Topic - 2. Data Manipulation Language

DML commands are used to modify the database. It is responsible for all form of changes in the database.

The command of DML is not auto-committed that means it can't permanently save all the changes in the database. They can be rollback.

Here are some commands that come under DML:

INSERT

UPDATE

DELETE

a. INSERT: The INSERT statement is a SQL query. It is used to insert data into the row of a table.

Syntax:

INSERT INTO TABLE_NAME

(col1, col2, col3,.... col N)

VALUES (value1, value2, value3, ... valueN);

Or

INSERT INTO TABLE_NAME

VALUES (value1, value2, value3, ... valueN);

For example:

INSERT INTO Student (Sname , Subject) VALUES ("Sonoo", "DBMS");

b. UPDATE: This command is used to update or modify the value of a column in the table.

Syntax:

UPDATE table_name SET [column_name1= value1,...column_nameN = valueN] [WHERE CONDITION]

For example:

UPDATE student

SET SName = 'Sonu'

WHERE Student_Id = '3' ;

c. DELETE: It is used to remove one or more row from a table.

Syntax:

DELETE FROM table_name [WHERE condition];

For example:

DELETE FROM Student

WHERE Sname ="Sonu";

3. Data Control Language

DCL commands are used to grant and take back authority from any database user.

Here are some commands that come under DCL:

Grant

Revoke

a. Grant: It is used to give user access privileges to a database.

Example

GRANT SELECT, UPDATE ON MY_TABLE TO SOME_USER, ANOTHER_USER;

b. Revoke: It is used to take back permissions from the user.

Example

REVOKE SELECT, UPDATE ON MY_TABLE FROM USER1, USER2;

4. Transaction Control Language

TCL commands can only use with DML commands like INSERT, DELETE and UPDATE only.

These operations are automatically committed in the database that's why they cannot be used while creating tables or dropping them.

Here are some commands that come under TCL:

COMMIT

ROLLBACK

SAVEPOINT

a. Commit: Commit command is used to save all the transactions to the database.

Syntax:

COMMIT;

Example:

DELETE FROM CUSTOMERS

WHERE AGE = 25;

COMMIT;

b. Rollback: Rollback command is used to undo transactions that have not already been saved to the database.

Syntax:

ROLLBACK;

Example:

DELETE FROM CUSTOMERS

WHERE AGE = 25;

ROLLBACK;

c. SAVEPOINT: It is used to roll the transaction back to a certain point without rolling back the entire transaction.

Syntax:

SAVEPOINT SAVEPOINT_NAME;

5. Data Query Language

DQL is used to fetch the data from the database.

It uses only one command:

SELECT

a. SELECT: This is the same as the projection operation of relational algebra. It is used to select the attribute based on the condition described by WHERE clause.

Syntax:

SELECT expressions

FROM TABLES

WHERE conditions;

For example:

SELECT emp_name

FROM employee

WHERE age > 20;