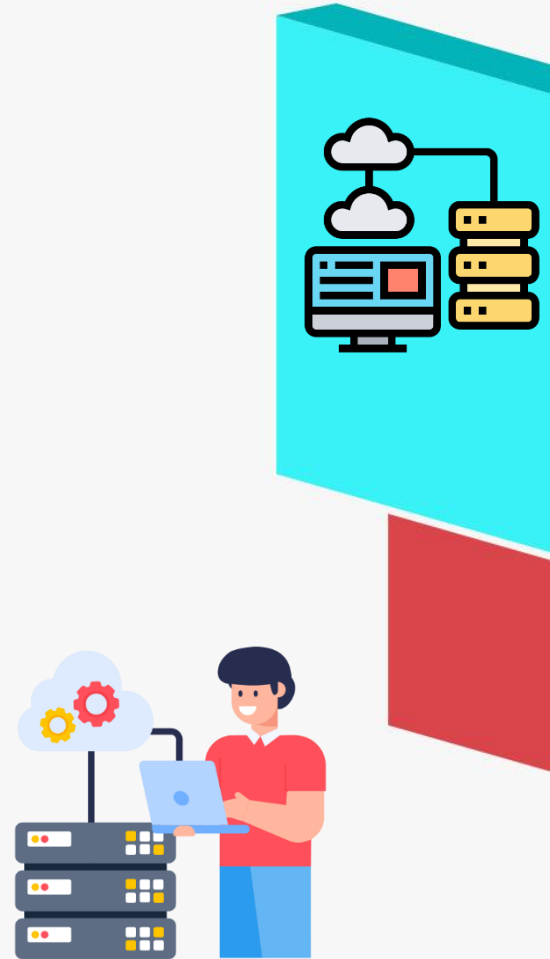


OUR TEAM

- DHRUV KASWALA
- MAITRY SHAH
- DRASHTI CHITRE





INDEX

- ✓ SQL Basic's
- ✓ Types of SQL Commands
- ✓ DDL(Data Definition Language)
- ✓ DML(Data Manipulation Language)
- ✓ DCL(Data Control Language)
- ✓ TCL(Transaction Control Language)





SQL Basic's

➤ What is SQL?

- ✓ SQL stands for Structured Query Language.
- ✓ SQL lets you access and manipulate databases.
- ✓ SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987.

➤ What Can SQL do?

- ✓ SQL can execute queries against a database.
- ✓ SQL can retrieve data from a database.
- ✓ SQL can create stored procedures in a database.
- ✓ SQL can create views in a database.
- ✓ SQL can set permissions on tables.



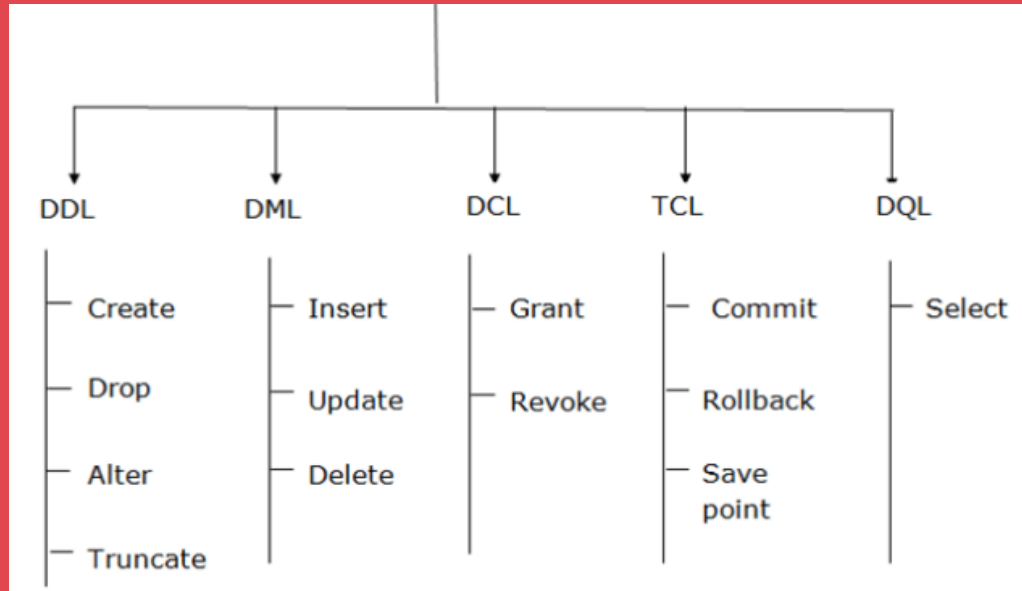
SQL Commands

- SQL commands are instructions. It is used to interact with the database. It is also used to carry out certain activities, procedures, and data inquiries.
- SQL can do a variety of activities such as creating a table, adding data to tables, dropping the table, modifying the table, and assigning permissions to users.



Types of Commands

SQL COMMANDS





DDL(Data Definition Language)

- DDL changes the structure of the table like creating a table, deleting a table, altering a table, etc.
- All the command of DDL are auto-committed that means it permanently save all the changes in the database.

Here are some commands that come under DDL:

- CREATE
- ALTER
- DROP
- TRUNCATE



DDL(Data Definition Language)

- **CREATE:** It is used to create a new table in the database.

Syntax:

```
CREATE TABLE TABLE_NAME (COLUMN_NAME DATATYPES[,....]);
```

Example:

```
CREATE TABLE EMPLOYEE(Name VARCHAR2(20), Email VARCHAR2(100), DOB DATE);
```

- **DROP:** It is used to delete both the structure and record stored in the table.

Syntax:

```
DROP TABLE table_name;
```

Example:

```
DROP TABLE EMPLOYEE;
```




DDL(Data Definition Language)

- **ALTER:** It is used to alter the structure of the database. This change could be either to modify the characteristics of an existing attribute or probably to add a new attribute.

Syntax:

To add a new column in the table.

```
ALTER TABLE table_name ADD column_name COLUMN-definition;
```

To modify existing column in the table:

```
ALTER TABLE table_name MODIFY(column_definitions....);
```

Example:

```
ALTER TABLE STU_DETAILS ADD(ADDRESS VARCHAR2(20));
```

```
ALTER TABLE STU_DETAILS MODIFY (NAME VARCHAR2(20));
```



DDL(Data Definition Language)

- **TRUNCATE:** It is used to delete all the rows from the table and free the space containing the table.

Syntax:

```
TRUNCATE TABLE table_name;
```

Example:

```
TRUNCATE TABLE EMPLOYEE;
```



DML(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



DML(Data Manipulation Language)

- **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);
```

Example:

```
INSERT INTO Dhruv (Author, Subject) VALUES ("Dhruv", "ADBMS");
```

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



DML(Data Manipulation Language)

Syntax:

```
UPDATE table_name SET [column_name1= value1,...column_nameN = valueN] [WHERE C  
ONDITION]
```

Example:

```
UPDATE students
```

```
SET User_Name = Dhruv'
```

```
WHERE Student_Id = '1'
```



DML(Data Manipulation Language)

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

Syntax:

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

Example:

```
DELETE FROM Dhruv
```

```
WHERE Author="Dhruv";
```



DCL(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**
- **GRANT:** It is used to give user access privileges to a database.

Example:

```
GRANT SELECT, UPDATE ON MY_TABLE TO SOME_USER, ANOTHER_USER;
```



DCL(Data Control Language)

➤ **REVOKE:** It is used to take back permissions from the user.

Example:

```
REVOKE SELECT, UPDATE ON MY_TABLE FROM USER1, USER2;
```




TCL(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



TCL(Transaction Control Language)

- **COMMIT:** Commit command is used to save all the transactions to the database.

Syntax:

COMMIT;

Example:

DELETE FROM CUSTOMERS WHERE AGE = 25;

COMMIT;

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



TCL(Transaction Control Language)

Syntax:

ROLLBACK;

Example:

```
DELETE FROM CUSTOMERS WHERE AGE = 25;
```

```
ROLLBACK;
```

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

Syntax:

```
SAVEPOINT SAVEPOINT_NAME;
```



Thank You!

