SQL DML COMMANDS

DML Commands

INSERT

UPDATE   SELECT

DELETE

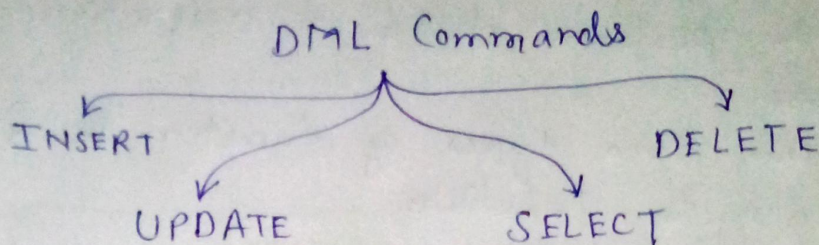**DML (Data Manipulation Language):**
The SQL commands that deals with the manipulation of data present in the database belong to DML or Data Manipulation language and this * includes most of the SQL statements.

Command	Description	Syntax
INSERT	insert data into a table	INSERT INTO table_name (column1, column2,---) VALUES (value1, value2,----);
UPDATE	Update existing data within a table	UPDATE table_name SET column1 = value1, column2 = value2 where condition;
DELETE	Delete records from a database table.	DELETE FROM table_name WHERE condition;
LOCK	Table control concurrency	LOCK TABLE table_name IN lock_mode;
CALL	Call a PL/SQL or JAVA subprogram	CALL procedure_name (arguments);
EXPLAIN PLAN	Describe the access path to data	EXPLAIN PLAN FOR SELECT * FROM table_name;

SQL FUNCTIONS

SQL Functions are built-in programs that are used to perform different operations on the database.

There are two types of function in SQL.

1. Aggregate Functions
2. Scalar Functions

SQL Aggregate Functions:

SQL Aggregate functions operate on a data group and return a singular output. They are mostly used with the GROUP BY clause to summarize data.

Aggregate Function	Description	Syntax
AVG()	Calculate the average value.	SELECT AVG(column-name) FROM table-name;
COUNT()	Count the number of rows.	SELECT COUNT(column-name) FROM table-name;
FIRST()	Returns the first value in an ordered set of values.	SELECT FIRST(column-name) FROM table-name;
LAST()	Returns the last value in an ordered set of values.	SELECT LAST(column-name) FROM table-name;
MAX() and MIN()	Retrieves the max and min value from a column.	SELECT MAX(column-name) FROM table-name;
SUM()	Calculate the total sum of values in a numeric column.	SELECT SUM(column-name) FROM table-name;

SQL scalar function:

SQL Scalar functions are built-in functions that operate on a single value and return a single value. Scalar functions in SQL helps in efficient data manipulation and simplification of complex calculations in SQL queries.

Scalar function	Description	Syntax
UCASE()	Converts a string to uppercase.	SELECT UCASE(column-name) FROM table-name;
LCASE()	Converts a string to lowercase.	SELECT LCASE(column-name) FROM table-name;
MID()	Extracts a substring from a string	SELECT MID(column-name, start, length) FROM table-name
LEN()	Return the length of a string.	SELECT LEN(column-name) FROM table-name;
ROUND()	Rounds a number to a specified number of decimals.	SELECT ROUND(column-name, decimals) FROM table-name;
NOW()	Returns the current date and time	SELECT NOW();
FORMAT()	Formats a value with the specified format	SELECT FORMAT(column-name, format) FROM table-name;