

DBMS SQL

Lesson 2: Basics of SQL

Lesson Objectives

- To understand the following topics:
 - SQL, rules for SQL Statements, standard SQL Statement groups
 - SQL*PLUS & iSQLPlus environment



What is SQL?

- SQL:
 - SQL stands for Structured Query Language.
 - SQL is used to communicate with a database.
 - Statements are used to perform tasks such as update data on a database, or retrieve data from a database.
 - Benefits of SQL are:
 - It is a Non-Procedural Language.
 - It is a language for all users.
 - It is a unified language.

What can SQL do?

- SQL
 - allows you to access a database.
 - can execute queries against a database.
 - can retrieve data from a database.
 - can insert new records into a database.
 - can delete records from a database.
 - can update records in a database.

Rules for SQL statements

- Rules for SQL statements:
 - SQL keywords are not case sensitive. However, normally all commands (SELECT, UPDATE, etc) are upper-cased.
 - “Variable” and “parameter” names are displayed as lower-case.
 - New-line characters are ignored in SQL.
 - Many DBMS systems terminate SQL statements with a semi-colon character.
 - “Character strings” and “date values” are enclosed in single quotation marks while using them in WHERE clause or otherwise.

Standard SQL statement groups

Given below are the standard SQL statement groups:

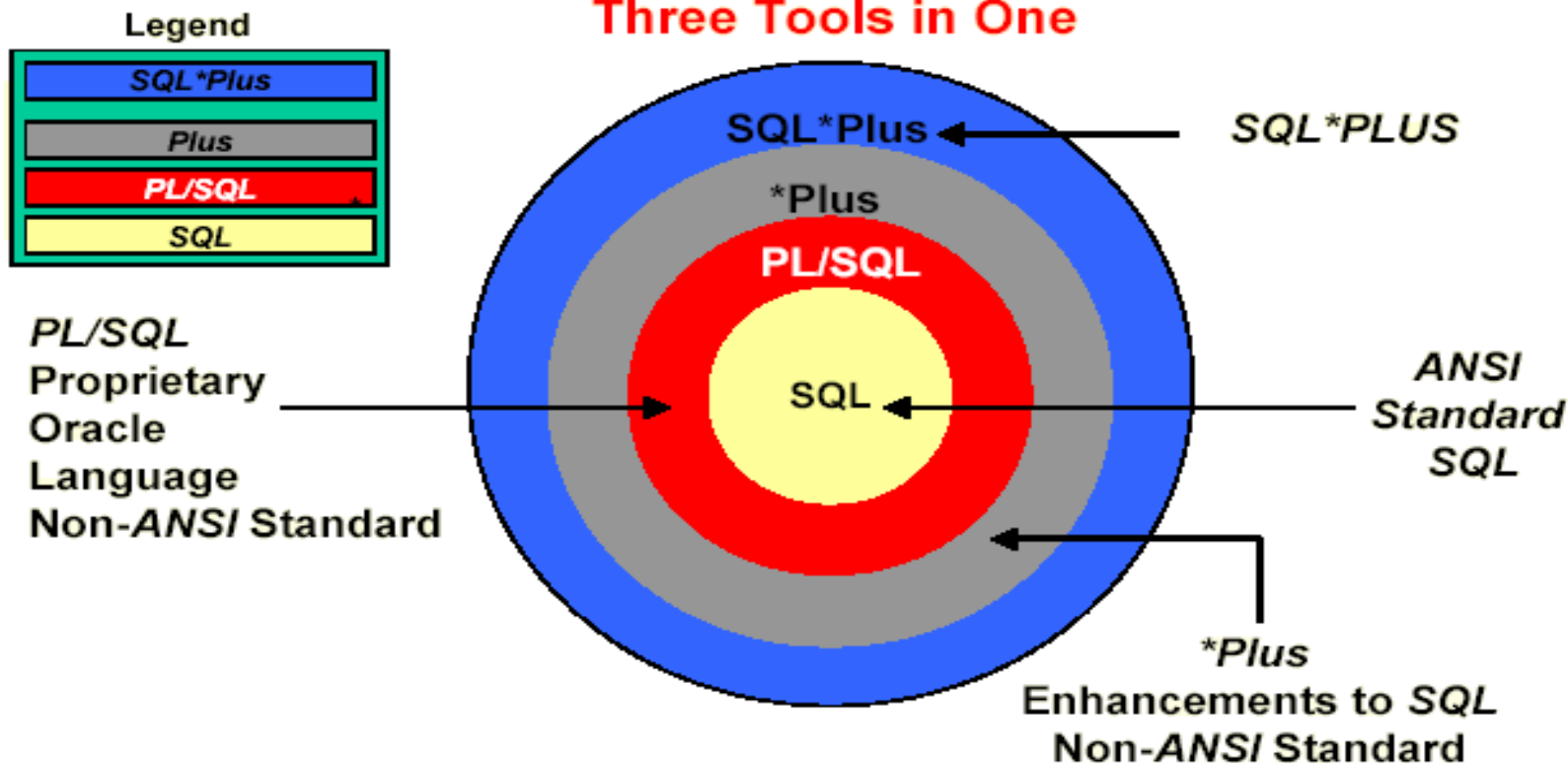
Groups	Statements	Description
DQL	SELECT	DATA QUERY LANGUAGE – It is used to get data from the database and impose ordering upon it.
DML	DELETE INSERT UPDATE MERGE	DATA MANIPULATION LANGUAGE – It is used to change database data.
DDL	DROP TRUNCATE CREATE ALTER	DATA DEFINITION LANGUAGE – It is used to manipulate database structures and definitions.
TCL	COMMIT ROLLBACK SAVEPOINT	TCL statements are used to manage the transactions.
DCL (Rights)	REVOKE GRANT	They are used to remove and provide access rights to database objects.

SQL* Plus Tool



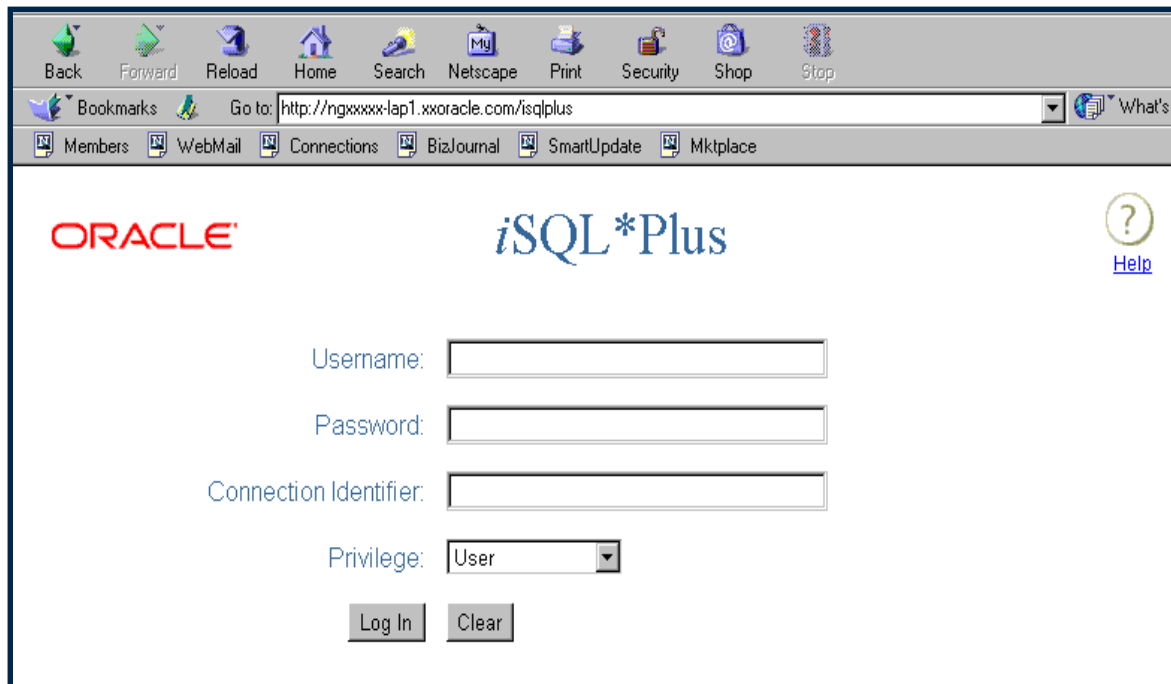
SQL*Plus **The Oracle RDBMS Access Tool**

Three Tools in One



Logging to Oracle Server using iSQLPlus

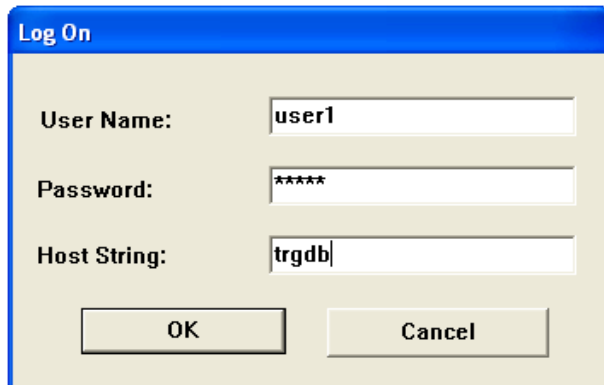
- To log into the iSQL*Plus environment:
 - In the Windows browser, type the URL in the address field. The user will be directed to iSQL*Plus environment screen.



The screenshot shows a Netscape browser window with the address bar containing the URL `http://ngxxxx-lap1.xxoracle.com/isqlplus`. The browser's toolbar includes buttons for Back, Forward, Reload, Home, Search, Netscape, Print, Security, Shop, and Stop. Below the toolbar is a bookmarks bar with links for Members, WebMail, Connections, BizJournal, SmartUpdate, and Mktplace. The main content area displays the Oracle logo and the text "iSQL*Plus". To the right of the text is a help icon (a question mark in a circle) with a "Help" link below it. The login form consists of four input fields: "Username:", "Password:", "Connection Identifier:", and "Privilege:". The "Privilege:" field is a dropdown menu currently set to "User". Below the input fields are two buttons: "Log In" and "Clear".

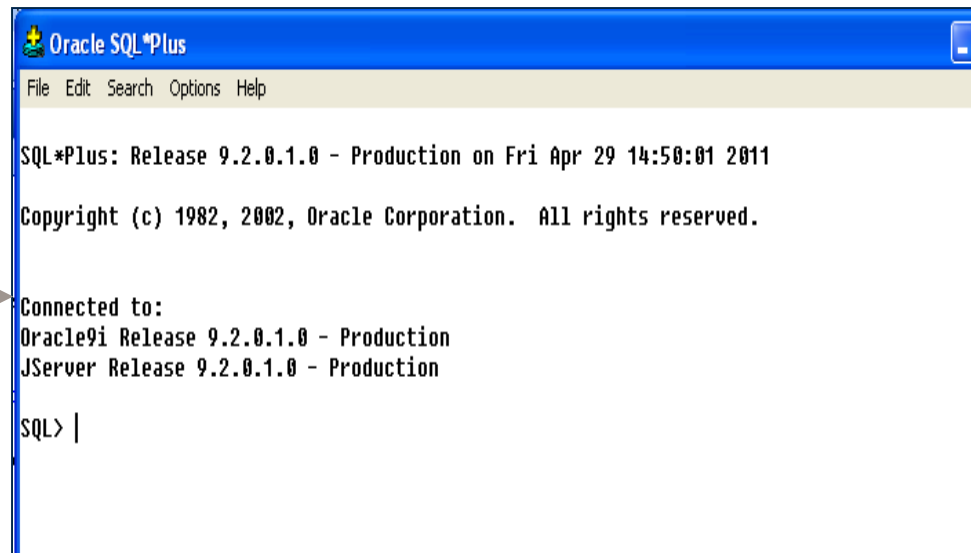
Logging to Oracle Server using iSQLPlus

- To connect to the Oracle server:
 - Select Start, go to Programs, and select Oracle-OraHome8I.
 - Go to Application Development, and select SQL Plus. You will get the following logon screen:



A 'Log On' dialog box with a blue title bar. It contains three input fields: 'User Name:' with 'user1', 'Password:' with '*****', and 'Host String:' with 'trgdb'. At the bottom are 'OK' and 'Cancel' buttons.

Connect to SQL*Plus



Summary

- In this lesson, you have learnt:
 - What is SQL?
 - Rules for SQL statements
 - Standard SQL statement groups
 - SQL*PLUS environment



Review Question

- Question 1: SQL ____.
 - Option 1: cannot execute queries against a database.
 - Option 2: can manipulate data from a database.
 - Option 3: cannot retrieve data from a database.
 - Option 4: can insert new records in a database.
 - Option 5: can delete records from a database.



Review Question

- Question 2: SQL categories are ____.
- Option 1: DDL
- Option 2: DML
- Option 3: DSL
- Option 4: DQL
- Option 5: TCL
- Option 6: TDL

