

a) Create a table called my\_class(pk\_roll\_no, first\_name, last\_name, address, marks(out of 500),age ,division(according to marks like first, second, distinction, third, pass, fail)

Constraints applied:

o You must give first name

o Age must be greater than 17.

o Division should be given as fail if not provided by the user.

```
MariaDB [dbms_practice]> create table my_class(
  -> roll_no int primary key,
  -> first_name varchar(30) not null,
  -> last_name varchar(30),
  -> address varchar(30),
  -> marks int check(marks>500),
  -> age int check(age>17),
  -> division varchar(30) not null default 'fail'
  -> );
Query OK, 0 rows affected (0.013 sec)
```

```
MariaDB [dbms_practice]> select * from my_class;
```

roll_no	first_name	last_name	address	marks	age	division
1	Ram	Shrestha	Kathmandu	550	19	second
2	Shyam	Gurung	Pokhara	560	22	first
3	Ramesh	Tamang	Ghorahi	580	24	first
4	Anita	Singh	Rolpa	590	20	distinction
5	Gita	NULL	Dang	600	21	first
6	Sita	Basnet	NULL	510	25	third
7	Ravi	Sharma	Kathmandu	700	28	distinction
8	Raj	Yadav	Tulsipur	620	27	second
9	Amit	Lama	Ghorahi	670	23	fail
10	Bina	Thapa	NULL	590	19	distinction
11	Arjun	Malla	Rolpa	650	26	first
12	Suraj	Adhikari	Dang	540	24	second
13	Pooja	Magar	Tulsipur	530	20	third
14	Manish	Karki	Kathmandu	510	29	third
15	Kiran	Basnet	NULL	520	18	fail

```
15 rows in set (0.001 sec)
```

b) Select the first five classmates. (LIMIT)

```
MariaDB [dbms_practice]> select * from my_class limit 5;
```

roll_no	first_name	last_name	address	marks	age	division
1	Ram	Shrestha	Kathmandu	550	19	second
2	Shyam	Gurung	Pokhara	560	22	first
3	Ramesh	Tamang	Ghorahi	580	24	first
4	Anita	Singh	Rolpa	590	20	distinction
5	Gita	NULL	Dang	600	21	first

```
5 rows in set (0.001 sec)
```

c) Select the classmates whose first name starts with 'R'.

```
MariaDB [dbms_practice]> select * from my_class where first_name like 'R%';
```

roll_no	first_name	last_name	address	marks	age	division
1	Ram	Shrestha	Kathmandu	550	19	second
3	Ramesh	Tamang	Ghorahi	580	24	first
7	Ravi	Sharma	Kathmandu	700	28	distinction
8	Raj	Yadav	Tulsipur	620	27	second

```
4 rows in set (0.001 sec)
```

d) Select the classmates whose first name contains 'a' in their name.

```
MariaDB [dbms_practice]> select * from my_class where first_name like '%a%';
```

roll_no	first_name	last_name	address	marks	age	division
1	Ram	Shrestha	Kathmandu	550	19	second
2	Shyam	Gurung	Pokhara	560	22	first
3	Ramesh	Tamang	Ghorahi	580	24	first
4	Anita	Singh	Rolpa	590	20	distinction
5	Gita	NULL	Dang	600	21	first
6	Sita	Basnet	NULL	510	25	third
7	Ravi	Sharma	Kathmandu	700	28	distinction
8	Raj	Yadav	Tulsipur	620	27	second
9	Amit	Lama	Ghorahi	670	23	fail
10	Bina	Thapa	NULL	590	19	distinction
11	Arjun	Malla	Rolpa	650	26	first
12	Suraj	Adhikari	Dang	540	24	second
13	Pooja	Magar	Tulsipur	530	20	third
14	Manish	Karki	Kathmandu	510	29	third
15	Kiran	Basnet	NULL	520	18	fail

```
15 rows in set (0.000 sec)
```

e) Select the classmates whose last name contains 's' as the second last character.

```
MariaDB [dbms_practice]> select * from my_class where last_name like '%s_';
```

Empty set (0.001 sec)

f) Select the classmates whose last name is not known yet. (IS NULL)

```
MariaDB [dbms_practice]> select * from my_class where last_name is NULL;
+-----+-----+-----+-----+-----+-----+-----+
| roll_no | first_name | last_name | address | marks | age | division |
+-----+-----+-----+-----+-----+-----+-----+
|      5 | Gita      | NULL     | Dang    | 600   | 21 | first     |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.005 sec)
```

g) Select all the classmates who address is known. (IS NOT NULL)

```
MariaDB [dbms_practice]> select * from my_class where address is not NULL;
+-----+-----+-----+-----+-----+-----+-----+
| roll_no | first_name | last_name | address | marks | age | division |
+-----+-----+-----+-----+-----+-----+-----+
|      1 | Ram        | Shrestha | Kathmandu | 550   | 19 | second    |
|      2 | Shyam      | Gurung   | Pokhara   | 560   | 22 | first     |
|      3 | Ramesh     | Tamang   | Ghorahi   | 580   | 24 | first     |
|      4 | Anita      | Singh    | Rolpa     | 590   | 20 | distinction |
|      5 | Gita       | NULL     | Dang      | 600   | 21 | first     |
|      7 | Ravi       | Sharma   | Kathmandu | 700   | 28 | distinction |
|      8 | Raj        | Yadav    | Tulsipur  | 620   | 27 | second    |
|      9 | Amit       | Lama     | Ghorahi   | 670   | 23 | fail      |
|     11 | Arjun      | Malla    | Rolpa     | 650   | 26 | first     |
|     12 | Suraj      | Adhikari | Dang      | 540   | 24 | second    |
|     13 | Pooja      | Magar    | Tulsipur  | 530   | 20 | third     |
|     14 | Manish     | Karki    | Kathmandu | 510   | 29 | third     |
+-----+-----+-----+-----+-----+-----+-----+
12 rows in set (0.006 sec)
```

h) Select the students whose age is between 20 and 30 and lives in 'Ghorahi', 'Rolpa', 'Dang', 'Tulsipur'.

```
MariaDB [dbms_practice]> select * from my_class where age between 20 and 30 and address in ('Ghorahi','Rolpa','Dang','Tulsipur');
+-----+-----+-----+-----+-----+-----+-----+
| roll_no | first_name | last_name | address | marks | age | division |
+-----+-----+-----+-----+-----+-----+-----+
|      3 | Ramesh     | Tamang    | Ghorahi | 580   | 24 | first     |
|      4 | Anita      | Singh     | Rolpa   | 590   | 20 | distinction |
|      5 | Gita       | NULL      | Dang    | 600   | 21 | first     |
|      8 | Raj        | Yadav     | Tulsipur | 620   | 27 | second    |
|      9 | Amit       | Lama      | Ghorahi | 670   | 23 | fail      |
|     11 | Arjun      | Malla     | Rolpa   | 650   | 26 | first     |
|     12 | Suraj      | Adhikari  | Dang    | 540   | 24 | second    |
|     13 | Pooja      | Magar     | Tulsipur | 530   | 20 | third     |
+-----+-----+-----+-----+-----+-----+-----+
8 rows in set (0.009 sec)
```

i) Select all the students whose name does not end with 'a'.

```
MariaDB [dbms_practice]> select * from my_class where first_name not like '%a';
```

roll_no	first_name	last_name	address	marks	age	division
1	Ram	Shrestha	Kathmandu	550	19	second
2	Shyam	Gurung	Pokhara	560	22	first
3	Ramesh	Tamang	Ghorahi	580	24	first
7	Ravi	Sharma	Kathmandu	700	28	distinction
8	Raj	Yadav	Tulsipur	620	27	second
9	Amit	Lama	Ghorahi	670	23	fail
11	Arjun	Malla	Rolpa	650	26	first
12	Suraj	Adhikari	Dang	540	24	second
14	Manish	Karki	Kathmandu	510	29	third
15	Kiran	Basnet	NULL	520	18	fail

```
10 rows in set (0.000 sec)
```

j) Select all the students whose name starts with 'a' but does not end with 'a'.

```
MariaDB [dbms_practice]> select * from my_class where first_name like 'a%' and first_name not like '%a';
```

roll_no	first_name	last_name	address	marks	age	division
9	Amit	Lama	Ghorahi	670	23	fail
11	Arjun	Malla	Rolpa	650	26	first

```
2 rows in set (0.001 sec)
```

k) Select the classmates and sort them in ascending order by their name.

```
MariaDB [dbms_practice]> select * from my_class order by first_name;
```

roll_no	first_name	last_name	address	marks	age	division
9	Amit	Lama	Ghorahi	670	23	fail
4	Anita	Singh	Rolpa	590	20	distinction
11	Arjun	Malla	Rolpa	650	26	first
10	Bina	Thapa	NULL	590	19	distinction
5	Gita	NULL	Dang	600	21	first
15	Kiran	Basnet	NULL	520	18	fail
14	Manish	Karki	Kathmandu	510	29	third
13	Pooja	Magar	Tulsipur	530	20	third
8	Raj	Yadav	Tulsipur	620	27	second
1	Ram	Shrestha	Kathmandu	550	19	second
3	Ramesh	Tamang	Ghorahi	580	24	first
7	Ravi	Sharma	Kathmandu	700	28	distinction
2	Shyam	Gurung	Pokhara	560	22	first
6	Sita	Basnet	NULL	510	25	third
12	Suraj	Adhikari	Dang	540	24	second

```
15 rows in set (0.005 sec)
```

l) Select the classmates and sort them as highest scorer to lowest scorer.

```
MariaDB [dbms_practice]> select * from my_class order by marks desc;
```

roll_no	first_name	last_name	address	marks	age	division
7	Ravi	Sharma	Kathmandu	700	28	distinction
9	Amit	Lama	Ghorahi	670	23	fail
11	Arjun	Malla	Rolpa	650	26	first
8	Raj	Yadav	Tulsipur	620	27	second
5	Gita	NULL	Dang	600	21	first
4	Anita	Singh	Rolpa	590	20	distinction
10	Bina	Thapa	NULL	590	19	distinction
3	Ramesh	Tamang	Ghorahi	580	24	first
2	Shyam	Gurung	Pokhara	560	22	first
1	Ram	Shrestha	Kathmandu	550	19	second
12	Suraj	Adhikari	Dang	540	24	second
13	Pooja	Magar	Tulsipur	530	20	third
15	Kiran	Basnet	NULL	520	18	fail
6	Sita	Basnet	NULL	510	25	third
14	Manish	Karki	Kathmandu	510	29	third

15 rows in set (0.000 sec)

m) Select the classmates who have exactly five characters in their first name.

```
MariaDB [dbms_practice]> select * from my_class where first_name like '_____';
```

roll_no	first_name	last_name	address	marks	age	division
2	Shyam	Gurung	Pokhara	560	22	first
4	Anita	Singh	Rolpa	590	20	distinction
11	Arjun	Malla	Rolpa	650	26	first
12	Suraj	Adhikari	Dang	540	24	second
13	Pooja	Magar	Tulsipur	530	20	third
15	Kiran	Basnet	NULL	520	18	fail

6 rows in set (0.000 sec)

n) Select all the classmates who has scored the marks in two digits only.

```
MariaDB [dbms_practice]> select * from my_class where marks like '__';  
Empty set (0.000 sec)
```

o) Teacher wants to know if they increase each of the students marks by 5, how much their marks will reach to. Write SQL query which will select student id, first name, marks and new marks which will contains the improved marks.

```
MariaDB [dbms_practice]> select roll_no,first_name,marks,marks+5 as new_marks from my_class;
```

roll_no	first_name	marks	new_marks
1	Ram	550	555
2	Shyam	560	565
3	Ramesh	580	585
4	Anita	590	595
5	Gita	600	605
6	Sita	510	515
7	Ravi	700	705
8	Raj	620	625
9	Amit	670	675
10	Bina	590	595
11	Arjun	650	655
12	Suraj	540	545
13	Pooja	530	535
14	Manish	510	515
15	Kiran	520	525

15 rows in set (0.003 sec)

p) College administration wants to know the different locations students come from (Note: They don't want to see the duplicate locations).

```
MariaDB [dbms_practice]> select distinct address from my_class;
```

address
Kathmandu
Pokhara
Ghorahi
Rolpa
Dang
NULL
Tulsipur

7 rows in set (0.006 sec)