Practical 1

Aim: 1. To implement Basic SQL commands and to access & modify Data using SQL. Create and populate database using Data Definition Language (DDL) and DML Commands.

Theory:

DDL: It stands for Data Definition Language. It is used to create database schema and can be used to define some constraints as well. It basically defines the column (Attributes) of the table.

Basic command present in DDL:

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

2. **DROP**: This command is used to delete objects from the database.
   Syntax:
   DROP object object_name;

3. **RENAME**: This is used to rename an object existing in the database.
   Syntax:
   ALTER TABLE table_name RENAME TO new_table_name;

4. **ALTER:** This is used to alter the structure of the database.
   Syntax:
   ALTER TABLE table_name DROP COLUMN column_name

5. **Truncate:** This is used to delete all the rows or tuples from a table
   Syntax:
   ```
   TRUNCATE TABLE  TableName;
   ```

DML: It stands for Data Manipulation Language. It is used to add, retrieve or update the data. It adds or update the row of the table. These rows are called as tuple. It is further classified into Procedural and Non-Procedural DML.

BASIC command present in DML:

1. **UPDATE:** The UPDATE statement in SQL is used to update the data of an existing table in database. We can update single columns as well as multiple columns using UPDATE statement as per our requirement.
   Syntax:
   UPDATE table_name SET column1 = value1, column2 = value2,... WHERE condition;

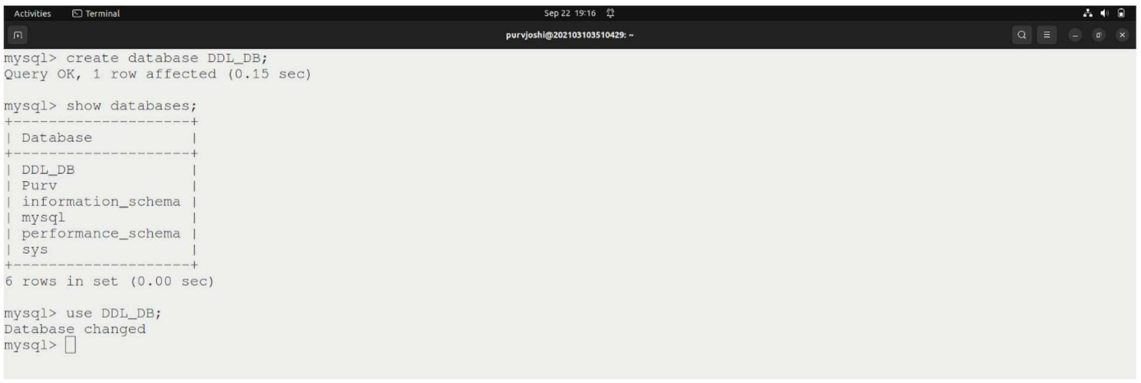
2. **INSERT**: The INSERT INTO statement of SQL is used to insert a new row in a table.
   Syntax:

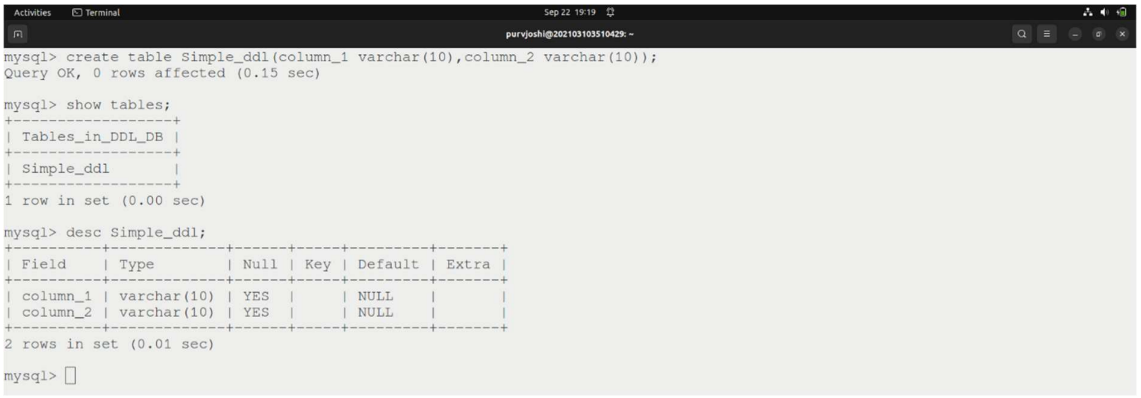
INSERT INTO table_name VALUES (value1, value2, value3,…); table_name: name of the table. value1, value2,.. : value of first column, second column,… for the new record

3. **DELETE:** The DELETE Statement in SQL is used to delete existing records from a table. We can delete a single record or multiple records depending on the condition we specify in the WHERE clause.
   Syntax:
   DELETE FROM table_name WHERE some_condition

Queries:

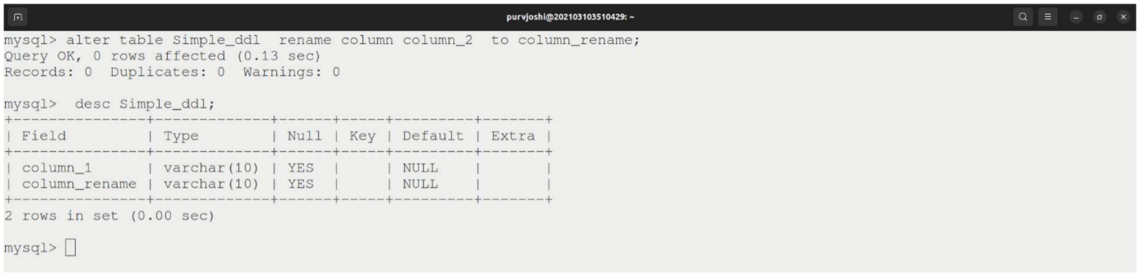
Ans: Use of CREATE command**.**



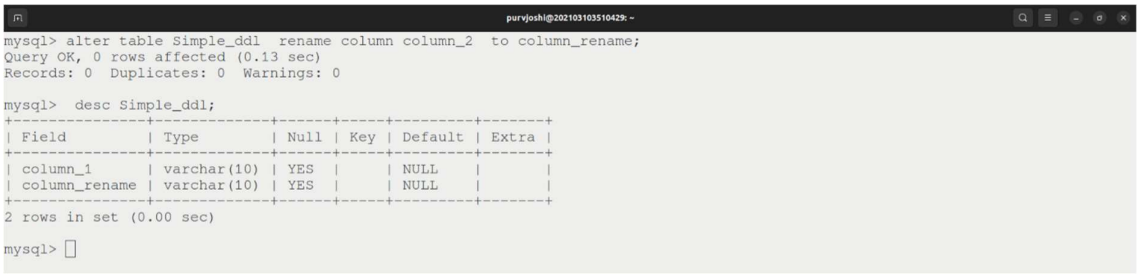


Ans: Use of DROP command.

Ans: Use of RENAME command.

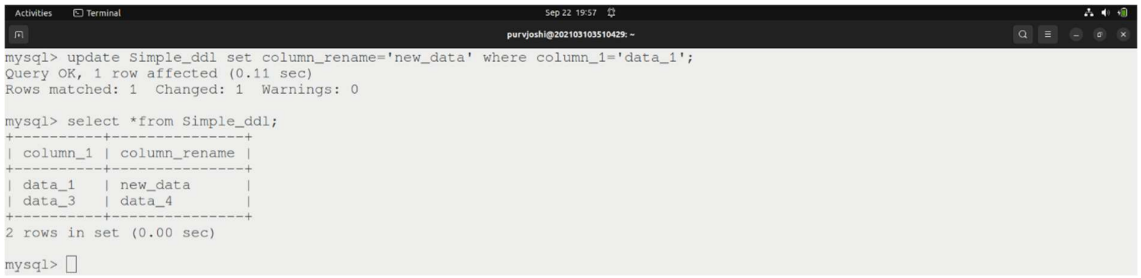


Ans: Use of ALTER command.



Ans: Use of TRUNCATE command.

Ans: Use of UPDATE command.



Ans: Use of INSERT command.

Ans: Use of DELETE command.

Conclusion:

The breadth and scope of the SQL commands provide the capability to create and manipulate a wide variety of database objects using the various CREATE, ALTER, and DROP commands.

Aim: b. To create own database and use same database for all queries.

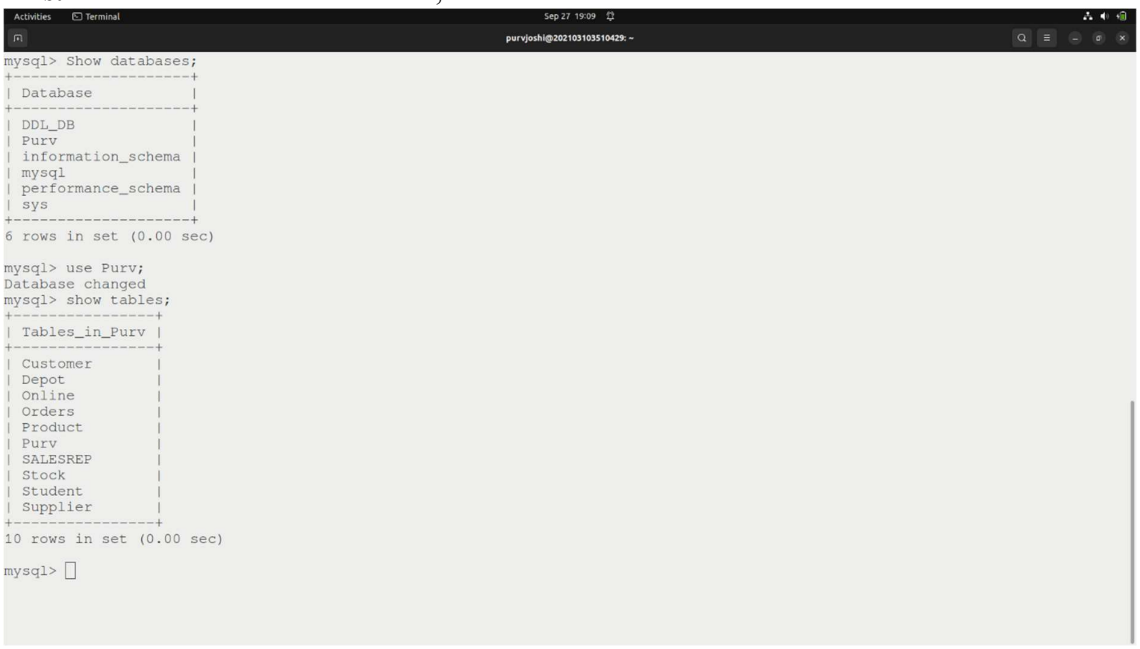
Theory:

A database management system is a software tool used to create and manage one or more databases, offering an easy way to create a database, update tables, retrieve information, and enhance data. A DBMS is where data is accessed, modified and locked to prevent conflicts.

A database management system also provides tools to administer the database schema – which dictates the structure of the database itself. In many cases, the database management system will be seen only by the database developer, because the developer will provide a different front-end for the customer. This front-end could be considered, by the most technical definition, to be a database management system in its own right — however, it is more likely to go by another name, such as a customer relationship management (CRM) tool.

Queries:

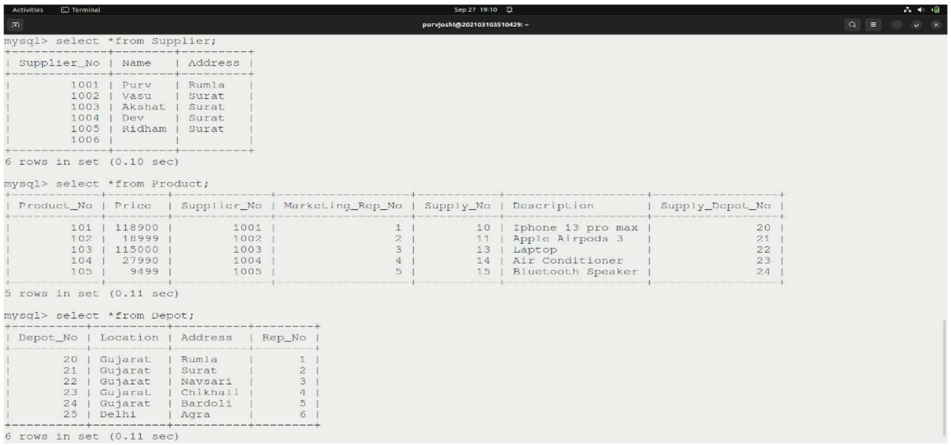
Ans: Use of SHOW DATABASES , SHOW TABLES AND USE DATABASES Commands.



```
mysql> Show databases;
+--------------------+
| Database           |
+--------------------+
| DDL_DB             |
| Purv               |
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
6 rows in set (0.00 sec)

mysql> use Purv;
Database changed
mysql> show tables;
+----------------+
| Tables_in_Purv |
+----------------+
| Customer       |
| Depot          |
| Online         |
| Orders         |
| Product        |
| Purv           |
| SALESREP       |
| Stock          |
| Student        |
| Supplier       |
+----------------+
10 rows in set (0.00 sec)

mysql>
```



```
mysql> select *from Supplier;
+-------------+--------+---------+
| Supplier_No | Name   | Address |
+-------------+--------+---------+
|        1001 | Purv   | Rumla   |
|        1002 | Vasu   | Surat   |
|        1003 | Akshat | Surat   |
|        1004 | Dev    | Surat   |
|        1005 | Ridham | Surat   |
|        1006 |        |         |
+-------------+--------+---------+
6 rows in set (0.10 sec)

mysql> select *from Product;
+------------+-------+-------------+-----------------+-------------+-------------------+-----------------+
| Product_No | Price | Supplier_No | Marketing_Rep_No | Supply_No | Description       | Supply_Depot_No |
+------------+-------+-------------+-----------------+-------------+-------------------+-----------------+
|        101 | 118900 |        1001 |               1 |          10 | Iphone 13 pro max |              20 |
|        102 |  18999 |        1002 |               2 |          11 | Apple Airpods 3   |              21 |
|        103 | 115000 |        1003 |               3 |          13 | Laptop            |              22 |
|        104 |  27990 |        1004 |               4 |          14 | Air Conditioner   |              23 |
|        105 |   9499 |        1005 |               5 |          15 | Bluetooth Speaker |              24 |
+------------+-------+-------------+-----------------+-------------+-------------------+-----------------+
5 rows in set (0.11 sec)

mysql> select *from Depot;
+----------+----------+---------+--------+
| Depot_No | Location | Address | Rep_No |
+----------+----------+---------+--------+
|       20 | Gujarat  | Rumla   |      1 |
|       21 | Gujarat  | Surat   |      2 |
|       22 | Gujarat  | Navsari |      3 |
|       23 | Gujarat  | Chikhali|      4 |
|       24 | Gujarat  | Bardoli |      5 |
|       25 | Delhi    | Agra    |      6 |
+----------+----------+---------+--------+
6 rows in set (0.11 sec)
```

Conclusion: Use of databases and show tables.