SQL Short Notes!

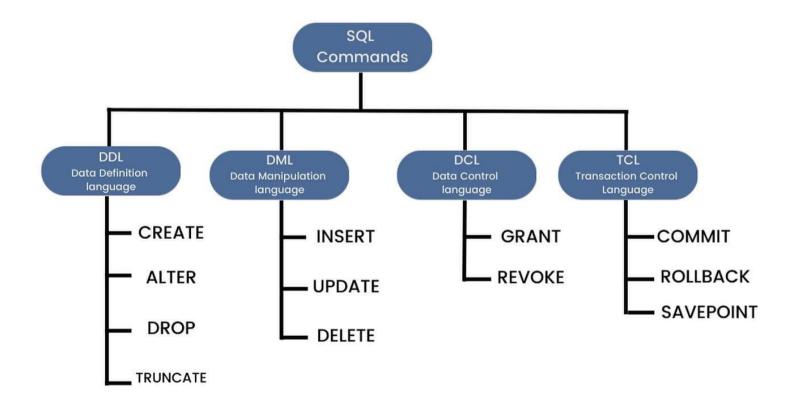


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What is SQL?

- 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 (
    column1 datatype,
    column2 datatype,
    column3 datatype,
    ....
);

Example:

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

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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

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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 table_name;

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 in a table.

Syntax:

```
INSERT INTO table_name
VALUES (value1, value2, value3....);
```

Example:

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

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2. UPDATE

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

Syntax:

```
UPDATE table_name

SET column1 = value1, 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 USER1, USER2;

TCL COMMANDS:

1. COMMIT

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

Syntax:
COMMIT;
Example:

DELETE FROM Student WHERE AGE = 20; COMMIT;

2. ROLLBACK

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;



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