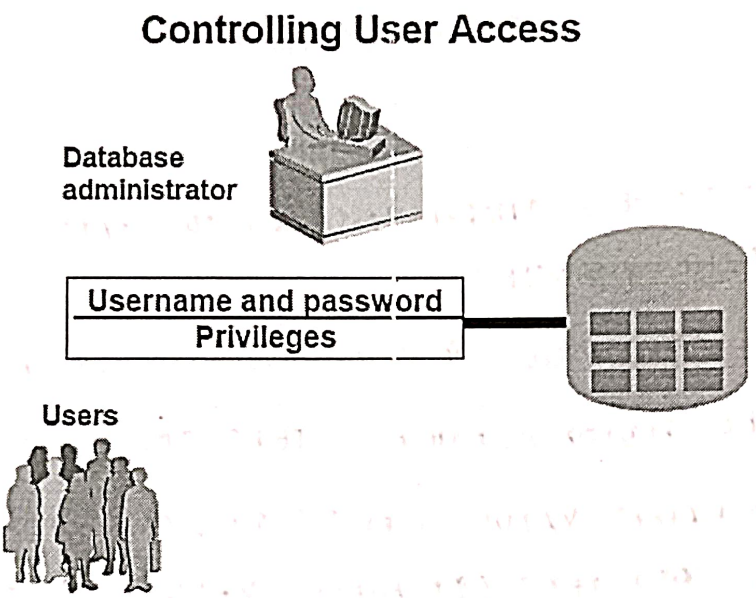
EXERCISE-15

Controlling User Access

Objectives

After the completion of this exercise, the students will be able to do the following:

- Create users
- Create roles to ease setup and maintenance of the security model
- Use the GRANT and REVOKE statements to grant and revoke object privileges
- Create and access database links



Controlling User Access

In a multiple-user environment, you want to maintain security of the database access and use. With Oracle server database security, you can do the following:

- Control database access
- Give access to specific objects in the database
- Confirm given and received *privileges* with the Oracle data dictionary
- Create synonyms for database objects

Privileges

- Database security:
  - System security
  - Data security
- System privileges: Gaining access to the database
- Object privileges: Manipulating the content of the database objects
- Schemas: Collections of objects, such as tables, views, and sequences

System Privileges

- More than 100 privileges are available.
- The database administrator has high-level system privileges for tasks such as:
  - Creating new users

Find the Solution for the following:

1. What privilege should a user be given to log on to the Oracle Server? Is this a system or an object privilege? CREATE SESSION [cite: 1080, 1102]. [cite_start] This is a system privilege [cite: 1076, 1103]

2. What privilege should a user be given to create tables?

CREATE TABLE [cite: 1080, 1104]

3. If you create a table, who can pass along privileges to other users on your table? The table owner

WITH GRANT OPTION [cite: 1097, 1105]

4. You are the DBA. You are creating many users who require the same system privileges. What should you use to make your job easier? A Role [cite: 1084, 1107]. [cite_start] You create the role, grant the privileges to the role and then grant the role to each user [cite: 1085, 1089, 1090]

5. What command do you use to change your password?

ALTER USER username IDENTIFIED BY new_password: [cite: 1091, 1108]

6. Grant another user access to your DEPARTMENTS table. Have the user grant you query access to his or her DEPARTMENTS table. GRANT SELECT ON DEPARTMENTS TO other_team_user

7. Query all the rows in your DEPARTMENTS table.

SELECT * FROM DEPARTMENTS: [cite: 1109]

8. Add a new row to your DEPARTMENTS table. Team 1 should add Education as department number 500. Team 2 should add Human Resources department number 510. Query the other team's table. INSERT INTO DEPARTMENTS (department_id, departname_name) VALUES

9. Query the USER_TABLES data dictionary to see information about the tables that you own.

SELECT * FROM other_team_user.DEPARTMENTS: [cite: 1110]

10. Revoke the SELECT privilege on your table from the other team.

SELECT table_name, tablespace_name FROM USER_TABLES: [cite: 1111]

11. Remove the row you inserted into the DEPARTMENTS table in step 8 and save the changes.

REVOKE SELECT ON DEPARTMENTS FROM other_team