**DCL (Data Control Language)**

- It is given to control privileges/permission.
- GRANT command is used to give privilege.
- REVOKE command is used to take privilege.

ogged In to MySQL

mysql -u username –p

Display User List

SELECT user, host FROM mysql.user;

Display Logged In User

SELECT current_user();

Create User

Syntax

CREATE USER 'username'@'machine' IDENTIFIED BY 'password';

Example

CREATE USER 'user1'@'localhost' IDENTIFIED BY 'user1';

Update Password

Syntax

ALTER USER 'username'@'hostname' IDENTIFIED BY 'new_password';

Example

ALTER USER 'user1'@'localhost' IDENTIFIED BY 'user2';

Delete user

Syntax

DROP USER 'username'@'host';


**Grant Privileges**

<u>Syntax</u>

<mark>GRANT privilege_type ON databasename.tablename TO 'username'@'hostname';</mark>

<u>Example</u>

GRANT ALL PRIVILEGES ON db1.* TO 'user1'@'localhost';

FLUSH PRIVILEGES;

**Revoke Privileges**

<u>Syntax</u>

<mark>REVOKE privilege_type ON database_name.table_name FROM 'username'@'hostname';</mark>

<u>Example</u>

REVOKE ALL PRIVILEGES ON db1.* FROM 'user1'@'localhost';

FLUSH PRIVILEGES;

<u>Grant All privilege to specific tables</u>

GRANT ALL PRIVILEGES ON db1.emp TO 'user1'@'localhost';

<u>Revoke All privileges from specific tables</u>

REVOKE ALL PRIVILEGES ON db1.emp FROM 'user1'@'localhost';

<u>Grant Specific privilege to specific tables</u>

GRANT SELECT ON db1.emp TO 'user1'@'localhost';

GRANT INSERT, UPDATE ON db1.emp TO 'user1'@'localhost';


<u>Show list of privileges Assigned to a specific user</u>

<mark>SHOW GRANTS FOR 'username'@'hostname';</mark>

**Role**

- It is a group of privileges; these are created by database administrator only.
- In this case DBA identify common set of privileges and assigns it to a role and then that role is given to the user.

**Working with Role**

**Step 1:**

- Creating a role
- Syntax :
create role rolename@'hostname'
create role role1@'localhost';

**Step 2:**

- Assign privileges to a role
- Syntax :
GRANT privilegename ON databasename.tablename TO rolename@'hostname';
GRANT SELECT, INSERT ON db1.emp TO role1@'localhost';

**Step 3:**

- Assign rolename to no. of user
- Syntax :
grant rolename@'hostname' to 'username'@'localhost';
GRANT role1@'localhost' TO 'user1'@'localhost';


**Revoke Role**

Syntax

REVOKE rolename@'hostname' FROM 'username'@'hostname';

Example

REVOKE role1@'localhost' FROM 'user1'@'localhost';

**WITH GRANT OPTION**

- It allows a user who has been granted a privilege to also grant that same privilege to other users.

<u>Syntax</u>

<mark>GRANT privilege_type ON database_name.table_name TO 'username'@'hostname' WITH GRANT OPTION;</mark>

<u>Example</u>

GRANT ALL PRIVILEGES ON db1.* TO 'user1'@'localhost' WITH GRANT OPTION;

**Questions**

1. How to give full access to user on a specific database?
2. How to give full access to user on a specific database including privilege administration?
3. How to give read-only access to user on all databases?
4. How to give read and write access on a specific database?
5. How to give append-only access to specific tables?