DML

DATA MANIPULATION LANGUAGE COMMANDS

DML: The SQL DML includes commands to insert tuples into database, t delete tuples from database and to modify tuples in the database. It includes a query language based on both relational algebra and tuple relational calculus.

Type of DML commands

- **INSERT**
- **DELETE**
- **UPDATE**
- **SELECT**

INSERT COMMAND

1. Basic INSERT
Insert a single row by specifying column names and values.
INSERT INTO table_name (column1, column2, column3) VALUES (value1, value2, value3);

2. Insert Without Specifying Columns
If values are provided for all columns in the exact order as they are in the table.
INSERT INTO table_name VALUES (value1, value2, value3);

3. Insert Multiple Rows
Insert multiple rows in one query.
INSERT INTO table_name (column1, column2, column3) VALUES (value1, value2, value3), (value4, value5, value6), (value7, value8, value9);

4. Insert Using SELECT
Insert data from another table or query.
INSERT INTO table_name (column1, column2, column3) SELECT column_a, column_b, column_c FROM another_table WHERE condition;

5. Insert Default Values
Insert a record with default values for columns.

INSERT INTO table_name DEFAULT VALUES;

6. Insert with Expressions
Insert values using expressions, calculations, or functions.

INSERT INTO table_name (column1, column2) VALUES (5 + 10, CURRENT_DATE);

Delete Command

- **DELETE Command is used to delete the rows from a table.**
- **It Will Not delete the structure of a table.**

Syntax:

DELETE FROM TableName Where Condition;

Key Points:

1. **table_name**: The name of the table from which you want to delete rows.
2. **WHERE condition**: Specifies which rows to delete. If this clause is omitted, all rows in the table will be deleted (use with caution).

Note:

- **If we use Delete Command Without Condition, then it will delete all the rows.**
- **But it's structure remains intact.**

2. UPDATE COMMAND

The update command is used to update or change the existing value in a table.

Syntax :

UPDATE TableName

set <ColumnNmane=<Value> Where Condition;

Points to Remember:

- Always use the WHERE clause carefully to avoid unintended updates to all rows.
- You can combine the UPDATE statement with subqueries for advanced updates.
- After executing an UPDATE command, you can use the SELECT statement to verify the changes.

SELECT COMMAND

The Syntex of insert statement is :

i. SELECT column_name from Table_Name;

ii. SELECT column_name_1,column_2,… column_n from Table_Name;

iii. SELECT * FROM Table_Name;

1. Basic Selection
Retrieve specific columns from a table.

```
SELECT column1, column2 FROM table_name;
```

2. Select All Columns
Retrieve all columns from a table.

```
SELECT * FROM table_name;
```

3. Using Aliases
Provide aliases for columns or tables for better readability.

```
SELECT column1 AS alias1, column2 AS alias2 FROM table_name AS alias_table;
```

4. Using DISTINCT
Retrieve unique values.

```
SELECT DISTINCT column1 FROM table_name;
```

-- The End --