Oracle® Forms Developer

Procedure Builder Reference

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We Appreciate Your Comments

Reader’s Comment Form - A 73076-01

Oracle Corporation welcomes your comments about this manual’s quality and usefulness. Your feedback is an important part of our revision process.

• Did you find any errors?
• Is the information presented clearly?
• Are the examples correct? Do you need more examples?
• What features did you like?

If you found any errors or have any other suggestions for improvement, please send your comments to oddoc@us.oracle.com.

Thank you for your help.
Preface


This reference guide includes information to help you effectively work with Forms Developer Procedure Builder and contains detailed information about its commands.

This preface explains how this user’s guide is organized and introduces other sources of information that can help you use Forms Developer Procedure Builder.
Prerequisites

You should be familiar with your computer and its operating system. For example, you should know the commands for deleting and copying files and understand the concepts of search paths, subdirectories, and path names. Refer to your Microsoft Windows 95 or NT and DOS product documentation for more information.

You should also understand the fundamentals of Microsoft Windows, such as the elements of an application window. You should also be familiar with such programs as the Explorer, Taskbar or Task Manager, and Registry.

Notational Conventions

The following typographical conventions are used in this guide:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>fixed-width font</td>
<td>Text in a fixed-width font indicates commands that you enter exactly as shown. Text typed on a PC is not case-sensitive unless otherwise noted. In commands, punctuation other than brackets and vertical bars must be entered exactly as shown.</td>
</tr>
<tr>
<td>lowercase</td>
<td>Lowercase characters in a command statement represent a variable. Substitute an appropriate value.</td>
</tr>
<tr>
<td>UPPERCASE</td>
<td>Uppercase characters within the text represent command names, SQL reserved words, and keywords.</td>
</tr>
<tr>
<td>boldface</td>
<td>Boldface is used to indicate user interface items such as menu choices</td>
</tr>
</tbody>
</table>
and buttons.

C> C> represents the DOS prompt. Your prompt may differ.

Related Publications

You may also wish to consult the following Oracle documentation:

<table>
<thead>
<tr>
<th>Title</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Forms Developer and Oracle Reports Developer: Guidelines for Building Applications</td>
<td>A73073</td>
</tr>
<tr>
<td>SQL*Plus User's Guide and Reference Version 3.1</td>
<td>A24801</td>
</tr>
</tbody>
</table>
Using Interpreter commands

Commands adhere to the following general syntax:

```
.command-name [option...]
```

In other words, a command consists of a period (.), then the command name, followed by zero or more keywords and keyword value arguments. Command options generally follow the form shown below:

```
keyword
```

or

```
keyword value(s)
```

Thus, an option consists of either a single keyword, or a keyword followed by one or more argument values. The command name, keywords, and argument values are separated by white space. Command names, keywords, and argument values are not case sensitive.

For example, the following DESCRIBE command invocation illustrates the basic elements of Procedure Builder command syntax:

```
.DESCRIPTION PROCEDURE proc1 BODY
```

The command name DESCRIBE is followed by the PROCEDURE and BODY keywords. The PROCEDURE takes a single argument value, `proc1`, while the BODY keyword takes no argument values.

**Multi-valued Arguments**

Keyword arguments may be multi-valued, in which case the individual values are delimited by commas as shown below:

```
value, value...
```

Spaces may appear between the commas and neighboring values.

Keyword arguments that can be multi-valued according to the syntax specified above will be described as shown below:

```
namelist, namelist...
```

For example, the LOAD command has the following partial syntax:

```
LOAD
```

In other words, a command consists of a period (.), then the command name, followed by zero or more keywords and keyword value arguments.
Thus, the file argument can be single-valued as shown below:

```
.LOAD FILE file1
```

or multi-valued as shown below:

```
.LOAD FILE file1, file2, file3
```

**Position Independence**

Unless explicitly specified in the syntax descriptions, keywords may appear in any order. For example, the command:

```
.DESCRIBE PROCEDURE proc1 BODY
```

can also be entered as:

```
.DESCRIBE BODY PROCEDURE proc1
```

**Multi-line Commands**

Normally, commands are terminated by a newline character or a carriage return. However, it is often desirable to make a command span multiple lines. This can be done by including the continuation character (backslash by default) as the last character of each line to be continued. For example, the continuation character is used below to place each file name argument value to the LOAD command on a separate line:

```
.LOAD FILE "long_file_name_number_one", \
long_file_name_number_two, \
long_file_name_number_three
```

**Argument Value Quoting**

Non-numeric command argument values may be optionally enclosed in double quotes. The quotes serve only as delimiters and are not considered part of the argument value. This is particularly useful in specifying argument values that contain white space, commas, or wildcard characters. For example, if supported by the native operating system, a file name containing a space could be specified in a load command as follows:

```
.LOAD FILE "my file"
```

A double quote may be included as a part of the argument value by preceding it with another double quote. For example, the command

```
.LOAD FILE ""quoted file"
```

loads a file with a name containing two double quotes--one at the beginning and one at the end.

**Abbreviating Keywords**

A command keyword may be abbreviated by typing only as many characters as it takes to distinguish it from all other keywords accepted by the same command. Command names may not be abbreviated. This is to minimize conflict with the PL/SQL namespace and avoid confusion in distinguishing between commands and PL/SQL code fragments.

**Entering PL/SQL Code**

In addition to commands, the Interpreter accepts and evaluates PL/SQL constructs (e.g., statements, blocks, procedure definitions, etc.), and SQL statements. Procedure Builder interprets a line beginning with anything other than a valid command name as the beginning of a PL/SQL statement, block, program unit, or SQL statement.
While commands occupy a single line (unless the continuation character is used), PL/SQL or SQL statements may occupy any number of lines, and continuation characters are neither necessary nor allowed.

If necessary, a PL/SQL construct can always be distinguished from a command by enclosing it in the block delimiters BEGIN and END.

**Notational Conventions**

The following table describes the notation and conventions for command syntax used in this section.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Example</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>uppercase</td>
<td>BREAK</td>
<td>A command or keyword name; it need not be typed in uppercase</td>
</tr>
<tr>
<td>lowercase italic</td>
<td>numbers</td>
<td>A keyword value; substitute an appropriate value</td>
</tr>
<tr>
<td>vertical bar</td>
<td></td>
<td>Separates alternative syntax elements that may be optional or mandatory</td>
</tr>
<tr>
<td>braces</td>
<td>{STACK</td>
<td>SCOPE}</td>
</tr>
<tr>
<td>brackets</td>
<td>[BEFORE</td>
<td>AFTER]</td>
</tr>
<tr>
<td>underline</td>
<td>[BEFORE</td>
<td>AFTER]</td>
</tr>
</tbody>
</table>

Enter other punctuation marks (such as commas) where shown in the command syntax.

---

**Alphabetic list of commands**

ATTACH
BREAK
CLOSE
COMPILE (libraries)
COMPILE (program units)
CONNECT
CREATE (bind variables)
CREATE (libraries)
DELETE (bind variables)
DELETE (debug actions)
DELETE (libraries)
DELETE (library program units)
DELETE (load path)
DELETE (program units)
DESCRIBE (debug actions)
DESCRIBE (load path)
DESCRIBE (locals)
DESCRIBE (libraries)
DESCRIBE (program units)
DESCRIBE (tables and views)
DESCRIBE (version)
DETACH
DISABLE (compiler options)
DISABLE (debug actions)
DISABLE (logging)
DISCONNECT
ENABLE (compiler options)
ENABLE (debug actions)
ENABLE (logging)
EXECUTE
EXPORT
GENERATE
GO
GRANT
HELP
INSERT (library program unit)
INSERT (load path)
INTERPRET
LIST (debug actions)
LIST (program units)
LOAD (library program units)
LOAD (program units)
LOAD (stored program units)
LOG
OPEN
QUIT
RENAME
RESET
REVERT
REVOKE
SAVE
SET
SHOW (call stack)
SHOW (debug actions)
SHOW (libraries)
SHOW (locals)
SHOW (program units)
STEP
STORE
TRIGGER

---

**Bind variable commands**

CREATE (bind variables)
DELETE (bind variables)

---

**Database commands**

CONNECT
DESCRIBE (tables and views)
DISCONNECT
GRANT
REVOKE
STORE

---

**Debug action commands**

BREAK
DELETE (debug actions)
DESCRIBE (debug actions)
DISABLE (debug actions)
ENABLE (debug actions)
LIST (debug actions)
SHOW (debug actions)
TRIGGER
Debugging commands

DESCRIBE (locals)
GO
RESET
SET
SHOW (call stack)
STEP

Library commands

ATTACH
CLOSE
COMPILE (libraries)
CREATE (libraries)
DELETE (libraries)
DELETE (library program unit)
DESCRIBE (libraries)
DETACH
EXPORT (libraries)
GENERATE
GRANT
INSERT (library program unit)
LOAD (library program units)
OPEN
RENAME
REVERT
REVOKE
SAVE
SHOW (libraries)

Load path commands

DELETE (load path)
DESCRIBE (load path)
INSERT (load path)
Logging commands
DISABLE (logging)
ENABLE (logging)
LOG

Program unit commands
COMPILE (program units)
DELETE (program units)
DESCRIBE (program units)
DISABLE (compiler options)
ENABLE (compiler options)
EXECUTE
EXPORT (program units)
EXPORT (stored program units)
LIST (program units)
LOAD (program units)
LOAD (stored program units)
SHOW (locals)
SHOW (program units)

Session commands
DESCRIBE (version)
HELP
INTERPRET
QUIT

Interpreter commands
Bind variable commands
Database commands
Debug action commands
Debugging commands
Library commands
Load path commands
Logging commands
Program unit commands
Session commands
Bind Variable Commands

CREATE (bind variable) command (PB standalone only)

**Description**
Creates a bind variable. This command is valid only when Procedure Builder is invoked as a standalone session.

**Syntax**
- CREATE CHAR var_name [LENGTH number]
- CREATE NUMBER var_name [PRECISION number] [SCALE number]
- CREATE RAW var_name [LENGTH number]
- CREATE DATE var_name

**Keywords and Values**

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAR</td>
<td>Specifies a bind variable, <code>var_name</code>, of the</td>
</tr>
<tr>
<td>var_name</td>
<td>datatype CHAR.</td>
</tr>
<tr>
<td>LENGTH</td>
<td>Optionally specifies the length of a CHAR</td>
</tr>
<tr>
<td>number</td>
<td>bind variable.</td>
</tr>
<tr>
<td>DATE</td>
<td>Specifies a bind variable, <code>var_name</code>, of the</td>
</tr>
<tr>
<td>var_name</td>
<td>datatype DATE</td>
</tr>
<tr>
<td>NUMBER</td>
<td>Specifies a bind variable, <code>var_name</code>, of the</td>
</tr>
<tr>
<td>var_name</td>
<td>datatype NUMBER.</td>
</tr>
<tr>
<td>PRECISION</td>
<td>Optionally determines a maximum number of</td>
</tr>
<tr>
<td>number</td>
<td>numeric digits for the variable.</td>
</tr>
<tr>
<td>SCALE</td>
<td>Optionally determines where rounding should</td>
</tr>
<tr>
<td>number</td>
<td>occur.</td>
</tr>
<tr>
<td>RAW</td>
<td>Specifies a bind variable, <code>var_name</code>, of the</td>
</tr>
<tr>
<td>var_name</td>
<td>datatype RAW.</td>
</tr>
</tbody>
</table>

**Comments**
The LENGTH attribute of the CHAR datatype defaults to 1 byte if you do not specify an alternate setting. The maximum value for LENGTH is 32767 bytes.
The maximum value for PRECISION is 38 characters. SCALE can be from -84 to 127. If you do not specify a value for SCALE, it defaults to zero, meaning numbers are rounded to the nearest whole number. For more information about datatypes and their attributes, see the PL/SQL User's Guide and Reference.

**CREATE (bind variable) command example**

The following command creates a bind variable $x$ of the datatype NUMBER that should round to the nearest hundredth decimal place:

```
CREATE NUMBER x SCALE 2
```

**DELETE (bind variables) command (PB standalone only)**

**Description**  Deletes one or more bind variables. This command is valid only when Procedure Builder is invoked as a standalone session.

**Syntax**

```
DELETE BINDVAR name [, name...]
DELETE CHAR name [, name...]
DELETE DATE name [, name...]
DELETE NUMBER name [, name...]
```

**Keywords and Values**

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BINDVAR name</td>
<td>Specifies a bind variable or set of bind variables of any datatype</td>
</tr>
<tr>
<td>CHAR name</td>
<td>Specifies a bind variable or set of bind variables of the datatype CHAR</td>
</tr>
<tr>
<td>DATE name</td>
<td>Specifies a bind variable or set of bind variables of the datatype DATE</td>
</tr>
<tr>
<td>NUMBER name</td>
<td>Specifies a bind variable or set of bind variables of the datatype NUMBER</td>
</tr>
</tbody>
</table>

**DELETE (bind variables) command examples**

The following command deletes the bind variable $y$ of the datatype CHAR:

```
DELETE CHAR y
```

The following command deletes a set of bind variables ($x$, $y$, and $z$) of different datatypes:

```
DELETE BINDVAR x,y,z
```
Database Commands

CONNECT command (PB standalone only)

Description  Establishes a database connection. This command is valid only when Procedure Builder is invoked as a standalone session.

Syntax

CONNECT DB [username/password@ | network_device: | datasource_node: | datasource_name] [SILENT]

Keywords and Values

- **username/password@** Indicates a valid user name and password for the datasource to which you wish to connect. The '@' symbol must precede the remaining database location specifiers.
- **network_device**: Specifies the networking device driver used to connect to the remote database.
- **datasource_node**: Specifies the network node of the remote datasource to which you wish to connect.
- **datasource_name**: Specifies the name of the remote or local datasource to which you wish to connect.
- **SILENT**: Optionally suppresses the status messages issued by the Interpreter.

Note  If you wish to connect to an ODBC datasource, use the following syntax:

```
username/password@ODBC:datasource[:dbname]
```

If `dbname` is not specified, the current database for the ODBC connection is used.

CONNECT command examples

The following command would connect you to the remote "inventory" database on the "boston" network node using the TCP/IP device driver.

```
.CONNECT DB scott/tiger@t:boston:inventory
```
If the “inventory” database were a local database, the following command would connect you:
```
.CONNECT DB scott/tiger@inventory
```

---

**DESCRIBE (tables and views) command**

**Description**  Displays detailed information about database tables and views.

**Syntax**
- `DESCRIBE TABLE name`
- `DESCRIBE VIEW name`

**Keywords and Values**
- `TABLE name`  Specifies a table in the current database.
- `VIEW name`  Specifies a view in the current database.

**Comments**  The information displayed for tables and views includes the columns and their types.

**DESCRIBE (tables and views) command examples**

The following command displays information about the EMP table:
```
.DESCRIBE TABLE emp
```

The following command displays information about the view named ASSOCIATE:
```
.DESC V associate
```

---

**DISCONNECT command (PB standalone only)**

**Description**  Disconnects you from the database to which you are currently connected. This command is valid only when Procedure Builder is invoked as a standalone session.

**Syntax**
```
DISCONNECT
```

---

**GRANT command (Database commands)**

**Description**  Grants a user access to a library stored in the database.

**Syntax**
```
```
**GRANT** LIBRARY name USER name

**Keywords and Values**
- **LIBRARY name**  Specifies the library.
- **USER name**    Specifies a user name.

**Comments**  You can specify any single valid user name, or PUBLIC (all users).

**GRANT command example (Database commands)**
The following command grants user SCOTT access to database library *lib1*:

```
.GRANT LIB lib1 USER scott
```

---

**REVOKE** command (Database commands)

**Description**  Revokes a user's access to a library stored in the database.

**Syntax**

```
REVOKE LIBRARY name USER name
```

**Keywords and Values**
- **LIBRARY name**  Specifies a library.
- **USER name**    Specifies a user.

**Comments**  You can specify any single valid user name, or PUBLIC (all users).

**REVOKE command example (Database commands)**
The following command revokes user SCOTT's access to database library *lib1*:

```
.REVOKE LIB lib1 USER scott
```

---

**STORE** command

**Description**  Stores one or more program units in the database.

**Syntax**

```
STORE PROGRAMUNIT name [, name...]  
    FILE [directory] name [extension]  
    [SPECIFICATION | BODY]  
    [NOWARN]  
STORE PACKAGE name [, name...]  
    [OWNER name]  
    [SPECIFICATION | BODY]  
STORE SUBPROGRAM name [, name...]
```
[OWNER name]  [SPECIFICATION | BODY]
STORE  PROCEDURE name[, name...]
      [OWNER name]
      [SPECIFICATION | BODY]
STORE  FUNCTION name[, name...]
      [OWNER name]
      [SPECIFICATION | BODY]

Keywords and Values

  PROGRAMUNIT Specifies one or more program units. name
  PACKAGE name  Specifies one or more packages. name
  SUBPROGRAM Specifies one or more subprograms. name
  PROCEDURE  Specifies one or more procedures. name
  FUNCTION name Specifies one or more functions. owner name
  OWNER name  Specifies the owner of the stored program
               unit(s).
  SPECIFICATION Dictates whether the specification or body of a
               package is stored in the database, respectively.

Comments  If OWNER is not specified, Procedure Builder assigns the currently
          connected user as the owner of the stored program units.
          If neither SPECIFICATION nor BODY is supplied, both the body and the specification
          (if available) of the designated package(s) are stored in the database.

STORE command examples

The following command stores procedure proc1 and function func2 in the current
database:
   .STORE PROGRAMUNIT proc1, func2

The following command stores the specification and body of package pack1 and
specifies the owner to be SCOTT:
   .STORE PACK pack1 OWNER scott
Debug Action
Commands

BREAK command

Description
Establishes a breakpoint at the specified source line within a program unit.

Syntax

```
BREAK ([USER schema] PROGRAMUNIT name | PROGRAMUNIT [schema.]name)
[LINE number]
[ENABLED | DISABLED]
[TRIGGER plsql-block]
```

```
BREAK (USER schema PACKAGE name | PACKAGE schema.name)
[LINE number]
[ENABLED | DISABLED]
[TRIGGER plsql-block]
```

```
BREAK (USER schema SUBPROGRAM name | SUBPROGRAM schema.name)
[LINE number]
[ENABLED | DISABLED]
[TRIGGER plsql-block]
```

```
BREAK (USER schema PROCEDURE name | PROCEDURE schema.name)
[LINE number]
[ENABLED | DISABLED]
[TRIGGER plsql-block]
```

```
BREAK (USER schema FUNCTION name | FUNCTION schema.name)
[LINE number]
[ENABLED | DISABLED]
[TRIGGER plsql-block]
```

```
BREAK ACTION number
[LINE number]
[ENABLED | DISABLED]
[TRIGGER plsql-block]
```

```
BREAK BREAKPOINT number
[LINE number]
[ENABLED | DISABLED]
[TRIGGER plsql-block]
```

BREAK .
Forms Developer Procedure Builder Reference

Keywords and Values

USER schema Specifies a schema name in the database where the stored program unit is located.

PROGRAMUNIT name Specifies a program unit body.

PACKAGE name Specifies a package body.

SUBPROGRAM name Specifies a subprogram body.

PROCEDURE name Specifies a procedure body.

FUNCTION name Specifies a function body.

ACTION number Specifies a debug action (breakpoint or trigger).

BREAKPOINT number Specifies a breakpoint.

PC Specifies the current source location. This is the default.

SCOPE Specifies the current scope location.

LINE number Specifies the line in a program unit at which to establish the breakpoint.

ENABLED or DISABLED Specifies whether or not the breakpoint is initially enabled or disabled. The default is ENABLED.

TRIGGER pl/sql-block Defines a PL/SQL trigger for the breakpoint. The trigger fires each time the breakpoint is reached.

Note If supplied, the TRIGGER keyword must appear as the last command option.

Comments BREAK may operate only on executable source lines. Trigger blocks may span multiple input lines. As is the case when entering PL/SQL constructs elsewhere in the Interpreter, no line continuation characters are required when entering the trigger body (nor are they allowed). If you wish to interrupt your program conditionally, you should use the TRIGGER command in conjunction with the DEBUG.BREAK exception.
If the statement is reached while running PL/SQL, Procedure Builder suspends execution just before the statement is executed, and passes control to the Interpreter. At this point, you can inspect and even modify program state using a variety of Procedure Builder functions. Once satisfied, you can resume execution with the GO or STEP commands. Alternatively, you can abort execution using the RESET command.

**BREAK command examples**

The following command sets a breakpoint at the current source location:

`.BREAK .`

The following command sets a breakpoint at the second line of the procedure named `my_proc`:

`.BREAK PROCEDURE my_proc LINE 2`

The following command sets a breakpoint at the tenth line of `my_proc` that shows all of the local variables and their values whenever the breakpoint is entered:

`.BREAK PROC my_proc LINE 10 TRIGGER debug.interpret('.SHOW LOCALS')`

The following command sets a breakpoint at line twelve of the program unit that contains debug action number four:

`.BREAK ACTION 4 LINE 12`

The following command sets a breakpoint at the current source location in a server-side program unit `my_proc` from the schema owned by user `scott`:

`.BREAK USER scott PROC my_proc`

or

`.BREAK PROC scott.my_proc`

### DELETE (debug actions) command

**Description**

Deletes one or more debug actions.

**Syntax**

```plaintext
DELETE ACTION number [, number...]  
DELETE BREAKPOINT number [, number...]  
DELETE TRIGGER number [, number...]
```

**Keywords and Values**

- `ACTION number`: Specifies one or more debug actions (breakpoint or trigger), by number.
- `BREAKPOINT number`: Specifies one or more breakpoints, by number.
- `TRIGGER number`: Specifies one or more debug triggers, by number.
Comments  This command permanently removes one or more debug actions. If you wish to temporarily remove a debug action, use the DISABLE command instead.

DELETE (debug actions) command example

The following command deletes debug actions two and three:

```
.DELETE ACTION 2,3
```
Syntax

DISABLE ACTION number [, number...]
DISABLE BREAKPOINT number [, number...]
DISABLE TRIGGER number [, number...]

Keywords and Values

ACTION number  Specifies one or more debug actions (breakpoints and triggers).
BREAKPOINT number  Specifies one or more breakpoints.
TRIGGER number  Specifies one or more triggers.

Comments
DISABLE has no effect on debug actions that are already disabled. You can restore disabled debug actions using the ENABLE command.

DISABLE (debug actions) command examples

The following command disables breakpoint number two:
.DISABLE BREAK 2

The following command disables debug action number three:
.DISABLE ACTION 3

ENABLE (debug actions) command

Description  Reactivates disabled debug actions.

Syntax

ENABLE ACTION number [, number...]
ENABLE BREAKPOINT number [, number...]
ENABLE TRIGGER number [, number...]

Keywords and Values

ACTION number  Specifies a debug action.
BREAKPOINT number  Specifies a breakpoint.
TRIGGER number  Specifies a trigger.

Comments  ENABLE has no effect on debug actions that are already enabled. To temporarily disable a debug action, use the DISABLE command.
ENABLE (debug actions) command examples

The following command enables breakpoint number two, which was previously disabled:

`.ENABLE BREAK 2`

The following command enables debug action number one:

`.ENABLE ACTION 1`

LIST (debug actions) command

**Description**
Displays the program unit source text to which the specified debug action is attached.

**Syntax**

```
LIST ACTION number
LIST BREAKPOINT number
LIST TRIGGER number
```

**Keywords and Values**

- `ACTION number` Specifies a debug action (breakpoint or trigger).
- `BREAKPOINT number` Specifies a breakpoint.
- `TRIGGER number` Specifies a trigger.

**Comments**
LIST displays the text associated with the specified debug action in the Source pane of the Interpreter. The line on which the specified debug action appears becomes the current source location.

LIST (debug actions) command examples

The following command displays breakpoint number one and sets the source location:

`.LIST BREAK 1`

The following command displays debug action number three and sets the current source location:

`.LIST ACTION 3`
SHOW (debug actions) command

Description
Enumerates the debug actions that are currently defined in the development session.

Syntax
SHOW ACTION
SHOW BREAKPOINTS
SHOW TRIGGERS

Keywords and Values
- **ACTION** Specifies all debug actions.
- **BREAKPOINTS** Specifies all breakpoints.
- **TRIGGERS** Specifies all triggers.

SHOW (debug actions) command example

The following command lists all of the breakpoints that are currently set:
```
.SHOW BREAKPOINTS
```

TRIGGER command

Description
Creates a debug trigger, which is a PL/SQL block associated with the specified source location.

Syntax
```
TRIGGER { [USER schema] PROGRAMUNIT name | PROGRAMUNIT [schema.]name} 
[LINE number] 
[ENABLED | DISABLED] 
[IS plsql-block] 

TRIGGER {USER schema PACKAGE name | PACKAGE schema.name} 
[LINE number] 
[ENABLED | DISABLED] 
[IS plsql-block] 

TRIGGER {USER schema SUBPROGRAM name | SUBPROGRAM schema.name} 
[LINE number] 
[ENABLED | DISABLED] 
[IS plsql-block] 

TRIGGER {USER schema PROCEDURE name | PROCEDURE schema.name} 
[LINE number] 
[ENABLED | DISABLED] 
[IS plsql-block] 

TRIGGER {USER schema FUNCTION name | FUNCTION schema.name} 
[LINE number] 
[ENABLED | DISABLED] 
[IS plsql-block] 
```
TRIGGER ACTION number [LINE number] [ENABLED | DISABLED] [IS plsql-block]
TRIGGER BREAKPOINT number [LINE number] [ENABLED | DISABLED] [IS plsql-block]
TRIGGER TRIGGER number [LINE number] [ENABLED | DISABLED] [IS plsql-block]
TRIGGER number [LINE number] [ENABLED | DISABLED] [IS plsql-block]
TRIGGER . [ENABLED | DISABLED] [IS plsql-block]
TRIGGER PC [ENABLED | DISABLED] [IS plsql-block]
TRIGGER SCOPE [ENABLED | DISABLED] [IS plsql-block]
TRIGGER DEBUG [ENABLED | DISABLED] [IS plsql-block]
TRIGGER * [ENABLED | DISABLED] [IS plsql-block]

Keywords and Values

USER schema Specifies a schema name in the database where the stored program unit is located.
PROGRAMUNIT Specifies a program unit.
name

PACKAGE name Specifies a package.
SUBPROGRAM name Specifies a subprogram.

PROCEDURE name Specifies a procedure.

FUNCTION name Specifies a function.
ACTION number Specifies a debug action (breakpoint or trigger).

BREAKPOINT number Specifies a breakpoint.
TRIGGER number Specifies a trigger.

LINE number Specifies the line of the program unit where the trigger should be located.
.

PC Specifies the current source location.

PC Specifies the current execution location.
SCOPE Specifies the current scope location.
DEBUG Specifies entry into the debugger (i.e., when program execution is suspended due to a breakpoint, program stepping, etc.).

* Specifies every PL/SQL source line. Thus, placing a trigger on * will cause the specified block to be evaluated just prior to executing every PL/SQL source line.

ENABLED or DISABLED Dictates whether the trigger is initially enabled or disabled. The default is ENABLED.

IS pl/sql-block Defines the body of the trigger.

Note: IS must appear as the last command option.

Comments Procedure Builder executes the trigger just before the program reaches the specified location. The trigger block may span multiple input lines. As is the case when entering PL/SQL constructs elsewhere in the Interpreter, no line continuation characters are required when entering the trigger body (nor are they allowed). TRIGGER is especially handy for creating conditional breakpoints. This is done by raising the exception DEBUG.BREAK from within the arbitrarily complex control logic of the trigger body. The exception is trapped by the debugger, which interrupts program execution and passes control to the Interpreter as if a breakpoint had been entered at the trigger location.

TRIGGER command examples

The following trigger establishes a conditional breakpoint on line ten of my_proc that is only reached if the local NUMBER variable `i' exceeds 100:

```
.TRIGGER PROC my_proc LINE 10 IS
   IF DEBUG.GETN('i') > 100 THEN
      RAISE DEBUG.BREAK;
   END IF;
```

Triggers can also be used to trace program execution. The following trigger lists every source statement as it is executed:

```
.TRIGGER * IS debug.interpret('LIST PC');
```

The following command sets a trigger at line 8 in a server-side program unit my_proc from the schema owned by user scott:

```
.TRIGGER USER scott PROC my_proc LINE 8
```

or

```
.TRIGGER PROC scott.my_proc LINE 8
```
Debugging Commands

DESCRIBE (locals) command

**Description**
Displays the name, type, and value of a variable or parameter that is local to the current scope location.

**Syntax**
```
DESCRIBE LOCAL name
DESCRIBE PARAMETER name
DESCRIBE VARIABLE name
```

**Keywords and Values**
- LOCAL *name* Specifies a parameter or variable local to the current scope location.
- PARAMETER *name* Specifies a parameter local to the current scope location.
- VARIABLE *name* Specifies a variable local to the current scope location.

**DESCRIBE (locals) command examples**
The following command displays information about the parameter *p1*:
```
.DESCRIBE PARAM p1
```
The following command displays information about the local variable *sal*:
```
.DESCRIBE LOCAL sal
```
GO command

Description  Resumes program execution indefinitely, after a breakpoint or debug trigger.
Syntax       GO
Comments     GO resumes program execution until the currently executing thread of execution either terminates or is interrupted by a debug action.

GO command example

The following command resumes program execution:
  .GO

RESET command

Description  Returns control to an outer debug level without continuing execution in the current debug level.
Syntax       RESET LEVEL number
Keywords and Values
  LEVEL number  Specifies an outer debug level.
Comments     RESET effectively aborts execution at the current and possibly higher debug levels.
You can perform a relative reset by supplying a negative value for LEVEL number.
Invoking RESET with no options always returns to top level.

RESET command examples

The following command resets to the previous debug level:
  .RESET LEVEL -1
The following command resets to the top level:
  .RESET
SET command

Description  Changes the current scope location to a specified frame of the call stack. The current scope location affects how local variable references are treated in the Interpreter.

Syntax

\begin{verbatim}
SET SCOPE FRAME number
SET SCOPE UP [COUNT number]
SET SCOPE DOWN [COUNT number]
SET SCOPE TOP
SET SCOPE BOTTOM
SET SCOPE PROGRAMUNIT name
SET SCOPE PACKAGE name
SET SCOPE SUBPROGRAM name
SET SCOPE PROCEDURE name
SET SCOPE FUNCTION name
\end{verbatim}

Keywords and Values

- FRAME number  Specifies a frame by number.
- UP  Specifies relative motion toward the top of the stack.
- DOWN  Specifies relative motion toward the bottom of the stack.
- COUNT number  Specifies a repeat count in the specified direction (UP or DOWN). The default is one.
- TOP  Specifies the top frame in the call stack.
- BOTTOM  Specifies the bottom frame in the call stack.
- PROGRAMUNIT name  Specifies a program unit.
- PACKAGE name  Specifies a package.
- SUBPROGRAM name  Specifies a subprogram.
- PROCEDURE name  Specifies a procedure.
- FUNCTION name  Specifies a function.

Comments  Frames are numbered from 0 (top frame) to n (bottom frame).

SET command examples

The following command moves up one stack frame:

```
.SET SCOPE UP
```

The following command moves down two frames:
.SET SCOPE DOWN COUNT 2

The following command moves to the frame associated with the function `func1`:

```
.SET SCOPE FUNCTION func1
```

The following command moves to the top of the stack:

```
.SET SCOPE TOP
```

The following command moves to the fifth frame:

```
.SET SCOPE FRAME 5
```

---

**SHOW (call stack) command**

**Description**

Lists the frames on the current call stack.

**Syntax**

```
SHOW STACK
SHOW SCOPE
```

**Keywords and Values**

- **STACK**
  - Lists the program unit name and line number for every frame on the call stack.
- **SCOPE**
  - Lists the frames from the top of the call stack down to the frame containing the current scope location.

**SHOW (call stack) command example**

The following command lists the current call stack:

```
.SHOW STACK
```

---

**STEP command**

**Description**

Advances execution of an interrupted program unit.

**Syntax**

```
STEP INTO
STEP OVER
STEP OUT
STEP TO PROGRAMUNIT name [LINE number]
STEP TO PACKAGE name [LINE number]
STEP TO SUBPROGRAM name [LINE number]
STEP TO PROCEDURE name [LINE number]
STEP TO FUNCTION name [LINE number]
```
STEP TO ACTION number
STEP TO BREAKPOINT number
STEP TO TRIGGER number
STEP TO . [LINE number]
STEP COUNT number

Keywords and Values

INTO Enables stepping into subprogram calls. This is the default if no keywords are specified.
OVER Prevents stepping into a called subprogram body.
OUT Resumes execution until the current subprogram has returned.
TO ... Continues execution until the specified source location is reached. Using the TO option is analogous to setting a temporary breakpoint at the specified location.

PROGRAMUNIT Specifies a program unit.
name
PACKAGE name Specifies a package.
SUBPROGRAM Specifies a subprogram.
name
PROCEDURE Specifies a procedure.
name
FUNCTION name Specifies a function.
ACTION number Specifies a debug action (breakpoint or trigger).
BREAKPOINT Specifies a breakpoint.
number
TRIGGER Specifies a trigger.
number

.LINE number Specifies the current source location.
COUNT number Specifies the line of the program unit.

Comments Control returns to the current debug level after the specified set of statements have been executed.

STEP command examples

The following command resumes execution until the first breakpoint is reached:
.STEP TO BREAK 1

The following command resumes execution for five lines:

.STEP COUNT 5
Library Commands

ATTACH command

Description  Attaches a PL/SQL library to the current session.

Syntax

```
ATTACH LIBRARY [directory]name[extension]
[FILESYSTEM | DB]
[BEFORE library]
[AFTER library]
[START | END]
```

Keywords and Values

- **LIBRARY name**  Specifies the name of the library, including the optional directory path and extension if stored in the file system.
- **FILESYSTEM** or **DB**  Specifies whether the specified library is stored in the file system or in the currently connected database. If neither keyword is specified, tries to access the specified library first in the file system and then, if unsuccessful, in the current database.
- **BEFORE library**  Specifies to attach the library before the named attached library.
- **AFTER library**  Specifies to attach the library after the named attached library.
- **START** or **END**  Specifies whether the attached library is placed at the beginning or the end of the attach list, respectively. The default is **START**.

Comments  If you attempt to attach a library in the file system, the load path and the extension .pll are used when resolving *lib-name*, unless *directory* and *extension* are specified explicitly. Note that the syntax of *directory* is operating system-specific. For more information about syntax, see the Oracle product documentation for your operating system.
Libraries are attached read-only. If you want to modify the contents of a library, use the OPEN command to open the library for editing.

**ATTACH command example**

The following command attaches to the library residing in the file *lib1*:

```
.ATTACH LIB lib1 FILE
```

---

**CLOSE command**

**Description**  
Removes one or more libraries from the current set of open libraries.

**Syntax**

```
CLOSE LIBRARY name[, name...] [DISCARD]
```

**Keywords and Values**

- `LIBRARY name`  
  Specifies one or more currently open libraries that you wish to close.

- `DISCARD`  
  Discards changes made to the libraries since the last save.

**Comments**  
Closing a library removes all program units loaded from that library into the environment. The namespace used to represent the library is also removed. Closing a library automatically saves any changes made to the library since it was opened. Specifying DISCARD discards any changes made to the library since the last save operation.

**CLOSE command example**

The following command closes the libraries *lib1* and *lib2*:

```
.CLOSE LIB lib1, lib2
```

---

**COMPILE (libraries) command**

**Description**  
Compiles/recompiles all of the program units in one or more open libraries.

**Syntax**

```
COMPILE LIBRARY name[, name...] [INCREMENTAL]
```

**Keywords and Values**

- `LIBRARY name`  
  Specifies one or more open libraries whose
program units you wish to compile.

INCREMENTAL Compiles only those program units within the
library that need to be compiled.

Comments
When invoked, COMPILE first checks for any currently loaded
program unit(s) that match the name and type of the program unit(s) in the library to be
compiled. If there is at least one match, you are asked if you wish to continue
compilation.
Answering Yes removes all of the matching program units from the environment,
compiles them, and saves them in the specified open library. Answering No aborts the
operation.

Note: The compiled program unit(s) are saved in the open library, but are not reloaded
into the environment. You can invoke the LOAD command (via the Interpreter
command line or File→Load) to reload them into the environment.
If INCREMENTAL is not specified, all program units in the library are force-compiled.

COMPILE (libraries) command example
The following command compiles all of the program units in the open library named
lib1:
.COMPILE LIB lib1

CREATE (libraries) command
Description Creates a new library that can be stored in either the file system or the
current database.

Syntax
CREATE LIBRARY [directory]lib-name[extension]
[SOURCE pld-file]
[NOCOMPILE]
[FILESYSTEM | DB]
[BEFORE | AFTER]
[NOCONFIRM]

Keywords and Values
LIBRARY name Specifies the name of the library, including the optional directory path and extension if
created in the file system.

SOURCE pld-file Specifies a file containing the source of one or more program units.

NOCOMPILE Prevents the contents of the newly created library from being compiled.
FILESYSTEM or DB Indicates whether the specified library should be created in the file system or in the currently connected database. The default is FILESYSTEM.

BEFORE or AFTER Dictates whether the attached library is placed at the beginning or the end of the attach list, respectively. The default is BEFORE.

NOCONFIRM Specifies to overwrite an existing library without prompting you for confirmation.

Comments For libraries created in the file system, the name of the library is designated by the basename of the file (the full filename minus any leading directory and any trailing extension). For example, in UNIX, the file /private/libs/emplib.pll holds the library named emplib.

The syntax of directory is operating system-specific. For more information about syntax, see the Oracle product documentation for your operating system.

The newly created library is automatically opened. Once a library has been opened, you can modify its contents using the INSERT and DELETE commands.

Using the SOURCE keyword, you can immediately populate the newly created library with the source of one or more program units contained in the specified pld-file. The library is then compiled (using the COMPILE LIBRARY command) unless you specify the NOCOMPILE keyword.

If you try to create a library with the same name as an existing library, a message box displays, asking if you want to overwrite the existing library. Specifying NOCONFIRM in the command string suppresses the alert.

CREATE (libraries) command example

In UNIX, the following command creates a new library named lib1 residing in the file /private/libs/lib1.pll:

```
.CREATE LIBRARY /private/libs/lib1.pll FILE
```

DELETE (libraries) command

Description Deletes one or more libraries that reside in the current database.

Syntax

```
DELETE LIBRARY name[, name...]
```

Keywords and Values

`LIBRARY name` Specifies a library.
Comments  You cannot delete a library that is currently attached. Use the DETACH command to detach a library before you delete it.

DELETE (libraries) command example

The following command deletes library *lib1* from the database:

```
.DELETE LIB lib1
```

DELETE (library program units) command

Description  Deletes one or more program units from an open library.

Syntax

```
DELETE PROGRAMUNIT name [, name...]
  LIBRARY name
    [SPECIFICATION | BODY]
DELETE PACKAGE name [, name...]
  LIBRARY name
    [SPECIFICATION | BODY]
DELETE SUBPROGRAM name [, name...]
  LIBRARY name
    [SPECIFICATION | BODY]
DELETE PROCEDURE name [, name...]
  LIBRARY name
    [SPECIFICATION | BODY]
DELETE FUNCTION name [, name...]
  LIBRARY name
    [SPECIFICATION | BODY]
```

Keywords and Values

- **PROGRAMUNIT** Specifies one or more program units. *name*
- **PACKAGE** *name* Specifies one or more packages.
- **SUBPROGRAM** Specifies one or more subprograms. *name*
- **PROCEDURE** Specifies one or more procedures. *name*
- **FUNCTION** *name* Specifies one or more functions.
- **LIBRARY** *name* Specifies the library from which the program unit(s) should be deleted.
- **SPECIFICATION** Specifies that either the specification or the BODY of the program unit be deleted.
DELETE (library program units) command example

The following command deletes the package named *p2* from the library named *lib1*:

```
.DELETE PACKAGE p2 LIBRARY lib1
```

DESCRIBE (libraries) command

**Description**  Displays detailed information about an attached library.

**Syntax**  
\[DESCRIBE LIBRARY name\]

**Keywords and Values**

- **LIBRARY name**  Specifies the name of an attached library.

**Comments**  The information displayed for a library includes the mode in which it was attached, its external location, and its contents.

DESCRIBE (libraries) command example

The following command displays information about the library named *lib1*:

```
.DESCRIBE LIBRARY lib1
```

DETACH command

**Description**  Removes one or more libraries from the current set of attached libraries.

**Syntax**  
\[DETACH LIBRARY name[, name...]\]

**Keywords and Values**

- **LIBRARY name**  Specifies one or more attached libraries.

**Comments**  Detaching a library removes all unmodified program units loaded from that library into the environment. Note that once a program unit loaded from a library has been modified within the environment (e.g., by compilation), it will not be removed when the library is detached.

DETACH command example

The following command detaches the libraries *lib1* and *lib2*:

```
.DETACH LIBRARY lib1, lib2
```
**EXPORT (libraries) command**

**Description**  Writes the source of a library to a text file.

**Syntax**

\[
\text{EXPORT \{LIBRARY name\} FILE \{directory\}name[extension]} \quad \text{[NOWARN]}\]

**Keywords and Values**

- **LIBRARY name**: Specifies an attached library.
- **FILE name**: Specifies the name of the file, including the optional directory path and extension.
- **NOWARN**: Suppresses the warning that a built-in program unit was not added to the attached library.

**Comments**

If unspecified, the file extension defaults to .pld. The syntax of directory is operating system-specific. For more information about syntax, see the Oracle product documentation for your operating system.

**EXPORT (libraries) command example**

The following command writes the source of procedure p1 and function f3 to the file pl1.pld:

```
.EXPORT LIB my_lib FILE lib1
```

---

**GENERATE command**

**Description**  Creates a runtime version of a currently open library.

**Syntax**

\[
\text{GENERATE LIBRARY name FILE \{directory\}name} \quad \text{[INCREMENTAL]}\]

**Keywords and Values**

- **LIBRARY name**: Specifies the name of the open library.
- **FILE name**: Specifies the file name of the runtime library, including the optional directory path. The default file extension .plx is automatically assigned.
- **INCREMENTAL**: Specifies that only the uncompiled program units in the open library are to be compiled.
Comments  This command creates a temporary library, copies all program units from the open library and inserts them in the temporary library, compiles the program units, then executes the SAVE command on the temporary library using the NOSOURCE and NODIANA keywords.
The resulting library is identified as a runtime only library with the .plx file extension.
If you specify a different file extension, that extension will be used instead of .plx.

**GENERATE command example**

The following command creates a runtime library named `runlib1.plx` based on the open library `mylib.pll`:

```
.GENERATE LIB mylib FILE runlib1
```

Since the INCREMENTAL keyword was not specified, all program units in the library `mylib` will be force compiled.

---

**GRANT command (Library commands)**

**Description**  Grants a user access to a library stored in the database.

**Syntax**

```
GRANT LIBRARY name USER name
```

**Keywords and Values**

- **LIBRARY** *name*  Specifies the library.
- **USER** *name*  Specifies a user name.

**Comments**  You can specify any single valid user name, or PUBLIC (all users).

**GRANT command example (Library commands)**

The following command grants user SCOTT access to database library `lib1`:

```
.GRANT LIB lib1 USER scott
```

---

**INSERT (library program units) command**

**Description**  Inserts one or more program units into an open library.

**Syntax**

```
INSERT PACKAGE name[, name...]
[SPECIFICATION | BODY]
LIBRARY name
[NOPCODE] [NODIANA] [NOSOURCE] [NOWARN]
```
INSERT SUBPROGRAM name [, name...] [SPECIFICATION | BODY]
LIBRARY name [NOPCODE] [NODIANA] [NOSOURCE] [NOWARN]

INSERT PROCEDURE name [, name...] [SPECIFICATION | BODY]
LIBRARY name [NOPCODE] [NODIANA] [NOSOURCE] [NOWARN]

INSERT FUNCTION name [, name...] [SPECIFICATION | BODY]
LIBRARY name [NOPCODE] [NODIANA] [NOSOURCE] [NOWARN]

Keywords and Values

PACKAGE name Specifies one or more packages.
SUBPROGRAM Specifies one or more subprograms.
PROCEDURE name Specifies one or more procedures.
FUNCTION name Specifies one or more functions.
SPECIFICATION or BODY Specifies the specification or the body of the designated program unit(s), respectively. If neither keyword is supplied, both are inserted into the library.
LIBRARY name Specifies the target library.
NOPCODE Adds the program unit(s) to the library without the PCODE.
NODIANA Adds the program unit(s) to the library without the DIANA.
NOSOURCE Adds the program unit(s) to the library without the source code.
NOWARN Suppresses the warning that a built-in program unit was not inserted into the open library.

Comments
You can use NODIANA and NOSOURCE to dramatically reduce the size of a PL/SQL library.

Note: Program units inserted into libraries with NODIANA and NOSOURCE can be used only in a runtime environment, because it is impossible to compile references to program units that do not include DIANA.

Attempting to insert a built-in program unit into an open library (e.g., INSERT PROG 
* LIB lib3) displays a warning in the Interpreter pane (Warning: Program unit <progunit name> has no source to insert...). Specifying NOWARN in the command string suppresses the warning.
**INSERT (library program units) command example**

The following command inserts the packages \emph{p1} and \emph{p2} into the library named \emph{lib1}:

```
..INSERT PACKAGE p1,p2 LIBRARY lib1
```

---

**LOAD (library program units) command**

**Description**  Loads one or more program units from an attached library.

**Syntax**

```
LOAD PROGRAMUNIT \texttt{name\ldots}
\hspace{1em}LIBRARY \texttt{name}
\hspace{1em}[SPECIFICATION \hspace{0.5em}\textbar\hspace{0.5em} BODY]
\hspace{1em}[NOCONFIRM]

LOAD PACKAGE \texttt{name\ldots}
\hspace{1em}LIBRARY \texttt{name}
\hspace{1em}[SPECIFICATION \hspace{0.5em}\textbar\hspace{0.5em} BODY]
\hspace{1em}[NOCONFIRM]

LOAD SUBPROGRAM \texttt{name\ldots}
\hspace{1em}LIBRARY \texttt{name}
\hspace{1em}[SPECIFICATION \hspace{0.5em}\textbar\hspace{0.5em} BODY]
\hspace{1em}[NOCONFIRM]

LOAD PROCEDURE \texttt{name\ldots}
\hspace{1em}LIBRARY \texttt{name}
\hspace{1em}[SPECIFICATION \hspace{0.5em}\textbar\hspace{0.5em} BODY]
\hspace{1em}[NOCONFIRM]

LOAD FUNCTION \texttt{name\ldots}
\hspace{1em}LIBRARY \texttt{name}
\hspace{1em}[SPECIFICATION \hspace{0.5em}\textbar\hspace{0.5em} BODY]
\hspace{1em}[NOCONFIRM]
```

**Keywords and Values**

- \texttt{PROGRAMUNIT} Specifies one or more program units.
- \texttt{name}
- \texttt{PACKAGE} \texttt{name} Specifies one or more packages.
- \texttt{name}
- \texttt{SUBPROGRAM} Specifies one or more subprograms.
- \texttt{name}
- \texttt{PROCEDURE} \texttt{name} Specifies one or more procedures.
- \texttt{name}
- \texttt{FUNCTION} \texttt{name} Specifies one or more functions.
- \texttt{name}
- \texttt{LIBRARY} \texttt{name} Specifies an attached library.
- \texttt{SPECIFICATION} Specifies that either the specification or the
  body of the program unit be loaded, respectively. If neither is specified, both are
  loaded.
- \texttt{BODY}
- \texttt{NOCONFIRM} Specifies to redefine an existing program unit.
without prompting you for confirmation.

Comments  If you try to load a library program unit with the same name and type as an existing program unit, a message box displays, asking if you want to redefine the existing program unit. Specifying NOCONFIRM in the command string suppresses the alert.

LOAD (library program units) command example

The following command loads the function \textit{f1} and the procedure \textit{p3}, both of which are stored in the attached library \textit{lib1}:
\begin{verbatim}
.LOAD PROGRAMUNIT f1, p3 LIB lib1
\end{verbatim}

OPEN command

Description  Opens a library for modification.

Syntax
\begin{verbatim}
OPEN LIBRARY [directory]lib-name[extension]
[FILESYSTEM | DB]
\end{verbatim}

Keywords and Values
\begin{itemize}
\item \textbf{LIBRARY name}  Specifies the name of the library, including the optional directory path and extension if stored in the file system.
\item \textbf{FILESYSTEM or DB}  Specifies whether the specified library is stored in the file system or in the currently connected database. The default is FILESYSTEM.
\end{itemize}

Comments  If neither FILESYSTEM nor DB is specified, Procedure Builder tries to access the specified library first in the file system and then, if unsuccessful, in the current database.

If you attempt to open a library in the file system, the load path and the extension .pll are used when resolving \textit{lib-name}, unless \textit{directory} and \textit{extension} are specified explicitly. Note that the syntax of \textit{directory} is operating system-specific. For more information about syntax, see the Oracle product documentation for your operating system.

OPEN command examples

The following command opens the library named \textit{lib1}, which is stored in the file system.
\begin{verbatim}
.OPEN LIB /private/libs/lib1
\end{verbatim}
The following command opens the library named libdb, which is stored in the current database:

```
.OPEN LIB libdb DB
```

## RENAME (libraries) command

**Description**
Renames a library that resides in the current database.

**Syntax**

```
RENAME LIBRARY oldname TO newname
```

**Keywords and Values**

- **LIBRARY**
  Specifies the current library name.

- **oldname**
  Specifies the current library name.

- **TO**
  Specifies the new library name.

- **newname**
  Specifies the new library name.

**Comments**
You cannot rename a library to the name of a library that is currently attached. Use the DETACH command to detach the library specified by the new name, or use a different new name.

You cannot use this command to rename libraries stored in files. You must use operating system commands.

### RENAME (libraries) command example

The following command renames database library lib1 to lib4:

```
.RENAME LIB lib1 TO lib4
```

## REVERT command

**Description**
Reverts one or more libraries to their previously saved state.

**Syntax**

```
REVERT LIBRARY name[, name...]
```

**Keywords and Values**

- **LIBRARY name**
  Specifies one or more open libraries.

### REVERT command example

The following command reverts the library lib1:

```
.REVERT LIB lib1
```
**REVOKE command (Library commands)**

**Description**
Revoke a user's access to a library stored in the database.

**Syntax**
```
REVOKE LIBRARY name USER name
```

**Keywords and Values**
- `LIBRARY name`: Specifies a library.
- `USER name`: Specifies a user.

**Comments**
You can specify any single valid user name, or PUBLIC (all users).

**REVOKE command example (Library commands)**

The following command revokes user SCOTT's access to database library `lib1`:
```
.REVOKE LIB lib1 USER scott
```

---

**SAVE command**

**Description**
Saves changes made to one or more open libraries.

**Syntax**
```
SAVE LIBRARY name[, name...] [AS name] [NOPCODE] [NODIANA] [NOSOURCE]
```

**Keywords and Values**
- `LIBRARY name`: Specifies one or more open libraries.
- `AS name`: Specifies a new name for the saved library.
- `NOPCODE`: Saves the library without the PCODE.
- `NODIANA`: Saves the library without the DIANA.
- `NOSOURCE`: Saves the library without the source code.

**Comments**
Saving a library issues an implicit COMMIT. This operation commits any changes made to any database object, not just library objects. For more information on COMMIT, refer to the *Oracle7 SQL Language Reference Manual* or the *Oracle8 SQL Reference Manual*.

You can use NODIANA and NOSOURCE to dramatically reduce the size of a PL/SQL library.

**Note:** Libraries saved with NODIANA and NOSOURCE can be used only in a runtime environment, because it is impossible to compile references to library program units that do not include DIANA.
SAVE command examples

The following command saves the libraries *lib1* and *lib2*:

```
.SAVE LIB lib1, lib2
```

The following command saves library *lib1* as library *lib1a*:

```
.SAVE LIB lib1 AS lib1a
```

The following command saves the libraries *lib1* and *lib2* without DIANA or source:

```
.SAVE LIB lib1, lib2 NODIANA NOSOURCE
```

SHOW (libraries) command

**Description**
Enumerates the libraries that are currently attached.

**Syntax**

```
SHOW LIBRARIES
```

SHOW (libraries) command example

The following command displays the currently attached libraries:

```
.SHOW LIB
```
Load Path Commands

**DELETE (load path) command**

Description: Resets the load path to contain no elements.
Syntax:
```
DELETE LOADPATH
```

**DELETE (load path) command example**

The following command clears the load path of all entries:
```
.DELETE LOADPATH
```

**DESCRIBE (load path) command**

Description: Displays the current load path.
Syntax:
```
DESCRIBE LOADPATH
```

**DESCRIBE (load path) command example**

The following command displays all entries in the current load path:
```
.DESCRIBE LOADPATH
```

**INSERT (load path) command**

Description: Inserts directories into the load path.
Syntax

```
INSERT LOADPATH
{DIRECTORY path[, path...] | CURRENTDIR}
[BEFORE | AFTER]
```

**Keywords and Values**
- **LOADPATH**: Specifies the current load path.
- **DIRECTORY path**: Specifies one or more directory paths.
- **CURRENTDIR**: Specifies the current directory path.
- **BEFORE or AFTER**: Specifies whether the directories should be inserted before or after the existing directories in the load path, respectively. The default is AFTER.

**Comments**
The syntax of `path` is operating system-specific. For more information about syntax, see the Oracle product documentation for your operating system.

**INSERT (load path) command example**

In UNIX, the following command appends the directory `/usr/plsql` to the load path:

```
INSERT LOADPATH DIRECTORY /usr/plsql
```
Logging Commands

DISABLE (logging) command

Description  Suspends logging to the current log file.
Syntax
DISABLE LOGGING
Comments  DISABLE has no effect on logging if no log file has been specified (via the LOG command) or if logging is already disabled.
You can enable disabled logging by using the ENABLE command.

DISABLE (logging) command example

The following command temporarily suspends logging:
.DISABLE LOG

ENABLE (logging) command

Description  Resumes logging to the current log file.
Syntax
ENABLE LOGGING
Comments  ENABLE has no effect if no log file has been specified via the LOG command, or if logging is already enabled.
You can temporarily disable logging with the DISABLE command.

ENABLE (logging) command example

The following command resumes logging after it has been suspended:
.ENABLE LOG
LOG command

Description
Saves a transcript of Interpreter input and output to the specified log file.

Syntax
```
LOG FILE {directory}\name[extension]
[APPEND]
[ENABLED | DISABLED]
[OFF]
```

Keywords and Values
- **FILE name**: Specifies the log file name and, optionally, the directory path and file extension.
- **APPEND**: Indicates that log output should be appended to the specified file; otherwise, the file is overwritten.
- **ENABLED or DISABLED**: Specify whether logging is initially enabled or disabled, respectively. The default is ENABLED.
- **OFF**: Terminates logging and saves the log file.

Comments
If unspecified, the log file extension defaults to .log. The syntax of directory is operating system-specific. For more information about syntax, see the Oracle product documentation for your operating system.

If the specified log file does not exist, a new file is created in the specified directory. If no directory path is specified, the log file is created in the current directory. You can temporarily disable logging and then enable it again using the DISABLE and ENABLE commands, respectively.

LOG command examples

The following command begins logging Interpreter input and output in the file debug.log in the current directory:
```
.LOG FILE debug
```

The following command terminates logging and saves the log file:
```
.LOG OFF
```
Program Unit Commands

**COMPILE (program units) command**

**Description**
Compiles/recompiles the specified program units.

**Syntax**

- `COMPILE PROGRAMUNIT name[, name...] [SPECIFICATION | BODY]
- `COMPILE PACKAGE name[, name...] [SPECIFICATION | BODY]
- `COMPILE SUBPROGRAM name[, name...] [SPECIFICATION | BODY]
- `COMPILE PROCEDURE name[, name...] [SPECIFICATION | BODY]
- `COMPILE FUNCTION name[, name...] [SPECIFICATION | BODY]

**Keywords and Values**

- `PROGRAMUNIT` Specifies one or more program units.
- `name`
- `PACKAGE name` Specifies one or more packages.
- `SUBPROGRAM name` Specifies one or more subprograms.
- `PROCEDURE name` Specifies one or more procedures.
- `FUNCTION name` Specifies one or more functions.
- `SPECIFICATION | BODY` Specifies that either the specification or the body of the program unit be compiled. By default, both are compiled.
COMPILE (program units) command example

The following command compiles procedure `proc1` and package `pkg1`:

```
.COMPILE PROG proc1, pkg1
```

DELETE (program units) command

**Description**  Deletes one or more program units from the current development session.

**Syntax**

```
DELETE PROGRAMUNIT name [, name...]  
  [SPECIFICATION | BODY]
```

```
DELETE PACKAGE name [, name...]  
  [SPECIFICATION | BODY]
```

```
DELETE SUBPROGRAM name [, name...]  
  [SPECIFICATION | BODY]
```

```
DELETE PROCEDURE name [, name...]  
  [SPECIFICATION | BODY]
```

```
DELETE FUNCTION name [, name...]  
  [SPECIFICATION | BODY]
```

**Keywords and Values**

- `PROGRAMUNIT` Specifies one or more program units.
- `name`

- `PACKAGE` Specifies one or more packages.
- `name`

- `SUBPROGRAM` Specifies one or more subprograms.
- `name`

- `PROCEDURE` Specifies one or more procedures.
- `name`

- `FUNCTION` Specifies one or more functions.
- `name`

- `SPECIFICATION` Specifies that either the specification or the body of the program unit be removed. By default, both are removed.

**Comments**  Once deleted from the current development session, a program unit and any of its subobjects (types, variables, subprograms, etc.) are no longer defined within the development session. Deleting a program unit from the current development session can cause the invalidation of other program units that depend upon it. This is analogous to what happens when the specification of a program unit is changed.
DELETE (program units) command example

The following command deletes the package named p2 from the current development session:

```
.DELETE PACKAGE p2
```

DESCRIBE (program units) command

**Description**
Displays detailed information about a specific program unit instance.

**Syntax**

```
DESCRIBE PROGRAMUNIT name [SPECIFICATION | BODY]
DESCRIBE PACKAGE name [SPECIFICATION | BODY]
DESCRIBE SUBPROGRAM name [SPECIFICATION | BODY]
DESCRIBE PROCEDURE name [SPECIFICATION | BODY]
DESCRIBE FUNCTION name [SPECIFICATION | BODY]
```

**Keywords and Values**

- **PROGRAMUNIT** Specifies a program unit.
- **package name** Specifies a package.
- **SUBPROGRAM** Specifies a subprogram.
- **PROCEDURE** Specifies a procedure.
- **FUNCTION** Specifies a function.
- **SPECIFICATION** or **BODY** Specifies that either the specification or the body of the program unit be added to the library. The default is **SPECIFICATION**.

**Comments**

The information displayed includes the program unit name, its type, its parameters (if any), its external location, whether it is compiled, whether it is open for editing, and cross reference information. In addition, describing a package also indicates whether the package is a built-in program unit, and whether it is an extension to the STANDARD package. Describing a package specification lists all of the subprograms defined within the specification.

DESCRIBE (program units) command example

The following command displays information about the body of package pkl:

```
.DESCRIBE BODY PACKAGE pkl
```
**DISABLE (compiler options) command**

**Description**
Removes one or more compiler options temporarily.

**Syntax**
DISABLE COMPILER SIZECHECK

**Comments**
The SIZECHECK compiler option is automatically disabled for batch compilations. You can reactivate a compiler option using the ENABLE command.

**DISABLE (compiler options) command example**
The following command temporarily disables the SIZECHECK compiler option:
\ڥ\."DISABLE COMPILER SIZECHECK

---

**ENABLE (compiler options) command**

**Description**
Activates or reactivates one or more compiler options.

**Syntax**
ENABLE COMPILER SIZECHECK

**Comments**
You can activate the SIZECHECK compiler option for interactive compilations only. Once enabled, the compiler option remains active until disabled. This option is automatically disabled for batch compilations.

Enable the SIZECHECK option prior to compiling a program unit to raise an alert if the size of a program unit source is approaching an operating system limit for memory allocation. If the size of the source is close to an operating system limit, the compiled state of that source will probably be larger and may exceed the operating system limit.

The SIZECHECK option also raises an alert if the compiled state of the program unit is approaching or exceeds an operating system specific limit for memory allocation.

If the source of the program unit, or the compiled program unit exceeds an operating system-specific memory allocation limit, you may wish to break the program unit into smaller program units.

Check your operating system documentation for the memory allocation limit on your platform.

You can temporarily remove a compiler option using the DISABLE command.

**ENABLE (compiler options) command example**
The following command enables the SIZECHECK compiler option:
\ڥ\."ENABLE COMPILER SIZECHECK
EXECUTE command (PB standalone only)

Description  Executes a named anonymous block or a parameterless procedure. This command is valid only when Procedure Builder is invoked as a standalone session.

Syntax
EXECUTE PROGRAMUNIT name
EXECUTE PROCEDURE name

Keywords and Values
  PROGRAMUNIT  Specifies a named anonymous block.
  name
  PROCEDURE    Specifies a parameterless procedure.
  name

Comments  Use the EXECUTE command to execute program units and procedures that have no source or that have not been compiled.

EXECUTE command example
You create a library named lib1.pll. You insert the procedure x1 into that library using the NOSOURCE and NODIANA keywords. Although the x1 procedure is not compiled, you can run it with the EXECUTE command as follows:
.EXECUTE PROC x1

EXPORT (program units) command

Description  Writes the source of one or more program units to a text file.

Syntax
EXPORT PROGRAMUNIT name [, name...]
  FILE [directory]name[extension]
  [SPECIFICATION | BODY]
  [NOWARN]
EXPORT PACKAGE name [, name...]
  FILE [directory]name[extension]
  [SPECIFICATION | BODY]
  [NOWARN]
EXPORT SUBPROGRAM name [, name...]
  FILE [directory]name[extension]
  [SPECIFICATION | BODY]
  [NOWARN]
EXPORT PROCEDURE name [, name...]
  FILE [directory]name[extension]
  [SPECIFICATION | BODY]
[NOWARN]

EXPORT FUNCTION name[, name...]  
FILE [directory] name[extension]  
[SPECIFICATION | BODY]  
[NOWARN]

Keywords and Values

PROGRAMUNIT Specifies one or more program units.  
name

PACKAGE name Specifies one or more packages.  

SUBPROGRAM Specifies one or more subprograms.  
name

PROCEDURE Specifies one or more procedures.  
name

FUNCTION name Specifies one or more functions.  

FILE name Specifies the name of the file, including the  
optional directory path and extension.  

SPECIFICATION Specifies either the specification or the body of  
or BODY the designated program unit(s). By default,  
both are written to the file.  

NOWARN Suppresses the warning that a built-in  
program unit has no source for export.

Comments  

If you export more than one program unit, Procedure Builder sorts the 
program units to avoid forward references—that is, each program unit appears after the 
program unit(s) it references. This enables you to reload exported program units into  
Procedure Builder using INTERPRET.  
If unspecified, the file extension defaults to .PLD. The syntax of directory is operating  
system-specific. For more information about syntax, see the Oracle product  
documentation for your operating system.  
Attempting to export a built-in program unit to a text file (e.g., .EXPORT PROG *  
FILE allprogs.txt) displays a warning in the Interpreter pane (Warning:  
Program unit <progunit name> has no source to export...). Specifying NOWARN in the  
command string suppresses the warning.

EXPORT (program units) command example

The following command writes the source of procedure p1 and function f3 to the file  
pl1.pld: 

.EXPORT PROG p1,f3 FILE pl1

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EXPORT (stored program units) command

**Description**  Writes the source of one or more stored program units to a text file.

**Syntax**

```plaintext
EXPORT {STORED} PROGRAMUNIT schema.name [, schema.name...] 
   [SPECIFICATION | BODY] 
   [directory]name[extension] 

EXPORT {STORED} PACKAGE schema.name [,schema.name...] 
   [SPECIFICATION | BODY] 
   [directory]name[extension] 

EXPORT {STORED} SUBPROGRAM schema.name [,schema.name...] 
   [SPECIFICATION | BODY] 
   [directory]name[extension] 

EXPORT {STORED} PROCEDURE schema.name [,schema.name...] 
   [SPECIFICATION | BODY] 
   [directory]name[extension] 

EXPORT {STORED} FUNCTION schema.name [,schema.name...] 
   [SPECIFICATION | BODY] 
   [directory]name[extension]
```

**Keywords and Values**

- **PROGRAMUNIT** Specifies one or more program units.  
- **PACKAGE name** Specifies one or more packages.  
- **SUBPROGRAM name** Specifies one or more subprograms.  
- **PROCEDURE name** Specifies one or more procedures.  
- **FUNCTION name** Specifies one or more functions.  
- **FILE name** Specifies the name of the file, including the optional directory path and extension.  
- **SPECIFICATION** Specifies either the specification or the body of the designated stored program unit(s). By default, both are written to the file.

**Comments**  If you export more than one stored program unit, Procedure Builder sorts the stored program units to avoid forward references—that is, each stored program unit appears after the stored program unit(s) it references. This enables you to reload exported stored program units into Procedure Builder using INTERPRET. If unspecified, the file extension defaults to .PLD. The syntax of directory is operating system-specific. For more information about syntax, see the Oracle product documentation for your operating system.
**EXPORT (stored program units) command example**

The following command writes the source of stored procedure `p1` and stored function `f3` to the file `pl1.pld`:

```
.EXPORT STORED PROG SCOTT.p1,SCOTT.f3 FILE pl1
```

---

**LIST (program units) command**

**Description**

Displays the specified program unit text and sets the current source location.

**Syntax**

```
LIST [{USER schema} PROGRAMUNIT name | PROGRAMUNIT [schema.]name] 
  { . | PC | SCOPE} 
  [LINE number] 
  [SPECIFICATION | BODY]
```

```
LIST [{USER schema} PACKAGE name | PACKAGE schema.name] 
  { . | PC | SCOPE} 
  [LINE number] 
  [SPECIFICATION | BODY]
```

```
LIST [{USER schema} SUBPROGRAM name | SUBPROGRAM schema.name] 
  { . | PC | SCOPE} 
  [LINE number] 
  [SPECIFICATION | BODY]
```

```
LIST [{USER schema} PROCEDURE name | PROCEDURE schema.name] 
  { . | PC | SCOPE} 
  [LINE number] 
  [SPECIFICATION | BODY]
```

```
LIST [{USER schema} FUNCTION name | FUNCTION schema.name] 
  { . | PC | SCOPE} 
  [LINE number] 
  [SPECIFICATION | BODY]
```

**Keywords and Values**

- **USER schema**
  - Specifies a schema name in the database where the stored program unit is located.

- **PROGRAMUNIT name**
  - Specifies a program unit.

- **PACKAGE name**
  - Specifies a package.

- **SUBPROGRAM name**
  - Specifies a subprogram.

- **PROCEDURE name**
  - Specifies a procedure.

- **FUNCTION name**
  - Specifies a function.

- **.**
  - Specifies the current source location. This is the default.
Forms Developer Procedure Builder Reference

PC Specifies the current execution location.
SCOPE Specifies the current scope location.
LINE number Specifies the line of the program unit that should become the current source location.
SPECIFICATION or BODY Specifies that either the specification or the body of the program unit be displayed, respectively. The default is SPECIFICATION.

**Comments**

LIST displays the text of a program unit in the Source pane of the Interpreter. If no line is specified using LINE, the first line of the program unit becomes the current source location.
This rule does not apply if you specify ., PC, or SCOPE. Specifying . or PC sets the source location to the current execution location. Specifying SCOPE sets the source location to the current scope location.
Note PC and SCOPE are useful only when program execution has been interrupted.

**LIST (program units) command examples**

The following command displays the source text of procedure p1 and sets the source location to line one:
```
.LIST PROC p1
```

The following command displays the source text of p1 and sets the source location to line eighteen:
```
.LIST PROGRAMUNIT p1 LINE 18
```

The following command sets the source location to the current execution location and displays the source text:
```
.LIST PC
```

The following command displays the source text in a server-side program unit my_proc from the schema owned by user scott and retains the current source location:
```
.LIST USER scott PROC my_proc
```

or
```
.LIST PROC scott.my_proc
```

**LOAD (program units) command**

**Description**

Loads one or more program units from the file system.

**Syntax**

LOAD FILE [directory] name [extension] [, [directory] name ...] [NOCONFIRM]
Keywords and Values

FILE name        Specifies one or more files containing the
                program unit text.
NOCONFIRM        Specifies to redefine an existing program unit
                without prompting you for confirmation.

Comments        Each file you specify must contain the source text of a single program
                unit. If unspecified, the directory defaults to the current directory, and the file
                extension defaults to .pls.

The syntax of directory is operating system-specific. For more information about
syntax, see the Oracle product documentation for your operating system.

The source text is compiled as it is loaded. If the resulting program unit is a named
entity (i.e., a subroutine or package), processing is complete. If the program unit is an
anonymous block, it is executed and automatically discarded upon completion.

If you try to load a program unit with the same name and type as an existing program
unit, a message box displays, asking if you want to redefine the existing program unit.
Specifying NOCONFIRM in the command string suppresses the alert.

LOAD (program units) command example

The following command loads the program units whose source is contained in the files
proc1.pls and func2.pls in the current directory:

LOAD FILE proc1, func2

LOAD (stored program units) command

Description        Loads one or more program units stored in the database.

Syntax

LOAD STORED PROGRAMUNIT [owner]name[, [owner]name...]
    [SPECIFICATION | BODY]
    [NOCONFIRM]

LOAD STORED PACKAGE  [owner]name[, [owner]name...]
    [SPECIFICATION | BODY]
    [NOCONFIRM]

LOAD STORED SUBPROGRAM [owner]name[, [owner]name...]
    [SPECIFICATION | BODY]
    [NOCONFIRM]

LOAD STORED PROCEDURE [owner]name[, [owner]name...]
    [SPECIFICATION | BODY]
    [NOCONFIRM]

LOAD STORED FUNCTION [owner]name[, [owner]name...]
    [SPECIFICATION | BODY]
    [NOCONFIRM]
Keywords and Values

PROGRAMUNIT  Specifies one or more program units, including the optional owner.

PACKAGE name  Specifies one or more packages, including the optional owner.

SUBPROGRAM name  Specifies one or more subprograms, including the optional owner.

PROCEDURE name  Specifies one or more procedures, including the optional owner.

FUNCTION name  Specifies one or more functions, including the optional owner.

SPECIFICATION or BODY  Specifies that either the specification or the body of the stored program unit be loaded, respectively. If neither is specified, both are loaded.

NOCONFIRM  Specifies to redefine an existing program unit without prompting you for confirmation.

Comments  The source text is compiled as it is loaded. If the resulting program unit is a named entity (i.e., a subprogram or package), processing is complete. If the program unit is an anonymous block, it is executed and automatically discarded upon completion.

If you try to load a program unit with the same name and type as an existing program unit, a message box displays, asking if you want to redefine the existing program unit. Specifying NOCONFIRM in the command string suppresses the alert.

LOAD (stored program units) command example

The following command loads the program units whose source is contained in the files proc1.pls and func2.pls in the current directory:

`.LOAD STORED PROG scott.proc1, scott.func2`

SHOW (locals) command

Description  Lists the current local variables and parameters that are defined at the current scope location.

Syntax

SHOW LOCALS
SHOW PARAMETERS
SHOW VARIABLES
Keywords and Values

 LOCALS Specifies all parameters and variables.
 PARAMETERS Specifies all parameters.
 VARIABLES Specifies all variables.

SHOW (locals) command example

The following command displays information about all of the current parameters:

SHOW PARAMETERS

SHOW (program units) command

Description
Enumerates the program units that are currently defined in the development session.

Syntax

SHOW PROGRAMUNITS
[USER | BUILTIN]
[SPECIFICATION | BODY]

SHOW PACKAGES
[USER | BUILTIN]
[SPECIFICATION | BODY]

SHOW SUBPROGRAMS
[USER | BUILTIN]
[SPECIFICATION | BODY]

SHOW PROCEDURES
[USER | BUILTIN]
[SPECIFICATION | BODY]

SHOW FUNCTIONS
[USER | BUILTIN]
[SPECIFICATION | BODY]

Keywords and Values

 PROGRAMUNIT Specifies all program units.
 S
 PACKAGES Specifies all packages.
 SUBPROGRAMS Specifies all subprograms.
 PROCEDURES Specifies all procedures.
 FUNCTIONS Specifies all functions.
 USER or Specifies whether to show user-defined or
 BUILTIN built-in program units, respectively. The
default is USER.

SPECIFICATION Dictate whether specifications or bodies are
 or BODY listed, respectively. By default, both are listed.
**SHOW (program units) command examples**

The following command lists the names and types of all current user-defined program units:

```
.SHOW PROGRAMUNITS
```

The following command lists all of the built-in package specifications:

```
.SHOW PACK SPEC BUILT
```
Session Commands

DESCRIBE (version) command

Description Displays detailed information about the current version of Procedure Builder and the PL/SQL compiler.
Syntax DESCRIBE VERSION

DESCRIBE (version) command example

The following command displays information about Procedure Builder:
  .DESCRIBE VER

HELP command

Description Provides descriptions and syntax summaries for commands.
Syntax HELP [COMMAND name] [SYNTAX]

Keywords and Values
  COMMAND name Specifies the Procedure Builder command.
  SYNTAX Displays the syntax of the specified command.

Comments If no command name is supplied, a list of all Procedure Builder commands is displayed.

HELP command examples

The following command displays a brief description and the syntax of the BREAK command:
  .HELP COM BREAK SYNTAX
The following command lists all of Procedure Builder commands:

```
.HELP
```

### INTERPRET command

**Description**
Executes one or more Procedure Builder scripts.

**Syntax**

```
INTERPRET FILE name[, name...] [ECHO] [SILENT] [NOCONFIRM]
```

**Keywords and Values**

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FILE name</td>
<td>Specifies a file containing a Procedure Builder script.</td>
</tr>
<tr>
<td>ECHO</td>
<td>Displays each line of the script as it is processed.</td>
</tr>
<tr>
<td>SILENT</td>
<td>Suppresses status messages issued by the Interpreter.</td>
</tr>
<tr>
<td>NOCONFIRM</td>
<td>Specifies to redefine an existing program unit without prompting you for confirmation.</td>
</tr>
</tbody>
</table>

**Comments**

A Procedure Builder script consists of a sequence of constructs that can be any combination of program units, Procedure Builder commands, and SQL statements. The script is processed as if its contents had been typed directly into the Interpreter. Each PL/SQL construct found in the script is processed as if it had been loaded individually by the LOAD command.

If unspecified, the file extension(s) default to .pld.

If you try to load a program unit with the same name and type as an existing program unit, a message box displays, asking if you want to redefine the existing program unit. Specifying NOCONFIRM suppresses the alert.

You can include SQL statements in your script, but SQL*Plus statements and syntax are not supported.

INTERPRET provides a mechanism for loading multiple program units from a single file. However, INTERPRET lacks the performance of LOAD because Procedure Builder must preparse the source text and send program units to the PL/SQL compiler one at a time.

**INTERPRET command example**

The following command interprets (with ECHO enabled) the script in the file named `script1`:

```
INTERPRET FILE script1 [ECHO]
```
QUIT command (Procedure Builder standalone only)

**Description**  
Exits the current Procedure Builder session. This command is valid only when Procedure Builder is invoked as a standalone session.

**Syntax**  
QUIT [NOCONFIRM]
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