

TOPS TECHNOLOGY

Module 4 – Introduction to DBMS

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Data Control Language (DCL)

1. What is the purpose of GRANT and REVOKE in SQL?

- The **GRANT** and **REVOKE** commands in SQL are used to manage **permissions** or **privileges** in a database
- **GRANT Command**
- **Purpose:** The **GRANT** command is used to **assign privileges** (permissions) to users or roles for accessing or manipulating database objects.
- It allows users to perform specific actions on the database, such as selecting, inserting, updating, or deleting data.
 - **Syntax:**
 - `GRANT privilege_type ON object TO user;`
- **Example:**
 - `GRANT SELECT, INSERT ON employees TO john_doe;`

REVOKE Command

- **Purpose:** The **REVOKE** command is used to **remove or revoke** privileges that were previously granted to a user or role.
- It ensures that users no longer have access to certain database objects or actions.
- **Syntax:**

REVOKE privilege_type ON object FROM user;

privilege_type: The type of privilege being revoked.

object: The database object from which the privilege is being revoked.

user: The user or role from whom the privilege is being revoked.

Example:

REVOKE SELECT, INSERT ON employees FROM john_doe;

2.How do you manage privileges using these commands?

- Managing privileges in SQL using the **GRANT** and **REVOKE** commands is an essential aspect of **database security**.
- **Using GRANT to Manage Privileges**
- The **GRANT** command is used to **assign** specific privileges to users or roles, allowing them to perform certain actions on database objects.
- **Granting Privileges to a User**
- To grant specific privileges (e.g., **SELECT**, **INSERT**, **UPDATE**, **DELETE**) on a table or other objects, you would use the following syntax:
- **GRANT** privilege_type **ON** object **TO** user;
- **Examples:**
- Grant **SELECT** privilege on the employees table to the user john_doe:
- **GRANT SELECT ON employees TO john_doe;**

➤ Using REVOKE to Remove Privileges

➤ The **REVOKE** command is used to **remove** previously granted privileges. It ensures that a user or role can no longer perform specific actions on database objects.

➤ Revoking Privileges from a User

➤ To revoke a privilege from a user or role, use the following syntax:

➤ REVOKE privilege_type ON object FROM user;

➤ Examples:

➤ Revoke **SELECT** privilege on the employees table from the user john_doe:

➤ REVOKE SELECT ON employees FROM john_doe;