

# Module 3: Data Definition language(DDL) & Data Manipulation Language(DML)

## Lesson 1: Types of SQL Statements

- Data Definition Language(DDL)
- Data Manipulation Language (DML)
- Data Control Language(DCL)
- Transaction Control Language(TCL)

# SQL Statements

- SQL Statements are used for interacting with:

- Entities - tables

- Attributes – columns

- Tuples – rows with data values

- Types of SQL Statements

- Data Definition Language (DDL)

- Data Manipulation Language(DML)

- Data Control Language(DCL)

- Transaction Control Language(TCL)

# Data Definition Language (DDL)

- Data Definition Language (DDL) are the statements which are used to define, change or drop a database.
- Common DDL statements
  - CREATE - used to create tables and its columns
  - ALTER – used for altering tables includes – adding and dropping columns and modifying their datatypes
  - TRUNCATE – is used to delete data from table but not the table.
  - DROP – used for deleting tables.

# Data Manipulation Language (DML)

- Data Definition Language (DDL) are the statements which are used to read and modify data in tables.
- Referred as CRUD (Create, Read, Uppdate & Deflete) operations
- DML statements
  - INSERT - used to insert a row or many rows in table.
  - SELECT – reads or displays data from a table.
  - UPDATE – edit row values in the table.
  - DELETE – remove row or rows of data from a table.

# Data Control Language (DCL)

- Data Control Language (DCL) are the statements which are used to give privileges to access the limited Data.
  - Grant - Gives privileges to user for accessing database data.
  - Revoke - Take back for given privileges.
  - Analyse - to collect statistics information about index, cluster, table.
  - Audit - To track the occurrence of a specific SQL statement or all SQL statements during the user sessions.
  - Comment - Write comment to the data table.

# Transaction Control Language (TCL)

- Data Control Language (DCL) are the statements which are used to apply the changes permanently save into the database.
- COMMIT
  - Permanent work save into database.
- ROLLBACK
  - Restore database to original form since the last COMMIT.
- SAVEPOINT
  - Create SAVEPOINT for later use ROLLBACK the new changes.
- SET TRANSACTION
  - set the transaction properties such as read-write/read only access.



# Summary

- Types of SQL Statements

- DDL

- DML

- DCL

- TCL