Assignment -3 Report submitted
for Database Management System (UEC716)
by

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Submitted to
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Lab Assignment-3

Que1:-

1. Create table Student (Rno, Name, DOB, Gender, Class, College, City, Marks)

```
mysql> use assign3;
Database changed
mysql> create table student(
    -> Rno int(15) not null primary key,
    -> Name varchar(20) not null,
    -> DOB date not null,
    -> Gender varchar(15),
    -> class varchar(15),
    -> college varchar(50) not null,
    -> city varchar(15) not null,
    -> Marks int not null
    -> );
Query OK, 0 rows affected, 1 warning (0.02 sec)
```

2. Insert 5 records in student table

```
mysql> Insert into student values
    -> (3,'Pratham','2003-03-19','Male','ENC','Thapar university','Patiala',96),
    -> (5,'Archi','2002-10-30','Female','ENC','Thapar university','Patiala',26),
    -> (7,'Advika','2004-09-03','Female','ENC','Thapar university','Haryana',48),
    -> (9,'Harsh','2003-03-19','Male','ENC','Thapar university','Amritsar',66),
    -> (11,'Vasu','2003-01-23','Male','ENC','Thapar university','Najibabad',33);
Query OK, 5 rows affected (0.00 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

3. Display the information of all the students

```
mysql> select * from student;
+-----+---------+------------+--------+-------+-------------------+-----------+-------+
| Rno | Name    | DOB        | Gender | class | college           | city      | Marks |
+-----+---------+------------+--------+-------+-------------------+-----------+-------+
|   3 | Pratham | 2003-03-19 | Male   | ENC   | Thapar university | Patiala   |    96 |
|   5 | Archi   | 2002-10-30 | Female | ENC   | Thapar university | Patiala   |    26 |
|   7 | Advika  | 2004-09-03 | Female | ENC   | Thapar university | Haryana   |    48 |
|   9 | Harsh   | 2003-03-19 | Male   | ENC   | Thapar university | Amritsar  |    66 |
|  11 | Vasu    | 2003-01-23 | Male   | ENC   | Thapar university | Najibabad |    33 |
+-----+---------+------------+--------+-------+-------------------+-----------+-------+
5 rows in set (0.00 sec)
```

4. Display the detail structure of student table

```
mysql> desc student
    -> ;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| Rno     | int         | NO   | PRI | NULL    |       |
| Name    | varchar(20) | NO   |     | NULL    |       |
| DOB     | date        | NO   |     | NULL    |       |
| Gender  | varchar(15) | YES  |     | NULL    |       |
| class   | varchar(15) | YES  |     | NULL    |       |
| college | varchar(50) | NO   |     | NULL    |       |
| city    | varchar(15) | NO   |     | NULL    |       |
| Marks   | int         | NO   |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

5. Display Rno, Name and Class information of 'Patiala' students.

```
mysql> select rno,name,class from student where city='patiala';
+-----+---------+-------+
| rno | name    | class |
+-----+---------+-------+
|   3 | Pratham | ENC   |
|   5 | Archi   | ENC   |
+-----+---------+-------+
2 rows in set (0.01 sec)
```

6. Display information on ascending order of marks

```
mysql> select * from student order by marks;
+-----+---------+------------+--------+-------+------------------+-----------+-------+
| Rno | Name    | DOB        | Gender | class | college          | city      | Marks |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
|   5 | Archi   | 2002-10-30 | Female | ENC   | Thapar university | Patiala    |    26 |
|  11 | Vasu    | 2003-01-23 | Male   | ENC   | Thapar university | Najibabad  |    33 |
|   7 | Advika  | 2004-09-03 | Female | ENC   | Thapar university | Haryana    |    48 |
|   9 | Harsh   | 2003-03-19 | Male   | ENC   | Thapar university | Amritsar   |    66 |
|   3 | Pratham | 2003-03-19 | Male   | ENC   | Thapar university | Patiala    |    96 |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
5 rows in set (0.00 sec)
```

7. Change the marks of Rno 5 to 89.

```
mysql> update student  set marks=89 where Rno=5;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from student;
+-----+---------+------------+--------+-------+------------------+-----------+-------+
| Rno | Name    | DOB        | Gender | class | college          | city      | Marks |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
|   3 | Pratham | 2003-03-19 | Male   | ENC   | Thapar university | Patiala    |    96 |
|   5 | Archi   | 2002-10-30 | Female | ENC   | Thapar university | Patiala    |    89 |
|   7 | Advika  | 2004-09-03 | Female | ENC   | Thapar university | Haryana    |    48 |
|   9 | Prajwal | 2003-03-19 | Male   | ENC   | Thapar university | Bhopal     |    66 |
|  11 | Vasu    | 2003-01-23 | Male   | ENC   | Thapar university | Najibabad  |    33 |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
5 rows in set (0.00 sec)
```

8. Change the name and city of Rno 9.

```
mysql> update student  set name='Prajwal' , city='Bhopal' where Rno=9;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from student;
+-----+---------+------------+--------+-------+------------------+-----------+-------+
| Rno | Name    | DOB        | Gender | class | college          | city      | Marks |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
|   3 | Pratham | 2003-03-19 | Male   | ENC   | Thapar university | Patiala    |    96 |
|   5 | Archi   | 2002-10-30 | Female | ENC   | Thapar university | Patiala    |    89 |
|   7 | Advika  | 2004-09-03 | Female | ENC   | Thapar university | Haryana    |    48 |
|   9 | Prajwal | 2003-03-19 | Male   | ENC   | Thapar university | Bhopal     |    66 |
|  11 | Vasu    | 2003-01-23 | Male   | ENC   | Thapar university | Najibabad  |    33 |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
5 rows in set (0.00 sec)
```

9. Delete the information of 'Amritsar' city records

```
mysql> select * from student;
+-----+---------+------------+--------+-------+------------------+-----------+-------+
| Rno | Name    | DOB        | Gender | class | college          | city      | Marks |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
|   3 | Pratham | 2003-03-19 | Male   | ENC   | Thapar university | Patiala   |    96 |
|   5 | Archi   | 2002-10-30 | Female | ENC   | Thapar university | Patiala   |    89 |
|   7 | Advika  | 2004-09-03 | Female | ENC   | Thapar university | Haryana   |    48 |
|   9 | Prajwal | 2003-03-19 | Male   | ENC   | Thapar university | Amritsar  |    66 |
|  11 | Vasu    | 2003-01-23 | Male   | ENC   | Thapar university | Najibabad |    33 |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
5 rows in set (0.00 sec)

mysql> delete from student where city='Amritsar';
Query OK, 1 row affected (0.00 sec)

mysql> select * from student;
+-----+---------+------------+--------+-------+------------------+-----------+-------+
| Rno | Name    | DOB        | Gender | class | college          | city      | Marks |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
|   3 | Pratham | 2003-03-19 | Male   | ENC   | Thapar university | Patiala   |    96 |
|   5 | Archi   | 2002-10-30 | Female | ENC   | Thapar university | Patiala   |    89 |
|   7 | Advika  | 2004-09-03 | Female | ENC   | Thapar university | Haryana   |    48 |
|  11 | Vasu    | 2003-01-23 | Male   | ENC   | Thapar university | Najibabad |    33 |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
4 rows in set (0.00 sec)
```

10. Delete the records of student where marks<30.

```
mysql> select * from student;
+-----+---------+------------+--------+-------+------------------+-----------+-------+
| Rno | Name    | DOB        | Gender | class | college          | city      | Marks |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
|   3 | Pratham | 2003-03-19 | Male   | ENC   | Thapar university | Patiala   |    96 |
|   5 | Archi   | 2002-10-30 | Female | ENC   | Thapar university | Patiala   |    89 |
|   7 | Advika  | 2004-09-03 | Female | ENC   | Thapar university | Haryana   |    16 |
|  11 | Vasu    | 2003-01-23 | Male   | ENC   | Thapar university | Najibabad |    28 |
+-----+---------+------------+--------+-------+------------------+-----------+-------+
4 rows in set (0.00 sec)

mysql> delete from student where marks<30 ;
Query OK, 2 rows affected (0.00 sec)

mysql> select * from student;
+-----+---------+------------+--------+-------+------------------+---------+-------+
| Rno | Name    | DOB        | Gender | class | college          | city    | Marks |
+-----+---------+------------+--------+-------+------------------+---------+-------+
|   3 | Pratham | 2003-03-19 | Male   | ENC   | Thapar university | Patiala |    96 |
|   5 | Archi   | 2002-10-30 | Female | ENC   | Thapar university | Patiala |    89 |
+-----+---------+------------+--------+-------+------------------+---------+-------+
2 rows in set (0.00 sec)
```

[Que2](#):-

1. Create table emp which has the following attributes (employee table) (empno, ename, job, sal, deptno)

```
mysql> create table emp(
    -> empno int(10) not null,
    -> ename varchar(30) not null,
    -> job varchar(30) not null,
    -> sal int(10) not null,
    -> deptno int(10) not null,
    -> comm_percentage int(10));
Query OK, 0 rows affected, 4 warnings (0.02 sec)
```

2. Insert appropriate records in above tables.

```
mysql> insert into emp values
    -> (1,'Pratham','Clerk',2900,10,null),
    -> (2,'Abhiyudya','Salesperson',2000,20,5),
    -> (3,'Yoshita','Clerk',2700,30,null),
    -> (4,'Chehak','Salesperson',2850,20,3),
    -> (5,'Issac','Clerk',2300,40,null),
    -> (6,'Aband','Manager',3200,60,12);
Query OK, 6 rows affected (0.01 sec)
Records: 6  Duplicates: 0  Warnings: 0
```

```
mysql> select * from emp;
+-------+-----------+-------------+------+--------+-----------------+
| empno | ename     | job         | sal  | deptno | comm_percentage |
+-------+-----------+-------------+------+--------+-----------------+
|     1 | Pratham   | Clerk       | 2900 |     10 |            NULL |
|     2 | Abhiyudya | Salesperson | 2000 |     20 |               5 |
|     3 | Yoshita   | Clerk       | 2700 |     30 |            NULL |
|     4 | Chehak    | Salesperson | 2850 |     20 |               3 |
|     5 | Issac     | Clerk       | 2300 |     40 |            NULL |
|     6 | Aband     | Manager     | 3200 |     60 |              12 |
+-------+-----------+-------------+------+--------+-----------------+
6 rows in set (0.00 sec)
```

3. Get employee no and employee name who works in dept no 10

```
mysql> select  empno, ename from emp where deptno=10 ;
+-------+---------+
| empno | ename   |
+-------+---------+
|     1 | Pratham |
+-------+---------+
1 row in set (0.00 sec)
```

4. Display the employee names of those clerks whose salary > 2000

```
mysql> select ename from emp where job='Clerk' and sal>2000;
+---------+
| ename   |
+---------+
| Pratham |
| Yoshita |
| Issac   |
+---------+
3 rows in set (0.00 sec)
```

5. Display name and sal of Salesperson & Clerks

```
mysql> select ename,sal from emp where job='Clerk' or job='Salesperson';
+-----------+------+
| ename     | sal  |
+-----------+------+
| Pratham   | 2900 |
| Abhiyudya | 2000 |
| Yoshita   | 2700 |
| Chehak    | 2850 |
| Issac     | 2300 |
+-----------+------+
5 rows in set (0.00 sec)
```

6. Display all details of employees whose salary between 2000 and 3000

```
mysql> select * from emp where sal between 2000 and 3000;
+-------+-----------+-------------+------+--------+-----------------+
| empno | ename     | job         | sal  | deptno | comm_percentage |
+-------+-----------+-------------+------+--------+-----------------+
|     1 | Pratham   | Clerk       | 2900 |     10 |            NULL |
|     2 | Abhiyudya | Salesperson | 2000 |     20 |               5 |
|     3 | Yoshita   | Clerk       | 2700 |     30 |            NULL |
|     4 | Chehak    | Salesperson | 2850 |     20 |               3 |
|     5 | Issac     | Clerk       | 2300 |     40 |            NULL |
+-------+-----------+-------------+------+--------+-----------------+
5 rows in set (0.00 sec)
```

7. Display all details of employees whose dept no is 10, 20, or 30

```
mysql> select * from emp where deptno in (10,20,30);
+-------+-----------+-------------+------+--------+-----------------+
| empno | ename     | job         | sal  | deptno | comm_percentage |
+-------+-----------+-------------+------+--------+-----------------+
|     1 | Pratham   | Clerk       | 2900 |     10 |            NULL |
|     2 | Abhiyudya | Salesperson | 2000 |     20 |               5 |
|     3 | Yoshita   | Clerk       | 2700 |     30 |            NULL |
|     4 | Chehak    | Salesperson | 2850 |     20 |               3 |
+-------+-----------+-------------+------+--------+-----------------+
4 rows in set (0.00 sec)
```

8. Display name of those employees whose commission is NULL

```
mysql> select * from emp ename where comm_percentage is null;
+-------+---------+-------+------+--------+-----------------+
| empno | ename   | job   | sal  | deptno | comm_percentage |
+-------+---------+-------+------+--------+-----------------+
|     1 | Pratham | Clerk | 2900 |     10 |            NULL |
|     3 | Yoshita | Clerk | 2700 |     30 |            NULL |
|     5 | Issac   | Clerk | 2300 |     40 |            NULL |
+-------+---------+-------+------+--------+-----------------+
3 rows in set (0.00 sec)
```

9. Display dept no & salary in ascending order of dept no and with in each dept no salary should be in descending order

```
mysql> select deptno,sal from emp order by deptno ASC , sal desc;
+--------+------+
| deptno | sal  |
+--------+------+
|     10 | 2900 |
|     20 | 2850 |
|     20 | 2000 |
|     30 | 2700 |
|     40 | 2300 |
|     60 | 3200 |
+--------+------+
6 rows in set (0.00 sec)
```

10. Display name of employees that starts with 'C'

```
mysql> select ename from emp where ename like 'c%';
+--------+
| ename  |
+--------+
| Chehak |
+--------+
1 row in set (0.00 sec)
```

11. Display name of employees that ends with with 'C'

```
mysql> select ename from emp where ename like '%c';
+-------+
| ename |
+-------+
| Issac |
+-------+
1 row in set (0.00 sec)
```

12. Display name of employees having two 'a' or 'A' chars in the

```
mysql> select ename from emp where ename like '%aa' or ename like 'aa%' or ename like '%a%a%';
+-----------+
| ename     |
+-----------+
| Pratham   |
| Abhiyudya |
| Aband     |
+-----------+
3 rows in set (0.00 sec)
```

   name

13. Display the name of the employees whose second char is 'b' or 'B'

```
mysql> select ename from emp where substring(ename,2,1) in ('b','B');
+-----------+
| ename     |
+-----------+
| Abhiyudya |
| Aband     |
+-----------+
2 rows in set (0.00 sec)
```

OR

```
mysql> select ename from emp where ename like '_b%';
+-----------+
| ename     |
+-----------+
| Abhiyudya |
| Aband     |
+-----------+
2 rows in set (0.00 sec)
```

14. Display the name of the employees whose first or last char is 'a' or 'A'

```
mysql> select ename from emp where ename like '%a' or ename like 'a%';
+-----------+
| ename     |
+-----------+
| Abhiyudya |
| Yoshita   |
| Aband     |
+-----------+
3 rows in set (0.00 sec)
```