



# SHREE L. R. TIWARI COLLEGE OF ENGINEERING

Approved by AICTE & DTE, Maharashtra State & Affiliated to University of Mumbai, NAAC Accredited, NBA Accredited program,  
ISO 9001:2015 Certified | DTE Code No: 3423, Recognized under Section 2(f) of the UGC Act 1956, Minority Status (Hindi Linguistic)

## DEPARTMENT OF COMPUTER ENGINEERING

### EXPERIMENT NO 3

**Title:** Create a database using Data Definition Language (DDL) and apply integrity constraints for the specified System

**Aim:** Perform Data Definition Language (DDL) for specified system.

#### Theory:

Structured Query Language (SQL) as we all know is the database language by the use of which we can perform certain operations on the existing database and also, we can use this language to create a database. SQL uses certain commands like CREATE, DROP, INSERT, etc. to carry out the required tasks.

SQL commands are like instructions to a table. It is used to interact with the database with some operations. It is also used to perform specific tasks, functions, and queries of data. SQL can perform various tasks like creating a table, adding data to tables, dropping the table, modifying the table, set permission for users.

These SQL commands are mainly categorized into five categories:

1. DDL – Data Definition Language
2. DQL – Data Query Language
3. DML – Data Manipulation Language
4. DCL – Data Control Language
5. TCL – Transaction Control Language

#### DDL (Data Definition Language)

Following are the five DDL commands in SQL:

**CREATE:** This command is used to create the database or its objects (like table, index, function, views, store procedure, and triggers).

**DROP:** This command is used to delete objects from the database.

**ALTER:** This is used to alter the structure of the database.

**TRUNCATE:** This is used to remove all records from a table, including all spaces allocated for the records are removed.



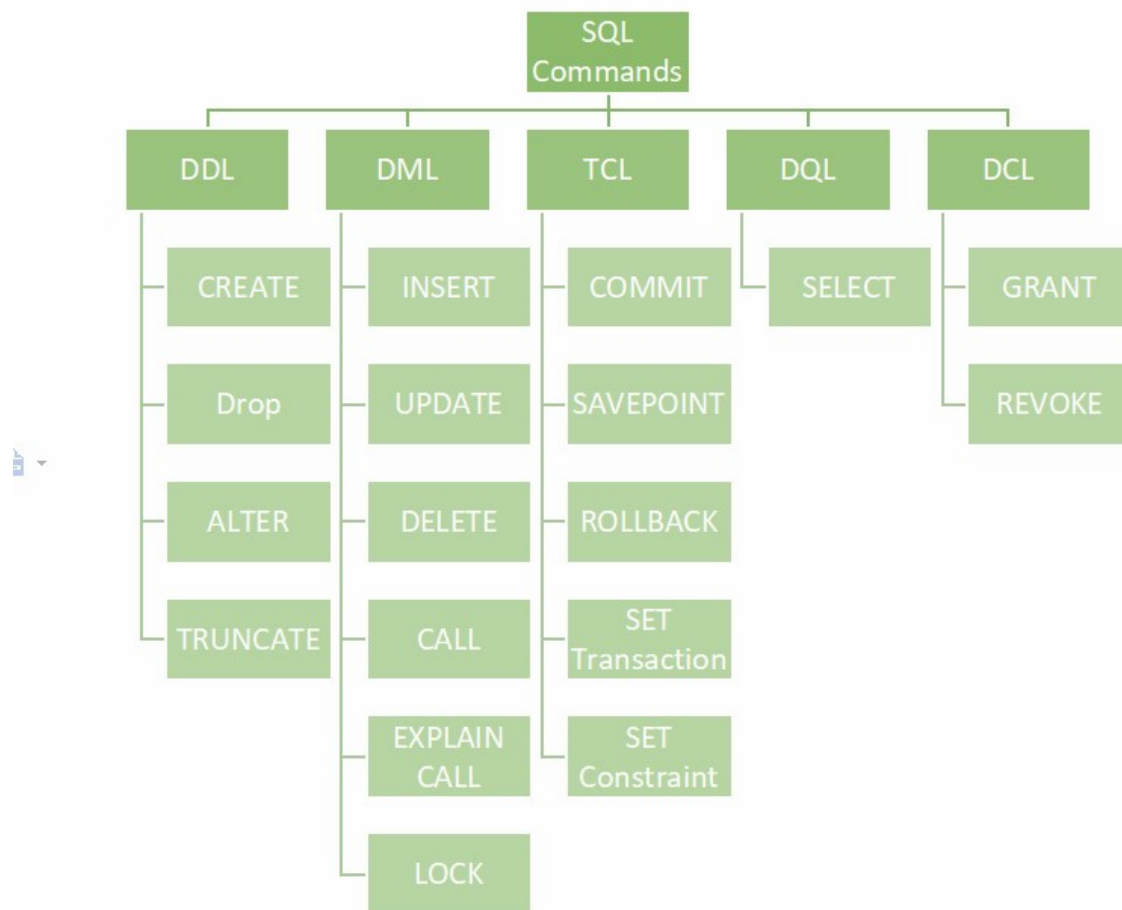
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**COMMENT:** This is used to add comments to the data dictionary.

**RENAME:** This is used to rename an object existing in the database.



## CREATE TABLE

A **Table** is a combination of rows and columns. For creating a table, we have to define the structure of a table by adding names to columns and providing data type and size of data to be stored in columns.

### Syntax:

CREATE table table\_name



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```
(  
Column1 datatype (size), column2  
datatype (size),  
.  
columnN datatype(size)  
);
```

### Example:

```
CREATE TABLE Customer (  
    CustomerID INT PRIMARY KEY,  
    CustomerName VARCHAR (50),  
    LastName VARCHAR (50),  
    Country VARCHAR (50),  
    Age int (2),  
    Phone int (10)  
);
```

Customer

CustomerID	CustomerName	LastName	Country	Age	Phone
empty					

### ALTER TABLE

A DBA can make changes to the table structure or column definitions after the table has been created in the database. The DDL command ALTER TABLE is used to perform such actions. Alter command provides multiple utilities exclusive for schema objects. The ALTER TABLE statement is used to add, drop, rename, and modify a column in a table.

```
ALTER TABLE EMP RENAME TO EMP_NEW;
```



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ALTER TABLE EMP\_NEW ADD (TESTCOL VARCHAR2 (100))

Example:

ALTER TABLE Student ADD

(AGE number(3), COURSE varchar(40));

**Output:**

ROLL_NO	NAME	AGE	COURSE
1	Ram		
2	Abhi		
3	Rahul		
4	Tanu		

## DROP TABLE

The DROP TABLE statement is used to remove a table from the database. The dropped table and its data remain no longer available for selection.

Syntax:

DROP TABLE [TABLE NAME] [PURGE]

DROP TABLE emp\_new;

Example : ALTER TABLE

Student

DROP COLUMN COURSE;

**Output:**



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ROLL_NO	NAME	AGE
1	Ram	
2	Abhi	

ROLL_NO	NAME	AGE
3	Rahul	
4	Tanu	

### TRUNCATE

The major difference between TRUNCATE and DROP is that truncate is used to delete the data inside the table not the whole table.

TRUNCATE statement is a Data Definition Language (DDL) operation that is used to mark the extent of a table for deallocation (empty for reuse). The result of this operation quickly removes all data from a table, typically bypassing several integrity-enforcing mechanisms.

```
TRUNCATE    TABLE    table_name;
```

```
CREATE TABLE CUSTOMERS (
```

```
    ID INT NOT NULL,  
    NAME VARCHAR (20) NOT NULL,  
    AGE INT NOT NULL,  
    ADDRESS CHAR (25),  
    SALARY DECIMAL (18, 2),  
    PRIMARY KEY (ID)
```

```
);
```

```
INSERT INTO CUSTOMERS (ID, NAME, AGE, ADDRESS, SALARY)
```



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VALUES (1, 'Ramesh', 32, 'Ahmedabad', 2000.00 );

INSERT INTO CUSTOMERS (ID,NAME,AGE,ADDRESS,SALARY)

VALUES (2, 'Khilan', 25, 'Delhi', 1500.00 );

INSERT INTO CUSTOMERS (ID,NAME,AGE,ADDRESS,SALARY)

VALUES (3, 'kaushik', 23, 'Kota', 2000.00 );

The table will be created as follows –

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00

Following query removes all the records of the customers table –

TRUNCATE TABLE CUSTOMERS;

SELECT \* FROM CUSTOMERS;

**Output:** Empty set (0.00 sec)

**Conclusion:** Hence in this way we have created a database using the DDL.