Toad® for Oracle 11.5

Beginner's Guide to Using Toad

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Toad for Oracle 11.5
Beginner's Guide to Using Toad
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Welcome

Toad for Oracle provides an efficient and accurate way for database professionals of all skill and experience levels to perform their jobs with an overall improvement in workflow and productivity. With Toad for Oracle you can:

- Understand your database environment through visual representations
- Meet deadlines easily through automation and smooth workflows
- Perform essential development and administration tasks from a single tool
- Deploy high-quality applications that meet user requirements and perform reliably in production
- Validate database code to ensure the best-possible performance
- Manage and share projects, templates, scripts, and more with ease

The Toad for Oracle solutions are built for you, by you. Over 10 years of development and feedback from various communities like Toad World have made it the most powerful and functional tool available. With an installed-base of over one million, Toad for Oracle continues to be the standard tool for development and administration.

About This Guide

The purpose of this guide is to help you quickly start using Toad by learning basic features and tasks. Toad is a very diverse and powerful tool, and there are many features that this guide does not cover. Refer to the online help for additional information about Toad, which you can access at any time by pressing F1.

In addition to the online help, Toad also has a variety of other resources to help you. See "Additional Toad Resources" (page 14) for more information.

Shortcut Keys

Popular Shortcut Keys

This topic covers some of the most popular shortcut keys in Toad. Toad provides dozens of standard shortcut keys, and you can assign new ones or customize the standard ones. Toad also allows you to print out your current list of shortcut keys. Review the following for additional information:

- Print List of Shortcut Keys (page 12)
- Customize Shortcut Keys (page 75)

Note: If you have customized your shortcut keys, you will not automatically be able to use new shortcuts added in Toad upgrades. However, you can reset your shortcut keys to the default to gain access to all new shortcuts. See "Shortcut Keys Options" in the online help for more information.

General	Description
CTRL+D	Open Quick Describe window. See "Describe Objects" (page 59) for more information.
CTRL+TAB	Cycle through a collection of "child windows" or tabs in a window
F1	Open the Toad documentation
F4	Immediately describe object in popup window. See "Describe Objects" (page 59) for more information.
F10	Display right-click menu
Debugger	**Description**
CTRL+F5	Add watch at cursor
CTRL+ALT+B	Display the PL/SQL Debugger Breakpoints window
CTRL+ALT+D	Display the PL/SQL Debugger DBMS Output window
CTRL+ALT+E	Display the PL/SQL Debugger Evaluate/Modify window
CTRL+ALT+C	Display the PL/SQL Debugger Call Stack window
CTRL+ALT+W	Display the PL/SQL Debugger Watches window
F11	Run (continue execution)
F12	Run to cursor
SHIFT+F5	Set or delete a breakpoint on the current line
SHIFT+F7	Trace into
SHIFT+F8	Step over
SHIFT+F10	Trace out
SHIFT+CTRL+F9	Set parameters
Editor	**Description**

ALT+UP	Display previous statement
ALT+DOWN	Display next statement (after ALT+UP)
CTRL+B	Comment block
CTRL+E	Execute Explain Plan on the current statement
CTRL+M	Make code statement.
CTRL+N	Find sum of the selected fields. You can also include additional calculations, such as the average or count. See "Perform Calculations on Grid Cells" (page 69) for more information.
CTRL+P	Strip code statement.
CTRL+T	Display pick list drop-down There are a variety of shortcut keys to use with the pick list. See "Toad Insight Pick List Shortcuts" (page 11) for more information.
CTRL+F9	Verify statement without execution (parse) in the Editor
CTRL+F12	Pass the SQL or Editor contents to the specified external editor.
CTRL+PERIOD	Display code completion list
CTRL+ENTER	Execute current SQL (same as SHIFT+F9)
CTRL+ALT+PAGEUP	Navigate to the previous results panel tab
CTRL+ALT+PAGEDOWN	Navigate to the next results panel tab
F2	Toggle full screen Editor
F5	Execute as script. See "Execute Scripts in the Editor" (page 41) for more information.
F6	Toggle between Editor and Results panel
F7	Clear all text, trace into the Editor
F8	Recall previous SQL statement in the Editor
F9	Execute statement in the Editor
SHIFT+F2	Toggle full screen grid

Find and Replace	Description
CTRL+F	Find text
CTRL+G	Go to line number
CTRL+R	Find and replace
F3	Find next occurrence
SHIFT+F3	Find previous occurrence

Toad Insight Pick List Shortcuts

There are a variety of shortcuts you can use to display the pick list and make a selection. Toad also provides options for you to customize the pick list behavior. See "Code Assist Options" in the online help for more information.

General	Description
CTRL+T	Display pick list for object (name) at caret. If a stored alias exists by that name, then that alias' object is shown in the pick list.
CTRL+SHIFT+T	Display pick list for object (name) at caret. This option ignores aliases with the same name.
LEFT ARROW	Move the caret left while filtering the pick list.
RIGHT ARROW	Move the caret right while filtering the pick list.
Make Selection	**Description**
Double-click the selection	Insert the selection and close the pick list.
ENTER	Insert the selection and close the pick list.
PERIOD	Insert the selection and a period after it. The pick list remains open and displays child objects, if there are any.
SPACE	Insert the selection and a space after it.
TAB	Insert the a partial selection if possible and leave the pick list open; if a partial selection is not possible, insert the selection and close the pick list. TAB accepts as much as possible without changing the list of displayed objects. For example, if the pick list displays a list of columns that all start with MY_COL, Toad would insert MY_

	COL when you press TAB and leave the picklist open. If the columns did not have a common preface, Toad would insert the selected column and close the pick list.
(OPEN PARENTHESIS	Insert the selection and "(" after it.
Close Pick List	**Description**
Click outside the pick list	Close the pick list without making a selection.
ESC	Close the pick list without making a selection.

Print List of Shortcut Keys

You can print your list of shortcut keys to use as a reference.

To print the list of shortcut keys

1. Click  on the standard toolbar.

   Tip: You can also select **View | Toad Options**.

2. Select **Toolbars/Menus | Shortcuts**.
3. Click the Category or Shortcut column to sort the list.
4. Click **Print**.

Help and Resources

Toad Advisor

Toad is self-diagnosing. If you are having difficulties with Toad that you cannot fix, the Toad Advisor may be able to help you. It offers warnings, alerts, and hints concerning the current state of your Toad installation. If you are in a managed environment, it specifies which features in Toad are managed, and to what extent.

To use Toad Advisor

1. Select **Help | Toad Advisor**.
2. Review the results, which are divided into the following categories:

Warnings	Describe things that should be fixed immediately
Alerts	Describe things that may have an impact upon Toad's functionality

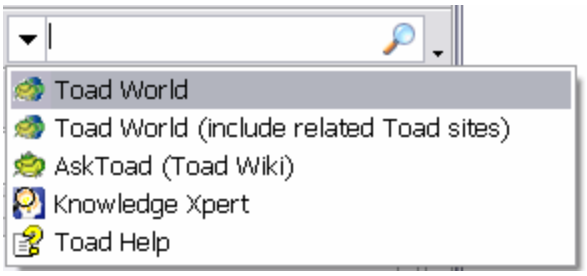
Hints	Provide information about your Toad installation that may affect how Toad works
Performance suggestions	Describe settings that could be changed to improve speed of performance
Tip: Select a result for additional information in the bottom pane. You can double click the performance suggestions to navigate direction to the relevant Toad option.	

Quick Search Bar

You can find help about Toad quickly from various locations in Quest using the Quick Search bar on the main toolbar. Each resource provides a different focus, such as Oracle technical references, videos, frequently asked questions, and more. See "Additional Toad Resources" (page 14) for more information.

To search for Toad resources

1. Click the drop down arrow and select the locations you want to search.



2. Enter a search term in the box.
3. Press **Enter** or click to search.

Additional Toad Resources

There are many resources for you to learn more about Toad, and many of them can be searched directly in the Quick Search bar. See "Quick Search Bar" (page 13) for more information.

Resource	Description
Helpfile	Provides step-by-step directions on how to use Toad. Press F1 in any Toad window to open the helpfile to the relevant topic.
Knowledge Xpert for Oracle	An extensive Oracle technical resource with thousands of insightful topics and working examples.
Oracle documentation	Oracle's database documentation.Since Toad is a tool to help you manage Oracle databases, the more you understand Oracle the more intuitive Toad becomes.
ToadForOracle.com	The main website for all things Toad for Oracle, including: • Forums—Connect with thousands of other Toad users to get help. **Tip:** Customers often use common Toad acronyms in the forums. • Documentation—Download the latest product documentation, including the Install Guide, Release Notes, and other documents. • Downloads—Download the latest update, beta, or trial version. • Idea Pond—Submit ideas to improve Toad and vote on other customer's ideas.
ToadWorld.com	The parent site for all Toad family products, providing videos, tech briefs, white papers, expert blogs, podcasts, user forums, and tech tips.

2

Create and Manage Connections

About Database Connections

This topic provides a very general overview of how Toad connects to Oracle databases. Please refer to Oracle's documentation for more information on Oracle connections.

Troubleshooting: If your previous connections do not display in the Database Login window, ensure that the **Show favorites only** and **Show selected home only** fields in the bottom of the Database Login window are not selected. See "Troubleshoot Connections" (page 34) for more information.

Oracle Clients and Database Servers

To connect to a database server (referred to as "database"), Toad requires that you have a database client ("client") installed on your computer. A client is simply software that accesses the database through a network.

You can have multiple Oracle clients installed on your computer. The client location is also referred to as the Oracle home, and you can select which one Toad uses on the Database Login window. See "Select an Oracle Home" (page 28) for more information.

See the Release Notes for a complete list of the client and database versions that Toad supports.

Important: It is recommended that your client version be of the same release (or later) as your database server. This is an Oracle recommendation to prevent performance issues.

Connection Files

The client installation generally includes connection files that are used to communicate between your computer and the database. Toad uses the following connection files, depending on the connection type you select:

Connection File	Description
SQLNET.ora	Specifies configuration details for Oracle's networking software, such as trace levels, the default domain, session characteristics, and the connection methods that can be used to connect to a database (for example, LDAP and TNSNAMES). If a method is not listed, you cannot use it. Toad uses the SQLNET.ora file for all connection methods, and consequently you must be able to access this file for any connection method.
TNSNames.ora	Defines database addresses to establish connections to them. Toad must be able to access the TNSNames.ora file for TNS connections. **Note:** If you have multiple Oracle clients installed or want to use a TNSNames.ora file on a network, you may want to use the TNS_NAMES environment variable to simplify managing TNS connections. See "Create a Variable for the TNSNames.ora File" (page 32) for more information.
LDAP.ora	Defines directory access information using Lightweight Directory Access Protocol (LDAP). Toad must be able to access the LDAP.ora file for LDAP connections.

Create New Connections

There are a few prerequisites you must have to connect to an Oracle database. See "About Database Connections" (page 15) for more information.

Troubleshooting: There are some common issues and solutions for database connections. See "Troubleshoot Connections" (page 34) for more information.

Notes:

- To edit a login record, click  on the Database Login window toolbar.
- You can import and export connection settings. See "Import/Export Connection Settings" in the online help for more information.

To create a new connection

1. Click  in the standard toolbar to open the Database Login window.

   Note: You can also select **Session | New Connection**.

2. Click  on the Database Login toolbar. The Add Login Record window displays.

Note: Instead of creating the connection in the Add Login Record window, you can directly enter the connection information in the Database Login window. However, this method forces you to connect to the database, and you cannot enter some of the additional connection information until after you connect.

3. Complete the **User/Schema** and **Password** fields.
4. Select a connection method:

TNS	Select a database in the **Database** field. Toad uses the listings in your TNSNames.ora file to populate the list. You can edit the TNSNames.ora file directly in Toad. See "Edit TNSNames Files" (page 30) for more information. **Note:** If you have multiple Oracle clients installed or want to use a TNSNames.ora file on a network, you may want to use the TNS_NAMES environment variable to simplify managing TNS connections. See "Create a Variable for the TNSNames.ora File" (page 32) for more information.
Direct	Enter the **Host**, **Port**, and either the **Service Name** or **SID** of the database to which you want to connect.
LDAP	Select the LDAP descriptor in the **LDAP Descriptor** field. You can edit the LDAP.ora file directly in Toad. See "Edit LDAP Files" (page 30) for more information.
Notes: • Toad must be able to access the SQLNET.ora file to use any of the connection methods. Toad must also be able to access the LDAP.ora file for LDAP connections and the TNSNames.ora file for TNS connections. • If Toad cannot connect to one of these files, a red X displays beside the editor button for that file. For example, the following image indicates that Toad cannot access the LDAP.ora file. You would have to resolve the issue before you could make an LDAP connection. 	

5. Complete the remaining fields as necessary. Review the following for additional information:

Connect as	Select the connection privilege level field.

Color	Select a color to border windows that use the active connection. **Note:** The color displays in all Toad user interface elements that use the connection, which is very helpful when you have multiple active connections. See "Color Code the User Interface per Connection" (page 27) for more information.
Connect Using	Select the Oracle home. **Note:** You can only connect to one Oracle home at a time. This field is disabled if you are already connected to a database. See "Select an Oracle Home" (page 28) for more information.
Alias	Enter a description or nickname for the connection. By default the alias only displays in the connections grid, but you can have Toad display the alias instead of the database name. To enable this option, select **View | Toad Options | Windows** and select the **Use alias instead of database** checkbox.
Execute Action upon Connection	Select to execute an action whenever Toad connects to the database. Then, click  by the **Action** field to select the action. See "Automation Designer Overview" in the online help for more information. You can also select a parameter file. See "Action Parameter Files" in the online help for more information. **Note:** Toad only executes actions upon connection when you execute through the user interface. Toad does not execute actions when it is executed through command line.
Custom Columns	Complete the custom fields, if you have defined any. See "Add Custom Columns" (page 25) for more information.
Save Password	Select to have Toad remember the password for only this connection. If **Save passwords** is selected in the Database Login window, then this field is selected by default. See "Save Connection Passwords" (page 20) for more information.
Auto Connect	Select to have Toad automatically make the selected connection on startup.
Favorite	Select this checkbox to mark the connection as one of your favorites. You can have the Database Login window only display your favorites by selecting **Show favorites only** at the bottom of the window.
Read Only	Select this checkbox to make the connection read only, meaning that you cannot make any changes to the database. This option is especially helpful when you want to access data for a production database but you do not want to accidentally make any changes.

6. Save the login record. Review the following for additional information:
    - To save the record without connecting to the database, click **OK**
    - To save the record and connect to the database, select the **Connect** checkbox and click **OK**.
    - To save the record and reuse the field values to quickly enter new connections, click **Post**.
7. Optional: Manage multiple connections. See "About Managing Multiple Connections" (page 21) for more information.

Basic Connection Contols

Automatically Connect on Startup

To select connections to automatically make when Toad starts

1. Click  in the standard toolbar to open the Database Login window.

    Note: You can also select **Session | New Connection**.
2. In the connections grid, select the checkbox in the **Auto Connect** column.

Use Previous Connections

Toad saves your previous connections so you can easily connect to them again. You can also change the active connection in open windows. See "Change Active Connection in Window" (page 19) for more information.

To open a previous connection

» Select one of the following:

- Click  in the standard toolbar to open the Database Login window, and then double-click the previous connection from the grid.
- Click the arrow beside  in the standard toolbar, and then select a connection from the list.

Change Active Connection in Window

You can easily change the connection in an open window to a connection you currently have open or a connection that you have recently used.

Tip: Toad provides a variety of features and options to help you manage multiple open connections. See "About Managing Multiple Connections" (page 21) for more information.

To change the active connection in a window

» Click the arrow beside  in the window toolbar and select an open or recent connection from the drop-down.

Save Connection Passwords

You can have Toad save all passwords automatically or individually save passwords for selected connections. Passwords are saved in an encrypted file called connectionpwds.ini. The encryption is tied to the currently logged in user profile, and it supports roaming profiles and Citrix installations.

Important: To save a connection password, you must connect to the database first, and then you can save the password in the connections grid.

Note: If the **Save Password** field is disabled, your ability to save passwords may have been removed during installation. See the *Toad for Oracle Installation Guide* for more information.

To automatically save all passwords

1. Click  in the standard toolbar to open the Database Login window.

   Note: You can also select **Session | New Connection**.

2. Select the **Save passwords** checkbox in the bottom of the window.

To save passwords for individual connections

1. Click  in the standard toolbar to open the Database Login window.

   Note: You can also select **Session | New Connection**.

2. Clear the **Save passwords** checkbox in the bottom of the window, if it is selected.
3. Select the **Save Pwd** checkbox for the connection in the connection grid.

   Note: If the connection is not listed in the connection grid, ensure that the **Show favorites only** and **Show selected home only** fields are cleared. If it still does not display, connect to the database again.

4. Enter the password in the **Password** field on the right.
5. Click **Connect**.

Commit or Rollback Changes

You can commit or rollback recent changes to the database from the Session menu at any time while working with Toad.

Note: You can configure Toad to either automatically commit changes or prompt to commit on exit. See "Oracle Transaction Options" in the online help for more information.

To commit or rollback your changes

» Select **Session | Commit** or **Session | Rollback**.

Tip: You can also right-click the connection in the Connection Bar, and select **Commit** or **Rollback**.

End Connections

To end one connection

» Select **Session | End Connection**.

Or

Click in the standard toolbar to end the currently active session. You can also click the arrow by the button to select a different open connection to end.

To end all connections

» Select **Session | End All Connections**.

Test Connections

To test connections if the session has dropped

» Select **Session | Test Connections (Reconnect)**.

To test connections in the Database Login window

» Select connections in the grid and click . Toad opens a new session to test the connection and lists any errors that occur.

Manage Multiple Connections

About Managing Multiple Connections

When working with Toad you may have multiple connections open at once. Trying to keep track of which open window is related to which connection can be difficult. Toad provides a variety of features and options to help you manage multiple open connections.

Method	Description
Organize the Database Connections Grid (page 24)	The Database Login window displays all of your previous connections in the connections grid. You can reduce the number of connections that display and organize how they display in a variety of ways.
Color Code the	You can use connection colors to help you distinguish between

Method	Description
User Interface per Connection (page 27)	open connections. The color coding displays prominently throughout Toad's user interface. For example, you may use red for all production databases and yellow for all test databases.
Display Connection and Window Bars (page 22)	You can use the Window and Connection bars to help you keep track of your open windows and connections. The active window and connection are selected in the bars (they display with a lighter color), which is helpful so you can always tell which connection you are using.

You may also find the following general connection management features helpful:

- Automatically Connect on Startup (page 19)
- Change Active Connection in Window (page 19)
- Commit or Rollback Changes (page 20)
- Customize Schema Drop-Downs (page 76)
- Use Previous Connections (page 19)

Display Connection and Window Bars

You can use the Window and Connection bars to help you keep track of your open windows and connections. The active window and connection are selected in the bars (they display with a lighter color), which is helpful so you can always tell which connection you are using.

***1)** Connection Bar **2)** Window Bar*

Notes:

- Toad provides a variety of features and options to help you manage multiple open connections. See "About Managing Multiple Connections" (page 21) for more information.
- You can rearrange the order of items in the Connection and Window bars. Right-click the bar and select **Connection/Window Bar Button Order**. Then, use the arrows to determine the order for items to display. Toad remembers these settings. For example, if you list

Editor first, then Editor windows always display in front of other windows (even if the Editor was opened last).

- You can customize the display settings, such as displaying connection strings or allowing the bars to span multiple lines. See "Toolbar Options" in the online help for more information.

Connection Bar

The Connection bar lists all of the connections that you have open. Right-clicking one of the connections in the Connections bar gives you helpful options, including:

- Opening a new Editor or Schema Browser window for the connection
- Ending the connection, which closes all windows that use the connection
- Rearranging the order of connections in the Connection bar

  Tip: Select **Show All** to display connections that are not currently open.
- Committing or rolling back changes
- Viewing a list of all of the windows that use the connection, which you can click to bring the window to the front

To display the Connection bar

» Right-click the file menu area and select **Connection Bar**.

Window Bar

The Window bar lists all of the windows that you currently have open. Right-clicking one of the windows in the Windows bar gives you helpful options, including:

- Rearranging the order of windows in the Window bar

  Tip: Select **Show All** to display windows that are not currently open.
- Only displaying windows for the active connection, which can be very helpful when you have numerous windows open for one connection

  Note: To use this feature, right-click *a blank area* in the Window bar and select **Show Buttons for Current Connection**.
- Closing all open windows

To display the Window bar

» Right-click the file menu area and select **Window Bar**.

Organize the Database Connections Grid

The Database Login window displays all of your previous connections in the connections grid. You can reduce the number of connections that display and organize how they display in a variety of ways:

- Display Only Favorite Connections (page 24)
- Add Custom Columns (page 25)
- Group Connections (Create Tree View) (page 25)
- Hide/Display Columns (page 26)
- Display Only Connections for Selected Oracle Home (page 26)
- Display Tabs for Each Server or User (page 26)
- Delete Previous Connections (page 27)

Tips:

- Toad provides a variety of features and options to help you manage multiple open connections. See "About Managing Multiple Connections" (page 21) for more information.
- Click  at the top of the Database Login window to refresh the connections grid.

Access the Database Login Window

All of the organization options are configured from the Database Login window.

To access the Database Login window

Click  in the standard toolbar to open the Database Login window.

Note: You can also select **Session | New Connection**.

Display Only Favorite Connections

If you have a long list of connections but only use a few of them regularly, you can mark the connections that you use frequently as favorites and hide the other connections. You can still view the other connections by displaying all connections instead of just favorites.

To select favorite connections

» In the connections grid, select the **Favorite** check box of the connection you want to make a favorite.

To view only favorites in the connections grid

» Below the connections grid, select the **Show favorites only** checkbox.

To view all connections in the connections grid

» Below the connections grid, clear the **Show favorites only** checkbox.

Add Custom Columns

You can add columns to the connections grid. For example, you may want to add a Locations column if you manage databases in multiple physical locations, or you may want to add an Environment column to distinguish between Test and Production databases.

Tip: You can also group the connections grid by custom fields. See "Group Connections (Create Tree View)" (page 25) for more information.

To add a custom column

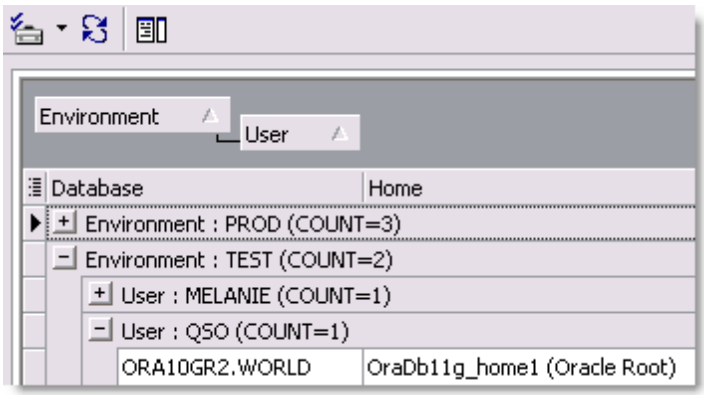
1. Click  in the Database Login window toolbar.
2. Click **Add**.
3. Enter the name for your custom field.

Group Connections (Create Tree View)

You can group connections by column header to create a tree view. You can add multiple column headers to add grouping levels.

To group connections in the data grid

1. Drag a column header into the grey area above the grid.
2. Drag additional column headers to add grouping levels.



Tip: The image above is grouped by a custom column. See "Add Custom Columns" (page 25) for more information.

To remove grouping

» Drag the column header into the connections grid.

Hide/Display Columns

If you have a small screen area, you can hide some of the columns that display in the connections grid.

To hide or show columns

1. Click  in the left-hand side of the grid headers.
2. Select the columns you want to display, or clear the checkbox for columns you want to hide.

Display Only Connections for Selected Oracle Home

If you have many connections using different Oracle homes, you may want to display only those using a particular home in the grid.

To limit connections to one Oracle home

1. Select the Oracle home you want to display in the **Connect using** field on the right side of the Database Login window.

   Note: You can only connect to one Oracle home at a time. This field is disabled if you are already connected to a database. See "Select an Oracle Home" (page 28) for more information.

2. Click the **Show selected home only** checkbox at the bottom of the window.

Display Tabs for Each Server or User

By default, the connections grid does not contain tabs; it is a unified grid that displays all connections. You can change the grid to display separate tabs for each server or user. Each tab contains a grid of its database connections.

To display tabs for each server or user

» Click  at the top of the Database Login window and select **Tabbed by Server** or **Tabbed by User**.

Delete Previous Connections

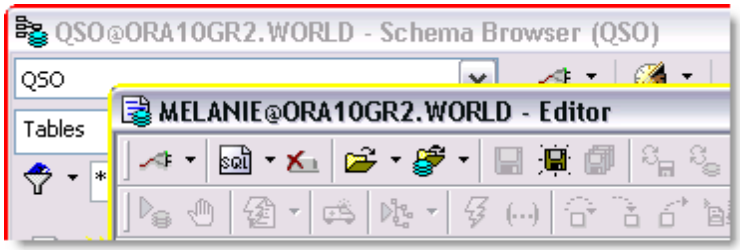
To permanently remove connections from the Database Login window

» Select the connection and press the DELETE key.

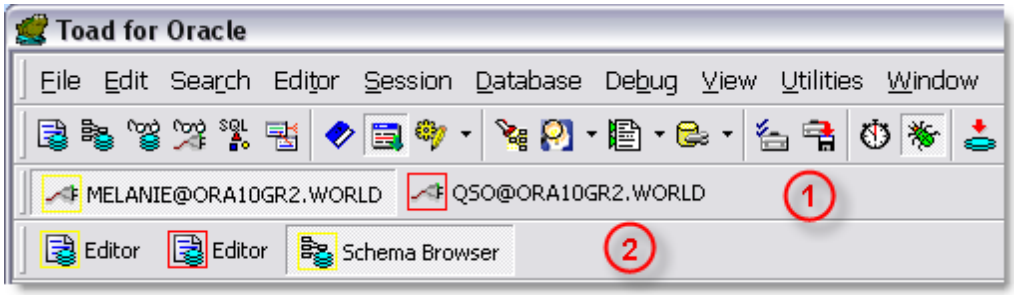
Color Code the User Interface per Connection

You can use connection colors to help you distinguish between open connections. The color coding displays prominently throughout Toad's user interface. For example, you may use red for all production databases and yellow for all test databases. The color coding would display as follows:

- Any open window related to that connection

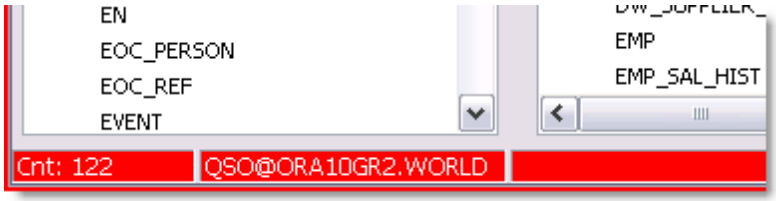


- Window and Connection bar buttons



1) *Connection Bar* ***2)*** *Window Bar*

- Status bars



Tip: Toad provides a variety of features and options to help you manage multiple open connections. See "About Managing Multiple Connections" (page 21) for more information.

To select a connection color

1. Click  in the standard toolbar to open the Database Login window.

   Note: You can also select **Session | New Connection**.

2. Select a color in the **Color** column in the connection grid.

Manage Oracle Homes

Select an Oracle Home

Only one Oracle home can be in use at one time. This means that once a connection is made, all future connections use the same Oracle home, regardless of default home. If you want to use a different Oracle home, you must close all open connections first.

Default homes can be assigned for a connection or for Toad. When a default Oracle home is assigned to a particular connection, any time you make that connection from the connection grid, Toad automatically uses that Oracle home. When a default Oracle home is assigned to Toad, Toad automatically uses that Oracle home any time you create a connection to a new database.

Toad searches for Oracle homes in several different ways. See "How Toad Finds Oracle Homes" in the online help for more information.

Notes:

- If you have multiple Oracle clients installed or want to use a TNSNames.ora file on a network, you may want to use the TNS_NAMES environment variable to simplify managing TNS connections. See "Create a Variable for the TNSNames.ora File" (page 32) for more information.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To select an Oracle home

1. Click  in the standard toolbar to open the Database Login window.

   Note: You can also select **Session | New Connection**.

2. With no open connections, select an Oracle home in the **Connect using** field.

   Note: To see more information about the home you have selected or change the SID, NLS_LANG, or SQLPATH, click  to open the Oracle Home Editor. See "Edit the Oracle Home" (page 29) for more information.

3. To set this as the default Oracle home for all connections, select **Make this the Toad default home**.

Edit the Oracle Home

You must restart Toad to have changes made here take effect.

Note: This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To edit the Oracle home

1. Click  beside the **Connect using** box on the Database Login window.
2. Select an Oracle home by clicking on its node. You can then:
    - Click **Clipboard**. This will copy the selected information to the clipboard so you can past it into an email, or another document.
    - Click **Advice**. This will tell you if you have a proper Net8 installation for this home, or suggest changes to your installation.
    - Right-click and choose to edit one of the following:
        - SID for the selected home
        - NLS_LANG for the selected home
        - SQLPATH for the selected home

Edit Oracle Connection Files

Edit SQLNET Files

From the SQLNET editor you can easily edit your SQLNET.ora parameters. The parameters on this window are standard Oracle parameters. See Oracle's documentation for more information.

To edit your SQLNET.ora file

1. Click  in the standard toolbar to open the Database Login window.

    Note: You can also select **Session | New Connection**.

2. Click **SQLNET Editor**.
3. To back up your file before editing it, click **Create Backup File**.

    Note: It is recommended that you create a backup file before you make any changes. This assures that if something goes wrong you can restore the original settings.

4. Make any necessary changes.

Note: If you are using a multi-threaded server and plan to use the PL/SQL Debugger, make sure you check the **USE_DEDICATED_SERVER** checkbox. This allows the PL/SQL Debugger to work.

5. To view the SQLNET.ora file after you update parameters, click **View File as Modified**.

Edit LDAP Files

You can use the LDAP editor to edit your LDAP parameters. Toad supports both Oracle LDAP and Windows LDAP servers.

The parameters on this window are standard Oracle parameters. See Oracle's documentation for more information.

To edit your LDAP.ora file

1. Click  in the standard toolbar to open the Database Login window.

   Note: You can also select **Session | New Connection**.

2. Click **LDAP Editor**.
3. To back up your file before editing it, click **Create Backup File**.

   Note: It is recommended that you create a backup file before you make any changes. This assures that if something goes wrong you can restore the original settings.

4. Make any necessary changes.

   Note: The directory server types apply to all servers listed in the Directory Servers area.

5. To view the file after you update parameters, click **View File**.

Edit TNSNames Files

From the TNSNames Editor, you can easily edit your TNSNames files. You can add a new service, edit a service, delete a service, or work with two files and transfer services back and forth between the two.

Notes:

- The TNSNames Editor supports much of the standard Oracle syntax, but there are certain old or advanced features that it does not support. See "Limitations of the TNSNames Editor" (page 32) for more information.
- An incorrect TNSNames.ora entry may block all valid entries after it. You can copy names to the top of the list until you find the incorrect entry.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To edit TNSNames files

1. Select **Utilities | TNSNames Editor** to open the TNSNames Editor.
2. Open a TNSNames file in one or both sides of the window.

   Note: If you are working with two TNSNames files at the same time, the TNSNames Editor does not prevent duplicate entries in the tnsnames.ora file. This allows you to copy a service and then edit it. Use the arrows in the middle of the screen to copy entries between the two files.

3. Make changes as necessary. Review the following for additional information:

Add new service	Click and complete the required fields.
Clone a service	To clone a service: a. Right-click the service and select **Clone Service**. **Note:** When you clone a service, the new service entry will have a blank Net Service Name and displays at the top of the service list. b. Select the new service and click to make necessary modifications.
Copy and paste entries	You can paste entries directly into either side of the TNSNames Editor from either the Project Manager or from a text file. To copy connections to the TNS Names Editor: a. Copy the text of the connection information from the email, file, or Project Manager. **Note:** To copy from the Project Manager, right-click the connection in the Connections tab and select **TNSNames information to clipboard**. b. Click in the pane containing the TNSNames.ora where you want the information.
Test a connection	To test a connection: a. Save the file to the location where your TNSping executable reads files. b. Select the connection and click .
Tip: Click to check the syntax of your TNSNames file from the editor. If there are errors, Toad lists them in the Message tab and suggest ways to fix them. **Note:** You can add a UR tag to a CONNECT_DATA tag of a TNS entry. This is available ONLY through the text edit area of the editor, not the Edit Service	

window. This tag is supported as a patch to Oracle 10g and is no longer necessary in Oracle 11 and later.

Create a Variable for the TNSNames.ora File

If you have multiple Oracle clients installed or want to use a TNSNames.ora file on a network, you may want to use the TNS_NAMES environment variable to simplify managing TNS connections. This variable specifies the location of your TNSNames.ora file, and all installed Oracle clients use this file for connections. If the TNS_ADMIN variable is not defined, then each Oracle client must have its own TNSNames.ora file. Consequently, using the TNS_NAMES variable allows you to maintain one TNSNames.ora file instead of maintaining multiple copies for the clients.

To create an environment variable for the TNSNames.ora file

1. Access the Environment Variables window:

Windows 7 Windows Vista	Select **Start** | **Computer** | **System Properties** | **Advanced system settings** | **Environment Variables**.
Windows XP	Select **Start** | **My Computer** | **View system information** | **Advanced** | **Environment Variables**.

2. Click **New** beneath the **System variables** field.
3. Enter *TNS_ADMIN* in **Variable name** the field. This must be an exact match.
4. Enter the TNSNames.ora file location in the **Variable value** field.

   Note: This file is generally located in the following directory: ORACLE_HOME\NETWORK\ADMIN.

Limitations of the TNSNames Editor

The TNSNames Editor supports much of the standard Oracle syntax. There are, however, certain old or advanced features that it does not support:

- Multiple Description Lists

  Note: Multiple Description *entries* are supported, and a DESCRIPTION_LIST will be created automatically to encompass them.

- Multiple Address Lists
- No ADDRESS_LIST keyword (The editor parses it correctly, but it adds the ADDRESS_LIST parameter back in to the entry, which produces a completely equivalent configuration. Existing entries with multiple ADDRESS_LIST tags are preserved, even if edited in the Editor window.)

In all of these cases, the TNSNames Editor will not change the entry unless the user chooses to edit that particular entry. If you do not try to change a non-supported entry, the file will remain useable.

If you do try to edit a service name with one of these unsupported features, the editor does its best to parse the entry into the Edit Service dialog box. It will write the entry into a structure it does support, if you click **OK** in the Edit Service dialog box and then save the file.

Whenever the TNSNames Editor overwrites a file, it first makes a backup of that file in the same directory. So if you do accidentally cause problems to your file, you can revert to the backup.

Troubleshoot Connections

General Connection Issues

Problem	Description and Possible Solution
Cannot connect to Oracle	You must have a full install of a 32-bit version of Net8. Connecting by SQL*Plus is *not* verification that Net8 is installed. Confirm that the registry setting specifies the correct folder where your TNSNames.ora file lives: `HKEY_LOCAL_MACHINE\Software\Oracle\TNS_ADMIN` If you cannot connect to Oracle using Toad, your Oracle client software may not be installed correctly. Re-install the Net8 client from the Oracle setup disks. Or, if you have installed OEM, NetAssist, Oracle Lite, or any other Oracle software recently, remove that software and see if you can connect using Toad. This issue can also be caused by an error in the TNSNames file. See "Edit TNSNames Files" (page 30) for more information.
Toad is connecting with the wrong Oracle Home	The default home that Toad uses matches the one you have chosen in the Oracle Home Selector, unless you have previously selected the checkbox: **Make this the Toad default home**. Only one Oracle home can be in use at one time. This means that once a connection is made, all future connections use the same Oracle home, regardless of default home. If you want to use a different Oracle home, you must close all open connections first.
OCI/DLL Not Found (Cannot load OCI DLL: <path to OCI.DLL>)	This problem commonly occurs when customers use a 64-bit Oracle client, which is not supported. Toad requires a 32-bit client. See the *Toad for Oracle Installation Guide* for more information. If you have a 32-bit client, make sure that the Oracle BIN directory is in your system path. This directory will be ORAWIN\BIN, or ORANT\BIN, or something similar. To check your path, Open a command line window, type PATH, and then press **Enter**.

Database Login Window

Problem	Description and Possible Solution
There's an X beside TNSNames Editor or SQLNet Editor.	Toad can't find the TNSNames.ora file or the appropriate SQLNet file. Make sure they are in the appropriate directory, and that your path points to them.
All of my past connections are not visible in the grid.	Clear the **Show favorites only** and **Show selected home only** fields in the bottom of the Database Login window.
Toad is/is not saving the password for a connection.	Make sure the **Save Password** column is selected or cleared as appropriate in the row for that connection. If Toad is saving all passwords and you do not want them saved, make sure the **Save passwords** checkbox beneath the grid is cleared. **Note:** If the **Save Password** field is disabled, your ability to save passwords may have been removed during installation. See the *Toad for Oracle Installation Guide* for more information.

3

Execute and Manage Code

About the Editor

The Toad Editor lets you edit many types of statements and code, and Toad provides many options to customize the Editor's behavior. See "Important Editor Settings" (page 37) for more information.

The Editor attaches itself to the active connection in Toad, but if you do not have a connection you can still use it as a text editor. You can also change the schema to execute against from the Current Schema toolbar. See "Change Current Schema" (page 43) for more information.

Tips:

- The Editor's right-click menu contains many options to help you work with code. When you are trying to figure out how to do something, try right-clicking the Editor to see if it is available in the menu.
- Select an object and press F4 to display the object's properties. See "Describe Objects" (page 59) for more information.
- If you press CTRL and click a PL/SQL object, the object opens in a new Editor tab. If you press CTRL and click a non-PL/SQL object, the object opens in the Describe Objects window.

Editor Panels

The Editor is organized into the following areas:

Area	Description
Navigator Panel	The Navigator Panel is a desktop panel that displays an outline of the Editor contents in the active tab. You can click on the items listed to navigate to that statement in the Editor. The Navigator Panel is displayed on the left-hand side by default, but you can change where it is docked.
Editor	The main Editor window displays code in separate tabs. You can create tabs for different bits of code, or different types of code. SQL and PL/SQL can go in the same tab. Toad can tell where the cursor is located and compile PL/SQL or run SQL as required. **Note:** If you have multiple statements in the Editor, you must trail them with a valid statement terminator such as a semi-colon.
Desktop Panels	The desktop panels contain many options for tab display, depending on what kind of code you are working with and what you want to do with it. In

Area	Description
	addition, you can configure how these panels display to make Toad work for you. See "Customize the Editor Layout" (page 38) for more information.

Important Editor Settings

Toad provides many options to let you customize the Editor's behavior. The following table describes some of the most popular or important Editor options:

Option	Description	Navigate
Code templates	Select code template settings. Code templates use a manual keystroke (CTRL+SPACE) to perform substitutions. See "Code Completion Templates" in the online help for more information.	View | Toad Options | Editor | Behavior
Commit after every statement	Commit every time a statement is run, after any posted edits are made in the grid, and after a row is deleted in the grid. **Enabling this option makes it very easy to accidentally change or delete data.** It is recommended that you do not select this option, and you should never have it enabled when you are working on a production database.	View | Toad Options | Oracle | Transactions
Font	Select the Editor display font.	View | Toad Options | Editor | Display
Syntax highlighting	Select syntax highlighting settings. See "Syntax Highlighting" in the online help for more information.	View | Toad Options | Editor | Behavior
Tab stops	Enter the number of spaces entered when you press TAB.	View | Toad Options | Editor | Behavior
When closing connections	Commit, rollback, or prompt when closing connections. This field is disabled if you select **Commit after every statement**. Selecting **Commit** makes it very easy to accidentally change or delete data. It is recommended that you select **Prompt**.	View | Toad Options | Oracle | Transactions

Customize the Editor Layout

You can easily configure which panels display on your Editor desktop and where they display. You can select panels to display one at a time or in groups. When you have configured it, you can save the desktop with its own name, returning to it whenever the need arises. In addition, you can turn on Auto-save current desktop, and however you have the desktop set when you change tabs or close Toad will be how your desktop is defined the next time you open the Editor.

You can split the Editor to easily compare code revisions. See "Split the Editor Layout" (page 38) for more information.

Note: This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To display panels one at a time

1. Right-click the Editor and select **Desktop**.
2. Select the panel you want to display or hide.

To configure your desktop

1. Right-click the panel area near the bottom of the window.
2. Select **Desktop | Configure Desktop Layout**.
3. Select the panels you want to display in the Show column, and click the drop down menus in the Dock Site column to change where the panel is docked. By default, all except the Navigator will be docked below the Editor.

To save your desktop

1. Click  on the Desktops toolbar.
2. Enter the name you want to use for this desktop.

To use a saved desktop

» From the drop-down desktop menu, select the desktop you want to use.

To restore a desktop

» Click the drop-down arrow on  and select **Revert to Last Saved Desktop** or **Restore Default Desktop**.

Split the Editor Layout

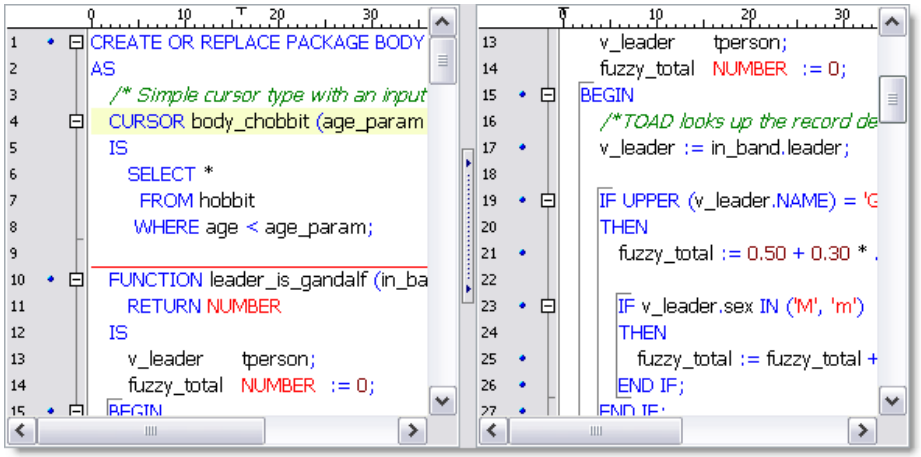
You can split the Editor to easily compare code revisions.

Tip: To remove the split layout, right-click in the Editor and select **Split Editor Layout | Not Split**.

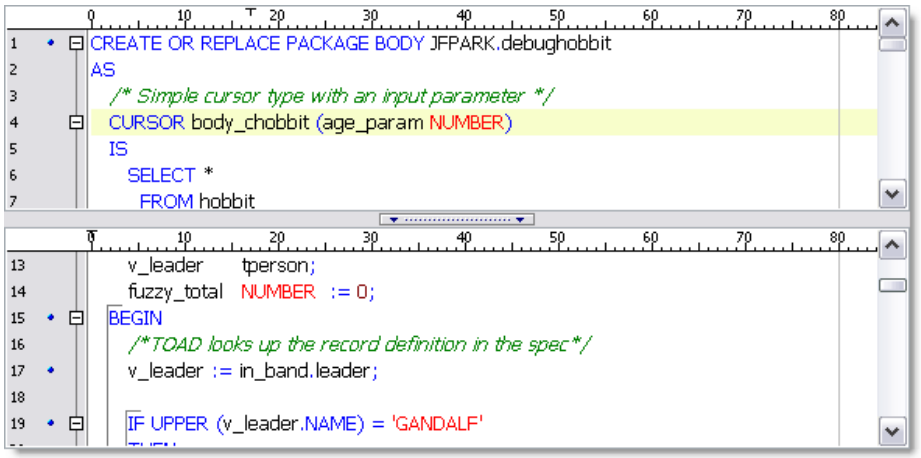
To split the Editor

1. Right-click the Editor and select **Split Editor Layout**.
2. Select one of the following options:

- **Left-Right**



- **Top-Bottom**



Execute Statements and Scripts

Toad provides many different options for you to execute scripts:

If you want to...	Review the following:
Execute a script in the Editor	Use **Execute as script** (F5) in the Editor. See "Execute Scripts in the Editor" (page 41) for more information. **Considerations:** • Long-running scripts can tie up the Editor. • Does not support bind variables and cannot produce editable data. Alternately, you can execute the code as a statement. See "Execute Single Statements" (page 41) for more information. • Fetches all matching records at the same time, which may cause it to execute slower and use more resources.
Execute a long-running script without tying up Toad (execute a script outside of Toad)	Use Quest Script Runner for scripts that may take a long time to execute or to execute a script in an external application. See "Execute Scripts with Quest Script Runner" (page 42) for more information. **Considerations:** • Compared to executing a script in Toad, Quest Script Runner does not offer all of the Editor's features • You can also use SQL*Plus to externally execute scripts. SQL*Plus does not have data grids or other Toad features, and it does not support Unicode. See "Execute SQL via SQL*Plus" in the online help for more information.
Execute multiple scripts	You can use the Automation Designer or Script Manager. Review the following topics in the online help for more information: • Automation Designer Overview • Script Manager Overview
Schedule execution	Create a Toad Action and schedule it to run. See "Scheduling Actions and Apps" in the online help for more information.
Execute through the command line	Execute scripts or Toad Actions with scripts from the command line. Review the following topics in the online help for more information: • Command Line Syntax • Execute Actions from the Command Line • Automation Designer Overview

Execute Single Statements

You can easily execute a single statement in the Editor. Toad's parser identifies and executes the statement or compiles the PL/SQL at the cursor.

Note: If you select code and execute, Toad ignores the parser results and executes the portion that is selected. This may cause errors, especially if you select more than one statement. It is better to place your cursor in the statement you want to execute and let Toad select the statement.

This method fetches matching records in batches to improve performance. The default is 500 records, but you can change the default by editing the **OCI Array Buffer size** option. See "General Oracle Options" in the online help for more information.

Notes:

- Executing a statement can produce editable data. See "Understand Editable Resultsets" (page 67) for more information.
- Toad provides several options to execute a full script or multiple statements. See "Execute Statements and Scripts" (page 40) for more information.
- You can easily execute a SQL statement embedded within PL/SQL. See "Execute SQL Statements within PL/SQL" in the online help for more information.

To execute a statement in the Editor

» Place the cursor in the statement and click  on the Execute toolbar (F9).

Note: To cancel the execution, click  in the Execute toolbar.

Execute Scripts in the Editor

Toad's **Execute as script** command is generally the best method when you want to execute multiple statements or a script in the Editor. However, there are some important differences between executing scripts and a single statement (Execute Single Statements (page 41)). For example, executing scripts:

- Does not support bind variables
- Cannot produce editable datasets
- Fetches all matching records at the same time, which may cause it to execute slower and use more resources than executing a single statement

If you want to execute a script that may take a long time to run, executing with Quest Script Runner may be the best choice. Quest Script Runner is an external execution utility, which allows you to keep working in Toad while the script executes in the background. See "Execute Scripts with Quest Script Runner" (page 42) for more information.

Notes:

- Toad does not support all SQL*Plus commands. See "SQL*Plus Commands" in the online help for more information.
- Linesize in Toad defaults to 80, just as in SQL*Plus. If you want to change this to a longer amount, you can do it using the SET LINESIZE command in your script.
- To load and immediately execute a script file, select **Editor | Load and Execute a Script File**.

To execute the contents of the Editor as a script

» Click  on the Execute toolbar (F5).

> **Caution:** If any changes have been made, the script in the current window is *automatically saved*, and then executed as a script.

Note: To cancel the execution, click  in the Execute toolbar.

Execute Scripts with Quest Script Runner

Quest Script Runner (QSR) looks and operates the same way as the Toad Editor, but it only includes a subset of the Editor's features. Quest Script Runner is a small script execution utility that can run in the background or from the command line. Quest Script Runner can be helpful when you need to run long scripts and want to perform other tasks in Toad. In addition, several instances of Quest Script Runner can run at one time because of its small size.

The Quest Script Runner window is divided into the following regions:

- Editor (top)—Displays the script for you to review and edit. You can use the toolbar to save the script, open a different one, search, manage your connection, and other options.
- Script output (bottom)—Displays the script output and variable settings. See "Script Output Tabs" in the online help for more information.

Notes:

- Quest Script Runner is not completely SQL*Plus compatible; however, most DDL and DML scripts should be supported. See "SQL*Plus Commands" in the online help for more information.
- If you change data in the script session, the changes will not reflect in Toad until you commit the changes in the script session. Also, any session control statements executed in the script session (such as ALTER SESSION) are not visible to the Toad session.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To execute scripts from Toad in Quest Script Runner

1. Open the script in the Toad Editor.
2. Select **Editor | Execute SQL via QSR**. Quest Script Runner opens using your current connection and executes the script.

   Note: You can also click the drop-down beside the icon and select **Execute in QSR**.

To execute scripts within QSR

1. Open the script in the Quest Script Runner Editor.
2. Click on the Quest Script Runner toolbar.

Work with Code

Change Current Schema

The Current Schema drop-down lets you work with a schema other than the one to which you are connected. This can be useful if, for example, you have tested a SQL statement in your test schema and now want to execute it on several other schemas without disconnecting and reconnecting.

By default, the current schema is set to your current connection. When you use this drop-down, Toad issues an `ALTER SESSION SET current_schema` command. After you execute, Toad issues the `ALTER SESSION SET current_schema` command again to return to the original connection schema.

Note: You must have the ALTER SESSION system privilege to use this feature. If you do not have the privilege, the drop-down is disabled.

To change the current schema

» Select a different schema in the Current Schema toolbar.

Change the Schema in Scripts

The Current Schema drop-down does not work with script execution or debugging commands. However, because Execute as Script is designed to mimic SQL*Plus, you can use a set schema command to change the schema.

To change the schema in scripts

» Include the following command at the beginning of your script:

```
ALTER SESSION SET current_schema = "USERNAME"
```

Save and Reuse SQL Statements

You can save SQL statements and easily insert them into the Editor at any time. The best way to save SQL statements is with the Named SQL feature. Toad also allows you to export and import your saved SQL. See "Import/Export Saved SQL" in the online help for more information.

Toad lists saved and recently executed SQL statements in the SQL Recall pane. See "View Recently Executed SQL Statements" (page 45) for more information.

Notes:

- If you want a quicker way to save SQL statements, you can save them as Personal SQL statements by selecting **Editor | Add to Personal SQLs**. This bypasses the dialog to name the SQL. However, the only way to reuse Personal statements is from the SQL Recall pane.
- Toad stores all saved SQL in `User Files\SavedSQL.dat`.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To save statements from the Editor

1. Select the statement in the Editor.
2. Select **Editor | Add to Named SQLs**.
3. Enter a name for the SQL statement.

   Note: The name is case sensitive. For example, you can save both "sql1" and "SQL1".

To use a saved statement in the Editor

1. Select one of the following options:
   - Press **CTRL+N** in the Editor and select the statement from the pick list.
   - Enter *^MyNamedSQL* in the Editor, where *MyNamedSQL* is the name of your saved SQL statement. Toad replaces the SQL name with the saved statement at execution.
   - Double-click or drag the statement from the SQL Recall pane.

To view saved statements

» Select **View | SQL Command Recall | Named**.

To edit statements in the SQL Recall pane

» Select a statement and click  on the SQL Recall toolbar.

View Recently Executed SQL Statements

Toad saves recently executed statements in the History tab of the SQL Recall pane. This list is organized with the most recent SQL at the top by default. You can select a statement from this list and run it, save the statement for easy recall, or remove a statement from this list.

The SQL Recall pane also lists your saved SQL statements in the Named and Personal tabs. See "Save and Reuse SQL Statements" (page 44) for more information.

Notes:

- You can change the number of statements that SQL Recall saves in the History (500 is default) or save only SQL statements that executed successfully. You can select these options and other SQL Recall settings on the Code Assist options page. See "Code Assist Options" in the online help for more information.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To view previously executed SQL statements

» Select **View | SQL Command Recall | History** (F8).

Tip: You can also press ALT+UP ARROW or ALT+DOWN ARROW in the Editor.

To open SQL statement directly in the Editor

» Double-click or drag the statement from the SQL Recall pane.

To save statements in the History tab

1. Select a statement and click  in the SQL Recall toolbar.
2. Select *Named* in the **Type** field and enter a name for the statement in the **Name** field.

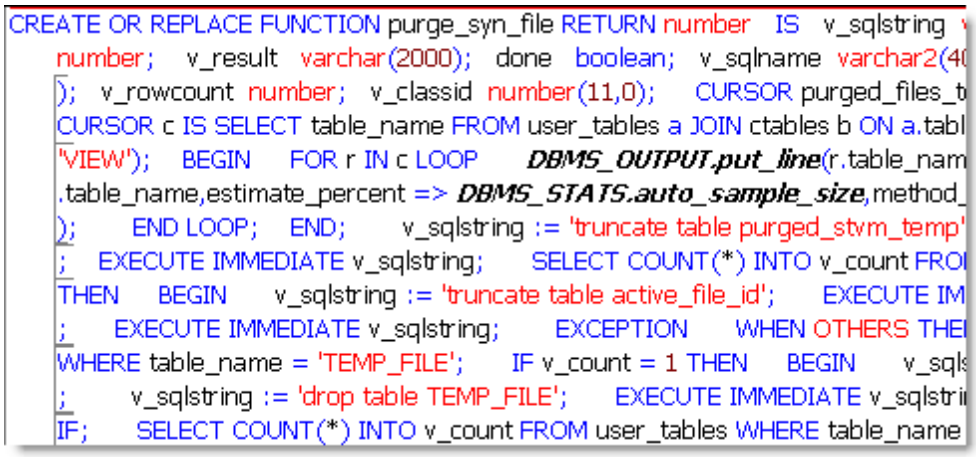
To edit statements in the SQL Recall pane

» Select a statement and click  on the SQL Recall toolbar.

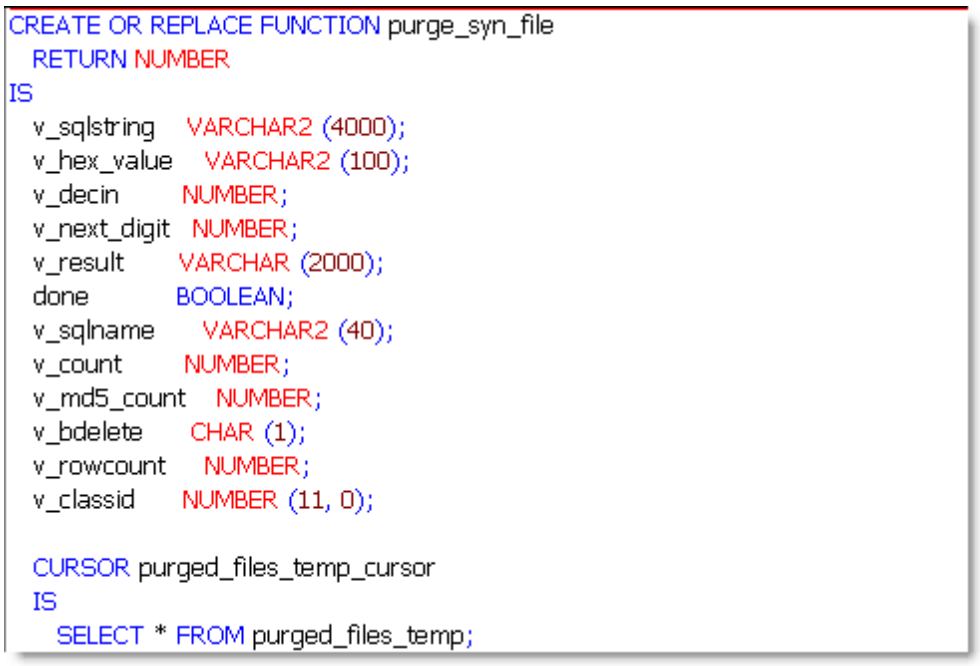
Format Code

You can have Toad format your code in the Editor. The following images display part of a script before and after formatting:

Before



After



You can customize how Toad formats the code, such as inserting spaces instead of tabs or changing the case for SQL commands. See "Formatter Options" in the online help for more information.

Note: Format multiple scripts at one time from the Project Manager. See "Format Files" in the online help for more information.

To format a statement

» Select the statement you want to select and click on the Edit toolbar.

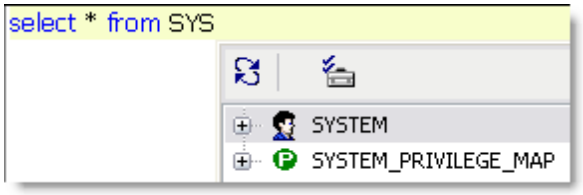
To format an entire script

» Click on the Edit toolbar.

Tip: You can also right-click the script and select **Formatting Tools | Format Code**.

Display Pick List (Automatically Complete Code)

The Toad Insight feature helps you write code by displaying a pick list with relevant object or column names. For example, if you start typing `SYS` and invoke the pick list, the `SYSTEM` user would be included in the pick list:



Toad provides options for you to customize Code Insight's behavior, such as adjusting the length of time before the pick list displays. See "Code Assist Options" in the online help for more information.

To display the pick list

» Press CTRL+T, or begin typing a name and pause 1.5 seconds.

Note: There are additional shortcut keys you can use with Toad Insight. See "Toad Insight Pick List Shortcuts" (page 11) for more information.

Extract Procedures

You can extract a procedure from existing code into a new stored procedure or locally defined procedure.

Creating the new procedure and call depend heavily on the parser to determine which identifiers in the text selection must be declared as parameters in the new procedure. If Toad cannot parse the code, no extraction occurs.

Note: This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To extract procedures

1. Select the code you want to extract in the Editor.
2. Right-click and select **Refactor | Extract Procedure**.
3. Select a procedure type.

Note: If you select stored procedure, you can choose to either include the "CREATE OR REPLACE" in the DDL instead of just "CREATE".

4. Enter the procedure name.

   Tip: The new procedure and the resulting procedure call are created an inserted so that the code is syntactically correct, but no formatting is done to the code. You can have Toad format the code by pressing SHIFT+CTRL+F.

Comment Out Code Block

These commands add or remove comments from the selected block of text by adding or removing "--" from the beginning of each line.

To comment code

1. Select the code block.
2. Right-click and select **Refactor | Comment Block**.

   Tip: You can also press CTRL+B.

To uncomment code

1. Select the code block.
2. Right-click and select **Refactor | Uncomment Block**.

   Tip: You can also press SHIFT+CTRL+B.

Find Unused Variables

Toad can find unused variables and identifiers in PL/SQL with code refactoring. If Toad find unused variables, it displays the variables and lets you jump to the occurrence in the Editor.

Notes:

- Toad only searches the object in the Editor, and does not evaluate other PL/SQL objects that may reference it. Be careful when removing unused variables from package specifications, as they maybe be referenced in other PL/SQL that is not searched.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To find unused variables

1. Right-click code in the Editor.
2. Select **Refactor | Find Unused Variables**.

Rename Identifiers

You can easily rename identifiers (variables, parameters, or PL/SQL calls) for PL/SQL in the Editor with code refactoring.

Notes:

- Toad only searches the PL/SQL object in the Editor. Be careful when renaming identifiers in package specifications, as they maybe be referenced in other PL/SQL that is not searched.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To rename identifiers

1. Right-click an identifier in the Editor and select **Refactor | Rename Identifier**.
2. Enter the new name in the **Name** field.

Debug PL/SQL

About Debugging

You can debug PL/SQL, SQL scripts, and Java in Toad. Toad's documentation includes tutorials on how to debug. See "Debugging a Procedure or Function Tutorial" in the online help for more information.

Notes:

- There are minimum Oracle database requirements for using this feature. See "Minimum Oracle Database Requirements" in the online help for more information.
- The debugger is not designed to work with word-wrapped lines, since the Editor will then have a different set of line numbers than what is stored in Oracle. Toad provides a warning message about this if you open the procedure Editor while word-wrapping is enabled. To disable word-wrap, select **View | Toad Options | Editor | Behavior** and clear **Word wrap**.

Types of Debugging

Debugging in Toad requires you to select one type of debugging at a time for all database instances open per instance of Toad. For example, if you have three database connections in one instance of Toad, they must all be in the same debugging state. If you then opened another instance of Toad, with the same or different connections, they could be in a different debugging state. Review the following about the debugging types:

DBMS Debugger	Debugs PL/SQL. Using the Debugger, you can set breakpoints, watches, and see call stacks. In addition, you can view DBMS output.

	Note: When using the PL/SQL Debugger and connecting to a RAC instance, you must have the TNSNAMES entry for the instance with the server directed the use connection or session here. Or, you must connect directly to an instance of the cluster without letting the server assign an instance.
Script Debugger	Debugs SQL scripts. You can set breakpoints, run to cursor, step over, trace into, and halt execution of your scripts.

You can also use Toad's Auto Debugger, which automatically inserts DBMS_OUTPUT.PUT_LINE statements into the DDL. Once you compile the code and inspect the contents of the DBMS_OUTPUT buffer, you can remove all instances of DBMS_OUTPUT.PUT_LINE with the click of a button. See "Automatically Insert DBMS_OUTPUT Statements (Auto Debugger)" in the online help for more information.

Compile with Debug Information

To use the debugger fully with PL/SQL or Java packages, you need to compile your object with debug information. If you have not compiled with debug information, in databases in versions before 10g you can step into a unit, step over and so on, but you cannot see watches unless the object is compiled with debug. In a 10g database you cannot step into code or step over unless the object was compiled with debug. You can only execute.

In addition, if you are debugging an object that has dependent objects, you cannot step into the dependents unless they, too, are compiled with debug information. See "Dependencies and References" in the online help for more information.

To enable compile with debug

» Click  on the main toolbar or select **Session | Toggle Compiling with Debug**.

Note: You can have Toad enable **Toggle Compiling with Debug** by default for each new session. See "Execute and Compile Options" in the online help for more information.

Start Debugging

You can debug PL/SQL objects in the Editor. When you open a complete package or type in the Editor, the spec and body open in separate tabs by default. However, Toad provides options to control how objects are split, reassembled, and saved. See "Editor Options: Open/Save" in the online help for more information.

Note: This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To start the Debugger

1. Open a PL/SQL object in the Editor.
2. Click  on the main toolbar or select **Session | Toggle Compiling with Debug**. This enables debugging.
3. Compile the object on the database.
4. Select one of the following options on the Execute toolbar to begin debugging:
   - Execute PL/SQL with debugger ()
   - Step over ()
   - Step into ()
   - Run to cursor ()

View DBMS Output

Oracle provides a specifically designed package called DBMS_OUTPUT with functions for debugging PL/SQL code. It uses a buffer that your PL/SQL code writes into and then a separate process queries the buffer out and displays the contents.

You must enable DBMS Output before executing the PL/SQL. In Toad, output displays after the procedure has completed execution, not while you are stepping through the code. In nested procedure calls, all procedures must have run to completion before any DBMS Output content is displayed.

Troubleshooting

If you do not see DBMS Output, try the following suggestions:

- Right-click the lower pane and select **Desktop Panels | DBMS Output**.
- Make sure the **Toggle Output On/Off** button is on () in the DBMS Output tab. Then, set the interval in the Polling Frequency box. If the toggle is on, Toad periodically scans for and displays DBMS Output content.
- Contact your Oracle DBA to make sure the DBMS_OUTPUT package is enabled on your database.

4

Work with Database Objects

About the Schema Browser

The Schema Browser allows you to view, add, and modify database objects. It also displays detailed information about a selected object. For example, the detailed information for a table includes its subpartitions, columns, indexes, data, grants, and so on.

Notes:

- Some Schema Browser features may not be available unless you have the commercial version of Toad with the DB Admin Module.
- You can set the Schema Browser to open automatically when a new connection is made. Select **View | Toad Options | Windows** and select the **Auto Open** checkbox of the Schema Browser row.

Schema Browser Panes

The Schema Browser is divided into two panes to help you review objects and their details:

Pane	Description
List of objects (left-hand side)	The left-hand side of the Schema Browser provides a list of objects that you can view. In general, you select a schema and an object type, and the list refreshes to display the relevant objects. You can filter the objects and save your filters for future use. See "About Schema Browser Filters" (page 62) for more information. The list can display additional information about the objects, such as the tablespace and number of rows. To view additional information, right-click a column in the left-hand side and select additional columns to display. (This feature is unavailable with the tree view display.) **Tip:** In drop-down mode, you can hide leading characters of object names in the left-hand side. Right click a column and select **Hide leading characters of name**. The display resets when you change the schema or connection.
Object details (right-hand side)	The right-hand side initially displays the same list of objects as the left-hand side. When you select an object on the left-hand side, Toad displays its details in the right-hand side. This format makes it easy for you to compare details between objects of the same type. **Note:** You can use Toad's Describe Objects feature to display an object's details in a new window. The Describe Objects window displays the

Pane	Description
	same information you would see in the right-hand side of the Schema Browser. See "Describe Objects" (page 59) for more information. From the Schema Browser you can drop most objects, enable/disable applicable objects, and disable triggers for a table or for an entire schema. You can recompile procedures, functions, packages, triggers, and views, or they can be extracted from the database and loaded into the clipboard or Editor.
Tips: • To reset the right-hand side to mirror the list of objects on the left-hand side, click  in the toolbar or select multiple objects on the left-hand side. • Many of the panes within the Schema Browser have icons to identify the objects. See "View Schema Browser Icon Legend" (page 60) for more information. • Many of the objects and panes have enhanced right-click menus. Right-click an object or its details to see what options are available.	

Customize the Schema Browser

You can customize how the Schema Browser displays to better suit the way you work. The most common customization is to change how object types display in the left-hand side. See "Select the Left-Hand Side Display Style" (page 53) for more information.

Toad also provides dozens of options to further customize the display and behavior of the Schema Browser. Select **View | Toad Options | Schema Browser** to view the options.

Customize the Schema Browser

Select the Left-Hand Side Display Style

You can customize how the Schema Browser displays to better suit the way you work. The most common customization is to change how object types display in the left-hand side. Once you select a basic display style, you can rename, hide, or rearrange the object types on the left-hand side and detail tabs on the right-hand side. See "Customize Schema Browser Tabs" (page 55) for more information.

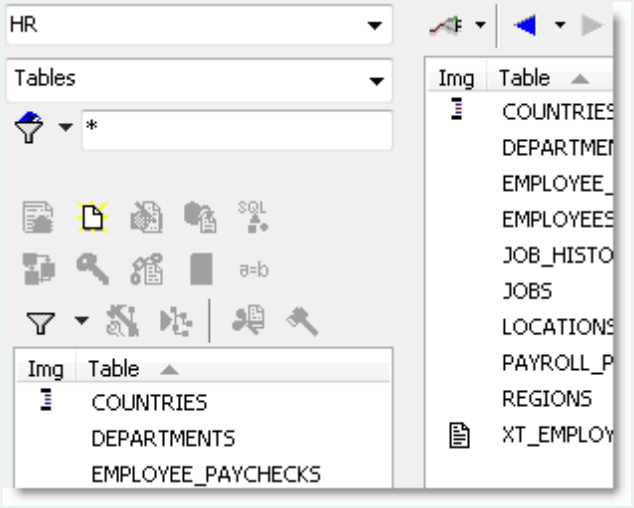
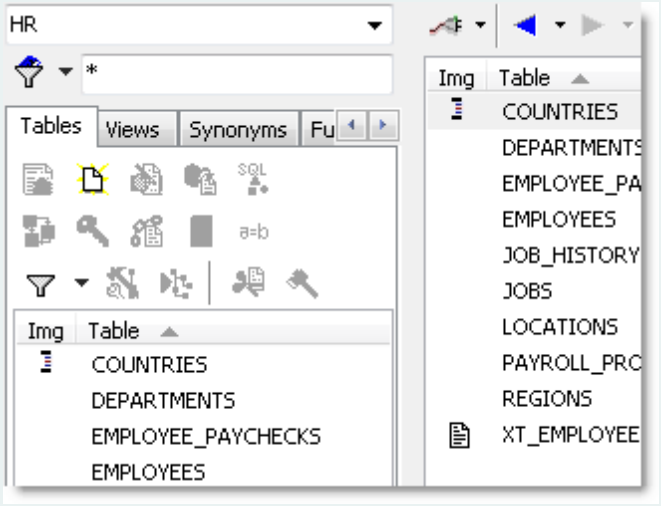
Tips:

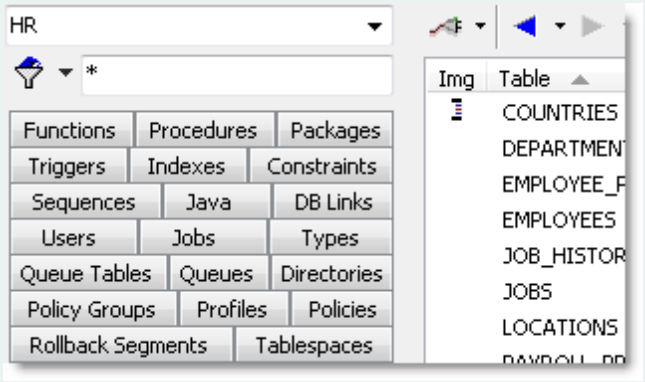
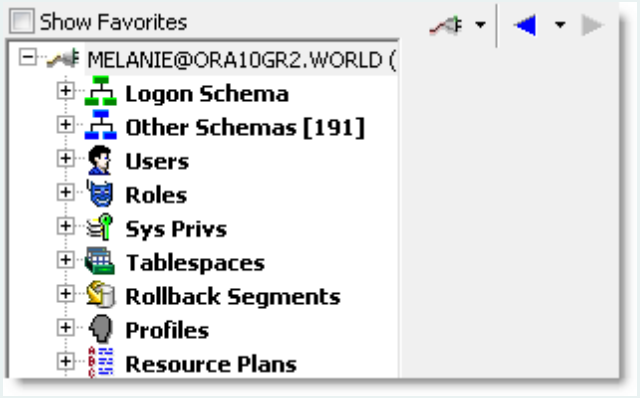
- To hide the right-hand side of the Schema Browser, press F12. You can press F12 again to display it again.
- To hide or display images and tips in the left-hand side, click  in the Schema Browser toolbar and select the appropriate option.
- In drop-down mode, you can hide leading characters of object names in the left-hand side.

Right click a column and select **Hide leading characters of name**. The display resets when you change the schema or connection.

To select the left-hand side display style

1. Click  in the Schema Browser toolbar.
2. Select one of the following options:

Drop-down	Displays object types in an alphabetical drop-down field. 
Tabbed (single row of tabs)	Displays object types as a single line of tabs. You must scroll through the tabs to view all object types. 
Tabbed (multi line tabbed)	Displays multiple rows of tabs instead of the scroll bar.

	
Tree view	Displays object types in a tree view. 
Note: You may need to close any open instances of the Schema Browser for the new browser style to display.	

Customize Schema Browser Tabs

The Schema Browser displays object types on the left-hand side and detail tabs on the right-hand side. You can rename, rearrange, and hide the object types that display in the left-hand side or the tabs on the right-hand side.

Note: This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To customize tabs and object types

1. Click  on the Schema Browser toolbar.
2. Select **Configure LHS Object Types** to customize the left-hand side, or select **Configure RHS Tabs** to customize the right-hand side.
3. Customize the display settings. Review the following for additional information:

If you want to...	Complete the following:
Rename an object type or tab	Enter a new name in the **Caption** field.
Hide an object type or tab	Clear the **Visible** field.
Rearrange tabs	Select a tab and click the up or down arrow on the right. **Note:** You can only rearrange the order of object type tabs if you are in a tabbed view. See "Select the Left-Hand Side Display Style" (page 53) for more information.
Tip: To restore the default settings, click  at the bottom of the window.	

4. To save the left-hand side settings as a configuration file, click  at the bottom of the window.

   Notes: You can save and load different configurations. This gives you more flexibility when you are working, because you can easily change the display to suit different tasks.

Group Favorite Objects

You can group objects that you use frequently into a tab on the Schema Browser. These different objects can be grouped into one or several folders. Folders are specific to an instance (not a connection or a schema).

Notes:

- The configuration file for this tab is saved as *Projects.lst* in the User Files folder.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To group favorite objects

1. Click  on the Standard toolbar to open the Schema Browser.
2. Select *Favorites* in the object list in the left-hand side.
3. Add one or more folders to group the objects:
   a. Click  on the Favorites toolbar.
   b. Enter a folder name.
4. Add objects to a folder. Review the following for additional information:

To search for and select objects	Complete the following: a. Click  on the Favorites toolbar.

	b. Search for objects. See "Object Search" in the online help for more information. c. Highlight the objects you want to add in the Results tab and click ★. d. Select the folder where you want the object.
To add objects directly	Complete the following: a. Right-click an object in the left-hand side and select **Add to SB Favorites List**. b. Select the folder where you want the object.
To add scripts/files	Complete the following: a. Right-click the folder where you want the item in the Favorites list and select **Add Files**. b. Select the file and click **Open**. **Note:** Multi-select files to add more than one at a time. c. Select the folder where you want the object.
Tips: • To remove objects from a folder, select the object in the Favorites list and click −. • To empty or remove favorites folders, right-click the folder and select **Remove Folder** to remove the folder and its contents or **Empty Folder** to leave the folder in the list but remove its contents.	

Create Objects

Toad lets you select Oracle object parameters and generate a DDL statement to create or alter objects. It is generally a good idea to review the DDL statement before executing it. When you execute the statement, Toad passes it to the database, and the object is created or altered.

The options to create or alter an object in Toad follow the parameters defined by Oracle. If you need clarification on what an option means or how it should be used, see Oracle's documentation for more information. Oracle provides detailed documentation about objects, including their purpose, properties, and restrictions.

Notes:

- You can also find detailed information about parameters in Knowledge Xpert. Knowledge Xpert is an extensive Oracle technical resource which you can search in the Quick Search bar. See "Quick Search Bar" (page 13) for more information.
- You can use an existing object as a template when creating a new one. See "Use Existing Object as Template for New Objects" (page 59) for more information.

- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To create an object

1. Click  on the Standard toolbar to open the Schema Browser.
2. Select the object type in the left-hand side and click  .

   Note: You can also create an object by selecting **Database | Create | *<Object type>***.
3. Complete the fields as necessary.
4. To add the object to the Project Manager, select **Add to PM**. See "Project Manager Overview" in the online help for more information.
5. To view the CREATE statement, click **Show SQL** or select the SQL tab.
6. Click **OK** or **Execute** to create the object immediately. You can also schedule the script to run later.

   Note: To alter or edit an object, double-click it in the Schema Browser. You can also press F2 to rename an object (if it can be renamed).

Copy Objects to Another Schema

From the Schema Browser, you can use existing objects to create identically formed objects in a different schema. This feature uses the Export DDL feature to export the code for the objects, and then import it into the new schema.

Note: This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To copy objects to another schema

1. Click  on the Standard toolbar to open the Schema Browser.
2. Right-click the object you want to copy in the left-hand side and select **Create in another schema**.
3. Select export settings and click **OK**. See "Export DDL" in the online help for more information.
4. Enter the destination connection and destination schemas.
5. To review the script to create the objects, click the Script tab.
6. Click **Execute**.

Use Existing Object as Template for New Objects

You can use an existing object as a template for creating a new object. Toad loads the original object's properties in the Create window for you to edit as necessary and execute.

Notes:

- This feature is not available for all object types.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To create an object based on an existing one

1. Click  on the Standard toolbar to open the Schema Browser.
2. Right-click the object you want to use as a template in the left-hand side and select **Create Like**.
3. Complete the fields as necessary.
4. To view the CREATE statement, click **Show SQL** or select the SQL tab.
5. Click **OK** or **Execute** to create the object immediately. You can also schedule the script to run later.

Helpful Features

Describe Objects

You can use the Describe Objects feature anywhere in Toad to find objects and display their information in the Describe Objects window. The Describe Objects window displays the same information you would see in the right-hand side of the Schema Browser.

Note: You can describe many objects types through database links. However, the following object types are not supported: policy, policy group, java, refresh group, resource groups/plans, sys privs, and transformations.

To immediately describe the object

1. Select the object and press **F4**.

   Tip: You can also right-click the object and select **Describe**.

2. If multiple objects have the same name, select the appropriate object from the Multiple Object Found window. (This only applies to the object types in DBA_OBJECTS.)

To specify the object schema and name before describing the object

1. Press **CTRL+D** to open the Quick Describe window.
2. Enter the object name in the **Object Name** field. You can complete the rest of the fields to refine your search. These fields are helpful when multiple schemas may contain objects with the same name, or when different object types have the same name (for example, a SYSTEM user and table).
3. Click **Describe and Close** to open the object in the Describe Objects window and close the Quick Describe window. If you click **Describe** instead, the Quick Describe window remains open.

Jump to Objects in the Schema Browser

Objects are displayed in the Schema Browser right-hand side within a data grid or a label. You can directly jump to the displayed object.

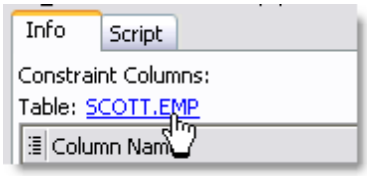
Tip: You can also describe the object to view its details in a new window. See "Describe Objects" (page 59) for more information.

To jump to the object from the data grid

» Select the object and press **SHIFT+F4**.

To jump to an object in a label

» CTRL+click and the object. In the following screenshot, you would click SCOTT.EMP to jump to the SCOTT.EMP table in the Schema Browser.



View Schema Browser Icon Legend

Many of the panes within the Schema Browser have icons to identify the objects. Toad includes an Icon Legend that you can use to easily decipher these images.

To view the icon legend

» Click  on the Schema Browser toolbar.

View Parent/Child Datasets in the Schema Browser

When you view a table's data in the Schema Browser, you can split the window to also show child or parent tables in a new detail grid. You can also change the query for the detail grid.

To view parent/child datasets in the Schema Browser

1. Select a table in the Schema Browser.
2. Select the Data tab and click  on the Data tab toolbar.

   If the table has a single foreign key, Toad automatically displays the related table. If there is more than one foreign key, click the arrow beside  on the detail grid toolbar and select the a table. Toad remembers your selection.
3. To edit the query in the detail grid, click  on the detail grid toolbar.

Filter Schema Browser Content

About Schema Browser Filters

The Schema Browser has several different types of filters:

Type	Description
Object filter (left-hand side)	Object filters reduce the number of objects displayed in a schema. By default, Toad automatically saves your filter settings per schema name. When you reopen the schema, Toad remembers and applies the last filter that you used for it. However, Toad provides other options on how to save and apply filters. You can: • Create and apply new filters, which you can save to reuse later. See "Create Schema Browser Filters" (page 63) for more information. • Create a default filter for each object type, which is used for all schemas. See "Create Default Schema Browser Filters" in the online help for more information. **Note:** You can have Toad automatically apply the default filter when you open a schema, instead of the last filter used. See "Schema Browser Left-Hand Side Options" in the online help for more information.
QuickFilter (left-hand side)	The QuickFilter is a client-side filter, so it filters all Schema Browser object lists without re-querying the database. This filter works in conjunction with the existing browser filters. See "Quickly Filter the Schema Browser Left-Hand Side" (page 64) for more information.
Data filter (right-hand side)	This is a server-side filter that limits which rows are retrieved from the database. This method is much faster than the grid filter when you are filtering a large dataset. See "Filter Data in the Schema Browser" (page 63) for more information.
Note: For performance reasons, Toad caches the list of table names for the current schema once the list has been queried from any window. The browser filter, although primarily intended to filter the Schema Browser window, also affects the table lists throughout Toad. For example, if your filter is set to display only tables that begin with GEO, every table list displays a filtered list until the filter is changed.	

Create Schema Browser Filters

Object filters reduce the number of objects displayed in a schema. See "About Schema Browser Filters" (page 62) for more information.

Note: This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To create browser filters

1. Click in the left-hand side. This displays the browser filter for the selected object type and schema.
2. Complete the fields as necessary.
3. To save the filter, click **Saved Filters** and select **Save Current Filter As**.
4. To customize or review the query before applying it, select **View/Edit Query Before Executing** and click **OK**.

   Notes:

   - Do not change the SELECT list.
   - When entering the IN clause, you must enclose the table name in single quotes ('TEST'). This lets you enter multiple table names (such as `'TABLE1', 'TABLE2', 'TABLE3'`) or enter a sub-query.

Filter Data in the Schema Browser

The Schema Browser has the following methods to filter data:

- Filter/Sort—This is a server-side filter that limits which rows are retrieved from the database. This method is much faster than the grid filter when you are filtering a large dataset. Access this filter by clicking the button in the tab's toolbar.
- Filter Data—This is a client-side filter that retrieves all rows from the dataset before filtering them. Access this filter by right-clicking the data grid. See "Filter Data" in the online help for more information.

Note: This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

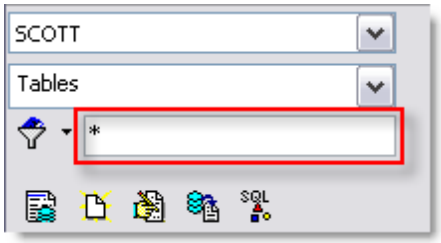
To filter data in the Schema Browser

1. Click in the tab's toolbar (right-hand side of the Schema Browser).
2. Complete the fields as necessary.

Quickly Filter the Schema Browser Left-Hand Side

The QuickFilter is a client-side filter, so it filters all Schema Browser object lists without re-querying the database. This filter works in conjunction with the existing browser filters. (See "Create Schema Browser Filters" (page 63) for more information.) The QuickFilter provides a faster way to filter the list than just using the browser filters.

The QuickFilter field is located below the schema drop-down for the tabbed and drop-down Schema Browser display styles:



Notes:

- QuickFilter does not work in the tree view Schema Browser or the Favorites Schema Browser tab.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To use the QuickFilter

» Enter the filter information. You can use wildcard characters at any point in your filter.

Wildcard	Description
* and %	Use for multiple character wildcards.
? and _	Use for single character wildcards.
!	Use to exclude the following characters. One exclamation point affects the entire string. For example, *!A*;B** would return everything that does not start with A or B.
Notes: • You can use multiple filters by separating them with a semicolon. For example, `A*;B*` would display everything that starts with A or B. • The QuickFilter maintains a history of up to 25 items, listed most recent first. Right-click the QuickFilter to access this list.	

Clear Schema Browser Filters

To clear filters on the left-hand side

» Click the arrow beside  and select **Clear Filter**.

To clear data grid filters in the Schema Browser

» Click  on the Schema Browser right-hand side.

5

Work with Data Grids

About Working with Data Grids

Throughout Toad, information is presented in a grid format. Within grids, you can customize grid views, filter resultsets, print the grid contents, and other standard operations.

Grids that provide query results have additional functionality. In most data grids you can:

Edit data	The dataset must be editable for you to make any changes. See "Understand Editable Resultsets" (page 67) for more information. If the dataset is editable, you can: • Post/Revert Edited Data (page 67) • Insert and Delete Rows (page 67) • Edit Data in Popup Editor (page 68) • Use an External Editor (page 68) • Access the Calculator (page 68)
Manage what and how content displays	Toad data grids support many of the same features as spreadsheet editing software, such as rearranging and resizing columns. You can also: • Perform Calculations on Grid Cells (page 69) • Anchor Column in Data Grid (page 70) • View a Single Record (page 70) • Preview Selected Column (page 71) • Hide Columns (page 71) • Sort and Group Data (page 69)
Filter results	Review the following for additional information: • Filter Data (page 71) • Use Excel-Style Filtering (page 72) **Note:** Schema Browser filters have special features. See "Create Schema Browser Filters" (page 63) for more information.
Export data	You can export data to a variety of formats, such as an Excel, HTML, or flat file: • Export Dataset (page 72) • Export Data to Flat File (page 73)

Edit Data

Understand Editable Resultsets

A data grid is fully editable providing that the query itself returns a resultset that can be updated. Query statements *must* return the ROWID to be editable. For example:

Not Editable	Editable
`select * from employee`	`select employee.*, rowid from employee`

Notes:

- You can substitute `EDIT` for `SELECT * FROM`. Toad translates it into the editable version of the statement. For example, `edit employee` returns the same result as `select employee.*, rowid from employee`.
- If the resultset should be editable but remains read only, make sure the **Use read-only queries** checkbox is not selected on the Data Grids | Data options page. See "Data Grid Options: Data" in the online help for more information.

Post/Revert Edited Data

To post data

1. Make changes to an editable resultset in the data grid.
2. Click ✓ in the grid navigator.

To revert data

» Click ✕ in the grid navigator.

Insert and Delete Rows

The dataset must be editable for you to make any changes. See "Understand Editable Resultsets" (page 67) for more information.

To insert a blank row

» Click + on the data grid toolbar.

To copy an existing row

» Right-click the cell you want to copy and select **Duplicate Row**. If you have a sequence set, then the sequence number advances when you finish editing.

To delete a row

» Click − on the data grid toolbar.

Edit Data in Popup Editor

You can view and edit data in a Popup Editor. This feature is helpful when there is too much data to view in the data grid.

Note: The dataset must be editable for you to make any changes. See "Understand Editable Resultsets" (page 67) for more information.

To edit data in the Popup Editor

» Right-click a cell in the data grid and select **Popup Editor**.

Use an External Editor

You can use an external editor of your choice, and copy the text to the external editor, edit the text, and bring the results back into Toad.

To set up your External Editor

1. Select **View | Toad Options | Executables**.
2. Navigate to and select the executable for the external editor in the **Editor** field.

To open text in External Editor

» Select **Edit | Load in External Editor** (CTRL+F12).

Note: If you have not saved the contents of the Toad Editor to a file, Toad prompts for a filename before launching the external editor.

To return to Toad from the External Editor

1. Save the file from the external editor and then close it.
2. Open Toad and load the file.

Note: Toad prompts you to reload the contents of the file only if the **Prompt for reload on activation if timestamp has changed** option is selected on the Editor | Open/Save page. See "Editor Options: Open/Save" in the online help for more information.

Access the Calculator

You can access a calculator within Toad data grids. To use the calculator, the table must be editable. See "Understand Editable Resultsets" (page 67) for more information.

To access the calculator

1. Click in a numeric cell. A drop-down arrow displays.
2. Click the arrow to display the calculator.

Customize Data Grid Display

Perform Calculations on Grid Cells

You can perform basic calculations on grid cells, such as finding the sum or average of the selected cells.

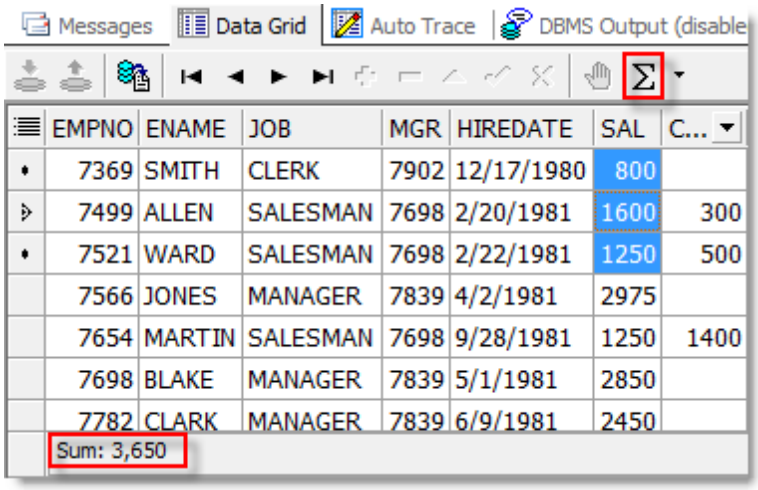
Note: This feature is not available if Row Select is enabled. To disable Row Select, right-click the grid and clear the **Row Select** option.

To perform calculations on grid cells

1. Select adjacent cells in the grid.

   Note: Calculations on non-adjacent cells is not supported.

2. Click Σ in the grid toolbar (CTRL+N). The calculations display in a new row below the grid.



   Tip: You can also right-click the grid and select **Calculate Selected Cells**.

3. To include additional types of calculations (such as the average or count), click the arrow by Σ and select the appropriate options.

Sort and Group Data

If the query does not contain an "Order By " command, you can sort the grid manually. You can also group data by column header.

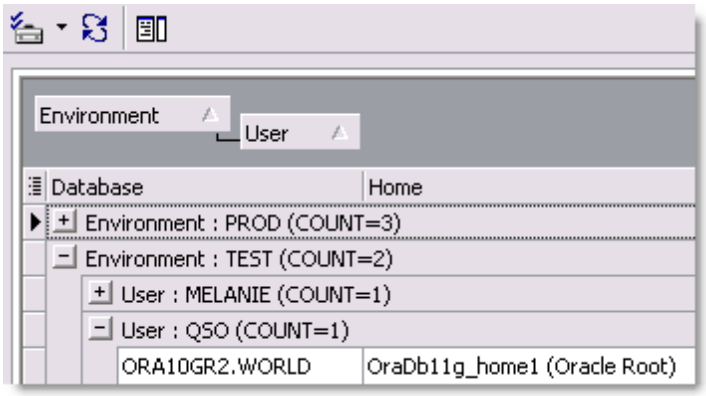
To sort by column

1. Click a grid column header.
2. Select the appropriate option, and click **Apply**.

Group Data by Column

To group by column

» Drag the column header into the area above the grid:



Anchor Column in Data Grid

You can anchor a column on the left side of the data grid (also referred to as locking, fixing, or freezing the column). This can make it easier to track information you must scroll through a large amount of content.

Note: Row numbers automatically display as fixed columns. With the exception of row numbers, fixed columns remain editable.

To anchor a column

» Right-click a column and select **Fix Column**.

To remove the column anchor

» Drag it to the right of the bold fixed column divider bar.

View a Single Record

You can view an individual record from a data grid. This feature presents the information in a format that is easy to view and edit, which is very helpful when the record contains long or complicated information.

To view a single record

» Right-click the grid and select **Single Record Viewer**.

Tip: Click . to edit the display options, such as the sorting order and alignment.

Preview Selected Column

You can display or hide a full row below each data row that shows the value of the selected column.

To preview current column

» Right-click the column in the Data grid and select **Preview Column**.

Hide Columns

You can hide columns from the data grid after running a query.

To select columns to display

1. Click  in the upper left corner of a data grid.
2. Clear the checkbox by the column name.

   Tip: To sort the column list alphabetically, right-click the column list and select **Sort Alphabetically**.

Filter Results

Filter Data

Filters reduce the amount of data displayed and let you display only what you want to see. They work by modifying the query used to fetch the data. If you frequently search for the same criteria, you can save the filter for reuse.

Notes:

- Schema Browser filters have special features. See "Create Schema Browser Filters" in the online help for more information.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To filter data

1. Right-click the data grid and select **Filter Data**.
2. To change the grouping clause, click **AND** and select a different option.
3. Click **press the button to add a new condition**.
4. To change the column, click the listed column and select a new one. The first column in the grid is selected by default.

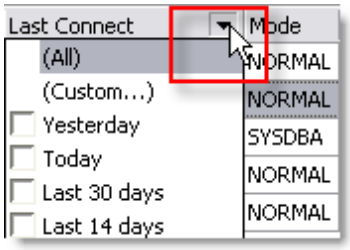
5. To change the condition, click **equals** and select the appropriate condition (LIKE, EQUAL TO, LESS THAN, and so on).
6. Click **<empty>** and add your criteria.
7. To add additional conditions or groupings, click **Filter** and then select **Add Condition** or **Add Group**.

Use Excel-Style Filtering

Toad automatically uses Excel style filtering in its data grids.

To use Excel-style filtering

1. Hover over a column heading to display the drop-down arrow.
2. Click the arrow and select a filter.



3. If you selected **(Custom)**, specify the filter criteria.

Export Data

Export Dataset

You can export the dataset to the clipboard or a file. Toad preserves your sorting and filtering settings in the exported file. In addition, you can set your choices here and then run the actual export of the results from the command line later. See "Run Actions from the Command Line" in the online help for more information.

Notes:

- You can export to a flat file, which is a file that does not contain TAB or comma characters between values. See "Export Data to Flat File" (page 73) for more information.
- CLOBs and BLOBs are automatically exported, but LONG columns are not exported using this method.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To export a dataset

1. Right-click the data grid and select **Export Dataset**.
2. Select in the output file format in the **Export format** field.

   Notes:

   - You can use a variable to create dynamic filenames, such as including a date or a timestamp.
   - For the Fixed Field Spacing format, the widths come from the definition of the table in the database, not the way it looks in the grid.
   - If your table contains columns with XML data, you may experience issues exporting to the SQL Loader and XML formats.

3. Select options as necessary. Review the following for additional information:

Data Substitution	Click the **Data Substitution** button to specify a constant value or expression to save into a column, instead of the actual value. For example, use this when you want to put SEQ.NEXTVAL in the INSERT statements in place of an ID column, instead of actual ID's, or to cover up a value in a column when you save the data to HTML.
Columns to exclude	Click the drop-down and select the object types or columns to exclude from the export.
Commit Interval	A commit inteval of 0 produces one insert statement after all of the SQL statements. A commit interval of -1 omits the commit entirely. This field is only available for the Merge and Insert Statements export formats. **Note:** You can generate these statements from any version of Oracle, but can only run them in Oracle 9i and newer.

Export Data to Flat File

You can export to a flat file, which is a file that does not contain TAB or comma characters between values.

Notes:

- The SQL*Loader tab in this feature is only available in the commercial version of Toad with the optional DB Admin Module.
- This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To export data to a flat file

1. Right-click the grid and select **Export to Flat File**.

   or

   Select **Database | Export | Table as Flat File**.

2. Click **Load Spec File** and select the specifications file.

   Note: You need to set up the Specifications File. See "Export Data to Flat File" (page 73) for more information.

3. Complete the fields as necessary.
4. Click **Execute**.

6

Customize Toad

About Customizing Toad

When you install Toad for the first time, it prompts you to select some of the most common customization options. You can change these at any time after installation.

Toad provides hundreds of options for you to customize its behavior. If there is a specific feature or behavior you would like to change, try searching for it in the Options window. See "Search for Options" (page 81) for more information.

Customize the Editor

Customizing the Editor is covered in a different chapter. See "Customize the Editor Layout" (page 38) for more information.

Customize the Schema Browser

Customizing the Schema Browser is covered in a different chapter. Review the following for additional information:

- Select the Left-Hand Side Display Style (page 53)
- Customize Schema Browser Tabs (page 55)
- Group Favorite Objects (page 56)

Customize Shortcut Keys

This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

Note: If you have customized your shortcut keys, you will not automatically be able to use new shortcuts added in Toad upgrades. However, you can reset your shortcut keys to the default to gain access to all new shortcuts. See "Shortcut Keys Options" in the online help for more information.

Menu Hot Keys

Menu hot keys are the keys that you access by pressing the ALT key and then the character in the menu item that is underlined to open that menu or command. You can configure the underlined character.

To change the hot key

1. Right-click the toolbar and select **Customize**.
2. Right-click the menu item you want to change.
3. Change the underlined character by changing the location of the ampersand in the **Name** field. For example, *&Tools* underlines the *T*, while *T&ools* underlines the *o*.

Shortcut Keys

To change shortcut keys

1. Click  on the standard toolbar.

   Tip: You can also select **View | Toad Options**.

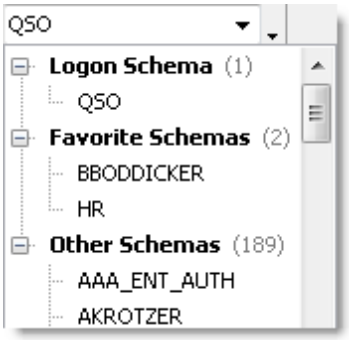
2. Select **Toolbars/Menus | Shortcuts**.
3. Select the command for which you want to set or change the shortcut keys.
4. Type the keystrokes you want to use.

   The shortcut key is changed as you type. If there is a conflict with another shortcut key, an asterisk (*) displays in the Conflict column. You can then find the conflict and remove it.

   Note: This option only allows you to use one keystroke after a control key (such as CTRL or ALT).

Customize Schema Drop-Downs

You can customize schema drop-downs by creating a list of favorites, hiding schemas, setting the default schema for connections, and other options. Changes apply to allow windows with the schema drop-down, such as the Editor and Schema Browser.



Note: This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To set a default schema

» Right-click the schema in the schema drop-down and select **Set <*schema name*> to Default Schema**.

To customize schema drop-downs

1. Right-click the schema drop-down and select **Customize**.
2. Select schemas to categorize and click the > button.
3. To hide schemas, select *Hidden Schemas* in the **Category** field for the schema.
4. To create a new category, enter the category name in the **Category** field for the schema. The new name becomes available in the Category drop-down.
5. To change when the schema is categorized, select the **When to Categorize** field for the schema and click ⋯.

Customize Toolbars and Menus

About Customizing Toolbars and Menus

You can customize Toad's default menus and toolbars, and you can create new ones with custom options. This lets you arrange Toad to best reflect how you want to work. Review the following for additional information:

- Create New Toolbars and Menus (page 78)
- Customize Toolbars and Menus (page 78)

In addition, Toad menu bars can configure themselves to how you work with Toad. As you work, Toad collects usage data on the commands you use most often. Menus personalize themselves to your work habits, moving the most used commands closer to the top of the list, and hiding commands that you use rarely. See "Customize Toolbars and Menus" (page 78) for more information.

View New or Previously Removed Commands

If you are using a custom configuration, new commands are not added to your custom toolbars when you upgrade Toad. However, you can see both new commands and commands that have been completely removed from the toolbars and menus.

Note: Commands that have been removed from the toolbar and not the menu bar (or the other way around) do not display in the Unused area. Because of this, it may not be obvious that you have removed a command from one location and not the other.

To view new/removed commands

1. Right-click the toolbar/menu and select **Customize**.
2. Select the Commands tab.

3. To view new commands, select *[New]* in the **Categories** field.
4. To view commands you removed, select *[Unused]* in the **Categories** field.
5. To add a new/removed command to a menu/toolbar, drag the command to the toolbar/menu.

Create New Toolbars and Menus

If you want to heavily modify an existing toolbar or menu, it may be easier to create your own custom toolbar or menu instead.

Note: This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To create a custom toolbar or menu

1. Right-click the toolbar/menu and select **Customize**.
2. Create the new toolbar/menu. Review the following for additional information:

To create a...	Complete the following:
toolbar	a. Click **New**. b. Enter a name your new toolbar. A blank toolbar displays in the user interface below the existing toolbars.
menu	a. Select the Commands tab. b. Select *New Menu* in the **Categories** field. c. Select *New Menu* in the **Commands** field and drag it to the menu bar where you want it located. The pointer changes to a vertical I-bar at the menu bar. **Tip:** You can create sub-menus by dragging a new menu into an existing one.

3. To add commands, select the Commands tab in the Customize window. Drag the command from the **Commands** field to the toolbar/menu. An I-bar pointer marks where the command will be dropped

   Note: You can rearrange and rename the commands, toolbars, and menus. See "Customize Toolbars and Menus" (page 78) for more information.

4. To lock the toolbars, right-click a toolbar and select **Lock Toolbars**.

Customize Toolbars and Menus

This topic focuses on information that may be unfamiliar to you. It does not include all step and field descriptions.

To customize the toolbar or menu

1. Right click the toolbar or menu and select **Customize**.
2. Change the toolbar or menu. Review the following for additional information:

If you want to...	Complete the following:
Change the order of commands	Drag the item on the toolbar/menu to where you want it. An I-bar pointer marks where the command will be dropped.
Add commands	Complete the following: a. Select the Commands tab in the Customize window. b. Drag the command from the **Commands** field to the toolbar/menu. An I-bar pointer marks where the command will be dropped.
Rename the toolbar, menu, or command	Complete the following: a. Right-click the icon or text on the item you want to change. b. Enter the new name in the **Name** field. If you want to define a hotkey, include an ampersand (&) before the letter you want to assign as the hotkey. **Note:** These are not the same as Toad shortcut keys, but rather the underlined letter for keyboard navigation. See "Customize Shortcut Keys" (page 75) for more information.
Remove a command or menu	Right-click the item and select **Delete**.
Tip: You can create sub-menus by dragging a new menu into an existing one. See "Create New Toolbars and Menus" (page 78) for more information.	

3. To have Toad menus configure themselves, select **Menus show recently used commands first** on the Options tab.

   If you select this option, Toad collects usage data on the commands you use most often. Menus personalize themselves to your work habits, moving the most used commands closer to the top of the list, and hiding commands that you use rarely.

4. To lock the toolbars, right-click a toolbar and select **Lock Toolbars**.

Display Additional Menus

You can display additional menus, such as Team Coding or Create Objects.

To display additional menus

1. Right-click the menu bar and select **Customize**.
2. Select the Commands tab.
3. Select *Menus* in the **Categories** field.
4. Click the menu you want to add (for example, Team Coding) in the right pane and drag it to the menu bar where you want it located. The pointer changes to a vertical I-bar at the menu bar.

Display/Hide Toolbars

To change the toolbars you display

1. Right-click the toolbar area.
2. Select the toolbars you want to display, and clear the toolbars you want to hide.

Reset Default Toolbars and Menus

To reset default toolbars and menus

» Right-click a toolbar and select **Restore defaults**.

Restore Lost Toolbars

It is possible to remove all the toolbars from the Editor. If this happens, you can restore the toolbars to your windows without resetting all the default settings.

To restore lost toolbars from the Editor

1. Right-click the Desktop panels tab area.
2. Select **Desktop Panels | Customize Toolbar**.
3. Select the Toolbars tab.
4. Select the Editor toolbars you want to display.

Search for Options

You can search for the option you want. This can be useful if you remember a basic option, but cannot remember where it falls in the categories.

To search for an option

1. Click  on the standard toolbar.

   Tip: You can also select **View | Toad Options**.

2. Enter search terms in the **Search** field.
3. Click **Search**.
4. Select a result and press ENTER or double-click it. The page with with the result displays and the result temporarily flashes in a bold font.
5. To close the search results area, click the arrow beside the **Search** button.

Appendix: Contact Quest

Contact Quest Support

Quest Software simplifies and reduces the cost of managing IT for more than 100,000 customers worldwide. Our innovative solutions make solving the toughest IT management problems easier, enabling customers to save time and money across physical, virtual and cloud environments. For more information about Quest go to www.quest.com.

Established in 1987, Quest Software (Nasdaq: QSFT) provides simple and innovative IT management solutions that enable more than 100,000 global customers to save time and money across physical and virtual environments. Quest products solve complex IT challenges ranging from database management, data protection, identity and access management, monitoring, user workspace management to Windows management. For more information, visit www.quest.com.

Note: This document is only available in English.

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See our web site for regional and international office information.

About Quest Software, Inc

Quest Software simplifies and reduces the cost of managing IT for more than 100,000 customers worldwide. Our innovative solutions make solving the toughest IT management problems easier, enabling customers to save time and money across physical, virtual and cloud environments. For more information about Quest go to www.quest.com.

Established in 1987, Quest Software (Nasdaq: QSFT) provides simple and innovative IT management solutions that enable more than 100,000 global customers to save time and money across physical and virtual environments. Quest products solve complex IT challenges ranging from database management, data protection, identity and access management, monitoring, user workspace management to Windows management. For more information, visit www.quest.com.

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