EXPERIMENT 1

Aim: To study and perform DDL and DML operations using SQL.

Software Used: MySQL

Theory:

Data Definition Language:

DDL or Data Definition Language consists of SQL commands that can be used to define the database schema. It simply deals with descriptions of the database schema and is used to create and modify the structure of database objects in the database. DDL commands are used to structure databases, not data. Following DDL commands were used and performed using SQL.

1) CREATE: This command is used to create the database or its objects.

```
>CREATE DATABASE Customer;
```

```
CREATE TABLE Customer(CustomerID INT PRIMARY KEY,NAME VARCHAR(50),AGE INT(3),CONTACT
INT(12));
```

Figure: SQL Query

CustomerID	NAME	AGE	CONTACT

Figure: Table

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

```
>DROP DATABASE TEST;
```

Figure: SQL Query

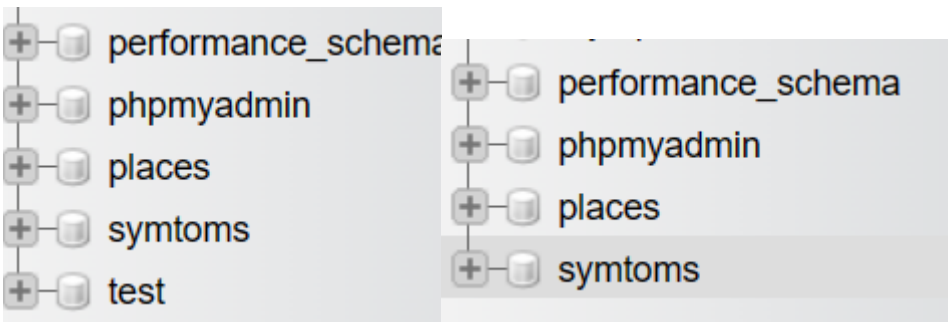


Figure: Before and after query

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

```
>ALTER TABLE customer ADD Email VARCHAR(50);
```

Figure: SQL Query

CustomerID	NAME	AGE	CONTACT	Email

Figure: Altered Table

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

	CustomerID	NAME	AGE	CONTACT	Email
Edit Copy Delete	0	Tushar	20	12345678	abc@gmail.com
Edit Copy Delete	1	Robert	40	987654321	bcd@gmail.com

Figure: Database

5) RENAME: It is used to rename an object existing in the database, or to rename the table

customer

```
ALTER TABLE customer RENAME hotel;
```

hotel

Figure: SQL Query and before and after query

Data Manipulation Language:

DML or Data Manipulation Language is used to deal with the manipulation of data present in a database. They allow an administrator to control access to data and to the database.

1) INSERT: It is used to insert data into a table.

```
>INSERT INTO customer VALUES('1','Robert','40','987654321','bcd@gmail.com');
```

Edit Copy Delete	1	Robert	40	987654321	bcd@gmail.com

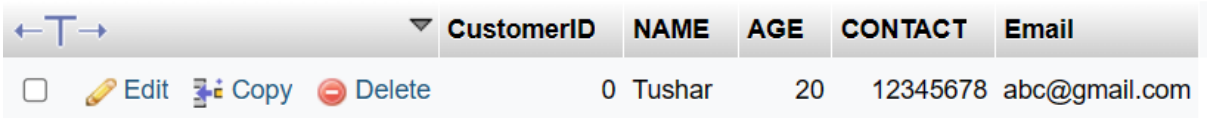
Figure: SQL Query and before and after query

2) UPDATE: It is used to update existing data within a table.

```
UPDATE customer SET NAME='Tushar',AGE='20',Email='abc@gmail.com' WHERE CustomerID=0;
```

Figure: SQL Query

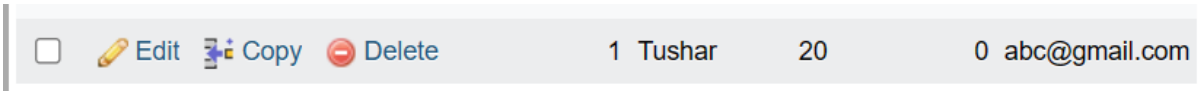
	CustomerID	NAME	AGE	CONTACT	Email
Edit Copy Delete	0	*NULL*	*NULL*	12345678	*NULL*



	CustomerID	NAME	AGE	CONTACT	Email
Edit Copy Delete	0	Tushar	20	12345678	abc@gmail.com

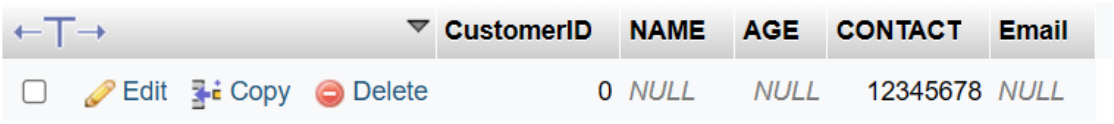
Figure: Database before and after query

3) DELETE: It is used to delete records from a database table.



Edit Copy Delete	1	Tushar	20	0	abc@gmail.com

Figure: Delete record



	CustomerID	NAME	AGE	CONTACT	Email
Edit Copy Delete	0	*NULL*	*NULL*	12345678	*NULL*

Figure: Record delete

4) LOCK: It is used to take control of concurrency in an SQL server.

Conclusion: DDL (Data Definition Language) and DML (Data Manipulation Language) commands were performed using MySQL.