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Database Management System.

IS a set of application or programs that enables users to create and maintain a database.

DBMS provides a tool or an interface for performing various operations such as inserting, deleting, updating into a database.

Data is stored in the form of table (rows and column) formate and can retrieve data with help of query.

SQL Commands

SQL:-(Structured Query Language)

Structural query language is a standerd language for dealing with relational database.

SQL programming can be effectively used to insert search update delete database records.

These SQL Commands are mainly Categorized.

1) DDL :- Data Commands are mainly Categorized
2) DQL :- Data Query language (Data retrieve language)
3) DML :- Data manipulation language
4) DCL :- Data control language
5) TCL :- Transaction control language.

The standard SQL commands to interact with relational database are CREATE, SELECT, INSERT, UPDATE, DELETE and DROP.

DDL – Data Definition Language:-

DDL consist of the SQL commands that can be used to define the database schema. It simply deals with description of the database schema and is used to create and modify the structural of the database object in database.

Command	Description
CREATE	Create a new table, a view of a table, or other object in database
ALTER	Modifies an existing database object, such as a table.
DROP	Deletes an entire table, a view of a table or other object in the database.

DML – Data Manipulation Language :-

The SQL commands that deals with the manipulation of the data present in the database belong to DML or data manipulation language and this includes most of the SQL Statements.

Command	Description
INSERT	Creates a record
UPDATE	Modifies records
DELETE	Deletes records

DCL – Data Control Language:-

DCL includes commands such as GRANT and REVOKE which mainly deal with the rights, permission, and other controls of the database system.

Command	Description
GRANT	Gives a privilege to user
REVOKE	Takes back privileges granted from user

DQL – Data Query Language :-

DQL statements are used for performing queries on the data within schema object. The purpose of the DQL command is to get some schema relation based on the query passed to it. We can define DQL as follows it is a compound of SQL statement that allows getting data form the database and imposing order upon it. It includes the SELECT statements.

Command	Description
SELECT	Retrieves certain records from one or more tables.

SQL Syntax :-

SQL is followed by unique set of rules and guidelines called syntax.

All the SQL statements start with any of the keywords like SELECT, INSERT, UPDATE, DELETE, ALERT, DROP, CREATE, USE, SHOW and all the statements end with a semicolon (;).

SQL SELECT Statement :-

```
SELECT DISTINCT column1, column2 . . . . . .columnN
FROM    table_name;
```

SQL WHERE Clause :-

```
SELECT Column1, column2 . . . . .columnN
FROM   table_name
WHERE CONDITION;
```

SQL AND/OR Clause :-

```
SELECT column1, column2 . . . . .columnN
FROM   table_name
WHERE CONDITION-1 {AND/OR} CONDITION-2;
```

SQL INSERT INTO Statement :-

```
INSERT INTO table_name (column1, column2, . . . . .columnN)
VALUES ( value1, value2. . . ..valueN);
```

SQL UPDATE Statement :-

```
UPDATE  table_name;
```

SQL DELETE Statement :-

```
DELETE   FROM table_name
WHERE   {CONDITION};
```

SQL USE Statement :-

```
USE DATABASE database_name;
```

SQL ROLLBACK Statement :-

```
ROLLBACK;
```

SQL JOIN :-

Join clause combines rows from two or more tables.

Creates a set of rows in a temporary table.

Types of SQL Join:-

1) **Inner Join :-**
    - Return only matched rows from the participating tables.
    - Match happened only at the key record of participating tables.

2) Outer Join :-

- Return all rows from one table.
- Matching rows from the secondary tables.
- Comparison columns should be equal in both the tables.

List of SQL Join :-

- Inner Join
- Left Join or Outer Join
- Right Join or Right Outer Join
- Full Outer Join
- Natural Join
- Cross Join
- Self Join