SQL Queries

Problem Statement:

1. Create table Student with schema (roll_no, name, division, branch, city, marks)

mysql> create table student(Rollno int, name varchar(50), division char, branch varchar(20), city varchar(40), marks float);

Query OK, 0 rows affected (0.07 sec)

2. Insert 10 records to the table students

mysql> insert into student values(1, "Zulfa", "A", "Computer", "Pune", "100");

Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(2, "Alex", "B", "ENTC", "Mumbai", "70");

Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(3, "Amar", "D", "Mechanical", "Chennai", 80);

Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(4, "Raju", "C", "Civil", "Kolkata", 50);

Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(5, "Karan", "A", "Computer", "Bihar", 100);

Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(6, "Geeta", "B", "ENTC", "Guwahati", 95);

Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(7, "Priya", "D", "Computer", "Bangalore", 98);

Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(8, "Riya", "A", "Computer", "Mysore", 97);

Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(9, "Aditya", "B", "Mechanical", "Kerala", 91);
Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(10, "Akash", "C", "Civil", "Assam", 94);
Query OK, 1 row affected (0.01 sec)

3. List all the student names with their corresponding city

Ans:

mysql> select name, city from student;

```
+--------+-----------+
| name   | city      |
+--------+-----------+
| Zulfa  | Pune      |
| Alex   | Mumbai    |
| Amar   | Chennai   |
| Raju   | Kolkata   |
| Karan  | Bihar     |
| Geeta  | Guwahati  |
| Priya  | Bangalore |
| Riya   | Mysore    |
| Aditya | Kerala    |
| Akash  | Assam     |
+--------+-----------+
```
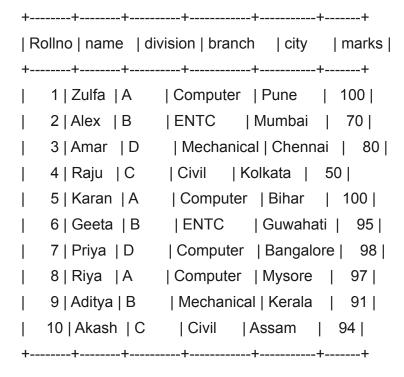10 rows in set (0.00 sec)

4. List all the distinct names of the students

mysql> select distinct name from student;

```
+--------+
| name   |
+--------+
| Zulfa  |
| Alex   |
| Amar   |
| Raju   |
| Karan  |
| Geeta  |
| Priya  |
| Riya   |
| Aditya |
| Akash  |
+--------+
10 rows in set (0.00 sec)
```

5. List all the records of the students with all the attributes

mysql> select * from Student;

```
+--------+--------+----------+------------+-----------+-------+
| Rollno | name   | division | branch     | city      | marks |
+--------+--------+----------+------------+-----------+-------+
|      1 | Zulfa  | A        | Computer   | Pune      |   100 |
|      2 | Alex   | B        | ENTC       | Mumbai    |    70 |
|      3 | Amar   | D        | Mechanical | Chennai   |    80 |
|      4 | Raju   | C        | Civil      | Kolkata   |    50 |
|      5 | Karan  | A        | Computer   | Bihar     |   100 |
|      6 | Geeta  | B        | ENTC       | Guwahati  |    95 |
|      7 | Priya  | D        | Computer   | Bangalore |    98 |
|      8 | Riya   | A        | Computer   | Mysore    |    97 |
|      9 | Aditya | B        | Mechanical | Kerala    |    91 |
|     10 | Akash  | C        | Civil      | Assam     |    94 |
+--------+--------+----------+------------+-----------+-------+
```

10 rows in set (0.00 sec)

6. List all the students whose marks are greater than 75

mysql> select * from Student where marks> 75;

```
+--------+--------+----------+------------+-----------+-------+
| Rollno | name   | division | branch     | city      | marks |
+--------+--------+----------+------------+-----------+-------+
|      1 | Zulfa  | A        | Computer   | Pune      |  100  |
|      3 | Amar   | D        | Mechanical | Chennai   |   80  |
|      5 | Karan  | A        | Computer   | Bihar     |  100  |
|      6 | Geeta  | B        | ENTC       | Guwahati  |   95  |
|      7 | Priya  | D        | Computer   | Bangalore |   98  |
|      8 | Riya   | A        | Computer   | Mysore    |   97  |
|      9 | Aditya | B        | Mechanical | Kerala    |   91  |
|     10 | Akash  | C        | Civil      | Assam     |   94  |
+--------+--------+----------+------------+-----------+-------+
```
8 rows in set (0.00 sec)

7. List all the students whose name starts with the alphabet 'S

mysql> select * from student where name like "S%";

```
+--------+---------+----------+----------+------+-------+
| Rollno | name    | division | branch   | city | marks |
+--------+---------+----------+----------+------+-------+
|     11 | Shubham | B        | Computer | Pune |   55  |
|     12 | Sara    | A        | IT       | Peru |   58  |
+--------+---------+----------+----------+------+-------+
```
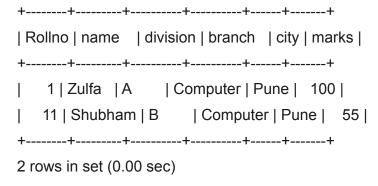2 rows in set (0.00 sec)

8. List all the students whose marks are in the range of 50 to 60

mysql> select * from student where marks between 50 and 60;

```
+--------+---------+----------+----------+---------+-------+
| Rollno | name    | division | branch   | city    | marks |
+--------+---------+----------+----------+---------+-------+
|      4 | Raju    | C        | Civil    | Kolkata |    50 |
|     11 | Shubham | B        | Computer | Pune    |    55 |
|     12 | Sara    | A        | IT       | Peru    |    58 |
+--------+---------+----------+----------+---------+-------+
```

3 rows in set (0.00 sec)

9. List all the students whose branch is 'computer and city is 'Pune'

mysql> select * from student where branch="Computer" and City="Pune";

```
+--------+---------+----------+----------+------+-------+
| Rollno | name    | division | branch   | city | marks |
+--------+---------+----------+----------+------+-------+
|      1 | Zulfa   | A        | Computer | Pune |   100 |
|     11 | Shubham | B        | Computer | Pune |    55 |
+--------+---------+----------+----------+------+-------+
```

2 rows in set (0.00 sec)

10. Update the branch of a student to IT whose roll number is 9

mysql> update student set branch="IT" where rollno = 9;

Query OK, 1 row affected (0.02 sec)

Rows matched: 1 Changed: 1 Warnings: 0

11. Delete the student records whose division is 'BE'

mysql> delete from student where division= "BE";

Query OK, 1 rows affected (0.00 sec)

12. Create another table TE_Students with Schema(roll_no, name)

mysql> create table TE_Student(Rollno int, name varchar(50));

Query OK, 0 rows affected (0.07 sec)

mysql> insert into TE_Student value (15, "Ram");

Query OK, 1 row affected (0.01 sec)

mysql> insert into TE_Student value (16, "Vikrant");

Query OK, 1 row affected (0.01 sec)

mysql> insert into TE_Student value (17, "Kunal");

Query OK, 1 row affected (0.01 sec)

mysql> insert into TE_Student value (18, "Krish");

Query OK, 1 row affected (0.01 sec)

13) List all the roll numbers unionly in the relations Student and TE_Students

mysql> select rollno from Student union Select rollno from TE_Student;

```
+--------+
| rollno |
+--------+
|      1 |
|      2 |
|      3 |
|      4 |
|      5 |
|      6 |
|      7 |
|      8 |
|      9 |
```

```
|    10 |
|    11 |
|    12 |
|    13 |
|    15 |
|    16 |
|    17 |
|    18 |
+--------+
17 rows in set (0.00 sec)
```

14. Display name of all the students belonging to relation Student in Upper case

mysql> select UPPER(name) from student;

```
+-------------+

| UPPER(name) |

+-------------+

| ZULFA       |

| ALEX        |

| AMAR        |

| RAJU        |

| KARAN       |

| GEETA       |

| PRIYA       |

| RIYA        |

| ADITYA      |
```

| AKASH |

| SHUBHAM |

| SARA |

| AMIR |

| AMIR |

+------------+

14 rows in set (0.00 sec)

15. Display the binary and hex equivalent of marks for all the students belonging to Student relation

mysql> select binary marks from Student;

+---------------------------+

| binary marks |

+---------------------------+

| 0x313030 |

| 0x3730 |

| 0x3830 |

| 0x3530 |

| 0x313030 |

| 0x3935 |

| 0x3938 |

| 0x3937 |

| 0x3931 |

| 0x3934 |

| 0x3535 |

| 0x3538 |

| 0x3732 |

| 0x3732 |

+--------------------------+

14 rows in set, 1 warning (0.00 sec)

mysql> select hex(marks) from Student;

+------------+

| hex(marks) |

+------------+

| 64 |

| 46 |

| 50 |

| 32 |

| 64 |

| 5F |

| 62 |

| 61 |

| 5B |

| 5E |

| 37 |

```
| 3A          |

| 48          |

| 48          |

+------------+
```

14 rows in set (0.00 sec)