.TDB” extension.

Quick Tip

- Click the [Finish] button to accept the default values and start documenting your database.

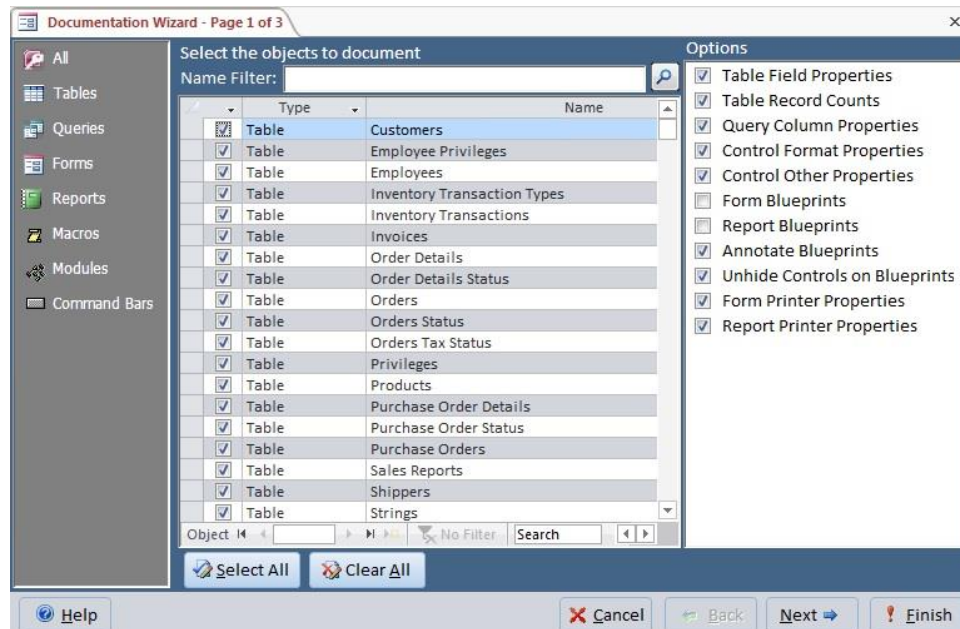
Generating Documentation

After clicking [Finish], the documentation is generated. This may take a while, depending on the complexity of your database, the selections you made, the speed and memory of your machine, and the hard disk speed. When documentation is complete, a summary screen appears. Press [Next] to return to the Main Menu form, and use the [View], [Search], and [Report] buttons to view, search, and print the results.

Page 1: Selecting Objects to Document

We'll now go through a more detailed description of the features and options in the Documentation Wizard.

When you select the [Document] option from the Main Menu form, the first of three pages of the Documentation Wizard appear. Use the [Back] and [Next] buttons to move through the pages.



Documentation Wizard (Page 1)

This form is divided into three sections. The icon menu on the left controls what is displayed in the list of objects and options sections. By default, [All] is selected and all objects and options are displayed. You can reduce your list by clicking on the other object types (tables, queries, forms, etc.).

This screen allows you to specify which objects to document as well as choose documentation options.



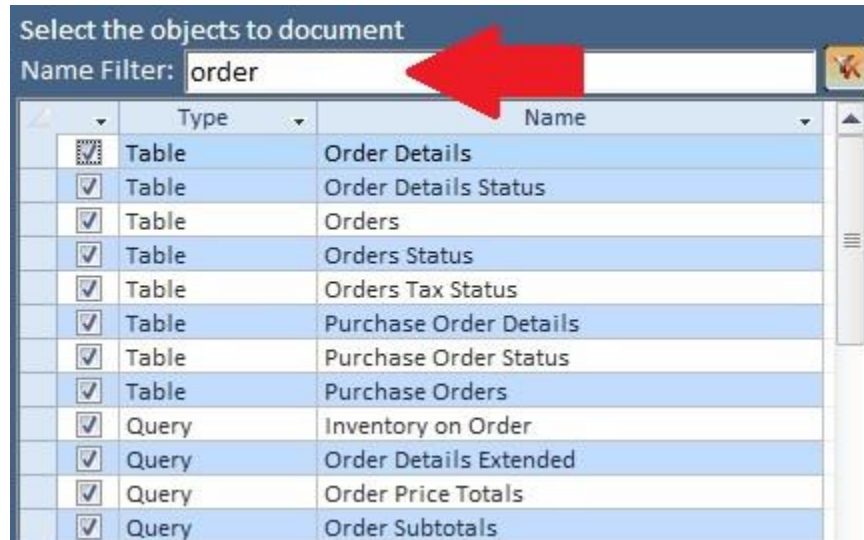
Tip

In general, you should select all objects, especially if you are interested in generating complete cross reference information and detection of unused objects.

For your convenience, if you have documented this database before, the objects you previously selected are selected by default. If you added new objects or renamed existing objects, they are listed but not selected. If you deleted any objects, they do not appear in the list.

Name Filter

Similar to the Search Bar on the Microsoft Access Navigation Pane, you can enter text to filter the list of objects:



Enter Text to Filter the List of Objects

The [Select All] and [Clear All] buttons apply to the filtered items.

To select or deselect one object

Click on the check box of the object you want to select. Click the check box again to deselect the object.

To select or deselect all objects by type

You can select all the displayed objects by pressing the [Select All] button.

To deselect all displayed objects, press the [Clear All] button.

If you want to select all objects in your database at one time, display all the objects via the [All] icon, then press [Select All]. To deselect all objects in the list, press [Clear All].

Object Selection Strategies

The more options and objects you select, the longer it takes to generate the results. If you only want to document your tables, only select the tables for documentation. If you want to see how your tables are referenced from queries, forms, and reports, you must also select those queries, forms, and reports.

Selecting Objects for Object Cross Reference

For complete and accurate Object Cross Reference, all objects must be selected. If you need to find object references in modules (e.g. DoCmd.OpenForm), the Generate Module XRef option must also be selected.

Selecting Objects for Field Cross Reference

Field Cross Reference is available for ACCDB/MDB documentation and follows the same rules as Object Cross Reference. To generate Field Cross Reference, make sure all tables are selected.

Selecting Objects for Modules Cross Reference

The Module XRef option on the next page automatically documents every module (regular and class modules)—even if you did not select them individually. It also analyzes the modules of every selected form and report.

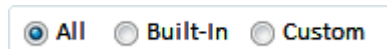
To generate complete cross reference, every object using module code must be selected. This includes all forms and reports, as well as any queries, macros, and command bars that invoke your functions. If you only want analysis of your modules, you do not need to select any objects. Just select Module XRef on the next page.

Selecting Options and Objects for Diagrams

To generate Diagrams, select all queries, forms, reports, macros, and command bars.

Selecting Fewer Command Bars

When you select [Command Bars] from the icon menu, the list of Command Bars appears. The number of command bars in the list may surprise you—the list includes all command bars available to your database, including the 100+ built-in command bars from Access. The built-in command bars are listed because you can customize them. Since there are so many command bars, you should decide whether you want to document them all. To help you, an option group appears under the list:



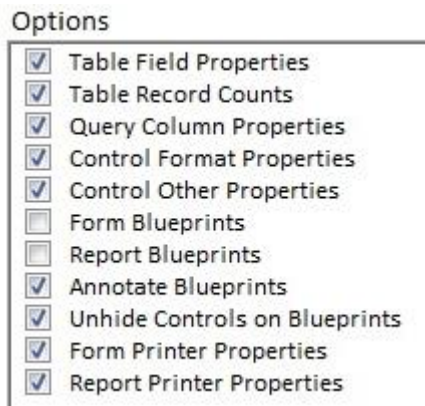
Differentiating Types of Command Bars

When you select “Built-In”, the list only displays the Access command bars. When you select “Custom,” the list shows command bars that you created. You should select every command bar listed under “Custom.” Additionally, you should choose every built-in command bar that has been modified.

If you are not sure, you should select all the command bars. Command bars can call procedures and macros, which you need to document if you want complete procedure cross referencing.

Specifying Options

The right side of the form lists documentation options for the different object types:



Object Documentation Options

By default, all the basic properties of each selected object and the database are documented. The options presented here allow you to perform additional documentation of your selected tables, forms, and reports. Even if you choose none of the options, plenty of documentation is still generated.

Your initial thought may be to turn on everything to get full and complete documentation. You may wonder why you would want to turn off any options. The simple answer is to save time and disk space. Each option takes time and adds to the amount of output generated. If you have no need for a certain type of documentation, turn it off

to document your database more quickly and use less disk space. If time and disk space are not issues, select all of the options.

The available options fall into four categories: Table Options, Form and Report Control Properties, Blueprint Options, and Printer Properties.

Table Options

Table Field Properties

Total Access Analyzer examines the properties of tables, queries, fields, relations, and indexes. Unfortunately, if you have linked tables in a Jet/ACCDB/MDB database, there may be significant performance problems examining field properties in tables with a large number of fields. You can see this problem outside of Total Access Analyzer by running the Access Database Documenter on a linked table with a large number of fields.

To alleviate this problem, you can disable the “Table Field Properties” option. When you turn this option off, Total Access Analyzer does not document the properties of fields in tables other than their name, type, and size. Turning this option off does not affect the analysis or cross reference documentation—it merely makes the documentation process run faster. Of course, if you want reports listing all field properties, you must turn this option on. If you are generating documentation and notice that each table is taking an inordinately long amount of time to complete, consider turning this option off.

This is not an issue when documenting ADPs.

Table Record Counts

This option is used to get the record count of every selected table. If your tables contain a large number of records or are linked to large external tables, this can take a while. Turn this option off if you have large tables and are not interested in record counts.

Control Properties

Total Access Analyzer can document all of the properties of your form and report controls. This may, however, generate a huge amount of information that you may not want and would never use. In particular, you can decide whether you want to document format and other properties of controls on forms and reports.

Control Format Properties

Format properties appear in the “Format” tab of a control’s property sheet and determine appearance. If you are not interested in properties such as size, font, color, and border information of every control, turn off this option. Otherwise, this information is documented for every control on every form and report.

Control Other Properties

This option documents the properties listed in the Microsoft Access property sheet’s “Other” tab. Examples of these properties are Status Bar Text, HelpContextID, Tag, Tab Stop, etc. Properties that can reference other objects (e.g. Shortcut Menu Bar) are always documented.

Blueprints Options

One of Total Access Analyzer’s most powerful documentation features is blueprints, which are visual representations of your forms and reports. They are helpful in documenting objects in a “what-you-see-is-what-you-get” format. Annotations (numbers) can be placed on each control, making it easy to identify each control and cross reference the visual representation of the form with other documentation.

Blueprints take additional time to generate, and they require a considerable amount of space in the output database. If you do not need blueprints, do not enable them and you can decrease both the documentation time and the size of the output database.

There are several options for generating blueprints:

Form Blueprints

This option generates a Blueprint for every selected form.

Report Blueprints

This option generates a Blueprint for every selected report.

Annotate Blueprints

This option places an annotation number on each control on the Form or Report Blueprint. Controls are numbered starting with 1. Annotations make it easy to reference each control in the printed documentation. Additionally, annotations allow you to recognize controls that invoke VBA code or macros. Controls with italicized annotations have code.

If you want the Blueprints to be a closer approximation of what the user actually sees when they open the form or report, do not select this option.

Unhide Controls on Blueprints

This option makes invisible controls appear on the generated Blueprints. If you use invisible controls, this option can help locate and identify these controls. If you want the Blueprints to be a closer approximation of what the user actually sees when they open the form or report, turn this option off. With this option off, only the controls that are visible when the form or report is opened are printed on the Blueprint.

Printer Properties

Total Access Analyzer allows you to specify whether to document printer properties for forms and reports, such as Device Name, Default Size, Orientation, Paper Size, Margins, etc. Documenting these items takes some additional time, and can be turned off if not necessary.

Form Printer Properties

Select this option to document printer properties for each form selected for documentation. Forms are normally not printed, so you may never care what these settings are.

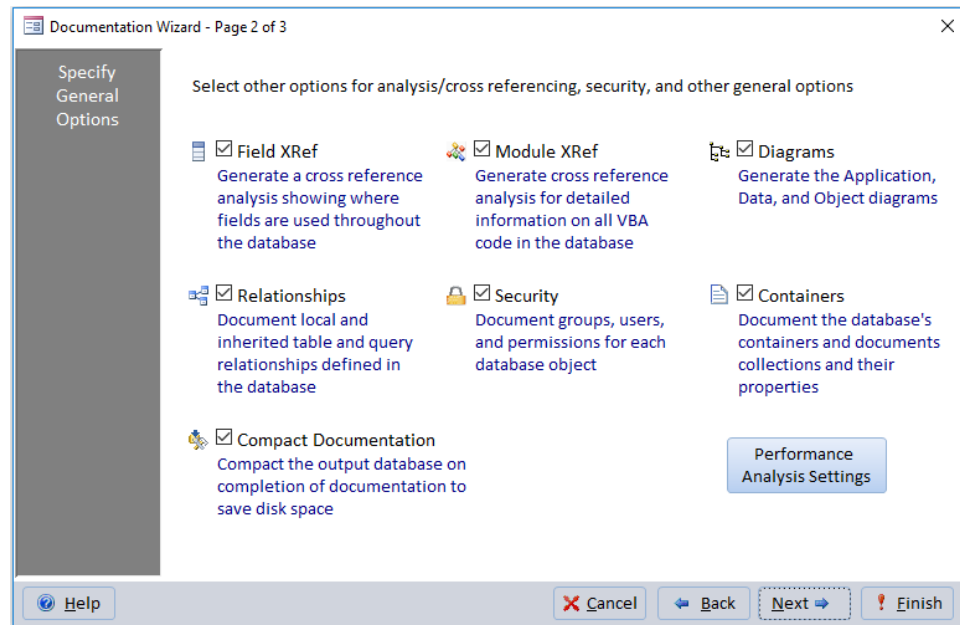
Report Printer Properties

Select this option to document printer properties for each report selected for documentation.

After selecting objects and documentation options, press the [Next>] button to go to the next page.

Page 2: Specifying General Options

The second page of the Documentation Wizard allows you to specify general documentation options not related to specific objects.



Documentation Wizard (Page 2)

One of the most powerful features of Total Access Analyzer is its ability to analyze the information generated from the basic documentation of individual objects. This includes how your objects are related to each other, where each object is used, and any errors that exist in your database due to incorrect or incomplete references. By default, cross reference analysis of tables, queries, forms, reports, and macros is always performed.

If you are only interested in the basic documentation of your database, turn all the Analysis options off. This results in faster documentation, but prevents Total Access Analyzer from generating some of its most valuable information, including the detection of some errors that may exist in your database.

In general, the two XRef options should be turned on. The Diagrams option should be turned on if you want the application, data, and object diagrams.



Tip

Generally, turn the Total Access Analyzer options off only if you are not concerned with how your database objects relate to each other.

Field XRef

The Generate Field XRef option is available for ACCDBs/MDBs and generates field cross reference analysis, showing where fields are used and whether they exist. By showing every reference to a field in tables, queries, forms, reports, controls, and macros, Total Access Analyzer shows you where to make changes if a field's structure changes or if a field is deleted or renamed. If this option is turned off, error detection of references to undefined fields is not possible.

Module XRef

The Module Cross Reference feature is one of the most powerful and useful features of Total Access Analyzer and works on ACCDBs, MDBs, and ADPs. A VBA code parser analyzes your module code and generates a great deal of information. This information includes procedure definitions, procedure calls, constants, variables, labels,

procedure declarations, function calls, and much more. Total Access Analyzer detects a variety of errors, along with suggestions and performance tips. It analyzes all modules, regardless of whether you selected them, as well as the modules behind the selected forms and reports.

Keep in mind that other objects such as queries, macros, and command bars also reference module code and should be selected for complete module cross reference.

The Generate Module XRef option is independent of basic module documentation, which just prints your module code. Make sure your VBA code compiles and refer to page 86 for information about the analysis performed. If this option is turned off, module errors are not detected.

Diagrams

This option generates the Application Diagram. For ACCDBs/ MDBs, Data and Object Diagrams are also generated. These diagrams are extremely powerful tools for understanding how your objects work together. While cross reference information shows only one level (where each object is used), the diagrams show the entire multi-level hierarchy. For more information on diagrams, see page 96.

Application Diagram

The Application diagram displays your application and procedure flow in a hierarchical format from its top-level object (Autoexec macro or startup form) through every referenced form, report, event, and procedure call. This multi-level tree provides an excellent illustration of the way your program works. If you are interested in the Application Diagram, also select the Generate Module XRef option. Otherwise, procedure calls are not included in the diagram.

Data Diagram

The Data Diagram shows how data flows from tables through other objects such as queries, forms, reports, and code. It shows the entire family of objects using each table.

Object Diagram

The Object Data diagram shows all the objects (tables, queries, and macros) referenced by every form, report, and query. It shows the entire family of objects used by each object.

General Documentation

The options on the second and third rows of the page generate additional documentation. Note that these four options are not available for ADPs since they deal with objects that don't exist in ADPs:

Relationships

This option documents the table and query relationships as defined in the Database Tools | Relationships window. Each relationship is documented along with the relationship window showing all the related data sources.

Security

This option documents the security (permission) settings for each selected object by each group and user defined in the current workgroup.

Containers

JET databases store information about objects in Containers and Documents. Containers are object types (tables, queries, forms, reports, relationships, etc.). Documents are individual objects within each container (a table, query, form, etc.). Properties include values such as date created, date modified, etc. Most of this information is already in the inventory documentation Total Access Analyzer generates.

Turn this option on to document container and document properties. This option adds time especially if you have a large number of tables and queries. This documentation does not affect any other documentation or analysis, but you may want to run it for thoroughness.

Compact Documentation

This option compacts the output database after documentation. This saves disk space, but takes extra time.

Performance Analysis Settings

Total Access Analyzer automatically generates extensive performance analysis of your system, database, and each object selected for documentation. The performance analysis offers suggestions and warnings on items that should be examined to improve performance. They do not imply that the flagged items need to be modified, only that they should be examined for potential improvement.

Several options are available to configure these tests from the [Performance Analysis Settings] button. Total Access Analyzer performs many more tests than are shown here—this form shows only the tests with configurable values. For more information, see page 81.

Setting	Value
Maximum Number of Fields per Table:	32
Maximum Number of Fields per Query:	16
Minimum Acceptable RAM in MB:	512
Minimum Local Disk Free Space in MB:	100
Maximum Controls Per Form:	50
Maximum Controls Per Report:	50
Maximum Form Complexity:	300
Maximum Report Complexity:	300

Performance Analysis Settings Form

Maximum Number of Fields per Table

Enter a number up to 255. This value is the maximum number of fields that can exist in a table before the table is flagged as a potential performance problem. For example, if you consider 32 fields to be the maximum number of fields that should be in a table before performance suffers, enter that number here. The default value is 32.

Maximum Number of Fields per Query

Enter a number up to 255. This value is the maximum number of fields that a query can return before the query is flagged as a performance problem. The default value is 16.

Minimum Acceptable RAM

Enter the amount of RAM (in megabytes) that should be on the computer. If available physical RAM is below this level, a performance problem is recorded. The default value is 128 megabytes.

Minimum Local Disk Free Space

Enter the amount of disk space in megabytes that should be available on local, non-networked drives. If the amount of space falls below this level, a performance problem is recorded. The default value is 100 megabytes.

Maximum Controls per Form

Enter the maximum number of controls that can exist on a form before a performance problem is recorded. The default value is 50.

Maximum Controls per Report

Enter the maximum number of controls that can exist on a report before a performance problem is recorded. The default value is 50.

Maximum Form/Report Complexity

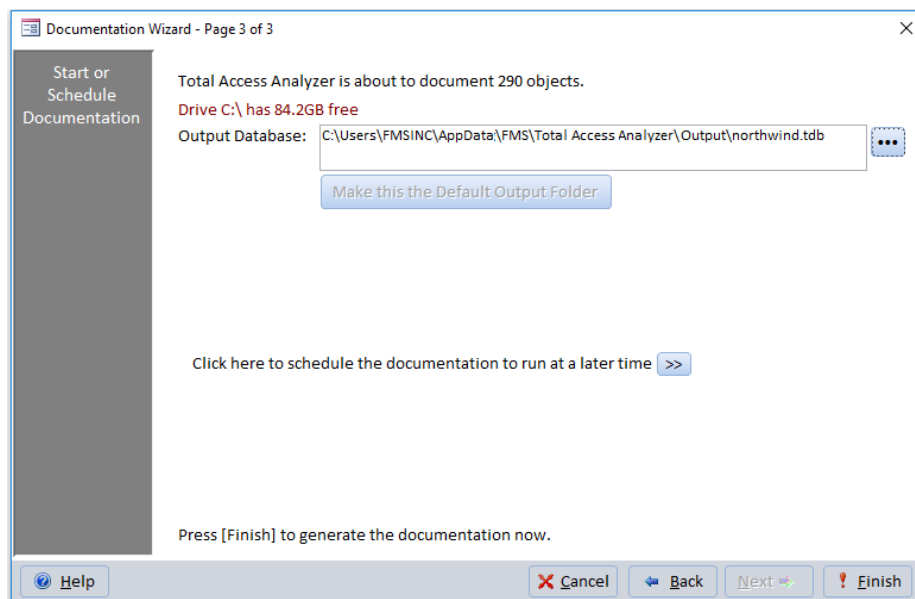
Different control types have different performance “weights” associated with them. For a list of the control types with their associated weights, see the System Report “Total Access Analyzer Performance Tips,” and look at the description for the **Form Control Cost** tip.

Enter the maximum control complexity that can exist on a form or report before the object is flagged as a performance problem. The default value is 300.

Press [OK] to return to page 2 of the Documentation Wizard, or [Next>] to go to the last page of the Documentation Wizard.

Page 3: Output Database and Scheduling

The third and final page of the Documentation Wizard provides information about the documentation and analysis that is about to be generated. It also allows you to specify the output database name, change the default output directory, and to start or schedule the documentation:



Documentation Wizard (Page 3)

Number of Objects to Document

The label at the top of the form displays the number of objects you selected to document.

Free Disk Space

This feature tells you how much disk space is available. Depending on the complexity of your objects and the number of objects selected, the documentation can be many times the size of your empty database (the amount of data does not affect the documentation size). Without documenting your database, it is impossible to determine the size of the documentation.

If the documentation process is started and Total Access Analyzer runs out of disk space, the program is halted. Your database is not modified in this situation, but you do need to provide more disk space and restart the documentation process.

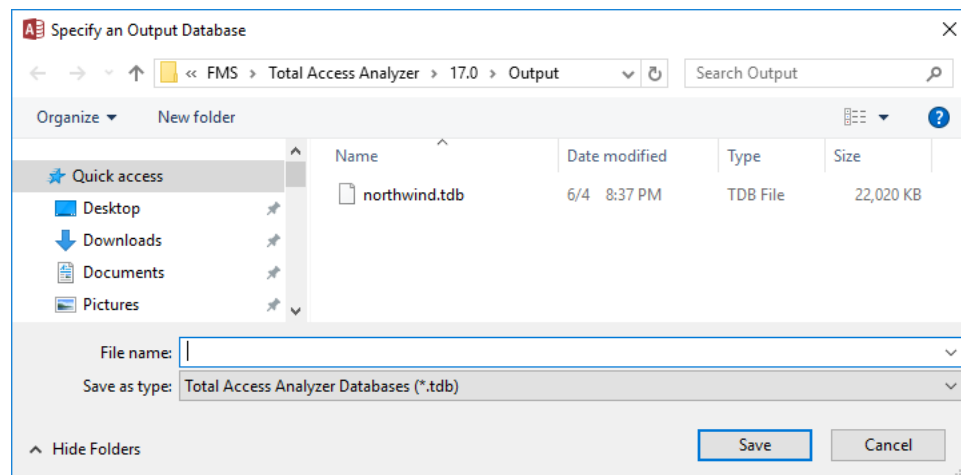
A good safety margin is to have at least 100 MB free on the disk where you are placing the output database. Your system should also have enough free space for the Windows swap file (also known as the virtual memory file). Consult your Windows documentation for information on this file and its settings.

Output Database

Total Access Analyzer stores the documentation in an Access database. The database is like any other Access database except it contains Total Access Analyzer documentation with a file extension of TDB instead of MDB. Total Access Analyzer uses the .TDB extension as an easy way to identify an output database.

Total Access Analyzer uses a default database name based on the name of the current database. For example, if you are documenting SALES.MDB database, the output database is named SALES.TDB.

You can override the folder and database name by pressing the [...] button to bring up the “Select an Output Database” dialog box:



Select an Output Database Dialog

Specify the name and location for your output database, and then press the [Save] button. You can use any legal file name, but the .TDB extension cannot be changed.

NOTE: Because of the way Access locks database files, you cannot have the output file with the same name and in the same folder as the database you are documenting.

Changing the Default Output Directory

The default directory for output databases is the “Output” subdirectory of the directory where Total Access Analyzer is installed. However, you can change the default directory by specifying an output database name in another directory and pressing [Make this the Default Output Directory].

For performance reasons, the output directory should be on your local hard disk and not on a network drive.

Previous Documentation

If the output database already exists, Total Access Analyzer provides information about the existing output database with the name of the database documented, the user who generated the documentation, and the date the documentation was generated. You can either overwrite the existing .TDB or choose another output file name.



Tip

Output databases can be large. If you already have an output database for the current database, decide whether you want to overwrite it with the new documentation or select another output database name. Normally, one set of documentation for each database is sufficient; however, you may want to keep extra copies for archival purposes. The number of different copies that you can save is limited by the amount of available disk space.

Scheduling Documentation

You can choose to run Total Access Analyzer immediately or schedule it to run at a later time. This option is useful if you want documentation generated when users are not active in the database. In a multi-user environment, it may be difficult to document your database during normal hours since users may have objects exclusively locked. By scheduling documentation after hours, you can minimize or eliminate conflicts with other users. Alternatively, you can copy your database to a local drive and document it there.

To schedule Total Access Analyzer to run later, click the [>>] button:

[Click here to schedule the documentation to run at a later time](#) >>

This reveals scheduling information on the bottom portion of the page:

Current Date/Time:	December 20 11:34:41 AM			
The Documentation is scheduled for:	December 20 12:34:35 PM	Day	Hour	Min
Click here to cancel the scheduled documentation (you can press Finish, Back, or Cancel after doing this)		X		

Schedule Documentation

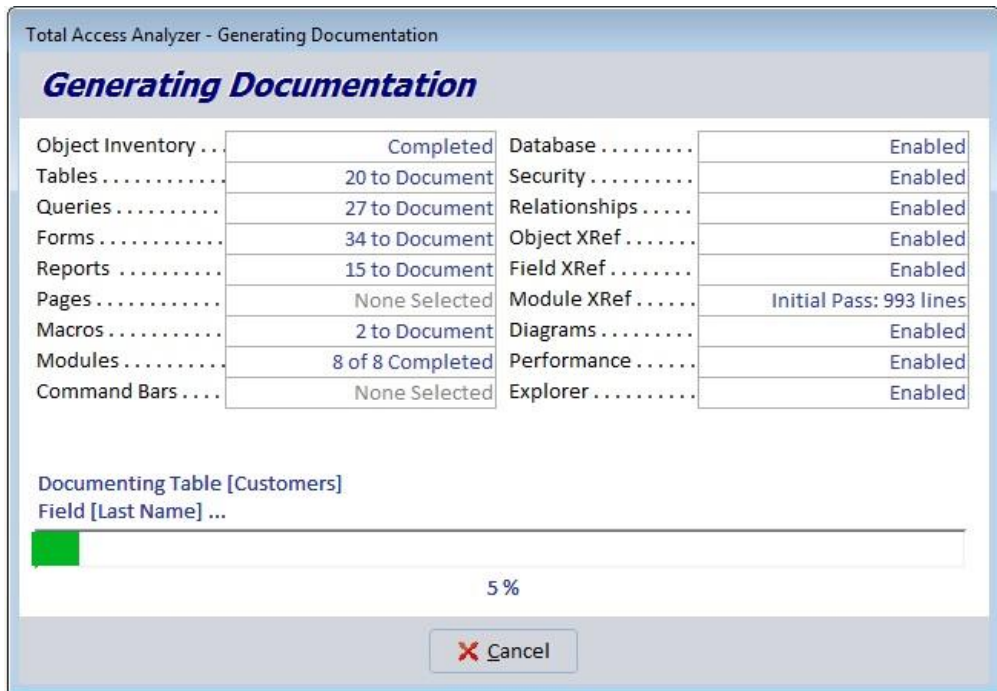
Use the buttons next to Day, Hour, and Minute to set the date and time that Total Access Analyzer should run, and leave the current window open. Total Access Analyzer will run at the designated time. Do not schedule documentation and close Total Access Analyzer or Microsoft Access.

Of course, if the scheduled time arrives and users are still using the database, Total Access Analyzer may still not be able to generate complete documentation.

If you schedule the documentation to run at a later time and then decide you would like to cancel the scheduling, click on the [X] button. This brings you back to the form without the schedule documentation information visible. From here you are given the option to click on the [Cancel], [Back], or [Finish] button. Click on the [Finish] button to begin documentation immediately.

Generating Documentation

While the documentation is being generated, the Generating Documentation form appears showing its progress.

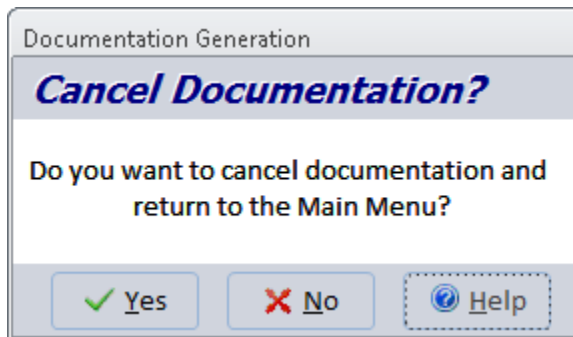


Generating Documentation Form

During form and report documentation, there may be some flickering on the screen and the form or report properties and other windows may appear. This is the normal operation of Total Access Analyzer based on its use of VBA and does not indicate problems.

Canceling Documentation

You can cancel documentation at any time by pressing the [Cancel] button. When Total Access Analyzer reaches a stopping point, it displays this dialog:



Documentation Generation Form - Cancel Documentation

Press [Yes] to cancel documentation or [No] to resume without canceling.

Screen Savers

If you have a screen saver active, it may move slowly or appear frozen while Total Access Analyzer is running. Moving the mouse may not immediately restore the status screen. Do not be alarmed; this does not indicate a problem. Total Access Analyzer is running while the screen saver is on. If you move the mouse while the screen saver is up, the program waits until the current object is documented, and then restores the status screen.

Documentation Summary

When documentation is completed, the Documentation Summary form appears displaying summary information about the documentation generated:

Object Type	Errors	Suggestions	Performance Tips
Table		12	8
Query		9	9
Form		140	5
Report	23	43	4
Macro		2	1
Module	4	58	1
Other	2	4	6
Total	29	268	34

Documentation Summary Form

There may be situations where problems arise and you do not get to this screen. If this happens, refer to the Troubleshooting section on page 59.

Problems Detected

Total Access Analyzer can detect a variety of problems in your database. This form shows the types of errors, suggestions and performance problems that were found. To see a list of the actual items, use the Errors, Suggestions, and Performance tabs on the Documentation Explorer form.

Adding Comments

Comments can be added about the documentation you just generated by pressing the [Add Comments] button to bring up the Documentation Comments form:

Enter any comments or descriptive information you want to save with the documentation. Your comments can be viewed later when you select this output database again from the main form. See Chapter 5: Viewing Documentation for more information.

When you are finished, press [Next>] on the Documentation Summary form to return to the Main Form.

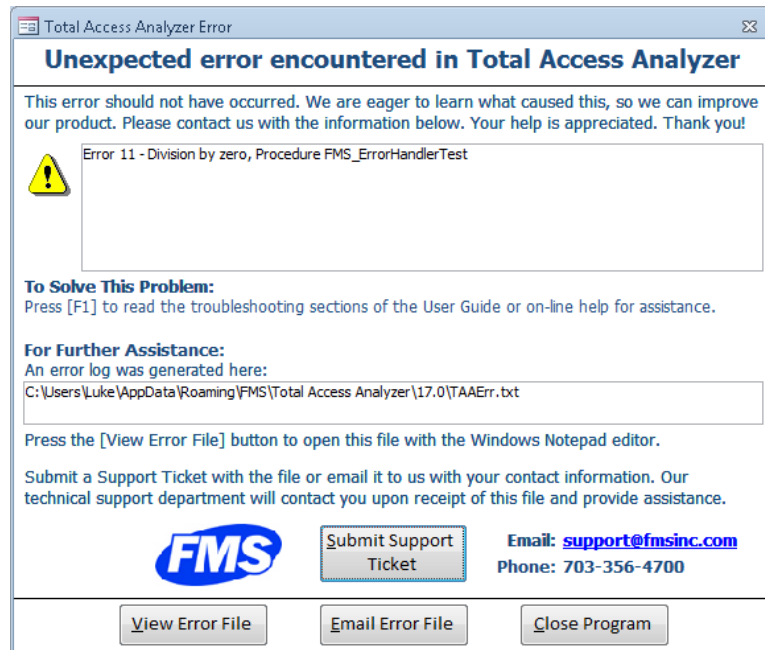
Where to Go Next

Your database is now documented. From the main Total Access Analyzer form, press [View] to view the results. Select [Reports] to print, preview, and export reports, and [Search] to find specific values. If this is your first time, you should view the data and preview the reports before printing them. You may be surprised how large some of the reports are. The following chapters show how to view the documentation and use the reports.

If you press [Exit], you return to Microsoft Access. Your settings, object selections, and documentation are available the next time you start Total Access Analyzer.

Troubleshooting Documentation Failures

Unexpected situations may cause Total Access Analyzer to stop before completing the documentation process. Unfortunately, if you encounter these problems, the documentation generated up to that point is not usable. When an unexpected error occurs, this form appears:



Total Access Analyzer Error Form

If the problem and solution is not obvious or listed, or you feel the problem is with Total Access Analyzer, please email us a copy of the error file. The error file can be viewed by pressing the [View Error File] button.

You can submit a ticket on our support site by clicking the [Submit Support Ticket] button to go to support.fmsinc.com, or click the [Email Error File] to send it from your mail program. The error file is saved as TAERR.TXT in Total Access Analyzer's application data folder.

At FMS, we are committed to supporting our products. Depending on the error, we may need a copy of your database to replicate the problem. We have attempted to anticipate all potential problems, but the variety of applications and limitations of Microsoft Access prevent us from handling every possible situation. Nevertheless, we are committed to resolving any problems you encounter. If the problem can be solved, we will provide instructions to work around it, or we will send you an updated version of Total Access Analyzer for free when we fix it. We apologize and thank you for your patience if you encounter errors.

Problems while Generating Documentation

Total Access Analyzer is written in VBA and uses Microsoft Access as its host environment. If you encounter a Microsoft Access error while running Total Access Analyzer, the most common cause is corrupted objects or code in your database. There are two ways to fix this:

Decompile

Sometimes corruption occurs in the compiled state of the VBA code of a database. There is a simple way to fix this by launching Access with the /decompile command line:

```
<Access installation path>\MSACCESS.EXE /decompile
```

- Once in Access, open the database. It may take a moment to decompile.
- Recompile it by putting a module in design mode.
- From the Debug menu, select Compile <project name>.
- From the File menu, select Save <project name>.

Steps to Fix Corrupted Databases

If decompile fails, a more complicated process is necessary to recover your database:

1. Make a backup copy of your database.
2. Compact and Repair your database. For Access 2010 and later, it's on your Database Tools ribbon. For Access 2007, it's under Office Button, Manage. For 2003 and earlier, it's under Tools, Database Utilities. Visit <http://fmsinc.com/microsoftaccess/compact/> for more information.
3. Create a clean copy of your database:
 - a. Create a new database with a temporary database name.
 - b. Choose the External Data ribbon, Import Access, then select the original database.
 - c. Import all of the objects from the original database, including relationships, menus and toolbars, and Import/Export specs (click the Options button on the Access Import Objects dialog box).
 - d. Close the new database, archive the original database, then rename the new database to the original database's name.

Re-install Total Access Analyzer

There is a chance that one or more objects in the Total Access Analyzer database are corrupt. To eliminate this possibility, uninstall Total Access Analyzer (see page 27 for details). Then re-install Total Access Analyzer from its original setup program. This does not remove existing documentation, but you do need to add the *.TDB files to your documentation list if you want to use them. See page 104 for more information.

These steps should fix any corruption that may exist in your database or Total Access Analyzer. Run Total Access Analyzer again to ensure that you can document your database without problems.

Out of Memory or Unable to Open More Databases Errors

If you encounter an out of memory error and have sufficient RAM, this usually indicates that Windows does not have enough free disk space on the drive it uses for its swap file. To alleviate this problem, you need to free up more space on the drive (we recommend 2 GB or more) for Microsoft Access to operate properly.

However, Out of Memory or Unable to Open More Databases errors are usually related to corrupt Access objects. When Total Access Analyzer attempts to document the damaged object, Microsoft Access consumes memory that prevents Total Access Analyzer to complete its analysis.

Sometimes the crash occurs while the corrupt object is being documented. This makes it easy to examine the object to see if it can be fixed. If it's no longer being used, you can delete it from your database or simply don't select it when running the documentation.

In other cases, the error occurs well after the corrupt object is documented, which makes it very difficult to determine which object is causing the problem. Even worse is if multiple objects are corrupt. Because these types of errors are due to problems with Microsoft Access, Total Access Analyzer cannot trap the errors consistently. To get around this, we suggest selecting a subset of your objects to see if they can be successfully documented. Hopefully, you can isolate the objects that cause the corruption so you can fix or remove them.

Other Known Problems

For a list of known problems not documented in the manual or help file, read Total Access Analyzer's README file or visit our web site for the latest information.

Chapter 5: Viewing Documentation

Total Access Analyzer includes a powerful explorer that organizes and displays the documentation you generated. This chapter explains the many ways you can view and filter data for multiple objects, individual objects, and parts of an object (fields, indexes, sections, controls, etc.). It also explains how to use the cross reference information, diagrams, and lists of errors, suggestions, and performance tips.

Topics in this Chapter

- **View or Print?**
- **Quick Start**
- **Using the Documentation Explorer**
- **Using Property Slices**
- **Errors, Suggestions, and Performance Tips**
- **Documentation by Object Type**
- **Selecting Another Output Database to View**

View or Print?

While you may be eager to print all your documentation, we strongly recommend that you first view it to:

1. Verify that all the objects you selected were successfully documented
2. Quickly spot errors in your application without printing a single page (if serious errors are listed, the documentation may be flawed or you may want to fix the problems and re-document your application before printing the reports).

There are advantages and disadvantages to viewing vs. printing the documentation. First, there are some items that are only available in reports:

- Form and report blueprints
- Bracketed module code printouts
- Dictionary reports that show multiple types of data for an object (for example, the Table Dictionary report shows a table, its properties, and its list of indexes and fields with each of their properties)

Second, most of the data displayed with the Documentation Explorer is in tabular format. On the other hand, reports are richly formatted, with data organized and sorted in a variety of ways and with more types of data displayed on one page than the Explorer.

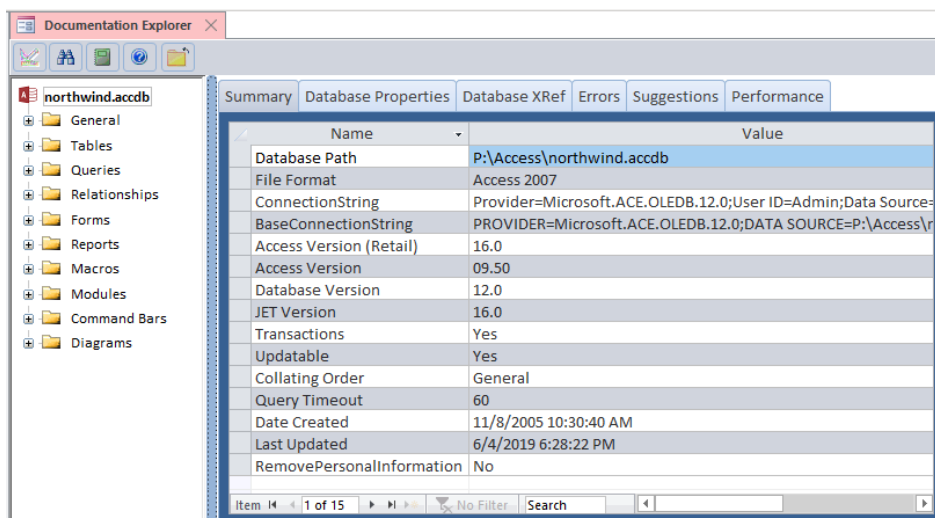
The reports, however, can be quite large. It is much easier to locate an object or other information by using the Documentation Explorer, especially with the objects organized in a treeview hierarchy. There are also interactive options, such as object selections, property slices, sorting, and the ability to mark Errors, Suggestions, and Performance issues as “reviewed.”

Another powerful feature available in the Documentation Explorer is the ability to open the current object in design view and modify it while exploring its documentation, analysis, and issues. This feature is described in more detail below.

Quick Start

This section offers tips on learning how to view the documentation generated by Total Access Analyzer. Once you understand this section and view some of the results, read the rest of the chapter to get the most out of Total Access Analyzer. There are many ways to examine and use the documentation. Your ability to review and interpret the data presented can significantly reduce the effort needed to maintain and test your databases.

Click the [View] button on the Main Menu to display the Documentation Explorer form.



Documentation Explorer Form

How the Documentation Explorer Works

The documentation is organized in an easy-to-use, hierarchical treeview. This form is similar to the Windows Explorer. Folders contain individual items and may also include additional folders. You can easily “drill-down” to select more detailed items. When you select an item in the treeview, its corresponding information is displayed in the tabbed panes on the right. Some tabs are only available for certain items. If data exceeds a column’s width, you can widen the column or use [Shift F2] to Zoom, just like in an Access datasheet.

Here are some highlights and tips for using the explorer:


- Click on an object type folder (e.g. tables, queries, etc.) in the Treeview. You can examine the information shown in each of the tab views on the right side of the Documentation Explorer to see data for all documented objects of that type.
- Expand the object type folder, and click on any object under that folder. Notice that the tabs now display data for that object only.
- Expand the object (the “parent” object) to show any types of objects (“child” objects) it may contain (e.g., a table has fields and indexes, a form has controls, sections, etc.).
- Expand any of these folders to see a list of child objects. As you choose any of these, related information is presented on the right.

View Results and Your Objects at the Same Time

While browsing the documentation, you can also switch to the Access navigation pane and open any of your objects in design view.

Put the Current Object in Design Mode

A very powerful and time saving feature is the ability to put the current object in the Database Explorer into design mode. While viewing an object, or the list of errors, suggestions, and performance tips, Total Access Analyzer can put that object in design mode with a keystroke.

Simply press [Ctrl D] or the Design View button on the toolbar , and the object opens in Design Mode.

Fix the Errors Detected In Your Database

Click on the database icon (the first item in the Treeview), then click on the Errors tab. Ideally, there is nothing in the list. Every item listed is a potentially serious problem in your database or a problem Total Access Analyzer encountered while generating its analysis (which may indicate incomplete documentation). Many errors, such as invalid object references, can cause your database application to crash.

If the list is long, you can use the [Filter Items] button to limit the types of errors displayed. You can also click on folders or objects in the Treeview to show only the errors that apply to those object types or individual objects. For instance, click on the Modules folder to see only module errors. For more information, see page 67.

After fixing the errors, you may need to regenerate the documentation. This is especially important if you fixed objects that could not be documented originally, since they are likely to affect the cross reference and unused object analysis.



You can easily jump to the offending object by selecting an error from the list, and pressing [Ctrl D] or the Design View button on the toolbar. This feature allows you to easily fix errors as you view them in the Documentation Explorer. As you fix items, you can also mark them as “Reviewed,” and filter them out of the list.

Review Suggestions and Performance Tips

Under the Suggestions and Performance tabs, there are many tips for ways to improve your database. These are less serious than errors, but you should examine the tips and determine whether you want to implement them. If you make modifications to your database, you should run the documentation again.



Like with Errors, you can easily jump to the offending object by using the Design View button, and mark items as “Reviewed” to filter them from the list.

Diagrams of How Your Database Works

Expand the Diagram folder in the treeview to view the Application, Data, and Object diagrams. Click on the Summary tab to view any of them. For more information, see page 96.

Object Cross Reference

See where objects are used across your entire database. Select the XRef tab and the desired folder or item.

For instance, to see where each table is used, click on the Tables folder. Each referenced table is shown with information for its calling object. You can also view Field references by looking at a table’s Fields folder.

Module Cross Reference

Select the Modules folder and XRef tab. The Module XRef Filter lets you choose the output to view. You can see lists of procedure definitions, where procedures are used, constants, variables, etc. By clicking on items within the Modules folder, you can reduce the items in the list. Modules are grouped into three major categories: general, form, and report.

Property Slices

Property slices let you view the value of one property across multiple objects. Select an object folder (tables, queries, etc.) and the Property Slices tab. Specify a property in the dropdown list and see the values for that property across all the documented objects in the folder. This lets you easily verify consistent property settings across objects. Switch between the properties for parent objects (e.g., tables) and child objects (e.g., fields).

Using the Documentation Explorer

The Documentation Explorer has the following components:

- Treeview on the left
- Tab Pane on the right
- Toolbar across the top
- Form Splitter

Treeview

The treeview on the left side of the form displays all the objects you selected for documentation. You can expand and collapse the nodes in the Treeview by double-clicking them, or by clicking the [+]/[-] box to the right of the name. The treeview has folders for major groups such as object types. Each folder may contain multiple items.

Tab Pane

The large area to the right of the treeview is the Tab Pane, which has six tabs to display the documentation. The tabs show information based on the current item in the Treeview. Some tabs are not available for every item.

Summary Tab

This tab shows summary information for the object selected in the Treeview. The type of summary information depends on the type of object selected.

Details Tab

This tab shows detailed information for the object selected in the Treeview. The information depends on the type of object, but typically contains property information.

XRef Tab

This tab shows cross reference information for a single object, or all objects of the object type in the Treeview.

Errors, Suggestions, and Performance Tabs

These provide high-level analysis of your database including information on errors, suggestions for improvement, and performance problems. For more information, see page 67.

The Toolbar

The toolbar at the top of the form has these buttons:



Design View

The Design View button allows you to open an object for modification, or jump to the object indicated in an Error, Suggestion, or Performance issue. This works for tables, queries, forms, reports, modules, and command bars. For security reasons, Access does not allow macros to be opened in design mode.

For this feature to work, you must open Total Access Analyzer from the documented database. If the object does not exist in the current database, an error message is displayed.



Search

Open the search form. See Chapter 6: Searching Results for more information.



Reports

Open the Print Documentation form to preview, print and export reports. See page 111 for more information.



Help

On-line help on the Documentation Explorer form.



Close

Close the Documentation Explorer form and return the Main Menu.

Using the Form Splitter

The Documentation Explorer form has a vertical splitter bar to adjust the relative width of the treeview and Tab Pane. To use the Splitter, click on the vertical line between the treeview and Tab controls. To adjust the size, hold the mouse button down and move to the left or right.

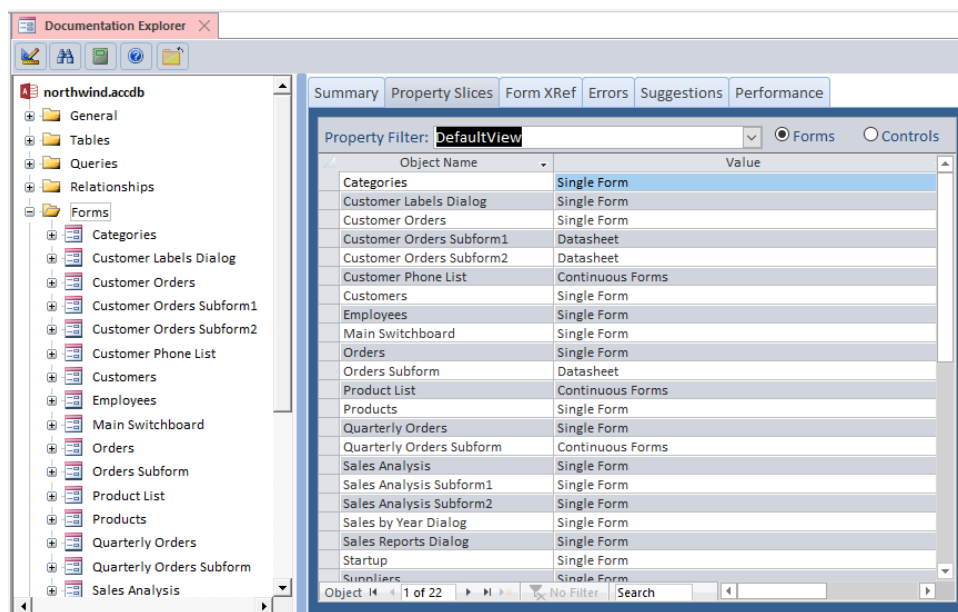
Resizing the Form

If your database, under Access Options | Current Database, is set to use Tabbed Documents, Total Access Analyzer displays the Documentation Explorer as a maximized tab.

If it uses the Access 2003 Overlapping Windows option, the Documentation Explorer form is resizable. By default, the form is set for 800x600 resolution. If your monitor is higher resolution, you can enlarge the size of the form to display more documentation. When you close this form, your settings are automatically saved for next time.

Using Property Slices

Total Access Analyzer documents the properties of every selected object. The Property Slices tab displays the properties for the current object, but you may want to see a property's settings across multiple objects. For example, you may want to see the DefaultView of every form:



Property Slices for Forms

Use the Property Filter combo box to select the property to examine. All items in the current folder with that property are displayed. Objects without the property value (null values) are not listed. In the example above, the Option Group to the right of the Property Filter lets you switch between views of parent and child objects.

This powerful feature is available in Total Access Analyzer for these folders in the Treeview:

Folder	Displays Property Values for	Page
Containers	All documents in a container	71
Tables	All tables or fields	75
Table Fields	All fields in the current table	76
Table Indexes	All indexes for the current table	76
Queries	All queries	77
Query Columns	All columns for a query	78
Forms	All forms or form controls	80
Form Controls	All controls in the current form	81
Form Sections	All sections in the current form	80
Reports	All reports or all report controls	81

Folder	Displays Property Values for	Page
Report Sections	All sections in the current report	82
Report Controls	All controls in the current report	82
Report Group Levels	All group levels in the current report	83
ADP Keys	All keys	102
ADP Triggers	All triggers	102
ADP Views	All views	103
ADP Stored Procedures	All stored procedures	104

The list of properties is controlled by options you selected for documentation. See page 48 for details.

Errors, Suggestions, and Performance Tips

One of the most powerful features of Total Access Analyzer is its ability to offer solutions for common database problems and suggestions to make your application more robust. This includes detection of errors that can crash your database, improvements to object design and application code, and tips to enhance performance. This information can be viewed from the Errors, Suggestions, and Performance tabs on the Documentation Explorer.

Reviewed	Type	Object	Error	ErrorCode
<input type="checkbox"/>	Database	Options	Access Option [Perform Name AutoCorrect] should be turned off.	10050
<input type="checkbox"/>	Form	Home	Form [Home] Combo Box [cboCurrentEmployee] in property/action [C	3004
<input type="checkbox"/>	Form	Order Details	Form [Order Details] Combo Box [Employee ID] in property/action [C	3004
<input type="checkbox"/>	Form	Purchase Order Details	Form [Purchase Order Details] Combo Box [Created By] in property/a	3004
<input type="checkbox"/>	Form	Supplier Details	Form [Supplier Details] Subform/Subreport [Products subform] in pr	3004
<input type="checkbox"/>	Module	CustomerOrders	Procedure [PrintInvoice] is not assigned a return value.	6230
<input type="checkbox"/>	Module	ErrorHandling	Procedure [TryToGoToRecord] is not assigned a return value.	6230
<input type="checkbox"/>	Module	Inventory	Procedure [RemovePurchase] is not assigned a return value.	6230
<input type="checkbox"/>	Report	Monthly Sales Report	Report [Monthly Sales Report] GroupLevel [2] in property/action [Co	4004
<input type="checkbox"/>	Report	Monthly Sales Report	Report [Monthly Sales Report] Text Box [SalesGroupingField] in prop	4004
<input type="checkbox"/>	Report	Monthly Sales Report	Report [Monthly Sales Report] Text Box [Total Sales] in property/act	4004
<input type="checkbox"/>	Report	Quarterly Sales Report	Report [Quarterly Sales Report] Text Box [1] in property/action [Cont	4004
<input type="checkbox"/>	Report	Quarterly Sales Report	Report [Quarterly Sales Report] Text Box [2] in property/action [Cont	4004
<input type="checkbox"/>	Report	Quarterly Sales Report	Report [Quarterly Sales Report] Text Box [3] in property/action [Cont	4004
<input type="checkbox"/>	Report	Quarterly Sales Report	Report [Quarterly Sales Report] Text Box [SalesGroupingField] in prc	4004
<input type="checkbox"/>	Report	Yearly Sales Report	Report [Yearly Sales Report] GroupLevel [0] in property/action [Cont	4004
<input type="checkbox"/>	Report	Yearly Sales Report	Report [Yearly Sales Report] GroupLevel [0] in property/action [Cont	4004
<input type="checkbox"/>	Report	Yearly Sales Report	Report [Yearly Sales Report] GroupLevel [0] in property/action [Cont	4004
<input type="checkbox"/>	Report	Yearly Sales Report	Report [Yearly Sales Report] Text Box [1] in property/action [Control	4004
<input type="checkbox"/>	Report	Yearly Sales Report	Report [Yearly Sales Report] Text Box [2] in property/action [Control	4004
<input type="checkbox"/>	Report	Yearly Sales Report	Report [Yearly Sales Report] Text Box [3] in property/action [Control	4004
<input type="checkbox"/>	Report	Yearly Sales Report	Report [Yearly Sales Report] Text Box [4] in property/action [Control	4004
<input type="checkbox"/>	Report	Yearly Sales Report	Report [Yearly Sales Report] Text Box [SalesGroupingField] in proper	4004

Issue 1 of 24 No Filter Search

Select All Clear All Show: All Not Reviewed Filter

This database's Perform Name AutoCorrect option should be turned OFF. When this option is selected with Track Name AutoCorrect, problems can instance, when changes occur, if you are using ActiveX controls, Access puts these objects into design view behind the scenes which cause the Acti user's machine doesn't have the ActiveX control's license (which is usually only available for the developer), it fails. This AutoCorrect feature occu

Tab Pane with Errors Selected



For a complete list of all the Errors, Suggestions, and Performance tips detected by Total Access Analyzer, print the reports from the System category. See page 128 for more information.

Errors

This tab lists the errors that Total Access Analyzer detected in your database. Errors are triggered for objects that Total Access Analyzer could not document or for serious problems that may cause your database application to crash (e.g. invalid linked tables, references to missing objects, etc.). You should fix or at least understand every

item in this list. After doing so, you may want to regenerate the documentation to make sure your entire object and cross reference information is valid.


Suggestions

This tab lists suggestions for improving your database. These suggestions focus on enhancing the reliability and maintainability of your application. Examples include lists of unused objects and code, form buttons that do nothing, procedures without error handling, etc.

Performance

This tab lists performance tips to help you optimize your database for speed and efficiency. Not every performance tip can be implemented, but the list tries to highlight areas where you should focus. For example, it lists queries that return a lot of fields or use the “SELECT * ” syntax. You may or may not be able to reduce the number of fields returned, but if you do, you can improve performance.



Use Design View button on the toolbar:  to open the object that triggered the Error, Suggestion, or Performance issue for editing. This feature allows you to easily fix issues as you view the list.

Reviewing Issues

Total Access Analyzer allows you to flag issues you’ve reviewed by checking the [Reviewed] column for the items you’ve fixed or deemed unnecessary to fix.

From the Documentation Explorer, you can filter the Errors, Suggestions, and Performance lists by reviewed status. The associated reports also show the reviewed status for each item, and can be filtered to show reviewed items, non-reviewed items, or all items.

Keeping Reviewed Status Between Documentation

The Reviewed status is saved between documentation runs, and can be seen the next time you document the database. This allows you to ignore items that you previously reviewed (note that issues that you fixed will no longer be in the list).

Reviewed status is stored in the output database. For this feature to work, make sure that the output database name remains the same every time you document the database.

Keep in mind that the output database name should be unique for each database you document. If you have multiple databases with the same name (e.g. C:\MySales\Sales.mdb and C:\CompanySales\Sales.mdb), the default output database name will be the same (OutputDirectory\Sales.tdb). To take advantage of this feature, be sure to specify unique output database names for each database you document.

Filtering by Reviewed Status

As you review Errors, Suggestions, and Performance issues, check the “Reviewed” box next to the issue. This feature helps you keep track of items you have addressed, or items that you determine require no action. The Reviewed status of each item is retained if you document the database again to make it easy to see new issues. Issues can also be filtered by Reviewed status on screen and in reports.

To filter by Reviewed status in the Documentation Explorer, select “All” or “Not Reviewed” from the option group at the bottom of the screen:



Reviewed Status Filter

Filtering reports by Reviewed status is explained on page 118.

Filtering by Object or Object Type

The number of Errors, Suggestions, and Performance tips can be quite large. To reduce the number of records displayed, click on a different folder or item in the Treeview. This adjusts the list to just the currently selected item in the Treeview.

For example, to view all Errors, Suggestions, and Performance tips for the entire database, click on the top item (database node) in the treeview and select the appropriate tab. To view all table errors, select the Tables folder in the Treeview. Similarly, you can reduce the list to a specific table by selecting that table in the Treeview.

In general, the Errors, Suggestions, and Performance tabs are available for parent or top-level objects (tables, relations, queries, forms, reports, macros, modules, command bars, and containers) and not available for child or sub-objects (fields, controls, sections, etc.). The one exception is module procedures; this is because there may be a large number of items per procedure.

Filtering by Error Type

You can also filter the Errors, Suggestions, and Performance lists by the type of error, suggestion, or performance tip. Just press the [Filter] button at the bottom of the form. A filter form appears showing all available items for your current tab. For example, if you are on the Suggestions tab and press the [Filter] button, the Filter form shows a list of all available suggestion types:

Select	Issue	Total	Reviewed	Not Reviewed	Type
<input checked="" type="checkbox"/>	Database Field Data Type and Size Inconsistency	1		1	10100
<input checked="" type="checkbox"/>	Database Identical SQL in Queries and RecordSources	1		1	10250
<input checked="" type="checkbox"/>	Database Always Use Event Procedures	1		1	10180
<input checked="" type="checkbox"/>	Database Four-Digit Year Formatting	1		1	10160
<input checked="" type="checkbox"/>	Form Unused	1		1	3300
<input checked="" type="checkbox"/>	Form Caption Missing	34	3	31	3110
<input checked="" type="checkbox"/>	Form Navigation Bar Caption Missing	23		23	3310
<input checked="" type="checkbox"/>	Form Allows Datasheet and Form views	9	1	8	3120
<input checked="" type="checkbox"/>	Form Unassociated Label and Control	19	1	18	3240
<input checked="" type="checkbox"/>	Form Tab Order Does Not Match Default Order	17		17	3150
<input checked="" type="checkbox"/>	Form AutoCenter Disabled	9	1	8	3190
<input checked="" type="checkbox"/>	Form AutoResize Disabled	2	1	1	3195
<input checked="" type="checkbox"/>	Form Not Moveable	25	1	24	3340
<input checked="" type="checkbox"/>	Form ComboBox AutoExpand Disabled	1		1	3702
<input checked="" type="checkbox"/>	Form Command Button Should Show Hyperlink Hand	3		3	3320
<input checked="" type="checkbox"/>	Form Subform LinkMasterFields References a Field Rather	8		8	3400
<input checked="" type="checkbox"/>	Macro Unused	1		1	5100
<input checked="" type="checkbox"/>	Module Unused Procedures	14		14	6007
<input checked="" type="checkbox"/>	Module Unused Class Property	1		1	6090
<input checked="" type="checkbox"/>	Module Unused Enum Element	20		20	6046
<input checked="" type="checkbox"/>	Module Unused Procedure Parameters	1		1	6012
<input checked="" type="checkbox"/>	Module Unused Labels	13		13	6160
	Total	56	541	8	533

Details
The same field name should have the same Data Type and Size in all the tables it is used. For instance, a CustomerID should be a long integer always, and not a Double, Integer, etc., similar a LastName field should always be Text 50, and not Text 100 or 255 in different tables. Total Access Analyzer has detected identically named fields with different Data Type and/or Size settings. A report...

Select All Clear All OK Help

Filter by Error Type

Each type is listed with the count of incidents and its unique code. A description of the currently selected type appears in the Details box. Select or deselect individual items, or use the [Select All] and [Clear All] buttons. Press [OK] to return to the Documentation Explorer, and the list is updated according to the items selected in the filter.

Documentation by Object Type

The following sections outline the documentation available in the Documentation Explorer. Organized by object type, it shows how the documentation is organized and explains the contents of each Tab for each type of object. In some cases, a particular tab is not applicable for a particular type of object and it is not listed. For example, when the General folder is selected in the Treeview, only the Summary tab has data.

In the remainder of this chapter, the term *Folder* is used to describe an entry in the treeview that has a folder icon. The term *Item* is used to describe all other objects in the Treeview.

Since Jet databases (ACCDB/MDB) and Microsoft Access Projects (ADP) contain different object types, the descriptions that follow show whether the object type is available only in ACCDB/MDBs, only in ADPs, or both database types.

The following table is a quick reference for finding information on the documentation you are interested in:

Documentation	Page
Database	70
General, Inventory, Ribbons, Import/Export Specifications, Security, References, Containers	70
Tables	75
Queries	77
Relationships	79
Forms	80
Reports	81
Macros	83
Modules	85
Command Bars	95
Ribbons	96
Diagrams	96
ADP Tables	102
ADP Views	103
ADP Database Diagrams	103
ADP Stored Procedures	104

Database Item

The first object in the treeview is the Database item.



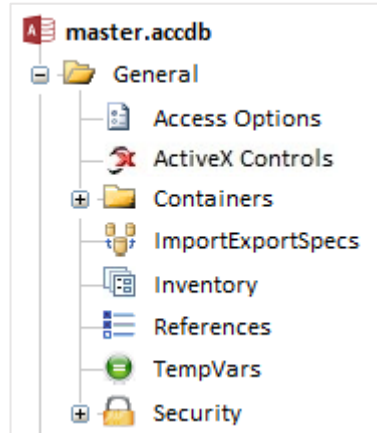
Tabs at Database Level

This is what's under each tab:

Tab Name	What's Displayed
Summary	Summary information about the database, including the path, name, and version
Database Properties	All database properties
Database XRef	All object cross-references across the database
Errors	All errors detected in the database
Suggestions	All suggestions for the entire database
Performance	All performance tips for the entire database

General Folder

The General folder contains information about your database at the highest level and is available for Jet (ACCDB and MDB) and ADP documentation.



It includes:

- Access option settings
- ActiveX controls
- Container and Document collections
- Saved ImportExport specifications
- Inventory of all objects
- Module library references
- Temporary variables (TempVars)
- Workgroup Security

For ADPs, containers and security are not available.

Access Options Item

You to set a variety of options under Access Options. Those settings are documented by Total Access Analyzer and shown here. For more information on individual settings, in Access, go under Access Options and press F1.

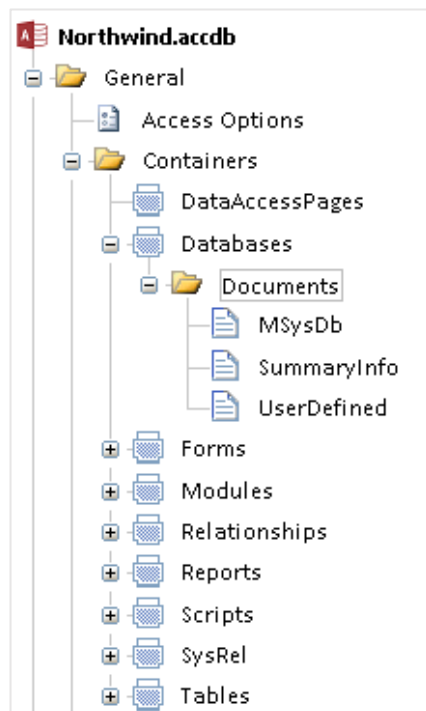
Tab Name	What's Displayed
Summary	The number of options documented
Options	Each option category, section, and value

ActiveX Controls Item

ActiveX controls can be used on forms and reports. Total Access Analyzer documents each of their uses.

Summary	The number of controls by ActiveX control type
ActiveX XRef	Where each ActiveX control is used on the forms and reports

Containers Folder



Access organizes ACCDB and MDB database objects into Containers and Documents. These objects hold permissions and other security settings implemented by Access User-Level security.

If you selected the "Containers" option (see page 52), this node appears in the General folder of the Treeview.

The Container folder includes nine Containers, each with a Document folder. For more information on Container objects, search Access online help for Containers. Containers are defined by the JET database engine:

- DataAccessPages for data access pages in Access 2003 or earlier
- Databases for internal objects maintaining the database
- Forms for all forms
- Modules for all standard (non-form/report) modules
- Relationships for table relationships
- Reports for all reports
- Scripts for all macros
- SysRel for relationship window layout information
- Tables for all tables and queries

Containers Folder

The Containers folder contains all container objects.

Summary	A list of all container names
Property Slices	View a property across all containers

Container Item

Each container in the database is an item. Each item also has a Documents folder.

Summary	The name of the container
Properties	The properties of the container

Documents Folder

Each container has a Documents folder that holds its members. For example, every form in the database is represented by a form document in the Forms container.

Summary	The name of each document in the container
---------	--

Document Item

Each document item in the container is shown.

Summary	The name of the document
Properties	The properties for the document

ImportExportSpecs Item

Import/Export specifications can be saved in Access 2007 and later. The list of saved specifications are documented

Summary	The number of saved specifications by type
Details	A list of each import/export name, description, type, path and XML values

The Detail reports provide more readable displays of the XML text divided by XML section.

Inventory Item

Inventory contains a list of all top-level objects in the database. This includes tables, queries, forms, reports, command bars, macros, and modules.

Summary	A list of the number of objects by type
Objects	A list of each object name by type (use the Filter to limit the list of objects)

References Item

Visual Basic for Applications (VBA) allows you to define references to other objects (libraries) from the Tools | References menu when a module is open in design view. This item lists each reference in the current database.

Note that Access automatically creates references in every database for:

- The Visual Basic for Applications library
- The Microsoft Access Object library
- The OLE Automation library
- The Microsoft ActiveX Data Objects library

Additionally, other references may be added by Access on your behalf. For example, when you place an ActiveX control on a form or report, Access creates a reference to the ActiveX control's resource library file.

Please note that the Microsoft DAO Object library is not included by default in new databases that are created in Microsoft Access 2000 or later. However in databases that need DAO, or in databases converted from previous versions of Access, this reference exists.

Summary	The number of references in the database
References	Each reference in the database and its properties (such as the full path, name, and version)

Temporary Variables (TempVars)

In Access 2007 and later, temporary variables can be defined in macros, embedded macros on forms and reports, and in VBA modules. These variables can be used by other objects including queries. Since they span so many object types across the entire database, temporary variables are listed under General with these tabs:

Summary	Number of named temporary variables
Variables	List of each temporary variable name
TempVars XRef	Where each temporary variable is defined and used

The cross-reference is also available under Modules XREF where you can filter it from the treeview by object. See Temporary Variables (TempVars) on page 90 for more information.

Security Folder

This folder contains Jet Engine security information on groups, users, permissions, and the workgroup. If you are not familiar with security, refer to the Access online help.

A workgroup is a collection of users and groups defined for security. Information for a workgroup is stored in an Access database called a Workgroup Information File, which typically has an extension of .MDW. If you implemented user-level security in your Access application, the information displays the specific users and groups of users you defined. If you have not implemented user-level security, the default Access Admins and Users groups are shown, along with an Admin user.

Workgroup Information Files are linked to Access itself, not to particular databases. This means multiple databases can share the same Workgroup Information File. Total Access Analyzer documents the Workgroup Information File in use by Access when documentation is generated.

For more information, search Access online help for **Workgroup Information Files**.

Summary	Information about the workgroup, including the number of users and groups, and the path and name of the Workgroup Information file (.MDW) currently in use
Errors	Errors detected with security

Security Groups Folder

This folder contains items for each group defined in the Workgroup Information file.

Summary	The number of groups defined
Errors	Errors encountered while documenting groups

Security Group Items

A group item appears for each group documented. If you implemented User-Level security in your application, this information is useful for tracking your group accounts.

Summary	The name of the group, as well as the path and name of the Workgroup Information file (.MDW) where the group is defined
Details	The properties of the group
Permissions	The group's permissions for each object

Important Note on Jet Database Security Documentation

The security settings documented by Total Access Analyzer are the Data Access Objects (DAO) permissions obtained using the Permissions and AllPermissions properties of Access Document objects. The names and types of permissions available through DAO are different from the permission names and settings available through the Access User Interface using the Database Tools, User and Permissions ribbon.

Unfortunately, Microsoft provides no documentation on how DAO permissions map to the Access User-Interface permissions. This, combined with the fact that there is no way for Total Access Analyzer to get to the User-Interface permissions means that there is a mismatch between some of the permissions documented by Total Access Analyzer and the permissions you see through the Access User-Interface. Rest assured that FMS has tested the DAO permissions documentation very carefully and the values being returned are correct. To use the Total Access Analyzer permissions documentation correctly, you must become familiar with the DAO permissions constants and properties.

We regret that we cannot accurately document permissions according to the terminology shown in the Access user interface, but the values we document are the exact values returned by the DAO object.

Security Users Folder

The Users folder contains all user objects in the group currently selected. If you implemented User-Level security on your database, this information is useful for tracking your user accounts. If you are not using User-Level security, this section lists the default Access User and Admin user accounts.

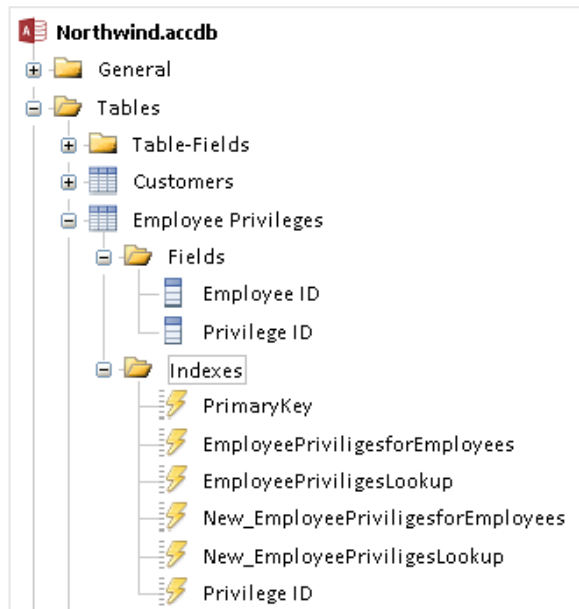
Summary	The number of users defined
Errors	Errors encountered during user documentation

Security User Items

Each user has an item shown here.

Summary	The user's name and workgroup name (of particular interest is the HasPassword property, which allows you to ensure that each user has a password set)
Details	The properties of the user
Permissions	The permissions for the current user for all objects and containers (see page 74 for important information concerning permissions)
Errors	Errors encountered during user documentation

Tables Folder



The Tables folder contains information on the tables selected for documentation. This includes table properties, their fields and indexes, cross reference, errors, suggestions, and performance tips.

This is an example of the Tables folder for an ACCDB.

- The Table-Fields folder shows field information across all tables.
- Each table has its own folder for its Fields and Indexes.
- If it has Data Macros, a Data Macro folder is available.

The terminology is slightly different for ADPs which is documented later.

Tab Name	What's Displayed
Summary	The number of tables documented and sorted by table type
Property Slices	Show the values for a single property across all tables or fields (see page 66 for more information)
Table XRef	Everywhere each table is used among the documented objects. See page 76 for a description of the columns shown in this view.
Errors	Errors detected among all tables
Suggestions	Suggestions for all tables
Performance	Performance tips for all tables

Table-Fields Folder (and Table Item)

The Table-Fields folder displays the list of fields, types, and many other properties across all tables.

Summary	By Data Type, the number of fields using it
Fields	For each table, all its fields and many of their properties.
Field XRef	Every place a field in the table is used among the documented objects (see page 76 for a description of the columns shown in this view)

Table Item

An item appears below the Tables folder for each table documented. Included below each table item is a list of properties, a list of the table's fields, and a list of the table's indexes.

For more information on table definitions, search Access VBA online help for **TableDef object**

Summary	Basic information about the table, including the number of records in the table and the cumulative size in bytes per record (note that if you did not select "Document Record Counts" as an option on page 49, the value of this is -1)
Properties	A list of all properties for the table

Table XRef	<p>Every place the table is used among the documented objects. These are the fields:</p> <p>The <i>Calling Object Type</i> and <i>Calling Object Name</i> fields show the object type and name referring to the table.</p> <p>The <i>Calling Child Type</i> and <i>Calling Child Name</i> fields show which item in the <i>Calling Object Name</i> refers to the table. For example, if a table is referenced by a control on a form, the <i>Calling Object</i> is the form and the <i>Calling Child</i> the control.</p> <p>The <i>Referenced Object</i> is the table being referenced.</p> <p>The <i>Called In</i> field is the property in the <i>Calling Object</i> or <i>Calling Child</i> that refers to the table.</p> <p>The <i>Resolved</i> field shows whether the referenced table exists. If the value is not checked, the table does not exist in the documented database. This indicates a serious error in your database, and is reported in the Errors tab of the table.</p> <p>The <i>Variable</i> field indicates whether the referenced table is a variable or expression. If this is the case, Total Access Analyzer cannot determine the validity of the reference, and automatically sets the <i>Resolved</i> field to unchecked (No). If the <i>Variable</i> field is checked (Yes), you must manually inspect the reference to determine its validity.</p>
Errors	Errors documented for the table
Suggestions	Suggestions available for the table
Performance	Performance tips for the table

Fields Folder

For ACCDB/MDB databases only, the Fields folder is the collection of fields in the table.

Summary	A list of fields in the table
Property Slices	Property's values across all fields in the table
Field XRef	Every place a field in the table is used among the documented objects (see page 76 for a description of the columns shown in this view)

Field Item

For ACCDB/MDB databases only, a field item exists for each field in the table.

Summary	Basic information about the field, including its data type, size, and description
Properties	All of the field's properties (if you did not select the Document Field Properties option as explained on page 49, this section is blank)
Field XRef	Everywhere the field is used among the documented objects (see page 76 for a description of the columns shown in this view)

Indexes Folder

The Indexes folder is the collection of Indexes belonging to a table.

Summary	A list of indexes in the table
Property Slices	Property's values across all indexes in the table

Index Item

An item exists for each index in the table.

Properties	The index properties
------------	----------------------

Data Macros Folder

The Data Macro folder is the collection of Data Macros for the table.

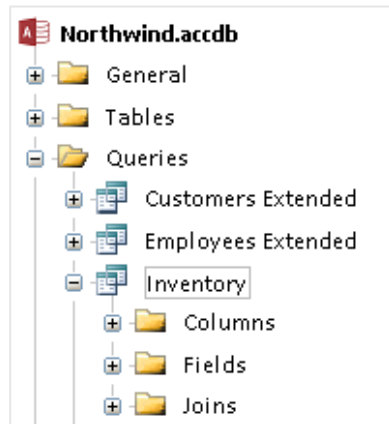
Summary	A list of data macros in the table
---------	------------------------------------

Data Macro Item

An item exists for each data macro in the table.

Summary	Name and number of lines
Data Macro	The data macro XML syntax

Queries Folder



The Queries folder contains information on the queries selected for documentation.

This includes query properties, their exposed columns, their referenced fields, table joins, parameters, errors, suggestions, and performance tips.

Tab Name	What's Displayed
Summary	The number of queries documented and the number of queries by query type
Property Slices	The values for a single property across all queries (see page 66 for more information on Property Slices)
Query XRef	Every place queries are used among the documented objects (see page 76 for a description of the columns shown in this view)
Errors	Errors detected for all queries
Suggestions	Suggestions for all queries
Performance	Performance tips for all queries

Query Item

An item appears below the Queries folder for each query documented. Included below a query item are folders for the columns exposed by the query, the fields used by the query, parameters, and joins.

For more information on query definitions, search Access VBA online help for **QueryDef object**

Summary	Information about the query such as its SQL string and type
Properties	The query's properties
Query XRef	Every place the query is used among the documented objects (for a description of the columns shown in this view, see page 75)
Errors	All errors for the query
Suggestions	All suggestions for the query
Performance	All performance tips for the query

Columns Folder

The Columns Folder represents the collection of fields provided (exposed) by the query (not the fields used by a query which are in the Fields folder). Not every query has columns. For instance, Action queries never have columns. The columns correspond to the DAO Fields collection of a query, which contains the fields returned by a SELECT or Crosstab query.

Summary	A list of fields referenced by the query
Property Slices	Property slices across all query's columns

Column Item

A column item appears in the treeview for every column provided by the query.

Summary	Column name
Properties	Column properties

Fields Folder

The Fields Folder represents the fields used in the query. These fields may or not be columns (fields exposed by the query).

Summary	A list of fields referenced by the query
---------	--

Field Item

A field item appears in the treeview for every field referenced by the query.

Summary	The name, type and other attributes of the field
---------	--

Parameters Folder

Parameter queries require input values before running. These values are typically used in the query's constraint (WHERE clause) and allow your queries to be very flexible.

For more information, search Access VBA online help for **Parameters collection**

A query may have many parameters. Access queries support two types of Parameters, implicit and explicit. Implicit parameters are defined as a reference to a field or expression that cannot be resolved by the query engine until runtime. Explicit parameters are those that are explicitly identified using the Parameters dialog available while in query design under Design | Show Hide | Parameters.

All explicit and implicit parameters are documented in the Parameters folder.

Summary	Each parameter and its name
---------	-----------------------------

Parameter Item

Each parameter in the query has a parameter item.

Summary	The name and data type of the parameter
Properties	The properties of the parameter

Joins Folder

When a query links tables or queries together, it does so with joins. Each join in the query is in the Joins Folder.

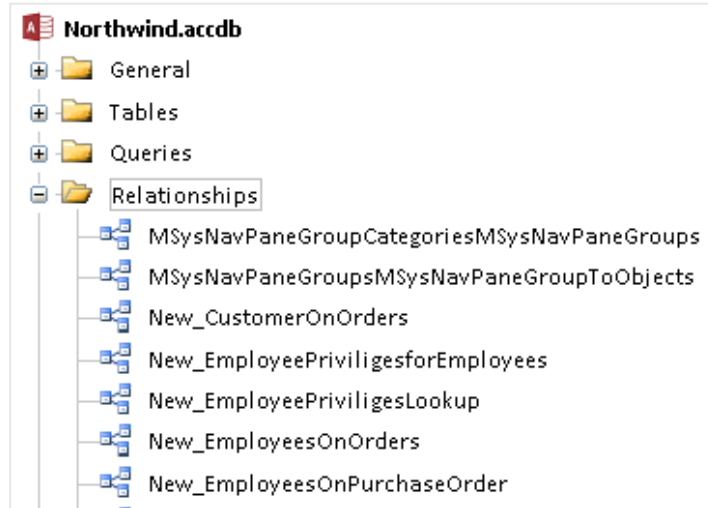
Summary	The joins identified by number starting at 1
---------	--

Join Item

Each join in the query is a Join Item.

Summary	The tables and fields used by the join, and join type
---------	---

Relationships Folder



Relationships among tables and queries are defined from the Database Tools | Show Hide | Relationships.

Tables and queries can be linked 1-to-many, 1-to-1, or indeterminate relationships. You can also enforce referential integrity to ensure that data changes do not corrupt data.

Total Access Analyzer documents all relationships in your database, including those that are inherited from tables in linked databases.

The Relationships folder contains all relationships in the documented database.

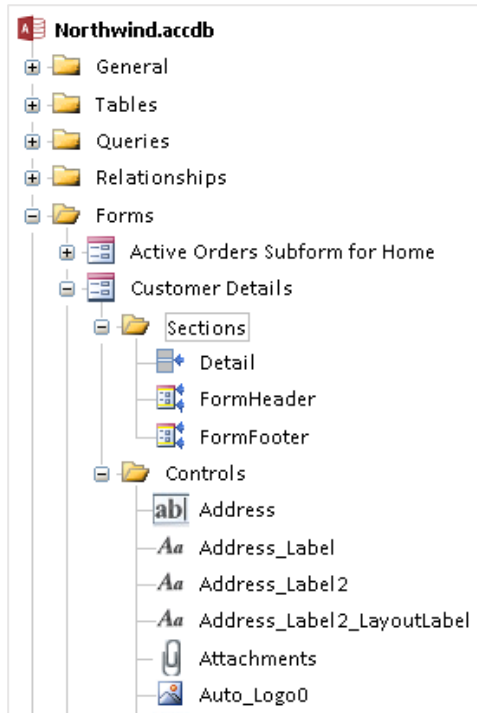
Tab Name	What's Displayed
Summary	Each relationship and its name
Relationships	Option to preview and print a view of your Relationships window by pressing the [View Relationships Window] button (for more information, see page 126)
Errors	All relationship errors

Relationship Item

A relationship item exists for each relationship.

Summary	All relationship properties, including the names of the tables and fields the relationship uses, and the relationship type
Relationships	A graphical representation of the relationship
Errors	All errors for the relationship

Forms Folder



Every form selected for documentation is available in the Forms folder.

Each form has folders for Sections and Controls.

The module code behind the forms is not included here. Look in the treeview's Modules folder for form modules. That's also where you'll find errors, suggestions, and performance tips related to the module code behind forms.

Similarly, the form's embedded macros are available in the Macros folder.

Tab Name	What's Displayed
Summary	The total number of documented forms and the number with and without code
Property Slices	The property slices for forms (select a property to see its values across all the forms or form controls; see page 66 for more information)
Form XRef	Where forms are used among the documented objects (see page 76 for a description of the columns shown in this view)
Errors	All errors documented for forms
Suggestions	All suggestions for forms
Performance	All performance tips for forms

Form Item

Each documented form has a form item.

Summary	Basic information about the form, including its name, description, and record source
Properties	All form properties
Form XRef	Where the form is referenced among the documented objects (see page 76 for a description of the columns shown in this view)
Errors	All errors documented for the form
Suggestions	All suggestions available for the form
Performance	All performance tips for the form

Sections Folder

Access forms are divided into sections. There are five possible sections for forms: form header, form footer, page header, page footer, and detail. The Sections folder contains every section in the form. If a section does not exist, it is not listed.

Summary	A list of sections and their names
Property Slices	Select a property for all the sections in the form

Section Item

Each section in the form is represented by a section item.

Summary	The section name and number
Properties	All properties for the section

Controls Folder

The Controls folder contains every control on the form.

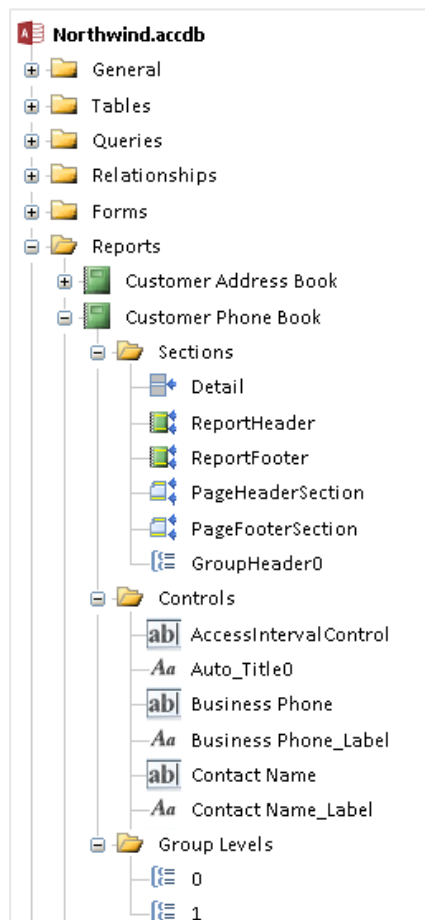
Summary	A list of controls and their names
Property Slices	View a property for all the controls on the form

Control Item

Each control in the form is shown as a control item.

Summary	Basic control information such as type, caption, and control source
Properties	All properties for the control (depends on your selection of “Control Format Properties” and “Control Other Properties” as explained on page 49)

Reports Folder



Every report selected for documentation is available in the Reports folder. Each report has folders for

- Sections
- Controls
- Group Levels

The module code behind the reports is not included here. Look in the treeview’s Modules folder for report modules. That’s also where you’ll find errors, suggestions, and performance tips related to the module code behind reports.

Similarly, the report’s embedded macros are available in the Macros folder.

Tab Name	What's Displayed
Summary	The total number of documented reports and the number with and without code
Property Slices	The property slice for reports (select a property to see its values across all the reports or report controls; see page 66 for details)
Report XRef	Where reports are used among the documented objects (see page 76 for a description of the columns shown in this view)
Errors	All errors documented for reports
Suggestions	All suggestions for reports
Performance	All performance tips for reports

Report Item

Each documented report has a report item.

Summary	Basic information about the report including its name, description, and record source
Properties	All report properties
Report XRef	Where the report is used among the documented objects (see page 76 for a description of the columns shown in this view)
Errors	All errors detected for the report
Suggestions	All suggestions available for the report
Performance	All performance tips for the report

Sections Folder

Access reports are divided into sections. There are several possible sections for reports: detail, headers and footers for the report, page headers and footers, and the report's sorting and grouping levels. The Sections folder contains all the sections in the report.

Summary	A list of sections and their names
Property Slices	View a property for all the sections in the report

Section Item

Each section in the form is represented by a section item.

Summary Tab	The section name and number
Properties	All properties for the section

Controls Folder

The Controls folder contains all controls on the report.

Summary	A list of all controls and their names
Property Slices	View a property for all the controls in the report

Control Item

Each control in the report is shown as a control item.

Summary	Basic information on each control including its type, caption, and control source
Properties	All properties for the control (the properties listed depend on your selection of "Control Format Properties" and "Control Other Properties" as described on page 49)

Group Levels Folder

The Group Levels folder contains all group levels on the report.

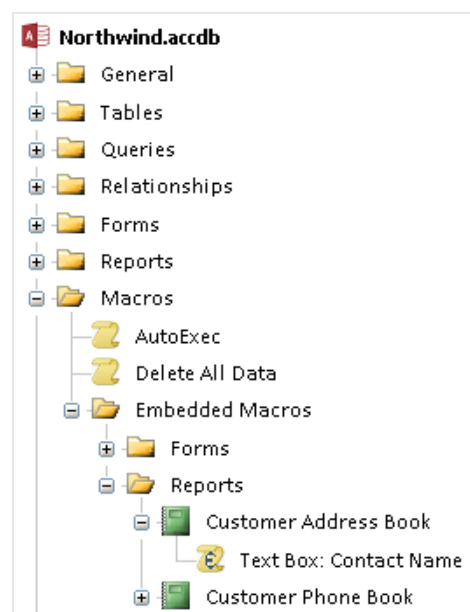
Summary	A list of all group levels
Property Slices	View a property for all the group levels in the report

Group Level Item

Each group level in the report is shown as a group level item.

Summary	Basic information on each group level including its control source, group header, etc.
Properties	All properties for the group level

Macros Folder



Every documented macro is listed in the Macros folder.

For each macro, its properties, macro lines, and sub-macro names are listed.

If Embedded Macros were created on the forms and reports, they are displayed in the Embedded Macros folder which comes after all the standard macros.

Tab Name	What's Displayed
Summary	The number of macros documented
List	A list of macros
Macro XRef	Where macros are referenced among the documented objects (see page 76 for a description of the columns shown in this view)
Errors	All errors documented for macros
Suggestions	All suggestions for macros
Performance	All performance tips for macros

Macro Item

A macro item exists for each macro documented.

Summary	The macro's name and number of lines
Macro Lines	Macro lines with each action, conditions, and arguments
Macro XRef	Where the macro is used among the documented objects (see page 76 for a description of the columns shown in this view)

Errors	All errors documented for the macro
Suggestions	All suggestions for the macro
Performance	All performance tips for the macro

Embedded Macros Folder

If Embedded Macros were created on the forms and reports, they are displayed in the Embedded Macros folder below the standard macros.

Summary	Number of forms and reports with embedded macros
Embedded Macros	List of every embedded macro event across all the forms and reports

Embedded Macros Forms or Reports Folder

Within this folder, Embedded Macros are categorized by object type (form or report).

Summary	Number of embedded macros for the object type
Embedded Macros	List of every embedded macro event for the object type

Embedded Macros Form or Report Item

Each form or report with embedded macros is listed.

Summary	Number of embedded macros for the object
Embedded Macros	List of every embedded macro event for the object

Embedded Macro Item

Each embedded macro is listed with its detailed lines.

Summary	Embedded macro event name
Macro Lines	Macro lines with each action, conditions, and arguments

Overview of Module Documentation

Total Access Analyzer generates a large amount of information about the module code in your database and works identically for ACCDB, MDB, and ADP databases. In addition to source code, Total Access Analyzer also documents and cross references procedures, variables, constants, declarations, user defined types, class modules, and many other VBA constructs. Because the type of documentation generated for modules is different from other objects, module cross reference is discussed in detail later.

Types of Access Modules

Access supports four types of modules. Regardless of type, all documented modules appear under the Modules folder in the Total Access Analyzer Documentation Explorer form:

Standard Modules

The standard modules are the regular (general) modules that appear in your database window.

General Class Modules

Class modules allow you to create powerful self-contained objects defined with properties and methods. Variables can be based on class modules and used by any module.

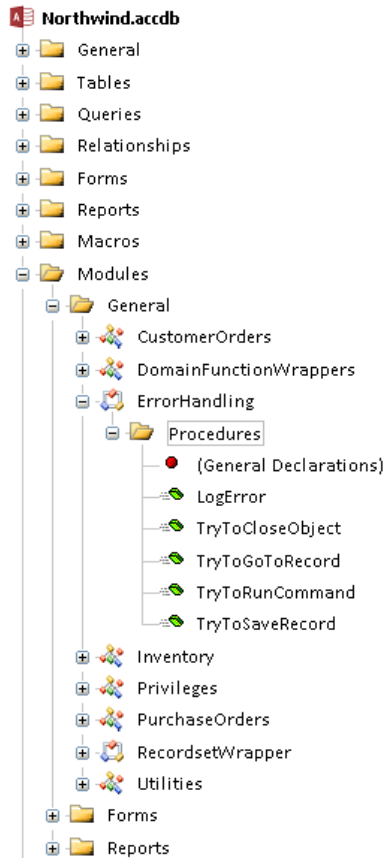
Form Class Modules

The code attached to a form is called a form class module. Forms are considered class modules and can be invoked from any module.

Report Class Modules

Similarly to form class modules, reports have report class modules.

Modules Folder



The Module folder contains all the documented modules.

There are three folders under the Modules folder:

- General
- Forms
- Reports

Every selected module, and form and report with module code, is listed.

The General folder contains the modules that appear in the Module tab of the database window (standard and general class modules).

Within each module item is a Procedures folder containing its declarations and individual procedures.

Tab Name	What's Displayed
Summary	The number of modules documented and the number of each type of module
List	A list of modules
Module XRef	Module XRef information for all modules (see page 86 for information on Module XRef)
Errors	All errors documented for modules
Suggestions	All suggestions for modules
Performance	All performance tips for modules

General, Forms and Report Folders

The modules are organized into three folders for standard modules, and modules behind forms and reports. The tabs are identical to the Modules level tabs but filtered by the module type.

Module Item

An item exists for every module documented.

Summary	Information about the module including its description and whether it is a class module
Module Code	The module's VBA source code by procedure (use the vertical scroll bar, or [PgDn] and [PgUp] keys to move between the procedures)
Module XRef	Module XRef information for the module (see page 86 for information)
Errors	All errors documented for the module
Suggestions	All suggestions for the module
Performance	All performance tips for the module

Procedures Folder

The Procedures folder contains the module's declarations section and all its procedures.

Summary	A list of all procedures in the module
Procedures	Details of each procedure in the module

Procedure Item

Each procedure in the module is a procedure item. This list includes the declarations section of the module, shown as "(General Declarations)".

Summary	The procedure definition including its type, start line, number of lines of code, parameters, etc.
Module Code	The VBA source code for the procedure
Procedure XRef	Where the procedure is referenced
Errors	All errors documented for the procedure
Suggestions	All suggestions for the procedure
Performance	All performance tips for the procedure

Module Cross Reference

One of the most powerful features of Total Access Analyzer is its module code analysis. This module analysis is called "Module XRef" and gives you an incredible amount of detail about your modules and how they work.

Module XRef information is displayed in the XRef tab when viewing a module or procedure object. The contents of the XRef tab changes according to the folder or object you are on in the Treeview. For example, when you click on the Modules folder and select the XRef tab, you are viewing cross reference information for all VBA code across all modules. When you click on a specific module and select the XRef tab, you are viewing information for all VBA code in the current module.

Module XRef includes many types of information:

- **Module Definitions**
Module summary of options, procedure and line counts, etc.
- **Procedure Definitions**
Procedure declaration information including events
- **Procedure Usage**
Where and how procedures are used (called)
- **Procedure Calls**
Procedures called by each procedure

- **Constants**
Every declared constant, its value, and module scope
- **Variables**
Every variable and how it's used (defined, assigned a value, or referenced)
- **TempVars**
Temporary variables referenced by forms, reports, and modules
- **DoCmd Actions**
Every DoCmd action and how it is used
- **Labels**
Every label definition and reference
- **Function Usage**
Every use of Access VBA functions and the parameters passed
- **Compiler Conditions**
Use of compiler conditions defined with #IF and #ELSE commands
- **Library Declarations**
External procedures referenced with Declare statements
- **User Defined Types**
Every user defined type and its elements
- **User Defined Type Variables**
Variables based on user defined types
- **Enums**
Every enum definition and its elements
- **Enum Variables**
Variables based on enums
- **Class Module Variables**
Variables based on class modules
- **Class Events**
Events defined in class modules
- **Debug & Stop Statements**
Everywhere a Debug or Stop statement is used
- **DEF Types**
Use of type definitions (DefInt, DefDbt, DefStr, etc.) to set variable types based on their first letter

For module folders and items, the XRef tab includes a Module XRef Filter that lets you select the data to view:

Summary List Module XRef Errors Suggestions Performance		
Module XRef Filter: Module Definitions		
Module Type	Module Definitions	Module definitions
Module	Procedure Definitions	Procedure definition details
Module	Procedure Usage	Where and how procedures are used (called)
Module	Procedure Calls	Procedures called (used) by a procedure
Module	Constants	Constants declared, their values, and scope
Module	Variables	Variable declarations, assignments, and usage
Module	TempVars	Temporary variables
Module	DoCmd Actions	DoCmd actions and type
Module	Labels	Label definitions and references
	Function Usage	References to built-in Access VBA function calls
	Compiler Conditions	Compiler conditions defined with #IF and #ELSE commands
	Library Declarations	Library procedure (Declare) declarations
	User Defined Types	User defined type definitions
	User Defined Type Variables	Variables based on a user defined type
	Enums	Enumerated type definitions
	Enum Variables	Variables based on an enumerated type
	Class Module Variables	Variables based on a class module
	Class Events	Class Events
	Debug & Stop Statements	Debug and Stop statements
	DEF types	Use of Define types (DefStr, DefInt, DefDbt, etc.)

Module XRef Filter Selections

These items are available if you are on the Modules Folder or module item. If you are on a procedure item, the module level XRef items (e.g. Library Declarations, User Defined Types, and DEF types) are not available. The selected XRef item stays the same as you move among modules. If you move between modules and procedures, each preserves its last selection.

Each Module XRef type is described in detail:

Procedure Definitions

Detailed information for the definition of every declaration, procedure, and property Let/Get/Set statement is shown.

The documentation is based on this syntax for Subs:

```
[Private|Public] [Static] Sub ProcName [(arglist)]
```

This syntax is used for Functions:

```
[Private|Public] [Static] Function ProcName  
[(arglist)] [As ReturnType]
```

Events defined in the declarations section of a module are also included:

```
[Public] Event ProcName [(arglist)]
```

Similar syntax applies to Property Let, Get, and Set.

For each of these, the following information is shown. The declarations section is also listed, but most of the fields are not relevant:

Field Name	Description
Module Type	The type of module (module, form, or report)
Module Name	The module where the procedure is defined
Procedure	The procedure, event, or property name
Static	Checked if the procedure is declared as Static
Public	Checked if the procedure is declared as Public
Private	Checked if the procedure is declared as Private
Type	The procedure type (Sub, Function, or Event); for class modules, if it is a property, the type (Get, Let, or Set)
Parameters	The procedure's parameter declaration (argument list)
Parameter Count	The number of parameters (arguments)
Optional Parameters	The number of optional parameters (as specified by the VBA Optional keyword)
Return	The explicit return type for functions
Description	The first line of comment text which is assumed to be the procedure's description
Comments	The comment block before your procedure declaration (or immediately after if no comments are found above your declaration)
Start Line	The line number where the procedure starts
End Line	The line number where the procedure ends
Error Trap	Checked if the procedure has error handling code (if the procedure has an "On Error" line, it is considered to have error handling)
Code Exists	Checked if the procedure has any code in it (if the procedure only has comments, it is not considered to have code)
Condition	Compiler condition, if any

Procedure Usage

Also known as the Procedure Cross Reference, this list shows every place a procedure is used. This includes references from other modules, form and report events, macros, and even queries. This is extremely useful for understanding everywhere a procedure is called and the parameters used.

Field Name	Description
Referenced Module Type	The type of the module in which the referenced procedure is defined (module, form, or report)
Referenced Module Name	The name of the module in which the referenced procedure is defined
Referenced Proc	The name of the referenced procedure
Calling Proc	The procedure calling the Referenced Proc (may be blank if the reference is not from a procedure such as an event, macro, or query)
Calling Object Name	If there is a Calling Proc, the name of the module in which the Calling Proc is defined; otherwise, the name of the object calling the Referenced Proc
Calling Type	The object type of the Calling Object Name
Calling Child Type	If the procedure is called from a form or report control, the control type (Command Button, ListBox, Label, etc.); it is a "child" of the Calling Object
Calling Child Name	The name of the control referencing the procedure
Event	The event name, if the procedure is called from a form, report, or control event
Parameters	The parameters used to call the procedure
Line	If the procedure is referenced in module code, the line number in the Calling Object Name module where the reference is made

Common Fields

The remaining Module XRef listings each have these three fields:

Field Name	Description
Module Type	The type of module (module, form, or report)
Module Name	The module name
Procedure	The name of the procedure documented

Procedure Calls

For every procedure, the procedures it uses are listed. In addition to the common fields listed above, these fields are shown:

Field Name	Description
Referenced Procedure	The name of the referenced procedure
Parameters	The parameters used in the procedure call
Referenced Module Type	The type of module in which the referenced procedure is defined
Referenced Module Name	The name of the module in which the referenced procedure is defined
Line	The module line number where the object is referenced

Constants

Each constant declaration is listed, along with its assigned value. Constants are defined by this syntax:

```
[Public|Private] Const constName [As type] = value
```

In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Constant	The name of the constant
Value	The value of the constant
Type	The constant declaration type (Const, Public Const, or Private Const)
DimType	The data type of constant (string, integer, etc.), if specified
Line	The line number where the constant is defined
Condition	Compiler condition, if any

Variables

The list includes every variable (including constants) and how it is used. In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Variable	The name of the variable
Parameters	The array parameters, if any
Type	How the variable is referenced: Const – the variable is declared as a constant Dim – the variable is declared Assigned – the variable is assigned a value Referred – the value of the variable is used Param – the variable is a procedure parameter
DIMType	If the variable is defined in a Dim statement, the variable's data type (String, Long, Boolean, etc.)
Line	The module line number where the variable is used
Condition	Compiler condition, if any

Temporary Variables (TempVars)

The list includes every temporary variable use and how it is used. In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Line	Line number if referenced from a macro or module
TempVar Name	The name of the temporary variable
Type	How the temporary variable is referenced: SetTempVar – the variable is assigned a value Add – the variable is increased by the amount Referred – the variable is used (referenced) RemoveTempVar – the variable is cleared
Assigned Value	Value assigned or incremented
Property Name	Object's property, if any, where the TempVar is used

DoCmd Actions

Every use of DoCmd in your code is documented. DoCmd has this syntax:

```
[Application.]DoCmd.Action Arguments
```

In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Action	The DoCmd action (Hourglass, Echo, OpenForm, Close, etc.)
Arguments	The arguments of the DoCmd action
Line	The module line number where DoCmd is called

Labels

Every label definition and reference is documented. Labels are used in a variety of syntax. Labels are defined this way:

```
LabelName:
```

Or referenced this way:

```
GoTo LabelName
Resume LabelName
```

In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Line	The module line number where the label is used
Label	The name of the label
Type	The type of label reference: Define, GoTo, or Resume

Function Usage

References to Access VBA functions (such as IsNull, Clnt, Mid\$, Len, etc.) are documented. Note that these are different from calls to user defined functions, which are part of the procedure calls list.

In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Function	The name of the function being called
Parameters	The parameters passed to the function
Line	The module line number where the function is called

Compiler Conditions

Compiler conditions are VBA syntax that specifies which code is active based on the value of the condition. This is particularly common for code which has both 32 and 64 bit API declarations. Compiler conditions are defined in syntax like this:

```
#If VBA7 Then
  < 64 bit code>
#Else
  < 32 bit code >
#End If
```

The use of these conditions is documented:

Field Name	Description
Condition	The condition value
Line	The module line number where the condition is defined

Library Declarations

Library declarations are procedures stored in external DLL or EXE libraries. They are defined with the Declare syntax:

```
[Public|Private] Declare Sub procname Lib libname
    [Alias aliasname] [(arglist)]
```

There is a similar syntax for declared functions, which have a return type. In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Type	The declared procedure type: Function or Sub
Procedure	The name of the declared procedure
Alias	The alias of the declared procedure, if any
Library	The name of the EXE or DLL library
Parameters	The parameters of the declared procedure, if any
# of Params	The number of parameters
ReturnType	The data type of the return value if it is a function (String, Boolean, Integer, etc.)
Line	The module line number of the Declare statement
Condition	Compiler condition, if any

User Defined Types

User defined types are defined in the declarations section of a module with this syntax:

```
[Private|Public] Type typeName
    element1 [(subscripts)] As varType1
    element2 [(subscripts)] As varType2
    ...
End Type
```

There is one record for every user defined type and element. In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Type Name	The name of the user defined type
Public	Checked if the Type is defined as Public
Private	Checked if the Type is defined as Private (types defined in forms and reports are always Private)
Number	The element number, starting at one and incremented for each element in the type
Variable	The variable (element) name
Parameters	The parameters if the variable (element) is an array
Dim Type	The data type of the element (if defined)
Line	The module line number where the type element is defined
Condition	Compiler condition, if any

User Defined Type Variables

Every variable based on a user-defined type is listed. The documentation is based on this syntax:

```
Dim varName As UserDefinedType
```

In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Type Name	The name of the user defined type
Variable	The variable (element) name

Enum Definitions

Enums are defined in the declarations section of a module with this syntax:

```
[Private|Public] Enum enumName
    membername1 [= constantExpression]
    membername2 [= constantExpression]
    ...
End Enum
```

There is one record for every enum and element. In addition to the common fields (page 89), these fields are shown:

Field Name	Description
Enum Name	The name of the enum
Public	Checked if the Enum is defined as Public
Private	Checked if the Enum is defined as Private
Number	The number, starting at one and incremented for each member in the Enum
Member Name	The member name
Constant Expression	The integer value of the element (even if it isn't explicitly defined)
Implied	Checked if the constant expression was not explicitly defined
Line	The module line number where the enum member is defined
Condition	Compiler condition, if any

Enum Variables

Every variable based on an enum is listed. The documentation is based on this syntax:

```
Dim varName As EnumName
```

In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Enum Name	The name of the Enum
Variable	The variable name

Class Module Variables

Every variable based on a class module is listed. The documentation is based on this syntax:

```
Dim varName As ClassModuleName
```

In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Variable	The variable based on a class module
Class Name	The name of the class module referenced

Class Events

Class events are procedure defined with the WITH EVENTS syntax.

In addition to the common fields (listed on page 89), these fields are shown:

Field Name	Description
Event Name	The defined event name
Public	Checked if the procedure is declared as Public

Start Line	The line number where the procedure starts
End Line	The line number where the procedure ends
Parameters	The procedure's parameter declaration (argument list)
Parameter Count	The number of parameters (arguments)
Optional Parameters	The number of optional parameters (as specified by the VBA Optional keyword)
ParamArray	If parameter arrays are used
Called	The event is referenced by the documented modules
Condition	Compiler condition, if any

Debug and Stop Statements

Shows all references to Debug.Print and Stop statements. You should examine this list since these debugging commands should not be running in a production database (of course, you may have logic that allows them to work when you are debugging). In addition to the common fields (listed on page 119), these fields are shown:

Field Name	Description
Line	The module line number of the command
Command	The command used: "Debug.Print" or "Stop"

Def Type Statements

Every use of a Deftype statement is documented. This command is used to set the data type of variables based on their first letter. This is an old style of Basic programming and is not recommended since you can now explicitly define the data type of each variable.

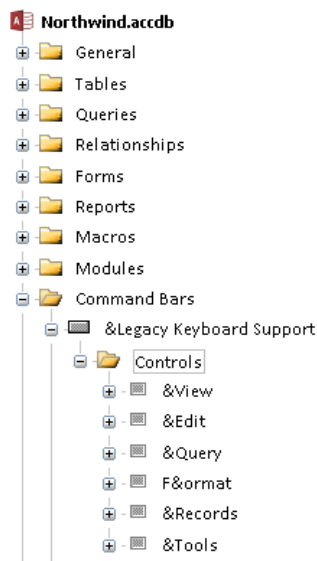
For more information, refer to "Deftype Statements" in the Access online help file. There are many Deftype commands: DefBool, DefByte, DefInt, DefLng, DefCur, DefSng, DefDbl, DefDec, DefDate, DefStr, DefObj, DefVar. They share this syntax:

```
DefInt LowLetterRange[, HighLetterRange]
```

The definition can be set for one letter or a range of letters. These fields are shown:

Field Name	Description
Module Type	The type of module (module, form, or report)
Module Name	The module name
Define Type	The Deftype: DefInt, DefLng, DefStr, etc.
Low Range	The first letter of the range
High Range	The last letter of the range
Line	The module line number of the DefType

Command Bars Folder



Command Bars are available for ACCDBs/MDBs and ADPs and include built-in Access command bars and user defined ones. Command bars were replaced by the Ribbon in Access 2007 but may still exist

The Command Bars folder contains all of the documented command bars.

Each command bar contains controls that may also contain additional controls.

Tab Name	What's Displayed
Summary	A list of all command bars
Property Slices	View a property value across all the documented command bars or their controls (see page 66 for more information on using the Property Filter)
CommandBar XRef	Where command bars are referenced among the documented objects
Errors	All errors documented for command bars

Command Bar Item

Each documented command bar is an item in the list.

Summary	Basic information about the command bar (including the number of controls it has and whether it is a built-in command bar)
Properties	The command bar properties
CommandBar XRef	Where the command bar is used among the documented objects
Errors	All errors documented for the command bar

Controls Folder

Each command bar contains one or more controls. This folder contains all the controls in the command bar.

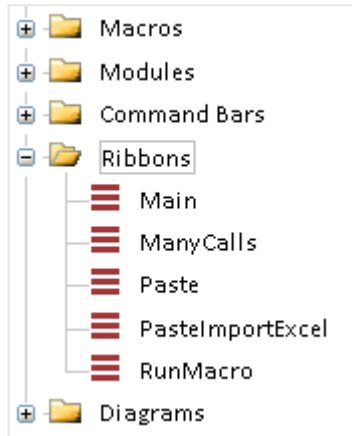
Summary Tab	A list of all controls in the command bar
Property Slices	View a property across all the controls in the command bar (see page 66 for more information on using the Property Filter)

Control Item

Each control in the command bar is shown in this section of the Treeview. Note that command bar controls may contain other controls. When this occurs, Total Access Analyzer adds an additional folder node below the control item. Expand this node to see the controls contained in the control.

Summary Tab	The name and type of the control
Properties	Every control property

Ribbons Folder



Total Access Analyzer documents the custom ribbons defined in your UsysRibbons table. The table contains a separate record for each ribbon.

Each of the ribbons is listed here with details about what's in each and where it's used by the documented objects.

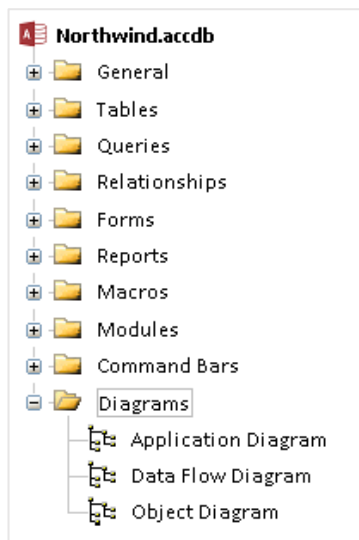
Tab Name	What's Displayed
Summary	Total number of Ribbons and Controls
Details	A list of every ribbon, their number of controls, and the ribbon XML
Ribbon XRef	Where the ribbons are referenced among the documented objects
Errors	All errors for the documented ribbons
Suggestions	All suggestions for the document ribbons (unused Ribbons)

Ribbon Item

Each ribbon is an item in the list.

Summary	The number of controls in the ribbon
Ribbon XML	The Ribbon XML
Ribbon XRef	Where the ribbon is referenced among the documented objects
Errors	Errors for the ribbon
Suggestions	Suggestions for the ribbon

Diagrams Folder



Total Access Analyzer generates three types of diagrams.

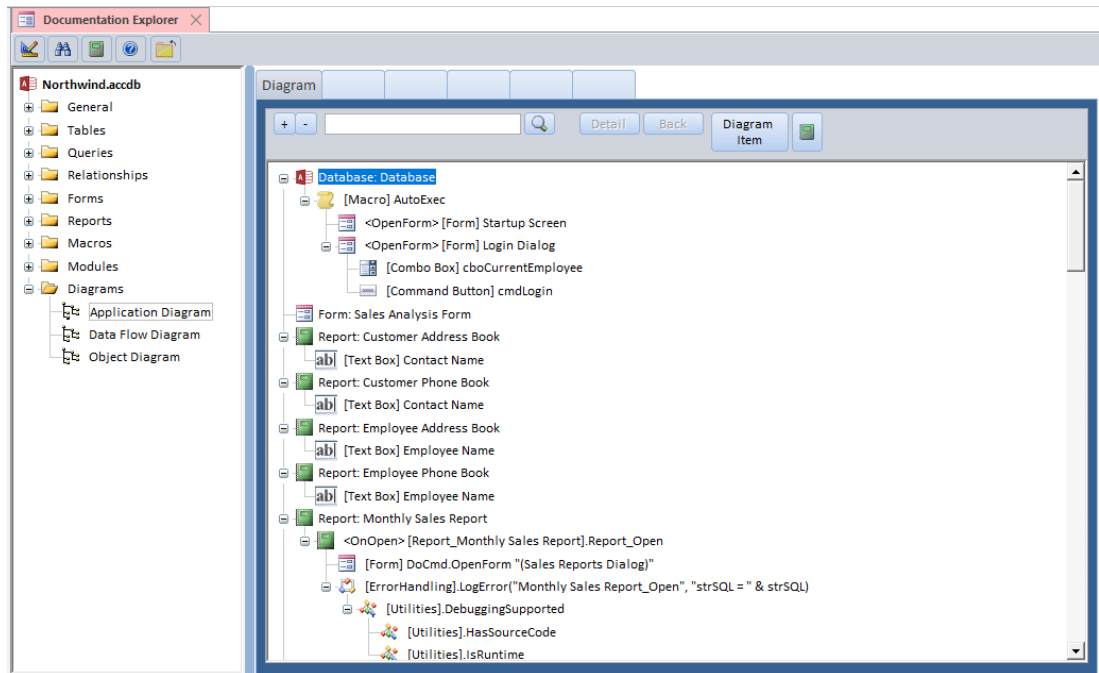
The diagrams are the highest summary level analysis of your database. Unlike cross reference information that only shows a relationship between two objects (described on page 86), the diagrams show multi-level hierarchies across multiple objects and really show how your application works.

Please remember, the diagram is limited by the capabilities of Total Access Analyzer. Some object references and procedure calls are not documented and therefore not included in the diagram. This is particularly true of forms and reports referenced by variables in your code. See Documentation Limitations on page 37 for more information.

Due to the cross reference limitations of ADP documentation (see page 39), only one of the diagrams (Application Flow) is available for ADPs.

Viewing the Diagrams

When you select the Summary tab, Total Access Analyzer loads the diagram tree. Depending on the number of objects and the complexity of your application, this may take a moment:



Viewing a Diagram

Root Level Objects

The first (*root*) level objects are displayed. Each object can be opened to show branches representing dependencies upon it. Although there are lines between the root level objects, there are no dependencies between them. They are just sorted by type and name.

Buttons

The following buttons are available at the top of the diagram:

+ and - Buttons

Within the diagram, you can expand individual branches by clicking on the [+] next to the branch. Click on the [-] box to close the branch. To expand or collapse all branches, use the [+] and [-] buttons next to [Search].

Search Button

The [Search] button allows you to find a value in the diagram. This is particularly useful if the diagram is large. Enter a value in the combo box and press the [Search] button. The combo box keeps a list of the values entered for you to select again.

Detail and Back Buttons

The first time an object is encountered in the diagram, all of its branches are drawn. If the same object is used again, a reference is made to the original drawing. By showing each object's tree once, the diagram is considerably smaller and more manageable.

An object already drawn in the diagram is displayed with a [+] at the end of its line. If you click on that line, the [Details] button is enabled. Pressing the button jumps you to the first use of that object and its diagram. The

[Back] button takes you back to where you last pressed [Details]. This lets you easily “drill-down” and go back through the items that you reviewed.

On the diagram reports, this corresponds to the [See Num] column that displays the line number of the original call.

Diagram Item Button

The [Diagram Item] button allows you to redraw the diagram to show the hierarchy of a single object. The redrawn diagram can also be printed, providing a report of a single object's diagram.

To redraw entire diagram, select it in the treeview.

Print Button

The [Print] button previews the diagram that is currently displayed. If the full diagram is showing, the printed report includes the diagram for all objects. If a redrawn diagram is showing, the printed report shows the diagram for a single object.

Diagram Displays in the 64-bit Version

For the 64-bit version of Microsoft Access, the treeview control is not used. The diagram items are displayed in their entirety (expanded).

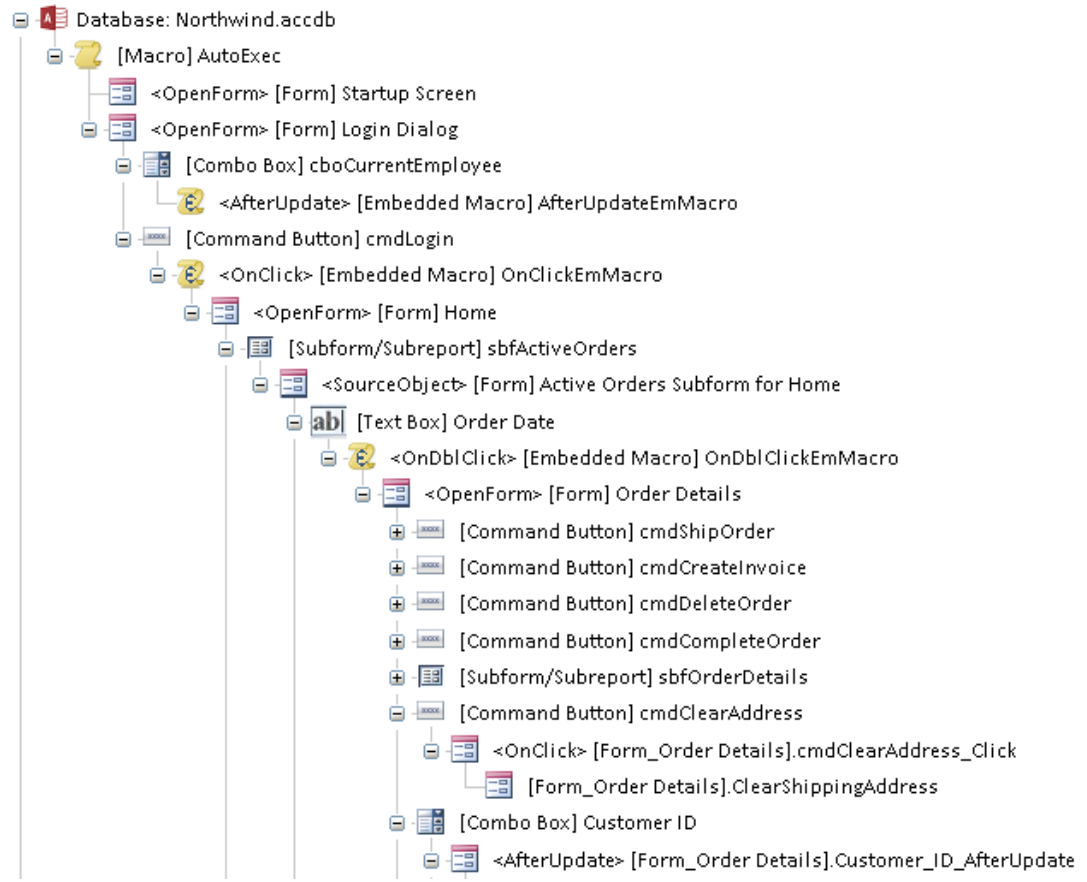
Diagram Descriptions

There are three types of diagrams:

- Application
- Data
- Object

Application Diagram

The most detailed of the three diagrams, the Application Diagram, shows the hierarchical flow of your entire application. It starts with the Startup form or Autoexec macro, then shows what procedures and objects it calls, and then does the same for the called objects. Every form, report, or procedure that is not called by another object starts its own tree. This provides a visual overview of all your procedure calls, macro calls, and form and report events.



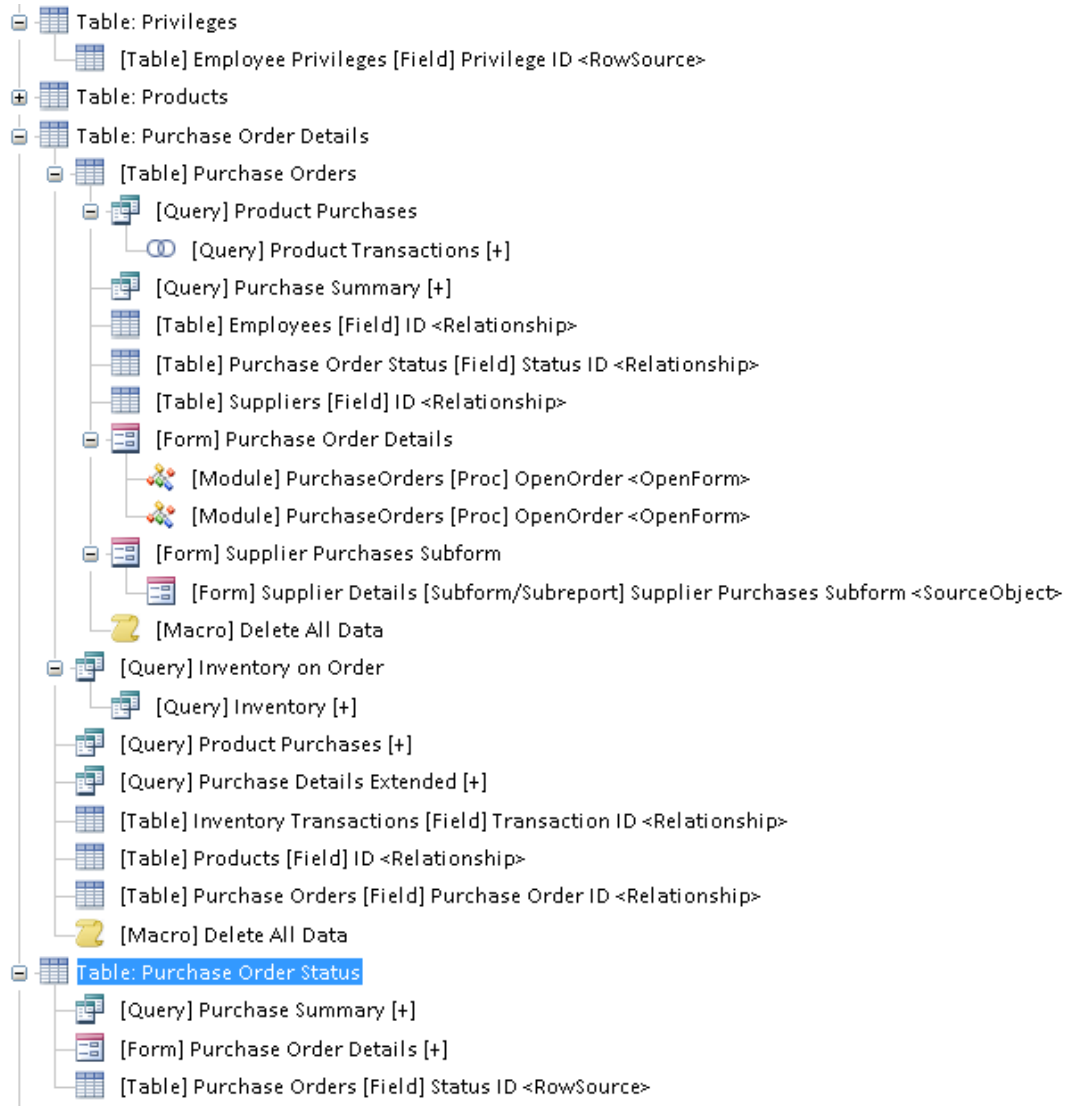
Application Diagram

In this example, the first object is the form named *Startup*. This form has a command button named “OK” that invokes the *CloseForm* procedure on its *OnClick* event. The form’s *OnOpen* event invokes a procedure that calls the *IsItAReplica* function. The form’s last item is an *OnClose* event. The next form is then drawn (*Categories*).

Every form, report, or procedure that is not used by another object has its own diagram. Not every form has its own diagram at the root (first) level. For instance, if a form is used by a procedure through an *OpenForm* command, the form’s diagram is drawn from the procedure calling it, and does not appear on its own.

Data Diagram

The Data Diagram (not available for ADPs) shows how your database's tables are used across your application. The Table XRef (described on page 76) shows which objects reference each table. The Data Diagram shows this information, along with the objects that use the objects referencing each table. This illustrates the entire family of objects related to each table.



Data Diagram

This example shows only a partial view of the objects related to the *Categories* table. The first branch shows that the query *Alphabetical List of Products* uses the *Categories* table. That query is used in a report that is opened by a form's command button's Hyperlink SubAddress property. The form is referenced by two other procedures. Several other queries also use the *Categories* table, including *Catalog*, *Products by Category*, and *Sales by Category*.

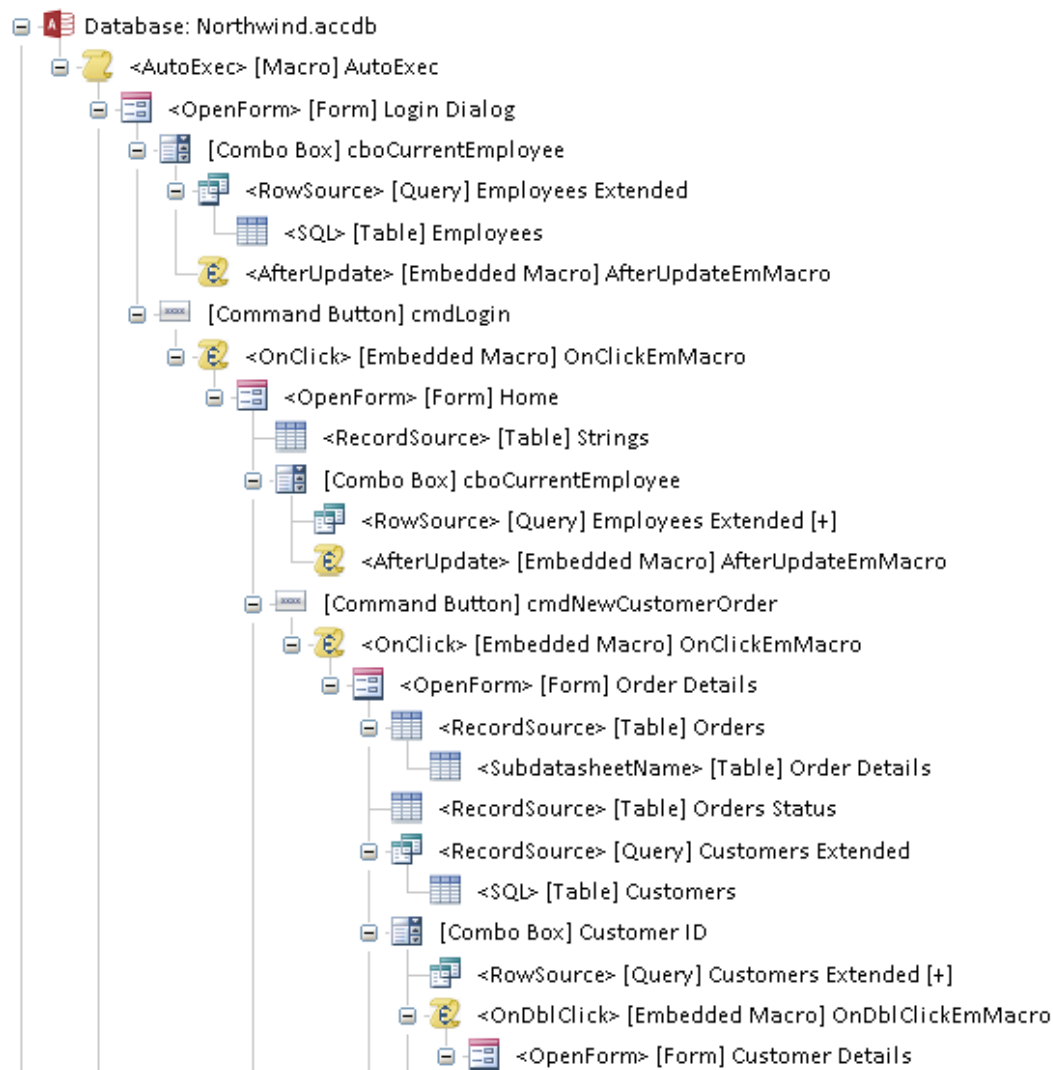


Beyond the first reference, subsequent items do not necessarily use the data in the table. For instance, a query that uses a table may be used by a form that does not use any fields from the table. Also, objects that open forms and reports referencing the table definitely do not use data from the table. They are included in the diagram to illustrate all objects directly and indirectly related to the table.

Object Diagram

The Object Diagram (not available for ADPs) shows all objects on which a form, report, or query is dependent. You can quickly see a form and its subforms, along with the queries, tables, and macros they use. The Object Diagram is almost like the Data Diagram in reverse; rather than seeing how data flows from a table, the Object Diagram displays what flows into an object.

Unlike the Application Diagram, the Object Diagram includes information on where forms and reports use tables and queries, and excludes procedure calls. This simplifies the diagram significantly.



Object Diagram from Documentation of Northwind.mdb

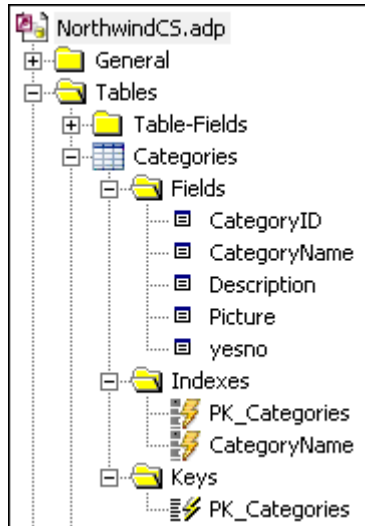
In the example above, you can easily see the *Categories* form's record source table, subform source object, and subform record source. You can also easily see where the *Customer Labels Dialog* form uses tables and macros.

Access Data Project (ADP) Object Types

Microsoft Access stopped support for Access Data Projects (ADP) with Access 2013. Since Access 2010 and earlier still support ADPs, Total Access Analyzer 2010 (and earlier) still document ADPs. You can skip this section if you are not supporting ADPs.

There are specific object types for ADPs that do not exist in a Jet (ACCDB/MDB) database. Those sections are documented here.

Tables Folder for ADPs



This is an example of the Tables folder for an ADP. Fields (Columns), Indexes, Keys, and Triggers folders appear for each table.

Fields (Columns) Folder

The Columns Folder for ADPs is similar to the Fields folder for ACCDBs/MDBs. See the information about the Fields Folder on page 76.

Column Item

The Column Item is similar to the Field item for MDBs. See the information about the Field Item on page 76.

Keys Folder

The Keys folder is the collection of Keys that belong to an ADP table.

Summary	A list of keys in the table
Property Slices	See a property value across all keys

Key Item

A Key item exists for each key in the table.

Summary	The name of the key and its fields
Properties	The key's properties

Triggers Folder

The Triggers folder is the collection of Triggers defined for an ADP table.

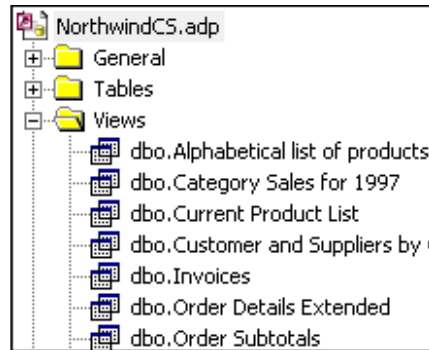
Summary	List of triggers defined for the table
---------	--

Trigger Item

A Trigger item exists for each trigger in the table.

Summary	The name of the trigger and its TSQL
Details	The trigger's properties

Views Folder



Views only exist in ADPs. They are similar to Jet queries, but are stored on the server rather than inside the ADP

The Views folder contains information on the views selected for documentation. This includes view properties.

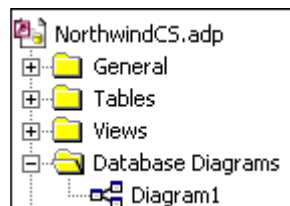
Tab Name	What's Displayed
Summary	The number of views documented and the number of views by view type
Property Slices	The values for a single property across all views (see page 66 for more information on Property Slices)
View XRef	Every place views are used among the documented objects (see page 76 for a description of the columns shown in this view)
Errors	Errors detected for all views
Suggestions	Suggestions for all views
Performance	Performance tips for all views

View Item

An item appears below the Views folder for each view documented

Summary	Information about the view such as its TSQL string and type
Properties	The view's properties
View XRef	Every place the view is used among the documented objects (see page 76 for a description of the columns shown in this view)
Errors	All errors for the view
Suggestions	All suggestions for the view
Performance	All performance tips for the view

Database Diagrams Folder



The Database Diagram folder contains information on the database diagram selected for documentation. This includes database diagram properties.

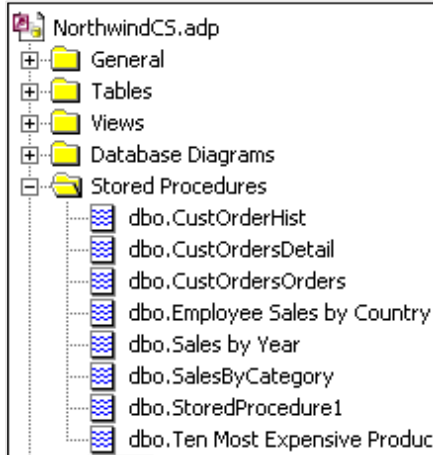
Tab Name	What's Displayed
Summary	The number of database diagrams documented
Property Slices	The values for a single property across all database diagrams (see page 66 for more information on Property Slices)
Diagram XRef	Every place database diagrams are used among the documented objects (see page 76 for a description of the columns shown in this view)
Errors	Errors detected for all database diagrams

Database Diagram Item

An item appears below the Database Diagrams folder for each database diagram documented.

Summary	Information about the database diagram
Properties	The database diagram's properties
Diagram XRef	Every place the database diagram is used among the documented objects (see page 76 for a description of the columns shown in this view)
Errors	All errors for the database diagram

Stored Procedures Folder



The Stored Procedures folder contains information on the stored procedures selected for documentation. This includes stored procedure properties.

Tab Name	What's Displayed
Summary	The number of stored procedures documented and the number of stored procedures by type
Property Slices	The values for a single property across all stored procedures (see page 66 for more information on Property Slices)
Stored Proc XRef	Every place stored procedures are used among the documented objects (see page 76 for a description of the columns)
Errors	Errors detected for all stored procedures

Stored Procedure Item

An item appears below the Stored Procedures folder for each stored procedure documented.

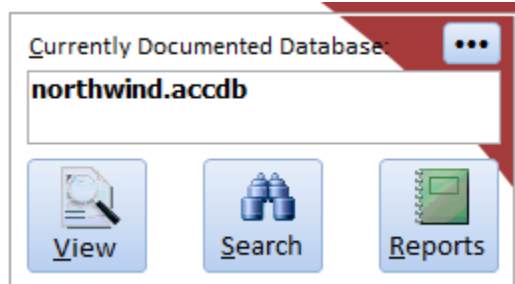
Summary	Information about the stored procedure such as its TSQL string and type
Properties	The stored procedure's properties
Stored Proc XRef	Every place the stored procedure is used among the documented objects (see page 76 for a description of the columns)
Errors	All errors for the stored procedure

Selecting Another Output Database to View

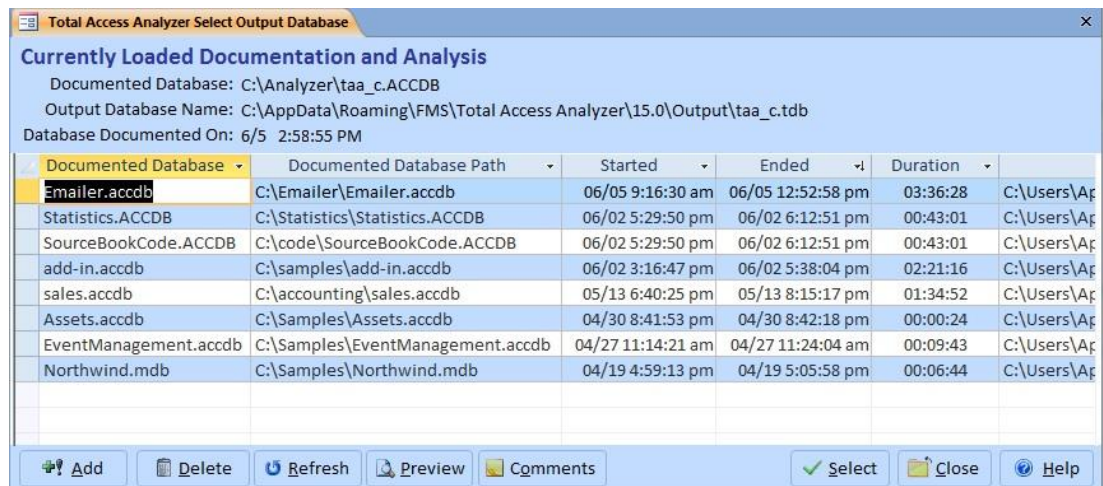
Total Access Analyzer stores documentation in output databases for each database you document. This lets you easily retrieve any documentation previously generated on other databases. When you open the Documentation Explorer, Total Access Analyzer retrieves the current output database: the one you last viewed or the one you just generated.

Note that Total Access Analyzer does not automatically load the documentation for the current database. For example, if you documented database DB1.MDB, then opened DB2.MDB, started Total Access Analyzer, from the Main Menu form, you would still see DB1.MDB listed.

You can load previously saved documentation by clicking on the [...] button on the Main Form:



The Select Output Database form is displayed:



Select Output Database Form

Every time you document a database, Total Access Analyzer keeps track of it and lists it here. The following information is provided:

- The path and name of the database that was documented
- The path and name of the output database containing the documentation
- The user who generated the documentation
- The date and time the documentation was generated

From this form, you can select an output databases to load, view the comments for a database, add a documentation database not in the list, delete a database, or print the list of output databases.

Selecting an Output Database

By selecting an output database, you are “pointing” Total Access Analyzer to the documentation it contains. The Documentation Explorer and all reports get their data from the selected output database.

To select an output database, click on the appropriate row in the list of available output databases then press [Select] (or double-click the output database).

Viewing Comments for an Output Database

You can view the comments saved in any output database (explained on page 58) by highlighting the output database and clicking on the [Comments] button. The Documentation Comments form appears, allowing you to view or edit the comments. When you are finished, press [OK] to return to the Select Output Database form.

Adding an Output Database

If you have an output database that does not appear in the list, you can add it with the [Add] button. This is useful if you receive an output database from another Total Access Analyzer user, or if you want to view documentation stored on another folder or on a network. It is also necessary if you re-install Total Access Analyzer.

Deleting an Output Database from the List

If you no longer need an output database, you can delete it by highlighting the database and clicking on the [Delete] button. Total Access Analyzer asks you for confirmation. Press [Yes] to delete the output database and remove it from the list. Press [No] to cancel.

If the output database was already deleted outside of Total Access Analyzer (from Windows Explorer for example), a message appears warning you that the output database does not exist. Press [Yes] to delete the output database from the list, or [No] to cancel without changes.

You may want to make a backup copy of your output databases before you delete them. Using compression, you can store large output databases in a much smaller amount of disk space.

To automatically remove a TDB from the list that you've already deleted from disk, press the [Refresh] button.

Printing the List of Output Databases

If you would like a printed list of output databases, click on the [Preview] button, and the Output Databases report opens in preview mode. You can then print or export the report from the menu.

Chapter 6: Searching Results

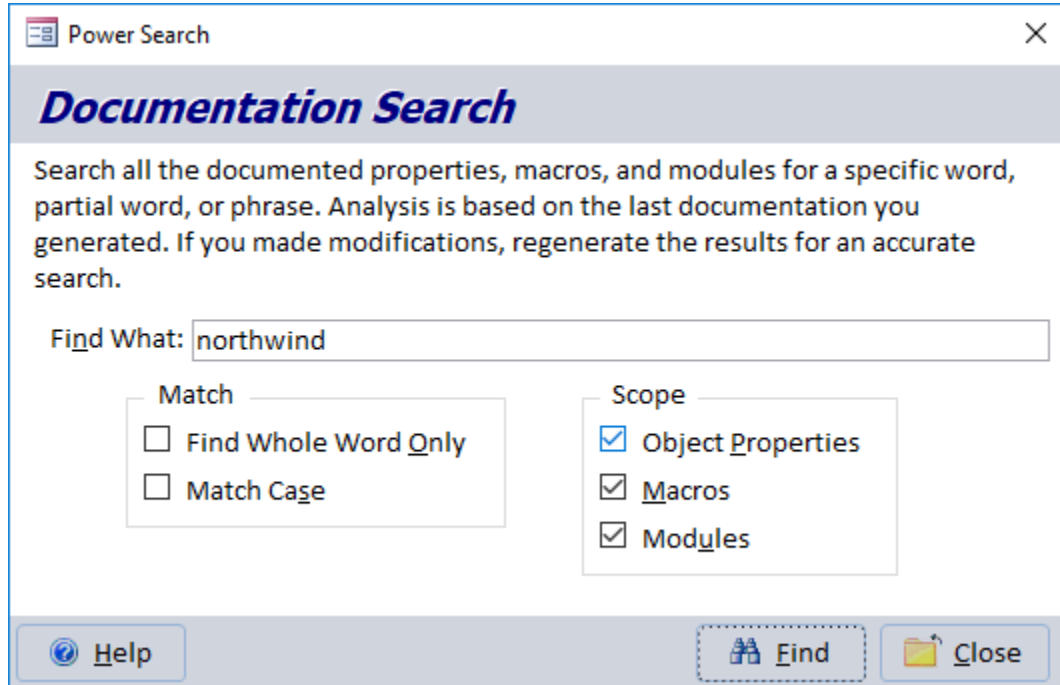
Once the documentation is generated, you can search the results to find the occurrence of any string. This powerful feature lets you search all objects in your database that you selected for documentation, and easily find a property value, object name, or piece of code.

Topics in this Chapter

- **Initiating the Search**
- **Search Results**
- **Searching a Previously Documented Database**

Initiating the Search

After you generate documentation for your database, click on the [Search] button from the main form to open the Search dialog:



Search Dialog

Enter the text you want to find in the Find What text box. The text can be a partial word, a whole word, or a phrase (multiple words). You can even include punctuation. The search is similar to a Like query, so you can use criteria wildcards that you would use in a query or Access Find dialog.

Match Options

The Match options let you specify how the search should be conducted:

- If **Find Whole Word Only** is checked, your text is found only if it is separated from other text. If your search text includes multiple words, the same logic applies (the phrase must be separated from other text). If this option is not selected, any occurrence of the text is retrieved.
- If **Match Case** is checked, a case sensitive match is required. If it's not checked, any occurrence of the letters, regardless of case, is retrieved.

Scope Options

The Scope options let you specify what should be searched:

- Select **Object Properties** to search all documented property values across all the objects. This also includes field and control properties.
- Select **Macros** to search all macro commands, including comments, conditions, and option arguments.
- Select **Modules** to search all module code, including code behind the selected forms and reports.

When you are ready to conduct the search, press the [Find] button.



Tip

Keep in mind that the search is only as accurate as the documentation. If you made considerable changes since you documented the database, you will need to document your database again to generate accurate results.

Search Results

After some churning, the results are shown in three tabs corresponding to the Scope options in the previous screen. If you didn't select a particular option, its tab does not appear. You can view the results, sort and resize the columns, and resize the form. You can also examine your own database objects while this form is open.

If your database is set to show Tabbed Documents, this form appears as a separate tab. Otherwise, it's a resizable and maximizable form.

Object Properties Tab

On the Object Properties tab, each row represents an object value matching the search string. The Object Type column shows the type of the object where the search string was found, the Object Name column shows the name of the object, the Property column shows the property name, and the Value column shows the property value containing the string. The SubObject Name and SubObject Type columns show information if applicable.

Object Type	Object Name	SubObject Type	SubObject Name	Property Name	Value
Container	Forms	Document	Active Orders Subfor	Name	Active Orders Subform
Container	Forms	Document	Customer Orders Sub	Name	Customer Orders Subfo
Container	Forms	Document	Employee Orders Sub	Name	Employee Orders Subfo
Container	Modules	Document	CustomerOrders	Name	CustomerOrders
Container	Modules	Document	PurchaseOrders	Name	PurchaseOrders
Container	Relationships	Document	New_CustomerOnOr	Name	New_CustomerOnOrder
Container	Relationships	Document	New_EmployeesOnO	Name	New_EmployeesOnOrdi
Container	Relationships	Document	New_InventoryTrans	Name	New_InventoryTransac
Container	Relationships	Document	New_OrdersOnInven	Name	New_OrdersOnInventoi
Container	Relationships	Document	New_OrderStatus	Name	New_OrderStatus
Container	Relationships	Document	New_OrderStatusLoo	Name	New_OrderStatusLooku
Container	Relationships	Document	New_ProductsOnOrc	Name	New_ProductsOnOrder
Container	Relationships	Document	New_PurchaseOrders	Name	New_PurchaseOrderson
Container	Relationships	Document	New_PurchaseOrder	Name	New_PurchaseOrderSta
Container	Relationships	Document	New_TaxStatusOnOr	Name	New_TaxStatusOnOrde
Container	Reports	Document	Top Ten Biggest Orde	Name	Top Ten Biggest Orders
Container	Tables	Document	Orders	Name	Orders

Search Results: Object Properties Tab

Macros Tab

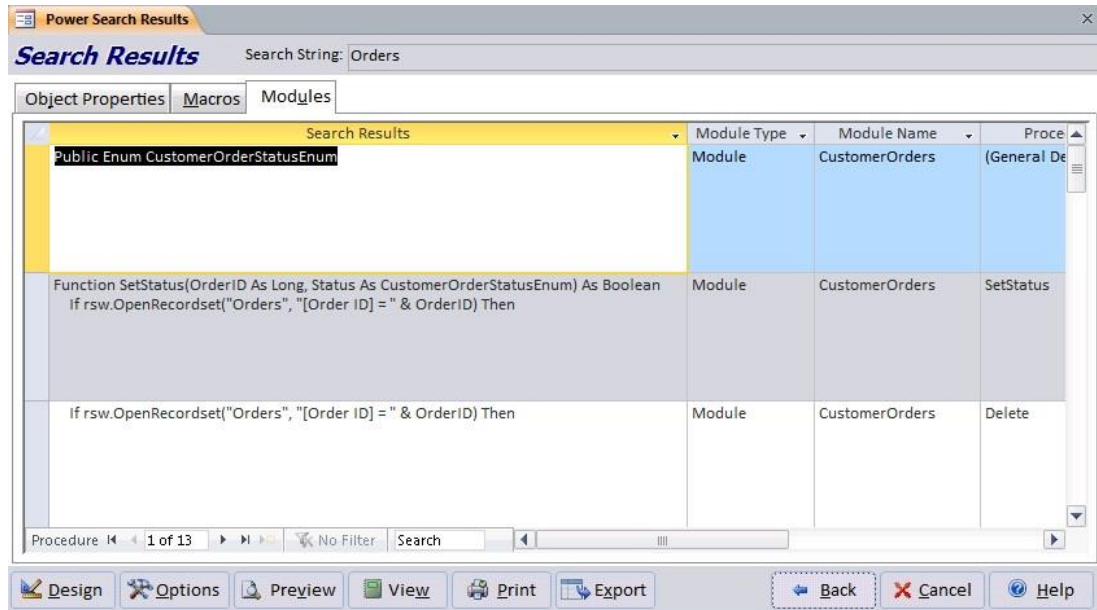
On the Macros tab, every macro line with a match is shown. A macro line has many parts and if any has a match, the entire line is flagged. The Search Results column identifies which of the fields has a match. The columns Arg1, Arg2, etc. represent the text boxes that appear in the lower pane when you edit a macro line.

Search Results	Macro Name	Label	Line Number	Condition	Action	Comments
Arg1	Delete All Data		5		RunSQL	
Arg1	Delete All Data		7		RunSQL	

Search Results: Macros Tab

Modules Tab

Under Modules, each procedure with a match is shown. Only the lines containing the match are shown:



Search Results: Modules Tab

Search Result Reports

While viewing any of the search results, reports corresponding to the tab being viewed are available. You can preview or print any of the three reports. Use the Options button to specify general report settings just as you would from the Options button under Print from the main form.

Searching a Previously Documented Database

If you want to search a previously documented database, change the current output database (see page 104). Keep in mind that the search is only accurate if your documentation is current and comprehensive.

Chapter 7: Printing Documentation

One of the main reasons for documentation is to create hard copy information on your database. For this purpose, Total Access Analyzer provides over 425 presentation-quality reports. This chapter shows you how to select, filter, preview, print, and customize the available reports. It also includes a brief discussion of each report category to highlight the information provided in the reports.

Topics in this Chapter

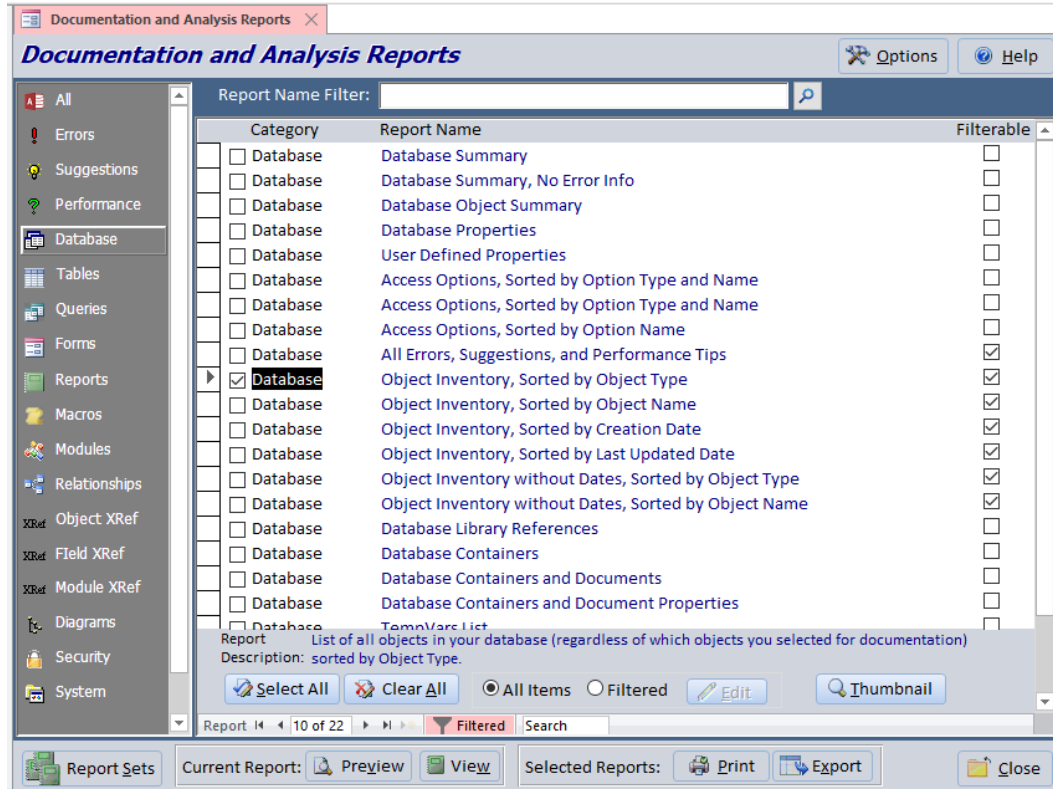
- **Quick Start**
- **Selecting Reports**
- **Exporting Reports**
- **Filtering Reports**
- **Customizing Reports**
- **Report Categories**
- **Report Sets**

Quick Start

Total Access Analyzer includes over 425 reports. While this may seem like a large number, the types of documentation and analysis generated are also numerous. This section is designed to give a quick overview of some of the highlights, as well as suggestions on how to select a report. Once you work through the Quick Start, read the rest of this chapter to get more information on how these reports can help you maintain your database.

Opening the Reports Form

From the main form, press the [Print] button, and the Reports form appears:



Selecting Documentation Reports

Use this form to select, preview, report view, print and export reports. You can also set options that control the appearance of the reports.

Using the Icon Menu

The icon menu on the left itemizes the report categories and filters the list of available reports on the right. By default, “All” is selected, and all available reports are shown on the right. The icon menu is scrollable—make sure you scroll down the list to see the other categories.

Previewing a Report

Once you have selected the appropriate category, scroll through the list of available reports on the right. Select a report by clicking on it (you don’t need to put a check in the box, just make it the current record). You can press the [Thumbnail] view to see a sample of the report layout or press the [Preview] button to display the report (with your data) on the screen. Use the toolbar buttons to change the zoom level, or select the number of pages to preview at one time, and print or export it.

Report View in Microsoft Access 2007 and Later

Access 2007 introduces Report View, a feature that lets you filter the reports interactively. Many of the reports in Total Access Analyzer 2007 and later can be viewed in Report View; however, some reports are not available in Report View mode.

Printing Multiple Reports

To print multiple reports, select the reports by clicking the checkbox to the left of the report name. Once you selected your reports, press the [Print] button. A confirmation dialog appears. Press [OK] to send all the reports to your printer. If any are empty, a report lists the reports with no data to print.



Tip

You should never print all reports! Many reports show the same information sorted differently, and many reports are enormous (especially the form and report control property reports). Make sure you preview the reports to understand their purpose, and choose only the reports you want to print.

Exporting Reports

To export multiple reports, select the reports by clicking on the checkbox to the left of the report name and press the [Export] button. A dialog appears letting you specify the type of output, the folder to place the files, and whether you want them opened. See page 116 for more information.

Filtering Reports

Many reports support object filtering. They are identified by a Check in the Filterable column. Filtering lets you limit the data presented in the reports. To apply a filter, select the “Filtered” option group button and click on the [Filter] button to specify the objects to include. With the filter turned on, the “Filterable” reports only include the objects you selected. See page 117 for more information about filtering reports.

Customizing Reports

You can customize the appearance of the reports by pressing the [Options] button. All reports allow you to customize their headers and footers, and you can modify how module code prints in the reports. See page 118 for more information about customizing reports.

The Reports to Select

If you are printing reports for the first time, you should preview these reports:

- **Database:** An overview of the entire database.
- **System:** A list and description of every report in Total Access Analyzer by category (system reports for errors, suggestions, and performance tips are also useful for understanding what Total Access Analyzer detects).
- **Errors:** A list of all errors found in your database.
- **Suggestions:** A list of items that may require modifications to make your application more robust. The Suggestions category also contains the *Table Fields with Different Types* report, which lists fields with different Data Type and Size settings. Use this report to make your fields consistent across all tables.
- **Performance:** A list of tips for improving your application’s speed and resource usage.

After printing the Errors, Suggestions, and Performance reports, you should address the items listed. If you make extensive changes, you should run the documentation again. Assuming everything is okay, we suggest that you examine the following valuable reports:

- **Diagrams:** The Application, Data, and Object diagrams show you how your database works.
- **Module:** The bracketed module code report provides a well-formatted view of your application’s code.
- **Module XRef:** This category contains many useful reports, such as *Module Analysis* and *Procedure List* reports.

- **Tables:** The field reports show field definitions for each table sorted by table name or field name.
- **Dictionary:** These reports show detailed information for each object. They are available under Tables, Queries, Forms, Reports, and Macros.
- **Blueprints:** These reports show a visual layout of each form. They are available for Forms and Reports.
- **Relations:** These reports contain information about the relationships in the database.

These are just some highlights. Eventually, you should view and understand what the reports can do for you.

Learning More

The rest of this chapter describes each of the operations available in the Print Documentation form in detail. First, a description of this form is provided, including details on customizing the reports. Then, every report category is described with its highlights mentioned.

Selecting Reports

Never select all reports and print them—many reports show the same information sorted differently, and many reports are enormous. We strongly suggest that you preview the reports before printing, and select only the reports you need. Depending on the complexity of your database, you could easily print thousands of pages if you were not careful.



Report data is based on the current output database. Remember that the current output database can be different from the currently opened database.

If you want to print reports for a previously documented database, change the current output database by pressing the [Change DB] button and selecting a new output database from the list (see page 132 for details).

Selecting Categories and Reports

The reports in the Print Documentation form are organized into categories similar to those in the Documentation Explorer form. The categories are listed in the icon menu on the left side of the form. The [All] category shows all reports.

To select a report, click on the check box to the left of the report name. To deselect a report, click on the check box again. Pressing the [Clear All] button deselects all the reports for the currently selected category.

Selecting a report does not print it. You may choose several reports. When you have finished selecting reports, press [Print] to send all the selected reports to the printer.

Depending on the number of objects documented and the reports selected, printing can take a long time. Most Total Access Analyzer reports have graphics: titles, lines to separate data, etc. The blueprint reports are particularly graphic intensive, and therefore take more time to print.

Previewing Reports

Because there are so many reports available, selecting the correct reports may seem like a daunting task. Don't worry; there are features to help you understand the reports. Before printing a report, you can preview it on the screen.

Just click on a report name and press [Preview]. The report appears in preview mode. The preview is only for the report highlighted, not for all selected reports; the report currently highlighted is previewed regardless of whether the check box for it is checked. In preview mode, you can click anywhere on the report to zoom in or out. Use the navigation buttons at the bottom of the window to move among the pages. You can also use items on the Access Print Command Bar or menu to print the report, change the zoom percentage, and change the number of pages displayed.

To close the report, choose [Close Print Preview].

Report View

You can also open the current report in Report View. Report View shows the entire report on one page and you can filter the data by clicking on columns similar to viewing a datasheet. Due to formatting issues, not all reports can be displayed in Report View.

Viewing Thumbnails

You can see a sample of any report by using the [Thumbnail] feature. Just click on any report in the list and press the [Thumbnail] button. An example of the report appears with a brief description:

The screenshot shows a window titled 'Database Summary' with a blue header bar. Below the header, the report content is organized into several sections:

Database Name: C:\sample\Northwind.accdb
Output Database Name: C:\Users\Luke\AppData\Roaming\FM\S\Total Access Analyzer\Output\Northwind.tdb
Analysis Completed: Friday, May 24, 5:00:21 PM
Documented By: Admin
Analysis Time: 00:05:34

Object Documentation Summary:

Object Type	Available (includes system objects)	Selected	Not Selected	Errors	Suggestions	Performance Tips
Table	33	20	13	0	37	19
Query	27	27	0	0	10	19
Form	34	34	0	1	157	20
Report	15	15	0	2	72	2
Page	0	0	0	0	0	0
Macro	2	2	0	4	1	0
Module	8	8	0	3	266	1
CommandBar	203	0	203	0	0	0
Other	0	0	0	2	4	4
Total	322	106	216	12	547	65

Modules:

Type	Number	Procedures	Lines	Declares	Proc Calls	Function Calls	Variables	Conditions
Class	2	15	218	0	10	3	76	0
Form	7	55	774	0	164	43	308	0
Module	6	60	775	0	119	30	660	0
Report	3	3	111	0	3	13	67	0
Total	18	133	1,878	0	296	89	1,111	0

Data Sources for Analyzed Tables:

Table Type (Linked Data Source)	Tables	Records	Est. Size (K)
Access	20	511	112
Total Tables	20	511	112

Table Field Types:

Data Type	Fields
Attachment	5
AutoNumber, Long Integer, Increment	13
Currency	12
Date/Time	14
Hyperlink	4
Memo	13
Number, Byte	6
Number, ComplexLong Integer	1
Number, Decimal	2
Number, Double	2

Queries:

Query Type	Queries
Select	26
Union	1
Total Queries	27

Forms:

Has Module?	Forms	Controls
<input checked="" type="checkbox"/>	7	173
<input type="checkbox"/>	27	675
Total	34	848

Reports:

Has Module?	Reports	Controls
<input checked="" type="checkbox"/>	3	55
<input type="checkbox"/>	12	182
Total	15	237

At the bottom of the window, there is a summary text box: "Summary of the database and what was documented. An excellent overview of what's in your database." and buttons for "Help" and "Close".

Report Thumbnail

The image in the Thumbnail is not from your database—it is only an example of the report's layout.

Printing Reports

The [Print] button prints all the selected reports at once. The reports are printed in the order they appear in the list. While the reports are printing, a status form appears showing which report is being sent to the printer. You can press the [Cancel] button on this form to stop printing the current report and return to the list of reports.

Remember, the selected reports span categories and may include items not visible in the current view based on the report category selected. To see all selected reports, click on “All” in the icon menu.

Reports with No Data

For most of the reports, if there’s no data, it would not appear in the list. However, reports may contain no data for a variety of reasons:

- You did not select any objects of a certain category for documentation.
- You did not select the options necessary to generate the documentation required for a report. For example, if you did not select the “Generate Module XRef” option, none of the Module XRef reports will have data.
- There were no errors, suggestions, or performance tips generated for your database.
- You applied a filter that eliminates all data for a report.

Empty reports are identified in one of two ways:

- If you preview a report with no data, a message box tells you the report is empty.
- If you print multiple reports, and one or more report has no data, an “Empty Reports” report is printed listing every selected report without data.

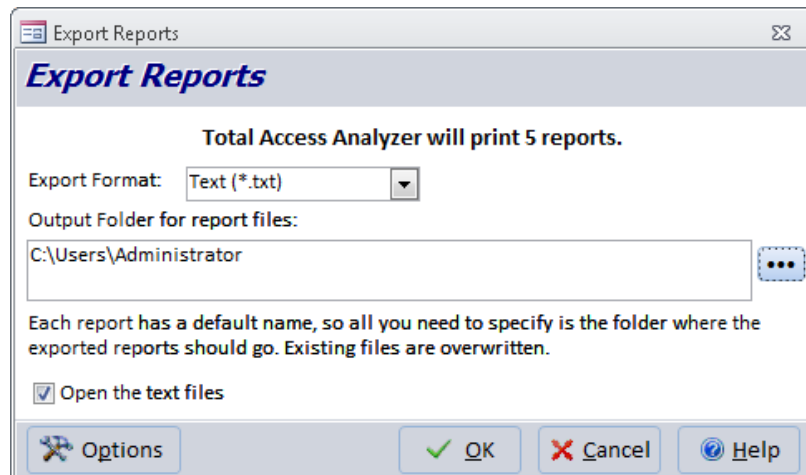
Exporting Reports

You can also export all the selected reports to files in a variety of formats:

- Adobe PDF (*.pdf) (Total Access Analyzer 2007 and later)
- HTML (*.html)
- Snapshot (*.snp)
- Text (*.txt)
- Word RTF (*.rtf)
- XPS (*.xps) (Total Access Analyzer 2007 and later)

To export to PDF and XPS formats, you must have the Office PDF and XPS add-in installed.

When you press the Export button, this form appears:



Export Report Options

These options are available:

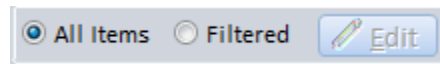
- **Format:** the output file format to create
- **Folder:** the location where the files should be created
- **Open:** an option to open the file after it is created. You must have a program installed and associated with the file type (for instance, Adobe Acrobat Reader for PDF files)

The reports are created in the folder you specify. Each report has a unique name that reflects the name of the report. If the file already exists, it is automatically overwritten without warning.

A list of files names is available in the System report “Report List with Export File Names”. Two reports are available listing the names by category or alphabetically.

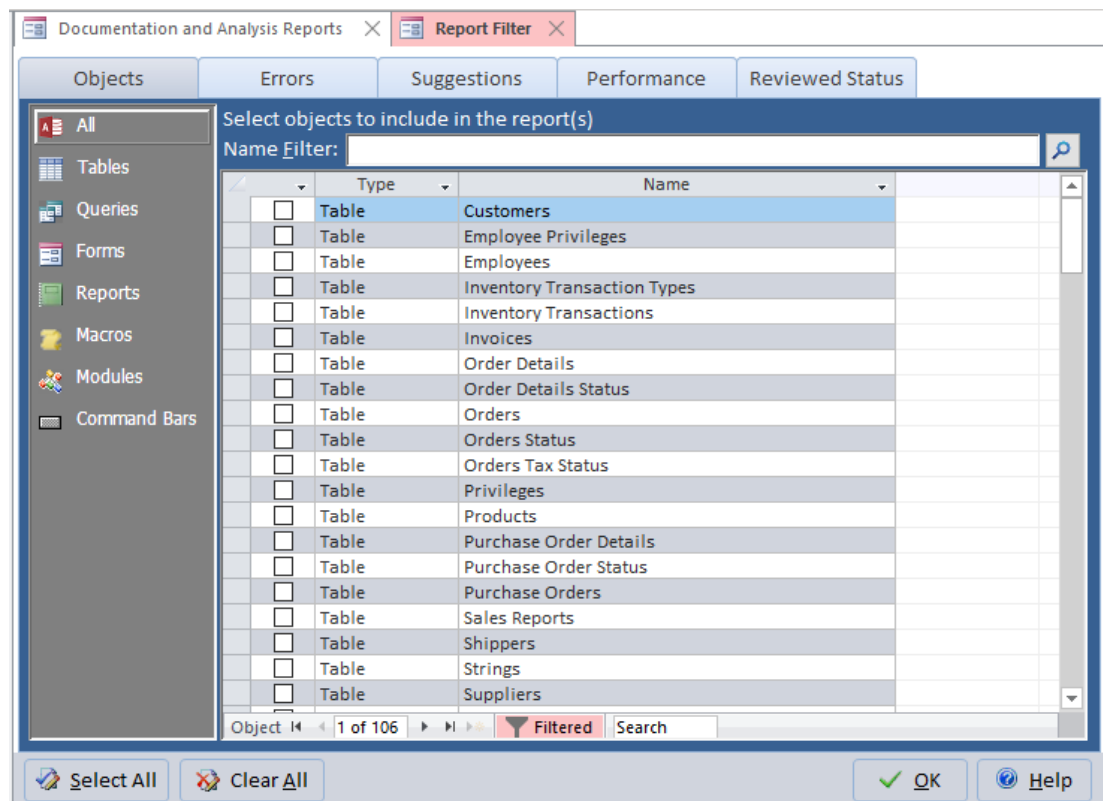
Filtering Reports

If you documented many objects, you may only want a subset of those objects in your reports, especially the large detailed reports. The Filter feature below the list of reports lets you limit the objects in the reports.



Filter Option

By default, [All Items] is selected and the reports include all documented objects. To filter objects, select [Filtered] and press the [Edit] button. The Reports Filter form appears:



Reports Filter

Object Filter

The Objects tab allows you to filter by object. Check the objects to include in the reports and press [OK] to return to the Print Documentation form. The Filtered option is selected, indicating that the filter is on.

The object filter does not apply to all reports. Only reports with a “Yes” in the “Filterable” column of the Print Documentation form respect the filter.

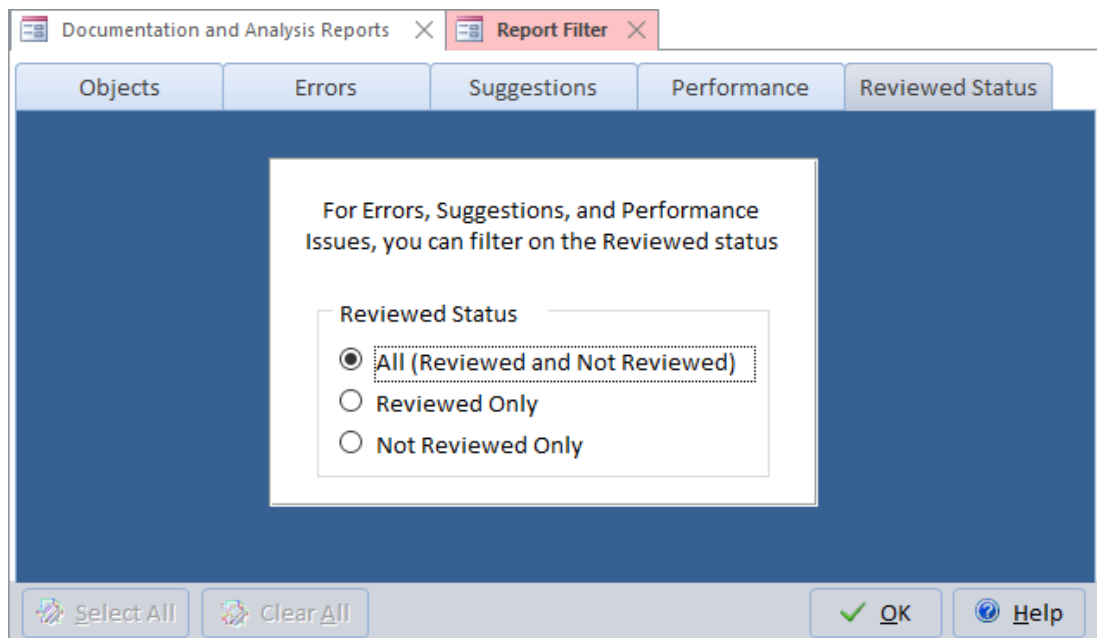
Use the icon menu on the left to filter the list by object type, and use the [Select All] and [Clear All] buttons to select or clear all objects.

Errors, Suggestions, and Performance Filter

The Errors, Suggestions, and Performance tabs allow you to filter any of the reports in the Errors, Suggestions, and Performance report categories by any of the possible items available on those reports. For example, if you want to preview or print a report that just shows broken linked tables, select that report, open the Reports Filter, click on the Errors tab, and select only the “Table with Invalid Links” error item.

Reviewed Status Filter

The Reviewed tab allows you to filter the reports in the Errors, Suggestions, and Performance report categories by Reviewed Status:



Reviewed Status Filter

Using the Documentation Explorer, you can mark issues as “Reviewed,” and filter them out of reports. The Reviewed Status filter allows you to include all issues (regardless of reviewed status), Reviewed issues only, or Not Reviewed issues only.

See Reviewing Issues on page 68 for information about flagging items as Reviewed.

Customizing Reports

Report Options Form

You can customize the appearance of the reports with your own headers, footers, date format, and more. Report options are global to Total Access Analyzer and not saved separately for each output database.

Press [Options] to see the Report Options form:

Report Options

General Reports | Module Printout | Report Set Location

Header 1: Total Access Analyzer

Header 2: Database: #DATABASE#
Use #DATABASE# for database name

Footer:

Date/Time Format: Long Short

Page Numbers: Page N Page N of M

Colors

Title: [Color Picker] [Color Picker]

Sub-Title: [Color Picker] [Color Picker]

Headers: [Color Picker] [Color Picker]

Group Shading: [Color Picker]

Footer: [Color Picker] [Color Picker]

Separator Lines

Use A4 Paper

Example:

Total Access Analyzer		Title		Tuesday, June 4, 2019	
Database: #DATABASE#		Sub-Title		Time: 6:30:21 PM User: Admin	
#	FIELD NAME	FIELD TYPE	FORMAT	DESCRIPTION	INDEXED?
TableName					
1	CustomerID	Counter	Long Integer	Unique ID for the customer record	Yes (Primary Key)
2	FirstName	Text	25	The customer's first name	No
3	LastName	Text	30	The customer's last name	Yes (Duplicates OK)

Page 1

Retrieve Defaults OK Cancel Help

Report Options Form

The top half of the form contains controls for setting options. As you set options, the sample report on the bottom half of the form updates the options that you select. These options are available:

Header 1

This text appears at the top left corner of every report page. It can be your company name, a project name, or any text up to 50 characters.

Header 2

This text appears below Header 1 on every report page. You can have Total Access Analyzer insert the name of the database by typing #DATABASE# anywhere in the field. For example, the default setting is "Database: #DATABASE#" which prints "Database: Northwind.mdb" at the top of each page (when Northwind.mdb is the documented database).

Footer

Enter your text (up to 50 characters) to appear at the bottom left of every report page.

Use A4 Paper

By default, the output reports are for US Letter size paper. For metric users, check this box for A4 paper.

Separator Lines

Many of the reports have an optional line between records. Check this option if you want Total Access Analyzer to print this line. The line makes it easier to read some reports, but can increase the time a report takes to print. By default, this option is enabled.

Date/Time Format

You can control the format of the date and time printed at the top of each report page. For long date format (e.g. January 1, 2019), select [Long], select [Short] for short date format (e.g. 1/1/19). The date and time printed is when the documentation was generated, not the current date and time. The default option is Long.

These date and time formats are defined by your Windows Control Panel's regional settings.

Page Numbers

By default, page numbers at the bottom of each page are displayed (e.g. Page 1). This option lets you display the page number with the total number of pages (e.g. Page 1 of 10).



Tip

If you display the total number of pages (Page N of M), larger reports take longer to load. This is because the report must process all the pages to determine the total page count prior to displaying the first page. If you display the page number only (Page N), the report displays pages as they are available, even if all pages are not processed yet.

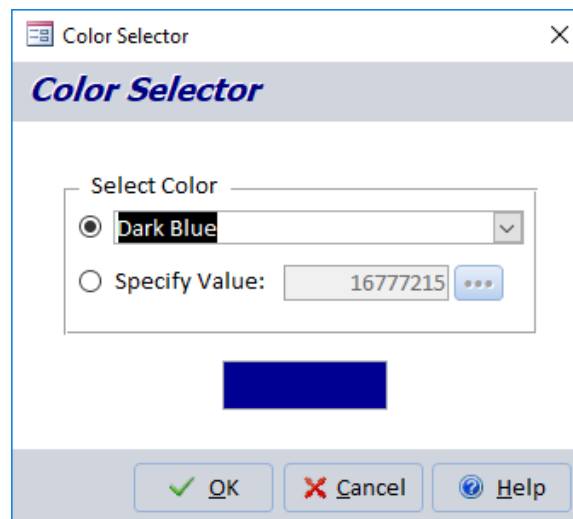
Colors

You can customize the font and background colors for the header and footer of the reports.



Report Colors

When you click on the font or background color icon, the color selector form appears:



Color Selector Form

You can choose from a dropdown list of pre-defined colors, or specify a value explicitly by entering it or pressing the [...] button to open the Windows color dialog.

As you select colors, the example displays your choices. Some reports have a grouping section that you can customize with a background shading color.

Setting Module Printout Options

There are two reports that print module code: the standard and the bracketed Module Printout reports (see page 126). The following options control how the Standard Module Printout report displays your source code.

Press the [Module Printout] tab to see the Module Options settings:

The screenshot shows the 'Total Access Analyzer - Report Options' dialog box with the 'Module Printout' tab selected. The 'General Appearance' section has 'Greenbars', 'Line #s', and 'Bold Proc Declarations' checked, with the font set to 'Courier New'. The 'Comments' section has 'Bold' and 'Italic' checked, with the font set to 'Courier New'. The 'Line Continuation Characters' section has 'Use Default (->)' selected. An 'Example' preview shows a code snippet for 'Function ShowTables()' with alternating green and white bars. The dialog includes 'Retrieve Defaults', 'OK', 'Cancel', and 'Help' buttons.

Module Options Form

General Appearance

These settings adjust the appearance of your module printouts. As you change the options, the sample report's layout reflects the new choices.

Greenbars

Enable this option to create a "green bar" effect with alternating white and gray sections. This makes the code easier to read, and is enabled by default.

Bold Proc Declarations

Enable this option to print procedure declarations in bold text. This makes it easier to see where each procedure begins. This option is enabled by default.

Font

Select the font to use for lines of code. The fonts on your system are displayed in this combo box. Select a mono-spaced font for code to line up correctly. An 8-point size is used, so make sure your font supports this size.

Comments

Comment lines can have their own formatting to make it easier to differentiate between code and comments. These settings are only applied to comments on a line by themselves, not to comments that appear on the same line as code. Set the text to Bold and/or Italic styles, and specify the Font.

Line Continuation

Lines of VBA code in Access can be very long and may word-wrap in the report. To show that a line is linked to the previous line, a special symbol is added to the beginning of the word-wrapped line. By default, the “->” symbol is added. If you prefer another symbol, select “Custom” and enter your own.



The line continuation symbol added in the reports is different from the VBA underline (_) character at the end of the line. The VBA character is always shown, but it may or may not be at the word-wrap point in the report.

Report Categories

Reports are in categories similar to the View Documentation Explorer. This section assumes you have a general understanding of the data available under each category. If you are not sure, refer to the previous two chapters.

Many of the reports contain the same data, but are sorted differently. Each sort provides a different perspective of the data. For instance, the reports sorted by property name let you view all the values for a single property across your objects and are ideal for verifying consistency. Special dictionary reports (called dictionaries because they provide the complete definition of a particular object) provide extensive information on the documented objects. Save the trees! Determine which reports are appropriate for you, and print only those reports.

If you are only interested in information on specific objects, use the object filter (described on page 117).

The following sections describe each category and highlight reports to help you decide which ones you need.

Errors Category

This category shows errors detected in your database. Errors are defined as problems that may cause your database to work incorrectly, crash, or lose data. You should examine these items carefully and resolve them.

- “Summary of Errors by Type” shows, by type of error, the number of instances it was detected in your database.
- “By Error Type, All” lists all errors detected, sorted by error type (with descriptions) and object.
- The error reports sorted by Object Name are useful lists of items to fix in your database. All errors for each object are grouped together, making it easy to fix all the problems for an object.
- “Object Reference Errors” shows all errors involving references to objects that do not exist. This information is included in the other error reports, but this report shows the data in a columnar layout that is easier to understand, especially if references involve controls.

Under the System category, the “Total Access Analyzer List of Errors” report lists each type of error the program detects.

Suggestions Category

The reports in this category offer suggestions for improving your database. Suggestions cover items that are less severe than errors, but are useful for simplifying maintenance, making your code more robust, eliminating

unnecessary objects, and applying Best Practices. Examples include lists of unused objects and code, procedures without error handling, procedures that should be private, and variable name conflicts.

- “Summary of Suggestions by Type” report shows for each suggestion type, times it was found.
- “By Suggestion Type, All” report includes all the suggestions sorted by suggestion type and object. The Suggestion Reports sorted by Suggestion Type include a description of each type of suggestion.
- The suggestion reports sorted by object are useful to view and implement suggestions for each object.
- There are several other reports in this category that list only one specific type of suggestion. Each suggestion can include many items, so the listings by type are helpful if you are implementing one type of suggestion across your objects. For instance, you may want to use the report for Unused Variables to go through all of your objects to examine and eliminate those variables.
- The data in the “Table Fields with Different Types” report does not appear in the other suggestion reports. This report shows identically named fields with inconsistent data type and/or size. Ideally, identically named fields have identical settings regardless of the table. This report lets you see the fields that should be modified or renamed for consistency. This report is for identically named fields; to verify the spelling of your field names (e.g. “CustomerID” vs. “Customer ID” or “CustID”, etc.) use the “Table Fields, Sorted by Field Name” report in the Tables Category.

Under the System category, the “Total Access Analyzer List of Suggestions” report lists every type of suggestion Total Access Analyzer detects.

Performance Category

This category contains reports that show you how to improve the performance of your application. Performance tips are generated for your system, database, and specific objects and settings in your database.

- “Summary of Performance by Type” shows for each error type, the number of times it was found.
- “By Performance Type, All Items” includes all performance tips detected, sorted by the performance type and object. Descriptions of each tip are provided.
- The reports sorted by Object Type simplify the process of making modifications to your objects by grouping all the performance tips for the same type of objects together.

Under the System category, the “Total Access Analyzer List of Performance Tips” report lists every performance issue the program detects.

Database Category

The Database category contains reports about your database as a whole, including inventory reports and information on the database’s Container and Document objects.

- “Database Summary” provides an excellent overview of the complexity of your database.
- “All Errors, Suggestions, and Performance Tips” lists all the ways to improve all objects.
- “Object Inventory” reports are useful for giving you a list of every object in the database.
- “User Defined Properties” shows non-standard Access properties added to your database and objects.
- “ActiveX” reports show where, if any, ActiveX controls are used.
- “Import Export” reports show any import or export specifications saved in the database.

Tables Category

This category includes reports for table properties, fields, field properties, and indexes. These are some of the highlights:

- “Table List” lists tables along with their basic table information.
- “Table Properties, Sorted by Property Name” lets you verify consistent values of a property across multiple tables.
- “Table Fields, Sorted by Table Name” is one of the most valuable reports. It shows each table and its fields, as well as each field’s field type, size, and description.

- “Table Field Properties, Sorted by Property and Field” compares even more field property values across your tables.
- “Table Dictionary” shows comprehensive information of each table on a separate page. It allows you to see all the table properties, fields, indexes, and field properties.
- “Table Field General Properties” and “Table Field Lookup Properties” display the field properties the way they appear in the table designer tabs.

Queries Category

This category exists only for ACCDBs/MDBs, and provides information on the queries you selected for documentation. Data includes query properties, SQL strings, fields used, fields returned (columns), and joins.

- “Query List” lists the queries by name and type.
- “Query Properties, Sorted by Query Name” makes it easy to see property settings across all queries. This report provides a good way to check for errors and inconsistencies.
- “Query Tables, sorted by Query Name” shows all tables referenced by each query.
- “Query Fields Referenced” shows each field referenced by each query.
- “Query Dictionary” shows all query documentation, including the fields used, fields returned, table joins, and parameters.

Views Category

The Views category exists only for ADPs, and provides information about views.

Database Diagrams Category

The Database Diagrams category exists only for ADPs, and provides information about database diagrams.

Stored Procedures Category

The Stored Procedures category exists only for ADPs, and provides information about stored procedures.

Forms Category and Reports Category

Documentation for forms and reports is very similar. This section describes both categories.

Information on each documented form or report is available, including object level properties, controls and control properties, sections, printer settings, and blueprints.

- “List” reports show documented objects with basic information, including whether the object has module code. There are List reports with and without the record source.
- “Subform” and “Subreport” reports list subforms and subreports in the documented objects.
- “Controls” reports list each control on each object sorted by control type or control name.
- “ActiveX” reports highlight ActiveX controls, show where they are used, and list their class types.
- “Dictionary” reports provide detailed information on each form or report, including properties, sections, subforms or subreports, and controls. Each form or report is printed on a separate page. The “Dictionary with Properties” reports also print out property settings for each control. This report is extremely large, as it lists the number of properties for every control on every form.

Form and Report Blueprints

If you selected the “Generate Form Blueprints” option (explained on page 49) for documentation, blueprint reports are available for each selected form and report. Blueprints are special reports that show a visual layout of each form or report. Blueprints are available only from the Print form, not from the Documentation Explorer.

Total Access Analyzer
Database: Northwind.accdb

Form Blueprint
Sorted by FormName

Form: Order Details

PageHeaderSection
Detail

<i>7</i> Customer	8	9 Salesperson	10
11 Mail Address	12	13 Order Date	14

15 Order Details | Shipping Information | Payment Information

PageFooterSection

Sample Form Blueprint with Annotations

If the “Annotate Images” option was selected, each major control is annotated with a number in a box (labels, lines, boxes, etc. are not annotated). This allows easy reference between the layout and documentation for each control. Annotations also show which controls have code behind them:

- Controls with italicized numbers contain code (or run macros).
- Controls with non-italicized numbers in boxes have no code.

This lets you easily identify controls that contain code. When you print blueprints, the blueprint appears on one page followed by a separate page listing the names of the controls.



Tip

If you are previewing blueprints, please be patient as the individual blueprints are displayed. Each blueprint takes a moment to appear. The screen may appear frozen, but it is still processing.

To increase the speed of previewing and printing, consider filtering for a subset of forms or reports before previewing or printing blueprints (see page 117 for details).

Report Page Setup

Under Reports, the “Report Page Setup, Orientation” report is a great way to make sure all the reports in your database have the correct page size, orientation, and margins. You can easily examine the list to spot inconsistencies.

There is an Access bug that may cause reports to reset their orientation and margins, so it’s important to check this before you ship your databases. This bug can be avoided if you turn off Name AutoCorrect from the Access Options, Current Database section.

Macros Category

This category contains reports describing macros, including conditions, actions, names, and comments.

- “Macro List” reports show lists of macros, sorted by Macro name or Number of Lines.
- “Macro Dictionary” prints all the macro lines including labels, conditions, expressions, actions, and command arguments.

Modules Category

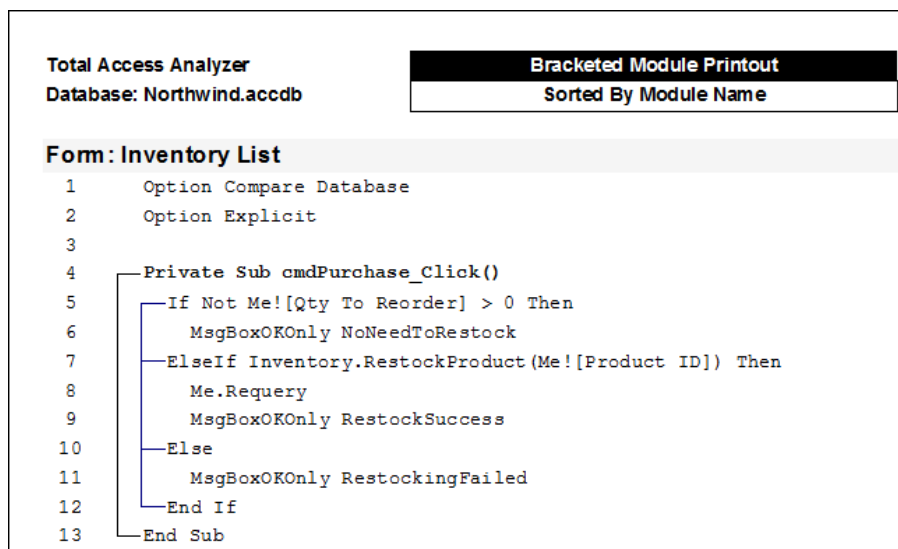
This category contains source code reports for all documented modules, including form, report, class, and standard modules. For more information on how Total Access Analyzer documents modules, see page 85.

Standard Module Printout

The “Module Printout – Standard” report prints your module code in a professional looking report—no modifications are made to the code indentation. The report shows line numbers, and applies fonts, green bars, and other options as specified under the Module Printout options (see page 120). At the end of each module is an index listing every procedure in the module and on which line it starts.

Bracketed Module Printout

The “Module Printout – Formatted with Brackets” report shows your code with standardized indentations and brackets around programming blocks.



```
Total Access Analyzer  
Database: Northwind.accdb  
Bracketed Module Printout  
Sorted By Module Name  
Form: Inventory List  
1 Option Compare Database  
2 Option Explicit  
3  
4 Private Sub cmdPurchase_Click()  
5 If Not Me![Qty To Reorder] > 0 Then  
6 MsgBoxOKOnly NoNeedToRestock  
7 ElseIf Inventory.RestockProduct(Me![Product ID]) Then  
8 Me.Requery  
9 MsgBoxOKOnly RestockSuccess  
10 Else  
11 MsgBoxOKOnly RestockingFailed  
12 End If  
13 End Sub
```

Sample Bracketed Module Code Printout

No matter how the actual code exists in your modules, this report standardizes the code and makes it easy to read and understand. For example, if the code uses non-standard indentation or no indentation at all, this report shows the code in a standardized manner. This is ideal in multiple developer environments where individual developers have different programming styles.

Every loop is bracketed and subsequent lines are indented two spaces. A block is any VBA construct that typically groups lines of code together (Sub, Function, If, Do, While, Select Case, With, Type, etc.).

Exits from blocks of code (e.g. Exit Function, Exit For, Exit Do, etc.) are also drawn. This is particularly helpful if Exit is buried within several levels of loops.

Command Bars Category

Command bar reports list command bars, their properties, the controls on each command bar, and each control’s properties.

Relations Category

For ACCDBs/MDBs only, relations reports contain information about the relationships in the database, including properties, fields, join types, and referential integrity settings. This category also includes the relationships window printout report.

- “Relationships” report prints a columnar text representation of all relationships in the database.
- “Relationships Window” report shows the layout of the relationships window as it appears in the database (in the Database Tools | Show/Hide | Relationships ribbon).

Security Category

This category is for ACCDBs/MDBs only, and contains information on users, groups, and object permissions. Note that the permission settings shown in these reports are the DAO permission settings as documented by Microsoft Access. See page 74 for important information on these settings.

- “Users” and “Groups” reports show lists of all users and groups.
- “Container Permissions for Groups” shows all permission settings for DAO Container objects for the current workgroup’s groups.
- “Container Permissions for Users” shows all permissions setting for DAO container objects for each of the workgroup’s users.
- “Object Permissions for Groups” shows the permissions settings for all database objects for Groups.
- “Object Permissions for Users” shows the permissions settings for all database objects for Users.

Object XRef Category

Object cross reference information shows where tables, queries, forms, reports, and macros are used throughout your database. This category contains several reports for flexible sorting and grouping.

Not all object references can be documented. See page 37 for Total Access Analyzer’s limitations.

- The Query, Form, Report, Macro, and Command Bar References reports show where each object is referenced.
- Several reports are available to show references by referenced Object Type.
- The Hyperlinks report shows all Hyperlink references across your objects and the use of the FollowHyperlink command in your code.

Field XRef Category

This category is available for ACCDBs/MDBs only, and shows where table and query fields are used in other objects. Various sort options are available. Field cross reference information is in its own category with its own reports because of the large amount of field references that exist in a typical database.

- “Field References, Sorted by Table Name” shows where fields are used, and is sorted by the referenced table and field names.
- Several reports are available listing fields referenced by the calling object. There is a report for all objects that reference fields, and other reports for just query, form, and report references.

Module XRef Category

The Module cross reference category has the most extensive collection of reports. These reports are available if you selected “Generate Module XRef” (explained on page 51). The data is based on detailed analysis of your general module code and the modules behind the selected forms and reports.

The available reports are similar to the items available on the Module XRef tab in the Documentation Explorer (see page 86 for more information).

- “Module Analysis Summary” reports show the number of lines, procedures, variables, and various other summary statistics for each module.
- “Module Overview” provides a one-page summary for each module, showing its public and private interfaces with their procedures, properties, events, enums, user defined types, library declarations, implemented classes, and public variables. Class properties are shown as ReadWrite, ReadOnly, or WriteOnly depending on whether the corresponding Get and Set/Let statements exist.

- “Procedure List” reports show a list of procedures defined in each module with information on their settings: procedure type, parameters, return type, etc. You can even include the comments of a procedure. The comments come from the comment block immediately before your procedure definition, or if there is none before it, the comment block immediately after the definition. This provides an excellent way to track each procedure’s purpose.
- “Procedure List, Sorted by Procedure Name” provides an alphabetical list of procedures and where they are defined. This is useful as a lookup when you know a procedure name, but not where it is defined.
- “Procedures Called – Where Procs are Called From” is the procedure cross reference showing where procedures are called from and the parameters used. This is ideal for reviewing procedure calls before making modifications to your code.
- “Procedures Called, Non-Event Procedures Only” shows the procedure cross reference for procedures excluding event procedures in forms, reports, and class modules.
- “Procedure Calls – What Each Procedure Calls” shows a list of procedures called by each procedure.
- “Library Declarations” reports show all uses of the Declare keyword to access external DLL or EXE procedures.
- “ENUM” reports list every enum definition and its members. Reports also show where they are used.
- “Event” reports show events defined by module, and where they are raised.
- “User Defined Type” reports list every user defined type along with its elements and where it is used.
- “Variable List” reports show a list of variables declared and their data types.
- “Variable References” reports show where variables are referred to or assigned values (these reports may be very large).
- “Variable Constants” reports shows all constants defined, their assigned values, and their scope.
- “Variables of Class Module” reports show variables based on class modules and where they are defined.
- “Classes Implements” reports show what classes are referenced via the IMPLEMENTS command.
- There are also reports for Line Labels, Access/VBA function calls, DoCmd calls, and DefType statements.

Diagram Category

Diagrams are the highest level of analysis generated by Total Access Analyzer. Three diagrams are available for ACCDBs/MDBs: Application, Data, and Object. Only the Application diagram is available for ADPs. The diagrams are described in detail for the Documentation Explorer (see page 98 for more information).

The diagram reports differ from the view of the diagrams in the Documentation Explorer in these ways:

- All branches are expanded.
- The called object’s module type and name is shown.
- There is a [See Num] field for objects whose calls were drawn earlier in the diagram. The value in the column refers to the line number where the original drawing is located.
- Lines are not drawn between root level objects.

System Category

The System category contains reports about Total Access Analyzer. These reports are helpful for giving you a better idea of the features of the program:

- “Total Access Analyzer Report List” shows every Total Access Analyzer report with its description.
- “Report List with Export File Names” lists the reports and the name used when you export it to file..
- Reports listing all Errors, Suggestions, and Performance Tips detected by Total Access Analyzer are available, and include descriptions of each detected item and ways to fix your objects.
- “Total Access Analyzer Output Databases” lists all documentation databases. See page 98 for more information about documentation output databases.

Report Sets

Total Access Analyzer allows you to create collections of reports you save for easy retrieval, called Report Sets.

This powerful feature lets you retrieve a set of reports and minimize the complexity of dealing with the huge number of reports available in Total Access Analyzer.

For example, you may want to consider creating the following report sets:

- Database administrator reports that includes Table Dictionary, Relationships, and other reports to help manage a database's data
- Developer reports with all the relevant module code reports for developer code review meetings
- A set of form and report blueprints for application design sessions

Total Access Analyzer ships with a set of built-in report sets that may suit many of your needs. You can access the Report Sets form by clicking on the [Report Sets] button on the Print Documentation form to open this:

ID	Name	Description	Builtin
1	Executive Summary	Database Overview and summary counts of errors, suggestion, and performance tips, plus overview of	<input checked="" type="checkbox"/>
2	Diagrams and Relationship	Application Flow, Data Flow, and Object Flow Diagrams; Relationship Window	<input checked="" type="checkbox"/>
3	Issues to Review	Errors, Suggestions, and Performance Tips to review. Also includes field type inconsistencies and object cross-	<input checked="" type="checkbox"/>
4	Unused Objects and Code	Unused objects (tables, queries, and macros) and module code (procedures, properties, variables)	<input checked="" type="checkbox"/>
5	Code Printouts	Macro and Module Printouts	<input checked="" type="checkbox"/>

Category	Report Name
Database	Database Summary (MDB Only)
Database	Database Summary (ADP Only)
Error	Summary of Errors by Type
Module XRef	Module Analysis Summary, Sorted by Module Type
Performance	Summary of Performance Tips by Type
Relationship	Relationships Window (MDB Only)
Suggestion	Summary of Suggestions by Type

Report Sets Form

There is a considerable amount of functionality built into this feature. Here are tips for using it:

- To select a report set, highlight any of the sets listed and click the [Select] button. You are returned to the Print Documentation form, with all of the reports in the chosen set selected. The name of the chosen report set is displayed on the top of the Print Documentation form.
- To create a new report set for the currently selected reports on the Print Documentation form, click the [New] button. Enter the name and description for the new set, then click [OK]:

Enter Report Set Name and Description

Report Set Name:

Description:

OK Cancel Help

Creating a New Report Set

- To rename a report set and/or change its description, press the [Rename] button.
- To copy the selected report, press the “Duplicate” button.
- To delete user-defined report sets, use the [Delete] button. Built-in reports cannot be deleted.
- To update the selected report set by replacing its selected reports with those currently selected, click the [Update] button.



If you close the Print Documentation form with a report set selected, your report selections are preserved but the currently selected set name is reset. The next time you use the Print Documentation form, you will see that the set name label at the top of the form is reset to “Report Set: <none>.”

Chapter 8: Quick Documentation

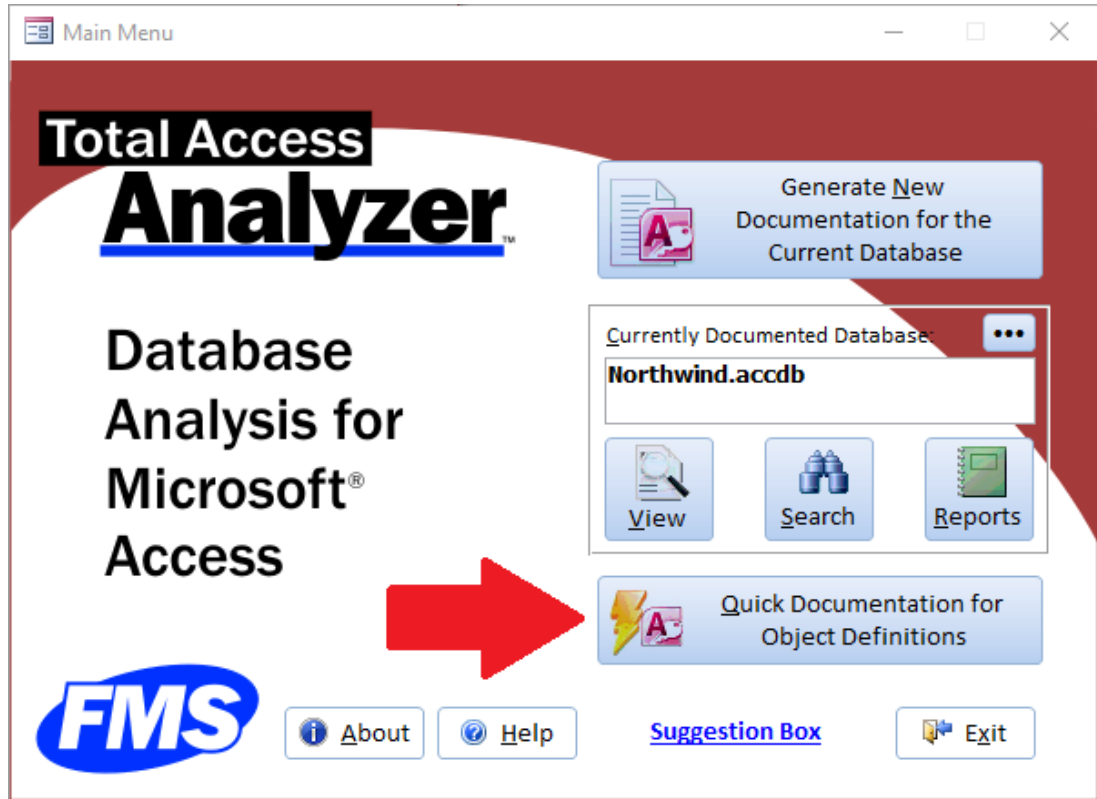
This chapter explains how to use the Quick Doc feature of Total Access Analyzer to generate basic information for individual objects in your database quickly. Learn how the Quick Doc Wizard works, and how it can help you understand your objects when full documentation and analysis of your entire database is not necessary.

Topics in this Chapter

- **Introduction**
- **Quick Doc Wizard**

Introduction

There are times when you simply need a quick printout of an object's structure. For example, the field and property list of some tables, or a module's code. For such simple tasks, Total Access Analyzer offers a Quick Doc feature as an alternative to the full documentation. The Quick Doc feature allows you to document basic information:



Quick Documentation Option on Main Form

Since the point of Quick Doc is to generate documentation quickly, the advanced information provided by the main Total Access Analyzer documentation operation is not available. This means that errors, suggestions, performance tips, cross reference, module analysis, and diagrams are not available through Quick Doc.

For a complete list of which Full Documentation reports are available in Quick Doc, print the list of Total Access Analyzer reports from the Main Menu form's [Report] button. The report is available under the System category.

To start Quick Doc, press the Quick Doc button on the Main Menu form.



Tip

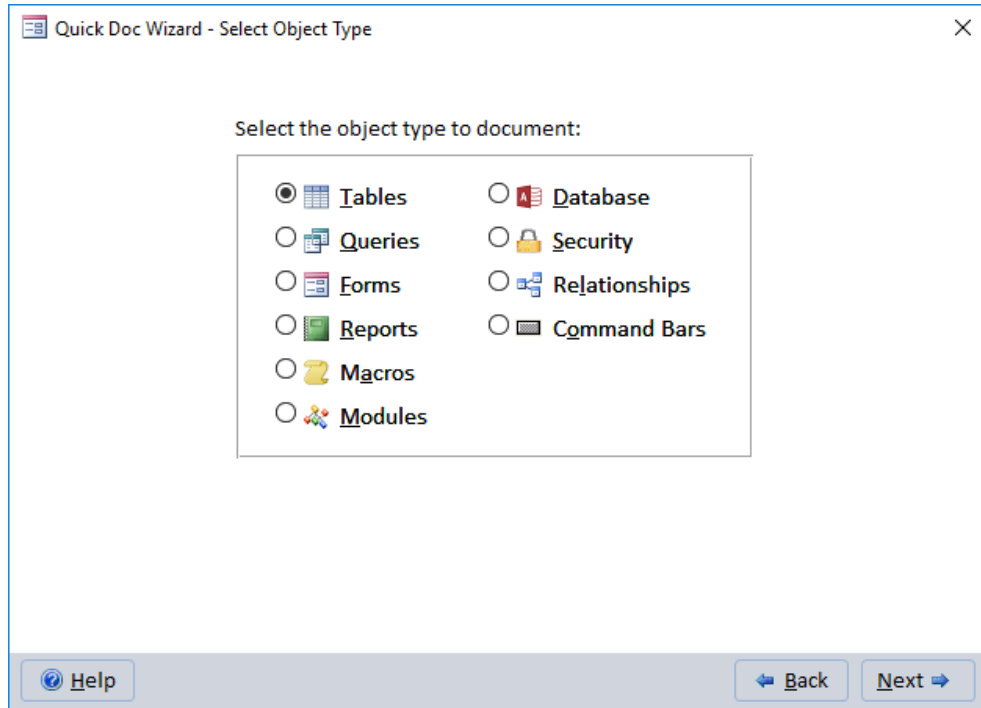
Unlike full documentation, Quick Doc documentation is not saved. When you leave the Quick Doc Wizard, the results are discarded. Note that the documentation generated by Quick Doc is based on a snapshot of the current state of your database. This may differ from previously generated results for the same database.

Quick Doc Wizard

Quick Doc is a multi-page wizard that guides you through the process of selecting an object, selecting options, generating results, and printing or previewing the output reports.

Select a Category

The first page of the Quick Doc Wizard displays a list of documentation categories:

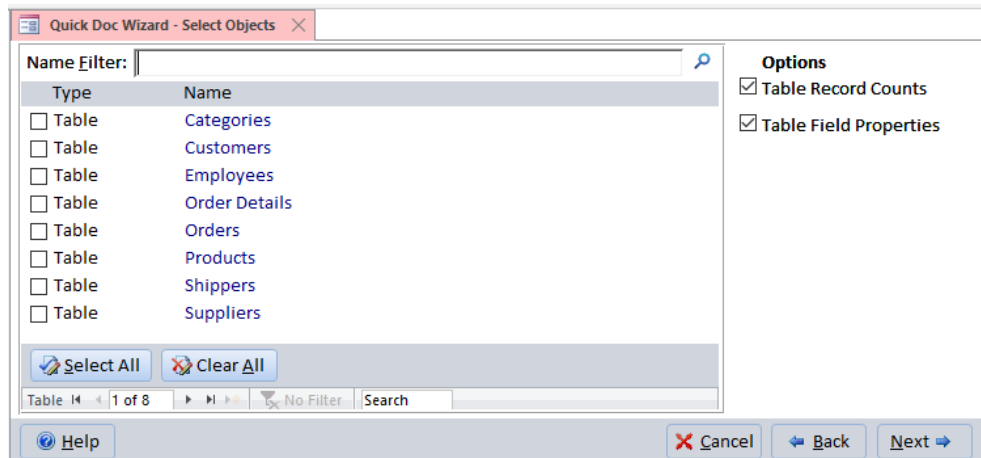


Quick Doc Wizard – Select Object Type

Select a category and press [Next] to continue.

Select Objects

The second page lists the objects available in the selected category. If you selected the Database or Relationships category, this screen does not appear since those categories do not have objects to select.



Quick Doc Wizard – Select Objects

Select a single object by checking its checkbox, or use the [Select All] button to select all objects. To deselect an object, clear its checkbox, or use the [Clear All] button to clear all objects.

Setting Options

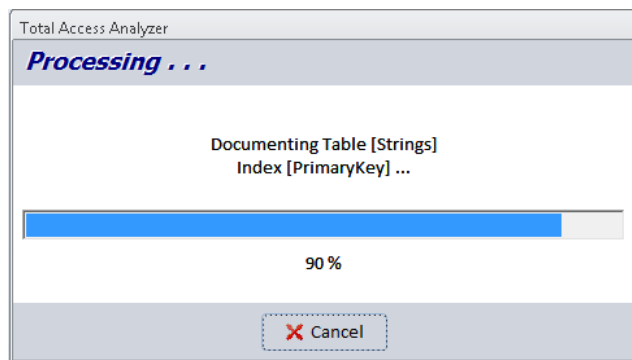
Depending on the category specified on the first page of the Wizard, there may be additional options available. These options appear below the list of available objects on the second page of the form. The options are the same options as the full documentation options. See page 49 for more information on the individual options. Your selection of Quick Doc options is not related to the options selected under [Document]. This lets you set your options independently on the Document and Quick Doc sides.

After selecting the objects and options you want, press the [Next] button. Total Access Analyzer displays a dialog asking you if you want to generate documentation. Select [Yes] to generate the documentation.

Generate Documentation

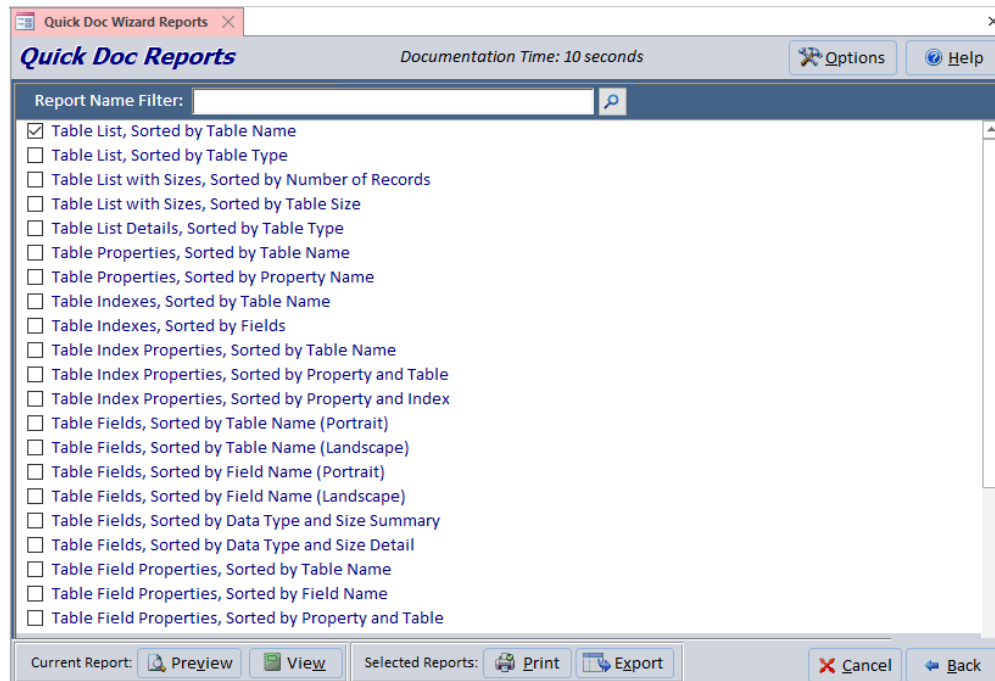
Depending on the number of objects you selected and their complexity, this process can take a few seconds to several minutes. As documentation is generated, a status form keeps you updated.

Like Full Documentation, the screen may flash as objects are documented. This is normal behavior.



Select Reports

When the documentation is complete, reports are available:



Quick Doc Wizard - Reports

This lists the available reports for the category of objects documented. Only reports with data are listed.

The report selection screen behaves like the report selection screen for the main documentation.

- You can filter the reports by name.
- To preview, go to the report row (no need to check it), and press [Preview].
- To open it in Report View, press [View].
- To print or export reports, check the ones you want and press the [Print] or [Export] buttons.
- To change report options, press the [Options] button. See page 118 for the report options. The report options are the same for both Full Documentation and Quick Doc. That is, if you change the report layout here, it also changes for your Full Documentation reports.

Finishing

After you finish previewing and printing your reports, you can press the:

- [Back] button once to select new objects to document.
- [Back] button twice to return the first page of the Quick Doc Wizard to specify another category.
- [Cancel] button to close the Quick Doc Wizard and return to the Total Access Analyzer Main Form.

Quick Doc results are not saved. When you leave the Quick Doc Wizard, the results are discarded.

Chapter 9: Product Support

This chapter provides information on troubleshooting problems that arise and obtaining support for Total Access Analyzer.

Topics in this Chapter

- **Support Resources**
- **Web Site Support**
- **Technical Support Options**
- **Contacting Technical Support**

Support Resources

There are many resources available to resolve issues you may encounter. Please check the following:

Readme File

Check the README file for the latest product information. The README file is located in the directory where you installed the product.

Product Documentation

We've spent a great deal of care and time to make sure the Total Access Analyzer manual and help file are very detailed. Check the Table of Contents and Index for your question, and read the appropriate pages.

Web Site Support

The FMS web site contains extensive resources to help you use our products better. Resources include product updates, frequently asked questions (FAQs), forums, information on new versions, betas, and other resources.

Web Site

The FMS web site is located at:

<http://fmsinc.com>

News and important announcements are posted here.

Support Site

The main support page is located at:

<http://support.fmsinc.com>

From this page, you can quickly locate the other support resources.

Product Updates

FMS takes product quality very seriously. When bugs are reported and we can fix them, we make the updates available on our web site. If you are encountering problems with our product, make sure you are using the latest version.

Frequently Asked Questions (FAQs)

Common questions and additional information beyond what is in the manual is often available from our FAQs.

Microsoft Patches

Our support site also includes links to Microsoft patches that are related to our products. Make sure you're using the latest versions by checking here or visiting the Microsoft site.

Technical Support Options

FMS is committed to providing professional support for all of our products. We offer free access to our online FAQs and forums. Bug reports, feature requests, suggestions, and general pre-sales questions related to our products are always available at no cost.

Additional maintenance plans are available to provide subscribers with enhanced technical support. This is the best way for you to stay current with the rapidly changing technologies that impact project development, and to ensure you are getting the maximum return from your software investment. Please visit our web site, <http://fmsinc.com/>, for the most up-to-date information.

Features & Benefits	Premium	Incident	Standard
Access to FAQs	✓	✓	✓
Access to Forums	✓	✓	✓
Minor Upgrades/ Bug Fixes	✓	✓	✓
Telephone Support	✓	Per incident	First 30 Days
Email Support	✓	Per incident	First 30 Days
Priority Response Time ¹	✓	✓	
Senior Engineer Support Team	✓	✓	
Email Project for Testing	✓	✓	
Programmatic Code Assistance ²	✓	✓	
Major Upgrades for Current Version (not between Access versions)	✓	Additional fee	Additional fee
Cost	Annual Fee	Fee Per Incident	Included
<p>1. Response generally within two business days. Actual resolution may take longer depending on complexity of the issue reported.</p> <p>2. Custom Programming implementation is not provided in our Support Maintenance plans. For products that include a programmatic interface, we can provide instructions for using our programmatic interface, and show examples, but we do not implement this into your projects. This service is available from our Professional Solutions Group.</p>			

Premium Subscription

The Premium Subscription is the ideal option for customers seeking the highest level of support from FMS. The annual fee entitles you to telephone and email technical support from a senior support engineer.

From time to time, FMS may release new versions of existing products which add new features. These are point releases (e.g. from version 16.0 to 16.1) and are different from new builds that correct problems in existing features (e.g. from version 16.00.0001 to 16.00.0004).

These point releases are available for a nominal upgrade fee to existing customers. Premium Technical Support subscribers receive these upgrades automatically and for no additional charge during their subscription term.

NOTE: Upgrades between versions (for instance going from Access 2013 to Access 2016) are not considered Point Release Upgrades and are not included in the Premium Subscription.

Subscriptions are available for a twelve month period, and may be purchased at any time. You must be the registered owner of the product to purchase a subscription and the only person contacting FMS for support under the subscription.

Please ensure you have purchased the subscription you need for Total Access Analyzer.

Per Incident

Our Per Incident package is available individually or by purchasing multiple incidents in advance. The Per Incident support package provides telephone and email technical support from a Senior Technical Support Engineer for resolving one incident.

An incident is defined as a single question related to one of our products. The Per Incident period is from start to finish (report of the incident to resolution) for a single incident. If you anticipate multiple questions for a single product, we recommend purchasing the Premium Subscription.

Standard Subscription

Our Standard Subscription comes with every product purchased for no additional cost. The standard subscription comes with access to our FAQs and forums, and responses to bug reports and feature requests for that version.

Please note that the person requesting support must also be the registered user of the product. Registration is required and will be requested by our Technical Support professionals.

Contacting Technical Support

If the troubleshooting suggestions and other support resources fail to resolve your problem, please contact our technical support department. We are very interested in making sure you are satisfied with our product.

Registering Your Software

Please register your copy of Total Access Analyzer at:

<http://fmsinc.com/register>

You must be registered to receive technical support. Registration also entitles you to free product updates, notifications, information about upcoming products, and beta invitations. You can even receive free email notification of our latest news.

Contact Us

The best way to contact us is to submit a ticket on our support site:

<http://support.fmsinc.com>

Please provide detailed information about the problem that you are encountering. This should include the name and version of the product, your operating system, and the specific problem. If the product generated an error file, please submit that as well.

Our ticketing system will let you track the progress of your issue and see the entire thread of communications and file attachments.

Please bear in mind that a unique issue may involve meetings between the technical support staff and product developers, so your patience is appreciated.

Microsoft Technical Support

FMS only provides technical support for its products. If you have questions regarding Microsoft products, please contact Microsoft technical support.

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