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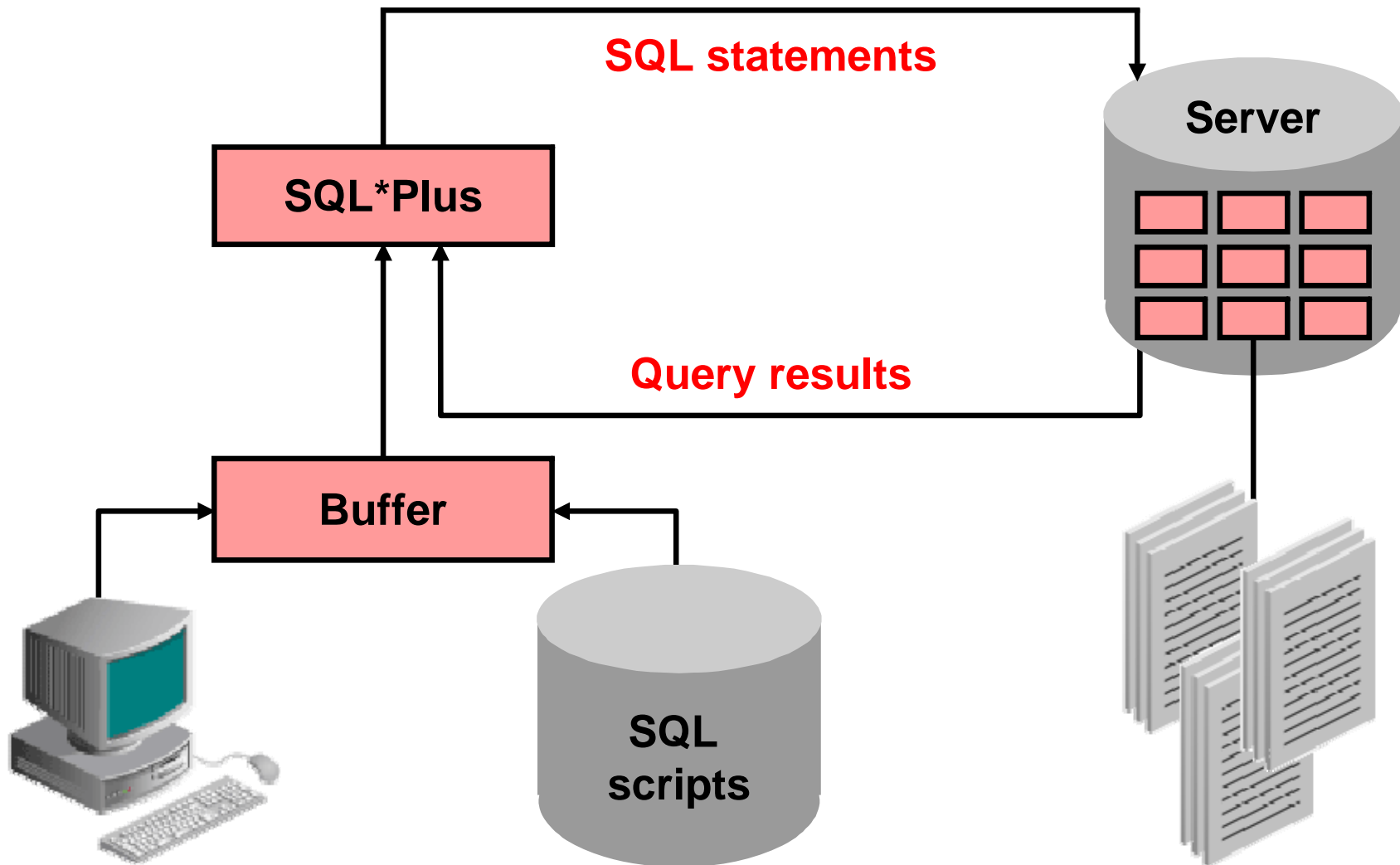
Using SQL*Plus

Objectives

After completing this appendix, you should be able to do the following:

- Log in to SQL*Plus
- Edit SQL commands
- Format the output using SQL*Plus commands
- Interact with script files

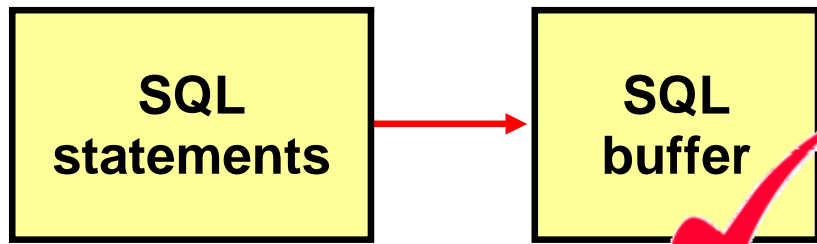
SQL and SQL*Plus Interaction



SQL Statements Versus SQL*Plus Commands

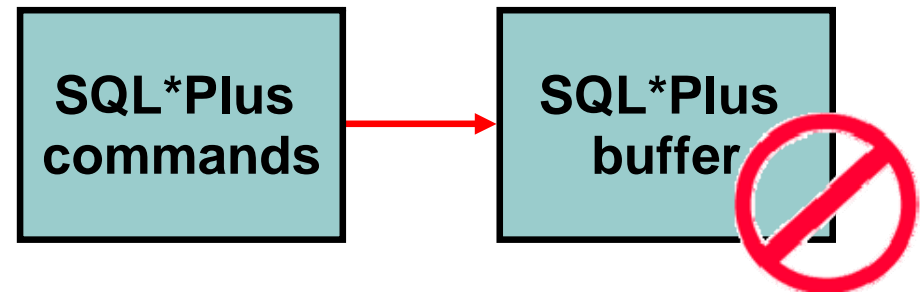
SQL

- A language
- ANSI-standard
- Keywords cannot be abbreviated.
- Statements manipulate data and table definitions in the database.



SQL*Plus

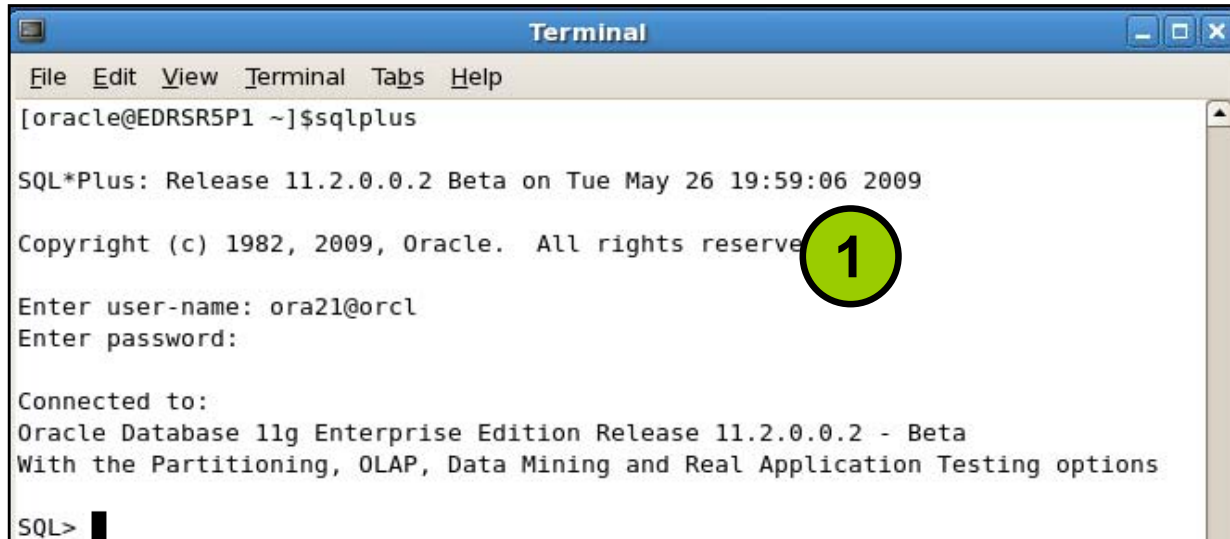
- An environment
- Oracle-proprietary
- Keywords can be abbreviated.
- Commands do not allow manipulation of values in the database.



Overview of SQL*Plus

- Log in to SQL*Plus.
- Describe the table structure.
- Edit your SQL statement.
- Execute SQL from SQL*Plus.
- Save SQL statements to files and append SQL statements to files.
- Execute saved files.
- Load commands from the file to buffer to edit.

Logging In to SQL*Plus

A terminal window titled "Terminal" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The command prompt shows the user at the shell: [oracle@EDRSR5P1 ~]\$sqlplus. The output displays the SQL*Plus version (11.2.0.0.2 Beta) and release date (Tue May 26 19:59:06 2009), followed by the copyright notice. A green circle with the number "1" is placed over the copyright line. The prompt then asks for the user name (ora21@orcl) and password. After successful authentication, it shows the connection details: "Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.0.2 - Beta With the Partitioning, OLAP, Data Mining and Real Application Testing options". The prompt is now SQL>.

```
Terminal
File Edit View Terminal Tabs Help
[oracle@EDRSR5P1 ~]$sqlplus

SQL*Plus: Release 11.2.0.0.2 Beta on Tue May 26 19:59:06 2009

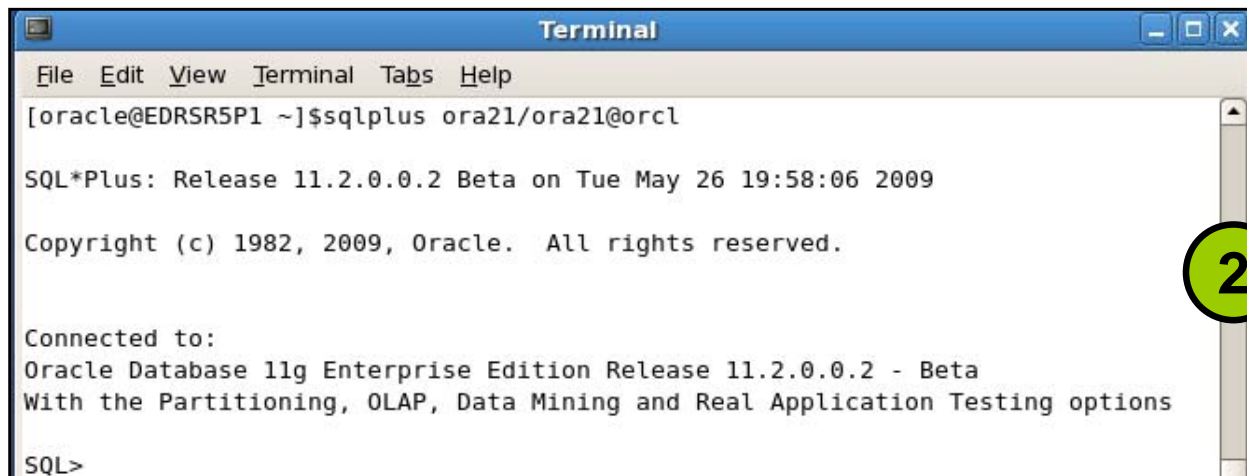
Copyright (c) 1982, 2009, Oracle. All rights reserved.

Enter user-name: ora21@orcl
Enter password:

Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.0.2 - Beta
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL>
```

```
sqlplus [username[/password[@database]]]
```

A terminal window titled "Terminal" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The command prompt shows the user at the shell: [oracle@EDRSR5P1 ~]\$sqlplus ora21/ora21@orcl. The output displays the SQL*Plus version (11.2.0.0.2 Beta) and release date (Tue May 26 19:58:06 2009), followed by the copyright notice. A green circle with the number "2" is placed over the copyright line. The prompt then shows the connection details: "Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.0.2 - Beta With the Partitioning, OLAP, Data Mining and Real Application Testing options". The prompt is now SQL>.

```
Terminal
File Edit View Terminal Tabs Help
[oracle@EDRSR5P1 ~]$sqlplus ora21/ora21@orcl

SQL*Plus: Release 11.2.0.0.2 Beta on Tue May 26 19:58:06 2009

Copyright (c) 1982, 2009, Oracle. All rights reserved.

Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.0.2 - Beta
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL>
```

Displaying the Table Structure

Use the SQL*Plus DESCRIBE command to display the structure of a table:

```
DESC[RIBE] tablename
```

Displaying the Table Structure

```
DESCRIBE departments
```

Name	Null?	Type
-----	-----	-----
DEPARTMENT_ID	NOT NULL	NUMBER(4)
DEPARTMENT_NAME	NOT NULL	VARCHAR2(30)
MANAGER_ID		NUMBER(6)
LOCATION_ID		NUMBER(4)

SQL*Plus Editing Commands

- A[PPEND] *text*
- C[HANGE] / *old* / *new*
- C[HANGE] / *text* /
- CL[EAR] BUFF[ER]
- DEL
- DEL *n*
- DEL *m n*

SQL*Plus Editing Commands

- I [NPUT]
- I [NPUT] *text*
- L [IST]
- L [IST] *n*
- L [IST] *m n*
- R [UN]
- *n*
- *n text*
- 0 *text*

Using LIST, n, and APPEND

LIST

```
1  SELECT last_name  
2* FROM    employees
```

1

```
1* SELECT last_name
```

A , job_id

```
1* SELECT last_name, job_id
```

LIST

```
1  SELECT last_name, job_id  
2* FROM    employees
```

Using the CHANGE Command

```
LIST  
1* SELECT * from employees
```

```
c/employees/departments  
1* SELECT * from departments
```

```
LIST  
1* SELECT * from departments
```

SQL*Plus File Commands

- `SAVE filename`
- `GET filename`
- `START filename`
- `@ filename`
- `EDIT filename`
- `SPOOL filename`
- `EXIT`

Using the SAVE and START Commands

```
LIST
```

```
1  SELECT last_name, manager_id, department_id
2*  FROM employees
```

```
SAVE my_query
```

```
Created file my_query
```

```
START my_query
```

LAST_NAME	MANAGER_ID	DEPARTMENT_ID
King		90
Kochhar	100	90
...		

107 rows selected.

SERVEROUTPUT Command

- Use the `SET SERVEROUT [PUT]` command to control whether to display the output of stored procedures or PL/SQL blocks in SQL*Plus.
- The `DBMS_OUTPUT` line length limit is increased from 255 bytes to 32767 bytes.
- The default size is now unlimited.
- Resources are not preallocated when `SERVEROUTPUT` is set.
- Because there is no performance penalty, use `UNLIMITED` unless you want to conserve physical memory.

```
SET SERVEROUT [PUT] {ON | OFF} [SIZE {n | UNL[IMITED]}]  
[FOR [MAT] {WRA[PPED] | WOR[D_WRAPPED] | TRU[NCATED]}]
```

Using the SQL*Plus SPOOL Command

```
SPO[OL] [file_name[.ext] [CRE[ATE] | REP[LACE] |  
APP[END]] | OFF | OUT]
```

Option	Description
file_name[.ext]	Spools output to the specified file name
CRE[ATE]	Creates a new file with the name specified
REP[LACE]	Replaces the contents of an existing file. If the file does not exist, REPLACE creates the file.
APP[END]	Adds the contents of the buffer to the end of the file you specify
OFF	Stops spooling
OUT	Stops spooling and sends the file to your computer's standard (default) printer

Using the AUTOTRACE Command

- It displays a report after the successful execution of SQL data manipulation statements (DML) statements such as SELECT, INSERT, UPDATE, or DELETE.
- The report can now include execution statistics and the query execution path.

```
SET AUTOT[RACE] {ON | OFF | TRACE[ONLY]} [EXP[LAIN]]  
[STAT[ISTICS]]
```

```
SET AUTOTRACE ON  
-- The AUTOTRACE report includes both the optimizer  
-- execution path and the SQL statement execution  
-- statistics
```

Summary

In this appendix, you should have learned how to use SQL*Plus as an environment to do the following:

- Execute SQL statements
- Edit SQL statements
- Format the output
- Interact with script files