Expt No 5

APPLICATION OF DML COMMANDS USING SQL

AIM :Insertion, updation, deletion, and selection of databases using SQL Commands

i. Create a table students with the fields , Auto Increment Primary key inital value = 100

```
+------------+-------------+------+-----+---------+----------------+
| Field      | Type        | Null | Key | Default | Extra          |
+------------+-------------+------+-----+---------+----------------+
| stud_id    | int         | NO   | PRI | NULL    | auto_increment |
| stud_fname | varchar(20) | YES  |     | NULL    |                |
| stud_lname | varchar(20) | YES  |     | NULL    |                |
| stud_email | varchar(20) | YES  |     | NULL    |                |
| stud_ph    | varchar(10) | YES  |     | NULL    |                |
```

ii. Create a table Subject with the fields, Auto Increment Primary key inital value = 200

```
+----------+-------------+------+-----+---------+----------------+
| Field    | Type        | Null | Key | Default | Extra          |
+----------+-------------+------+-----+---------+----------------+
| sub_id   | int         | NO   | PRI | NULL    | auto_increment |
| sub_name | varchar(20) | YES  |     | NULL    |                |
+----------+-------------+------+-----+---------+----------------+
```

iii. Create a table Marks with the fields

```
+---------+------+------+-----+---------+-------+
| Field   | Type | Null | Key | Default | Extra |
+---------+------+------+-----+---------+-------+
| sub_id  | int  | NO   | PRI | NULL    |       |
| stud_id | int  | NO   | PRI | NULL    |       |
| marks   | int  | YES  |     | NULL    |       |
+---------+------+------+-----+---------+-------+
```

iv. Insert data into the students table.

```
+---------+-----------+-----------+-------------------+------------+
| stud_id | stud_fname | stud_lname | stud_email        | stud_ph    |
+---------+-----------+-----------+-------------------+------------+
|     100 | shanti     | vasan      | shantiv@gmail.com  | 9677483824 |
|     101 | anjitha    | k          | anjithak@gmail.com | 9574884993 |
|     102 | riya       | khan       | riyakhan@gmail.com | 9637833993 |
+---------+-----------+-----------+-------------------+------------+
```

v. Insert data into the subject table.

```
+--------+-----------+
| sub_id | sub_name  |
+--------+-----------+
|    200 | chemistry |
|    201 | physics   |
|    202 | maths     |
+--------+-----------+
```

vi. Insert data into marks table.

sub_id	stud_id	marks
200	100	75
200	101	94
200	102	60
201	100	85
201	101	98
201	102	70
202	100	50
202	101	96
202	102	45

QUERY

1. Update the lname to 'rajan' of the student having student id 100.

2. Update the subject name to 'mathematics' where subject id is 202.

3. Update the marks of subject 200 and the student having student id 102 to 83.

4. **Diaplay contents from Student, Subject, Marks**

Expected output

stud_id	stud_fname	stud_lname	stud_email	stud_ph
100	shanti	rajan	shantiv@gmail.com	9677483824
101	anjitha	k	anjithak@gmail.com	9574884993
102	riya	khan	riyakhan@gmail.com	9637833993

sub_id	sub_name
200	chemistry
201	physics
202	mathematics

sub_id	stud_id	marks
200	100	75
200	101	94
200	102	83
201	100	85
201	101	98
201	102	70
202	100	50
202	101	96

```
|   202 |     102 |    45 |
+--------+---------+-------+
```

5. Write a query to get the details of a student whoseSTUD_ID is102.

6. Write a query to display student name, subject and marks of student ordered by marks.

7. Write a query to display student name, subject and marks of students who have marks greater than 70 in physics.

Expected result

```
+------------+----------+-------+
| stud_fname | sub_name | marks |
+------------+----------+-------+
| shanti     | physics  |    85 |
| anjitha    | physics  |    98 |
+------------+----------+-------+
```

8.Write a query to display average marks in each subject.

Expected result

```
+-------------+------------+
| sub_name    | avg(marks) |
+-------------+------------+
| chemistry   |    84.0000 |
| mathematics |    63.6667 |
| physics     |    84.3333 |
+-------------+------------+
```

9.Write a query to display the number of students.

Expected result – 3

10.Write a query to display the maximum and minimum marks obtained by students in each subject.

Expected Result:

```
+-------------+------------+------------+
| sub_name    | max(marks) | min(marks) |
+-------------+------------+------------+
| chemistry   |         94 |         75 |
| mathematics |         96 |         45 |
| physics     |         98 |         70 |
```

11. Write a query to display the details of a student whose name begins with S.

Expected result:

```
+---------+-----------+-----------+------------------+------------+
| stud_id | stud_fname | stud_lname | stud_email        | stud_ph    |
+---------+-----------+-----------+------------------+------------+
|     100 | shanti     | rajan      | shantiv@gmail.com | 9677483824 |
+---------+-----------+-----------+------------------+------------+
```

12. Write a query to display the details of a student whose first name contains character "a" in the fourth place.

Expected result:

```
+---------+-----------+-----------+------------------+------------+
| stud_id | stud_fname | stud_lname | stud_email        | stud_ph    |
+---------+-----------+-----------+------------------+------------+
|     102 | riya       | khan       | riyakhan@gmail.com | 9637833993 |
+---------+-----------+-----------+------------------+------------+
```

13. Write a query to display the name,subject and marks of students having marks between 50 and 75.

Expected result:

```
+------------+-------------+-------+
| stud_fname | sub_name    | marks |
+------------+-------------+-------+
| shanti     | chemistry   |    75 |
| riya       | physics     |    70 |
| shanti     | mathematics |    50 |
+------------+-------------+-------+
```

14. Create a view to display student name and marks

View name = student_view

Expected result:

select * from student_view;

```
+------------+------------+-------------+-------+
| stud_fname | stud_lname | sub_name    | marks |
+------------+------------+-------------+-------+
| shanti     | rajan      | chemistry   |    75 |
| anjitha    | k          | chemistry   |    94 |
| riya       | khan       | chemistry   |    83 |
| shanti     | rajan      | physics     |    85 |
| anjitha    | k          | physics     |    98 |
| riya       | khan       | physics     |    70 |
| shanti     | rajan      | mathematics |    50 |
| anjitha    | k          | mathematics |    96 |
| riya       | khan       | mathematics |    45 |
+------------+------------+-------------+-------+
```