

Mysql assignment 1

a. Create a new database User.

```
mysql> create database User;
```

```
mysql> show databases;
+-----+
| Database      |
+-----+
| User          |
| example_database |
| information_schema |
| mysql          |
| performance_schema |
| phpmyadmin     |
| sys            |
+-----+
```

b. Create a new table user_details in the User database

```
mysql> create table user_details(id int, fname varchar(50), lname varchar(50), username varchar(20) , gender varchar(10), email varchar(20), nationality varchar(10), phone bigint, dob date, profile_image varchar(10))
```

```
mysql> desc user_details;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| id | int | YES | | NULL | |
| fname | varchar(50) | YES | | NULL | |
| lname | varchar(50) | YES | | NULL | |
| username | varchar(20) | YES | | NULL | |
| gender | varchar(10) | YES | | NULL | |
| email | varchar(20) | YES | | NULL | |
| nationality | varchar(10) | YES | | NULL | |
| phone | bigint | YES | | NULL | |
| dob | date | YES | | NULL | |
| profile_image | varchar(10) | YES | | NULL | |
+-----+-----+-----+-----+-----+
```

c. Add the given fields.

- i. First name
- ii. Last name
- iii. Username
- iv. Gender
- v. Email
- vi. Nationality
- vii. Phone
- viii. Date of birth
- ix. Profile image

```
mysql> insert into user_details
values(1,"Andy","Ross","andyross01","female","abc@gmail.com",
"India",987987,19950219,"andy.jpg");
```

```
mysql> insert into user_details values(2,'Ben',' Henderson', 'jadeh', ' Fema
le','jhenn@gmail.com',' USA',' 565427','19970210','jh.jpg');
```

id	fname	lname	username	gender	email	nationality	phone	dob	profile_image
1	Andy	Ross	andyross01	female	abc@gmail.com	India	987987	1995-02-19	andy.jpg
2	Ben	Henderson	jadeh	Fema le	jhenn@gmail.com	USA	565427	1997-02-10	jh.jpg

2 rows in set (0.00 sec)

ASSIGNMENT NO. 3

Create table marks

```
mysql> Create table marks(Userid int,Roll_no int ,Maths int,Physics int);
```

```
mysql> desc marks;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Userid | int | YES | | NULL | |
| Roll_no | int | YES | | NULL | |
| Maths | int | YES | | NULL | |
| Physics | int | YES | | NULL | |
+-----+-----+-----+-----+-----+
```

```
mysql> insert into marks values(4,674,78,87);
```

```
mysql> Select * from marks;
+-----+-----+-----+
| Userid | Roll_no | Maths | Physics |
+-----+-----+-----+
| 4 | 674 | 78 | 87 |
+-----+-----+-----+
```

```
mysql> insert into marks values(1,540,65,89);
```

```
mysql> insert into marks values(9,345,98,87);
```

```
mysql> Select * from marks;
+-----+-----+-----+
| Userid | Roll_no | Maths | Physics |
+-----+-----+-----+
| 4 | 674 | 78 | 87 |
| 1 | 540 | 65 | 89 |
| 9 | 345 | 98 | 87 |
+-----+-----+-----+
```

a. Inner join

- i. Show the detail of both the table using an inner join. Show the first name, last name, and roll no

```
mysql> select user_details.fname,user_details.lname,marks.Roll_no  
from marks  
inner join user_details  
on user_details.id=marks.UserId;
```

fname	lname	Roll_no
Andy	Ross	540
jessi	wilams	674

2 rows in set (0.00 sec)

B. Left joins

- i. Write an SQL statement that will select all students, and any grade they might have. Show the first name, last name, and roll no.

```
mysql> select user_details.fname,user_details.lname ,marks.Roll_no from  
user_details  
left join marks  
on user_details.id=marks.UserId;
```

fname	lname	Roll_no
Andy	Ross	540
Ben	Henderson	NULL
john	doe	NULL
jessi	wilams	674

4 rows in set (0.00 sec)

C. Right join

- i. Write an SQL statement that will select all grade values, belonging to any student. Show the first name, last name, and roll no

```
mysql> select user_details.fname,user_details.lname ,marks.Roll_no  
,marks.Maths,marks.Physics  
from marks  
right join user_details  
on user_details.id=marks.UserId;
```

fname	lname	Roll_no	Maths	Physics
Andy	Ross	540	65	89
Ben	Henderson	NULL	NULL	NULL
john	doe	NULL	NULL	NULL
jessi	wilams	674	78	87

4 rows in set (0.00 sec)

MYSQL ASSIGNMENT NO.4

a. Instruction - Refer to table 1 (Students data table)

```
mysql> select * from user_details;
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | fname | lname | username | gender | email | nationality | phone | dob | profile_image |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Andy | Ross | andyross01 | female | abc@gmail.com | India | 987987 | 1995-02-19 | andy.jpg |
| 2 | Ben | Henderson | jadeh | Fema le | dcfre@gmail.com | USA | 565427 | 1997-02-10 | jh.jpg |
| 3 | john | doe | jdoe | male | john.doe@gmail.com | India | 989898981 | 1980-02-19 | jdoe.jpg |
| 4 | jessi | williams | jessie_will | male | jessie.w@gmail.com | Uk | 0 | 1986-12-19 | jw.jpg |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

b. List the number of students in each country.

```
mysql> select count(id) from user_details where nationality=' USA';
```

```
+-----+
| count(id) |
+-----+
|      1 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select count(id) from user_details where nationality='Uk';
```

```
mysql> select count(id) from user_details where nationality='Uk';
+-----+
| count(id) |
+-----+
|      1 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select count(id) from user_details where nationality='India';
```

```
mysql> select count(id) from user_details where nationality='India';
+-----+
| count(id) |
+-----+
|      2 |
+-----+
1 row in set (0.00 sec)
```

c. List the number of students in each country, ordered by the country with the most students first.

```
mysql> SELECT COUNT(id), nationality FROM user_details GROUP BY nationality;
```

```
mysql> SELECT COUNT(id), nationality FROM user_details GROUP BY nationality;
+-----+-----+
| COUNT(id) | nationality |
+-----+-----+
| 2 | India      |
| 1 | USA        |
| 1 | Uk         |
+-----+-----+
3 rows in set (0.00 sec)
```

d. When displaying the student's table, refer to the table as Users instead of Students

```
mysql> select * from user_details as user;
```

```
mysql> select * from user_details as user;
+----+-----+-----+-----+-----+-----+-----+-----+
| id | fname | lname | username | gender | email    | nationality | phone   | dob     | profile_image |
+----+-----+-----+-----+-----+-----+-----+-----+
| 1  | Andy  | Ross  | andyross01 | female | abc@gmail.com | India      | 987987 | 1995-02-19 | andy.jpg  |
| 2  | Ben   | Henderson | jadeh   | Female | dcfr@gmail.com | USA        | 565427 | 1997-02-10 | jh.jpg    |
| 3  | john  | doe   | jdoe   | male   | john.doe@gmail.com | India      | 989898981 | 1980-02-19 | jdoe.jpg  |
| 4  | jessi | willams | jessie_will | male   | jessie.w@gmail.com | Uk         | 0 | 1986-12-19 | jw.jpg    |
+----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

E. Select all the records where the Country is either "UK" or "USA"

```
mysql> select * from user_details where nationality=' USA' or nationality='Uk';
```

```
mysql> select * from user_details where nationality=' USA' or nationality='Uk';
+----+-----+-----+-----+-----+-----+-----+-----+
| id | fname | lname | username | gender | email    | nationality | phone   | dob     | profile_image |
+----+-----+-----+-----+-----+-----+-----+-----+
| 2  | Ben   | Henderson | jadeh   | Female | dcfr@gmail.com | USA        | 565427 | 1997-02-10 | jh.jpg    |
| 4  | jesst | willams | jessie_will | male   | jessie.w@gmail.com | Uk         | 0 | 1986-12-19 | jw.jpg    |
+----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

MYSQL ASSIGNMENT NO.5

a. Instruction - Refer to table 2 (Students Grade table)

```
mysql> SELECT * from marks;
+-----+-----+-----+-----+
| Userid | Roll_no | Maths | Physics |
+-----+-----+-----+-----+
|      4 |     674 |    78 |     87 |
|      1 |     540 |    65 |     89 |
|      9 |     345 |    98 |     87 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

i. Select the record with the smallest Grade value in the Physics column

```
mysql> select min(Physics) from marks;
+-----+
| min(Physics) |
+-----+
|          87 |
+-----+
1 row in set (0.00 sec)
```

ii. Select the record with the maximum Grade value in the Physics column.

mysql> select max(physics) from marks;

```
mysql> select max(physics) from marks;
+-----+
| max(physics) |
+-----+
|          89 |
+-----+
1 row in set (0.00 sec)
```

iii. Calculate the average Grade value in Maths of all students.

mysql> select avg(maths) from marks;

```
mysql> select avg(maths) from marks;
+-----+
| avg(maths) |
+-----+
|     80.3333 |
+-----+
1 row in set (0.01 sec)
```

iv. Return the number of records with the Maths grade value greater than 75

mysql> select * from marks where maths>75;

```
mysql> select * from marks where maths>75;
+-----+-----+-----+-----+
| Userid | Roll_no | Maths | Physics |
+-----+-----+-----+-----+
|      4 |     674 |    78 |     87 |
|      9 |     345 |    98 |     87 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

MYSQL ASSIGNMENT NO.6

```
mysql> select * from user_details
->;
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | fname | lname | username | gender | email | nationality | phone | dob | profile_image |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Andy | Ross | andyross01 | female | abc@gmail.com | India | 9879879876 | 1995-02-19 | andy.jpg |
| 2 | Ben | Henderson | jadeph | Fema le | dcfre@gmail.com | USA | 565427 | 1997-02-10 | jh.jpg |
| 3 | john | doe | jdoe | male | john.doe@gmail.com | India | 989898981 | 1980-02-19 | jdoe.jpg |
| 4 | jessi | williams | jessie_will | male | jessie.w@gmail.com | Uk | NULL | 1986-12-19 | jw.jpg |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

- i. Select all records where the second letter of the last name (lname) is an "O".

```
mysql> select * from user_details where lname like '_o%';
```

```
mysql> select * from user_details where lname like '_o%';
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | fname | lname | username | gender | email | nationality | phone | dob | profile_image |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Andy | Ross | andyross01 | female | abc@gmail.com | India | 9879879876 | 1995-02-19 | andy.jpg |
| 3 | john | doe | jdoe | male | john.doe@gmail.com | India | 989898981 | 1980-02-19 | jdoe.jpg |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

- ii. Select all records where the first letter of the first name (fname) starts with anything from an "a" to an "f".

```
mysql> select * from user_details where fname between 'a%'and 'f%';
```

```
mysql> select * from user_details where fname between 'a%'and 'f%';
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | fname | lname | username | gender | email | nationality | phone | dob | profile_image |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Andy | Ross | andyross01 | female | abc@gmail.com | India | 9879879876 | 1995-02-19 | andy.jpg |
| 2 | Ben | Henderson | jadeph | Fema le | dcfre@gmail.com | USA | 565427 | 1997-02-10 | jh.jpg |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

- iii. Select all records where the Phone number column is empty.

```
mysql> select * from user_details where phone is null;
```

```
mysql> select * from user_details where phone is null;
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | fname | lname | username | gender | email | nationality | phone | dob | profile_image |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 4 | jessi | williams | jessie_will | male | jessie.w@gmail.com | Uk | NULL | 1986-12-19 | jw.jpg |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

- iv. Select all records and sort the result in ascending order by the column Dob.

```
mysql> select * from user_details order by dob;
```

```
mysql> select * from user_details order by dob;
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | fname | lname | username | gender | email | nationality | phone | dob | profile_image |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 3 | john | doe | jdoe | male | john.doe@gmail.com | India | 989898981 | 1980-02-19 | jdoe.jpg |
| 4 | jessi | williams | jessie_will | male | jessie.w@gmail.com | Uk | NULL | 1986-12-19 | jw.jpg |
| 1 | Andy | Ross | andyross01 | female | abc@gmail.com | India | 9879879876 | 1995-02-19 | andy.jpg |
| 2 | Ben | Henderson | jadeph | Fema le | dcfre@gmail.com | USA | 565427 | 1997-02-10 | jh.jpg |
+----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```