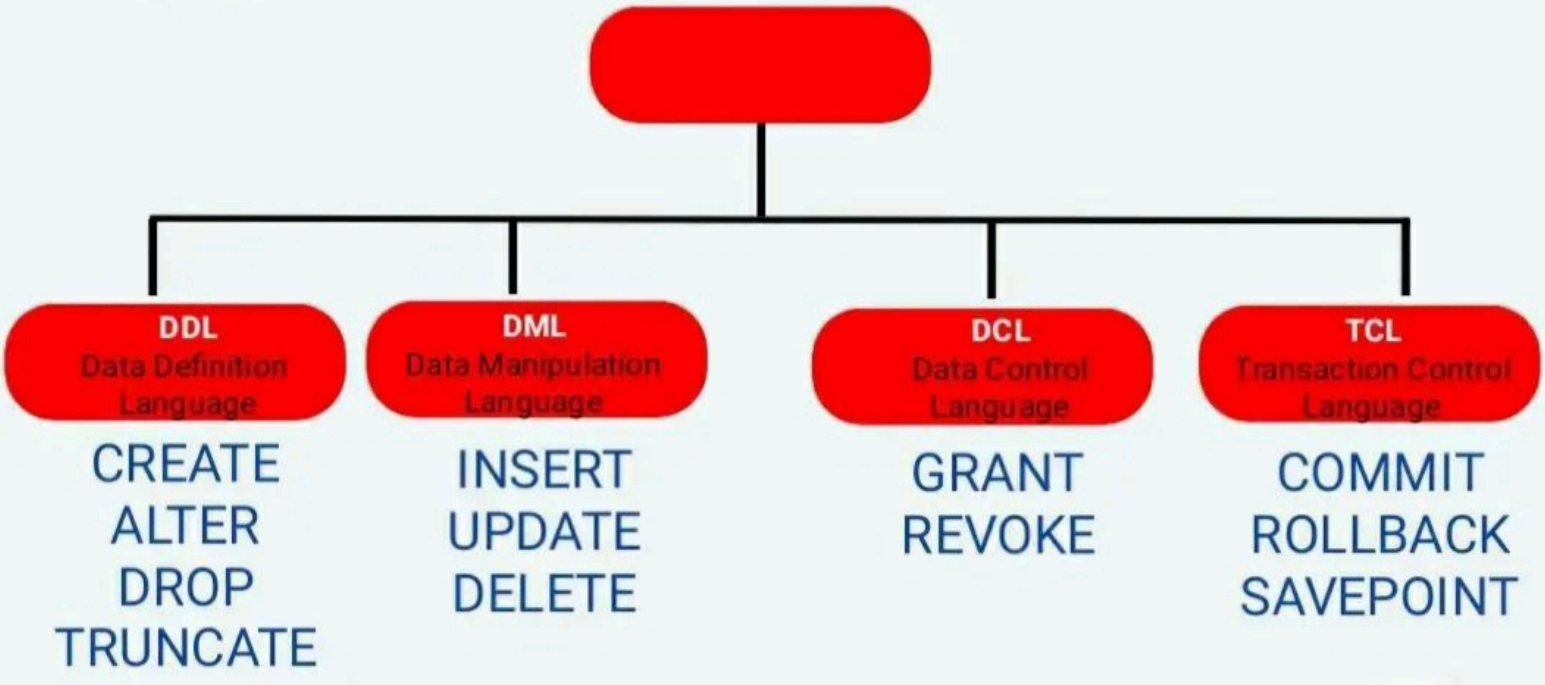
What is SQL ?

* SQL is stand for structured query language.

* This database language is mainly designed for maintaining the data in relational database management systems.

* SQL is standard language for accessing and manipulating database.

Types of SQL Commands:



DDL COMMANDS:

* DDL (Data Definition Language) used to change the structure of the table Like creating the table, altering the table & Deleting the table.

* All the commands in the DDL are auto Committed that means it permanently saves all the changes in the database.

1. CREATE

this command is used to create a new database or table.

Syntax:

```
CREATE TABLE table_name (
    columnl datatype,
    column2 datatype
    column3 datatype,
...
);
```

Example

```
CREATE TABLE Employee
(
    EmployeeID int,
    FirstName varchar(255),
    LastName varchar(255),
    AddressLine varchar(255),
    City varchar(255)
    );
```

2. Alter

The ALTER TABLE statement in Structured Query Language allows you to add, modify, and delete columns of an existing table.

Syntax:

```
ALTER TABLE table_name
ADD column_name datatype;
```

Example

```
ALTER TABLE Employee
ADD Email varchar (255);
```

3. Drop

The DROP TABLE statement is used to drop an existing table in a database. this command deletes both the structure & Records Stored in table.

Syntax:

```
DROP TABLE table_name;
```

Example

```
Drop TABLE Employee
```

4. Truncate

A truncate SQL statement is used to remove all rows (complete data) from a table. It is similar to the DELETE statement with no WHERE clause.

syntax:

TRUNCATE TABLE tablename

Example

TRUNCATE TABLE Employee;

DML COMMANDS:

1. Insert

SQL INSERT statement is a SQL query. It is used to insert a single or a multiple records ina table.

Syntax:

INSERT INTO table name
VALUES (valuel, value2, value3...);

Example

INSERT INTO STUDENTS (ROLL_NO, NAME, AGE, CITY)
VALUES (1, Yadnyesh, 19, PUNE);

2. Update

The UPDATE statement is used to modify the existing records in a table.

Syntax:

```
UPDATE table_name
SET columnl = valuel, column2 = value2, .
WHERE Condition;
```

Example

```
UPDATE Customers
SET ContactName = 'Yadu, City= 'pune
WHERE CustomeriD = 101;
```

3. Delete

The DELETE statement is used to delete existing records in a table.

Syntax:

```
DELETE FROM table_name [WHERE condition];
```

Example:

```
DELETE FROM Customers WHERE CustomerName="Yadu";
```

DCL COMMANDS:

1. Grant

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

Syntax:

GRANT SELECT, UPDATE ON MY_TABLE TO SOME_USER, ANOTHER_USER;

2. Revoke

GRANT SELECT, UPDATE ON MY_TABLE TO sOME_USER, ANOTHER_USER;

syntax:

REVOKE SELECT, UPDATE ON MY TABLE FROM USERI, USER2;

TCL COMMANDS:

1. COMMIT

Commits a Transaction. The COMMIT command saves all the transactions to the database since the last COMMIT l or ROLLBACK command.

Syntax:

```
COMMIT;
```

Example:

```
DELETE FROM Student WHERE AGE = 20; COMMIT;
```

2. Revoke

If any error occurs with any of the SQL grouped statements, all changes need to be aborted. The process of reversing changes is called rollback

Syntax

```
ROLLBACK;
```

Example:

```
DELETE FROM Student WHERE AGE = 20;
ROLLBACK;
```