| Ex.No.: 16 | |
|---|---|
| Date: 25/10/24 | **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



Database administrator

Username and password
Privileges

Users
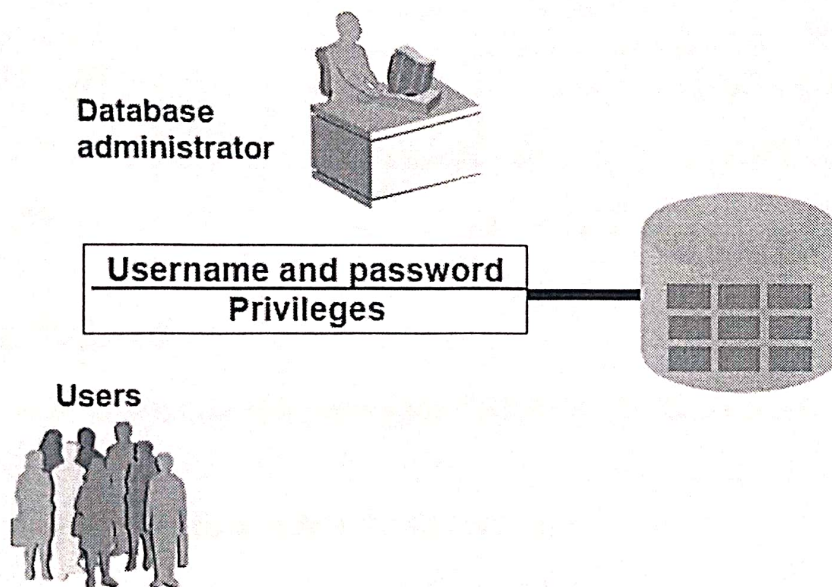
## Controlling User Access

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

1. System Privilege: The CREATE SESSION privilege is classified as a system privilege because it allows the user to establish a connection to the database.

2. GRANT CREATE TABLE TO Scott;

   * Grant: This command is used to provide a privilege to a user.
   * Create Table: This is the system Privilege.
   * TO Scott: This specifies the users to whom the privilege is being granted. You can replace Scott with any valid username

3. Create a role:
   CREATE ROLE Common_Priviliges;

   Grand Priviliges
   GRANT CREATE SESSION, CREATE TABLE, CREATE VIEW TO common_Priviliges.

## 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?

_____

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

_____

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

_____

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?

_____

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

6. Grant another user access to your DEPARTMENTS table. Have the user grant you query access
to his or her DEPARTMENTS table.

7. Query all the rows in your DEPARTMENTS table.   SELECT * FROM DEPARTMENTS;

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.

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

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

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

6. Step-1: Grant access to your DEPARTMENT Table
   Step-2: Grant Query Access to his or her
   DEPARTMENTS table

   Example: Commands in Sequence
   GRANT SELECT ON DEPARTMENT TO JOHN;

8. Step-1: Add new rows!
   INSERT INTO DEPARTMENTS (DEPARTMENT_ID,
                            DEPARTMENT_NAME)
   VALUES (500, 'education');

   Step-2: Query the other team's table.
   SELECT * FROM DEPARTMENTS WHERE
                            DEPARTMENTS_ID = 500;

9. SELECT * FROM USER_TABLES;

10. REVOKE THE SELECT privilege:
    REVOKE SELECT ON DEPARTMENTS FROM
                            TEAM 2;

11. * DELETE THE ROWS
    * COMMIT THE CHANGES.

| Evaluation Procedure | Marks awarded |
|---|---|
| PL/SQL Procedure(5) | 5 |
| Program/Execution (5) | 5 |
| Viva(5) | 5 |
| Total (15) | 15 |
| Faculty Signature | |

Completed