# MYSQL ASSIGNMENT 1:

## A) CREATE A NEW DATABASE:

mysql>CREATE DATABASE user;
mysql> USE user;
Database changed

## B) CREATE A NEW TABLE:
## C)ADD GIVEN FIELDS:
mysql> CREATE TABLE user_details(id INT(5) UNSIGNED
AUTO_INCREMENT PRIMARY KEY,fname VARCHAR(25) NOT
NULL,lname VARCHAR(25) NOT NULL,username VARCHAR(25)
NOT NULL,gender VARCHAR(10),email VARCHAR(25) NOT
NULL,nationality VARCHAR(20),Number BIGINT,dob DATE NOT
NULL,profile_img VARCHAR(25));
Query OK, 0 rows affected, 1 warning (0.05 sec)

## D)ADD 5 ENTRIES TO TABLE:

1)
mysql> INSERT INTO user_details
VALUES(01,"Andy","Ross","andyross01","female","andyr@g
mail.com","Indian",9893969812,"1975-06-23","andy.jpg");
Query OK, 1 row affected (0.01 sec)

2)

mysql> INSERT INTO user_details
VALUES(02,"Ben","Henderson","jade_h","female","ben_hen
@gmail.com","Indian",9876969812,"1981-07-26","ben.jpg");
Query OK, 1 row affected (0.01 sec)

3)
mysql> INSERT INTO user_details
VALUES(03,"John","Doe","Jdoe","male","john.doe@gmail.co
m","Indian",9896269812,"1979-01-13","john.jpg");
Query OK, 1 row affected (0.01 sec)

4)
mysql> INSERT INTO user_details
VALUES(04,"Jessie","Williams","Jessie_will","male","jessie.
w@gmail.com","Indian",9896269820,"1969-10-10","jw.jpg");
Query OK, 1 row affected (0.01 sec)

5)
mysql> INSERT INTO user_details
VALUES(05,"Harsh","Singh","harsh_123","male","harshsing
hrana9@gmail.com","Indian",7000945229,"2000-06-28","hars
h.jpg");
Query OK, 1 row affected (0.01 sec)

RESULTED TABLE:

mysql> SELECT * FROM user_details;
+----+--------+-----------+-------------+--------+------------------------+----
---------+-----------+-----------+------------+

```
| id | fname  | lname     | username    | gender | email                    | nationality | Number     | dob        | profile_img |
+----+--------+-----------+-------------+--------+--------------------------+-------------+------------+------------+------------+
|  1 | Andy   | Ross      | andyross01  | female | andyr@gmail.com          | Indian      | 9893969812 | 1975-06-23 | andy.jpg    |
|  2 | Ben    | Henderson | jade_h      | female | ben_hen@gmail.com        | Indian      | 9876969812 | 1981-07-26 | ben.jpg     |
|  3 | John   | Doe       | Jdoe        | male   | john.doe@gmail.com       | Indian      | 9896269812 | 1979-01-13 | john.jpg    |
|  4 | Jessie | Williams  | Jessie_will | male   | jessie.w@gmail.com       | Indian      | 9896269820 | 1969-10-10 | jw.jpg      |
|  5 | Harsh  | Singh     | harsh_123   | male   | harshsinghrana9@gmail.com | Indian     | 7000945229 | 2000-06-28 | harsh.jpg   |
+----+--------+-----------+-------------+--------+--------------------------+-------------+------------+------------+------------+
5 rows in set (0.00 sec)
```

## E)UPDATE ENTRY 2:

```
mysql> UPDATE user_details SET Nationality="American" WHERE id=02;
Query OK, 1 row affected (0.02 sec)
```

```
mysql> SELECT * FROM user_details;
+----+--------+-----------+-------------+--------+--------------------------+-------------+-----------+-----------+------------+
| id | fname  | lname     | username    | gender | email                    | nationality | Number    | dob       | profile_img |
+----+--------+-----------+-------------+--------+--------------------------+-------------+-----------+-----------+------------+
|  1 | Andy   | Ross      | andyross01  | female | andyr@gmail.com          | Indian      | 9893969812 | 1975-06-23 | andy.jpg   |
|  2 | Ben    | Henderson | jade_h      | female | ben_hen@gmail.com        | American    | 9876969812 | 1981-07-26 | ben.jpg    |
|  3 | John   | Doe       | Jdoe        | male   | john.doe@gmail.com       | Indian      | 9896269812 | 1979-01-13 | john.jpg   |
|  4 | Jessie | Williams  | Jessie_will | male   | jessie.w@gmail.com       | Indian      | 9896269820 | 1969-10-10 | jw.jpg     |
|  5 | Harsh  | Singh     | harsh_123   | male   | harshsinghrana9@gmail.com | Indian      | 7000945229 | 2000-06-28 | harsh.jpg  |
+----+--------+-----------+-------------+--------+--------------------------+-------------+-----------+-----------+------------+
5 rows in set (0.00 sec)
```
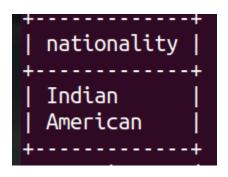
## F) DELETE ENTRY 3:

```
mysql> DELETE FROM user_details WHERE id=03;
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM user_details;
+----+--------+-----------+-------------+--------+--------------------------+-------------+-----------+------------+------------+
| id | fname  | lname     | username    | gender | email                    | nationality | Number     | dob        | profile_img |
+----+--------+-----------+-------------+--------+--------------------------+-------------+-----------+------------+------------+
|  1 | Andy   | Ross      | andyross01  | female | andyr@gmail.com          | Indian      | 9893969812 | 1975-06-23 | andy.jpg   |
|  2 | Ben    | Henderson | jade_h      | female | ben_hen@gmail.com        | American    | 9876969812 | 1981-07-26 | ben.jpg    |
|  4 | Jessie | Williams  | Jessie_will | male   | jessie.w@gmail.com       | Indian      | 9896269820 | 1969-10-10 | jw.jpg     |
|  5 | Harsh  | Singh     | harsh_123   | male   | harshsinghrana9@gmail.com | Indian     | 7000945229 | 2000-06-28 | harsh.jpg  |
+----+--------+-----------+-------------+--------+--------------------------+-------------+-----------+------------+------------+
4 rows in set (0.00 sec)
```

# ASSIGNMENT 2:

I)  RETURN DISTINCT NATIONALITY:

mysql> SELECT DISTINCT nationality FROM user_details;

```
+-------------+
| nationality |
+-------------+
| Indian      |
| American    |
+-------------+
```

II)  RETURN INFORMATION ABOUT STUDENT WHOSE AGE IS BELOW 30:

mysql> SELECT * FROM user_details WHERE dob>"1992-01-01";

                OR
mysql> SELECT * FROM user_details WHERE dob BETWEEN "1992-01-01" AND "2022-09-19";

```
mysql> SELECT * FROM user_details WHERE dob BETWEEN "1992-01-01" AND "2022-09-19";
+----+-------+-------+-----------+--------+--------------------------+-------------+------------+------------+-------------+
| id | fname | lname | username  | gender | email                    | nationality | Number     | dob        | profile_img |
+----+-------+-------+-----------+--------+--------------------------+-------------+------------+------------+-------------+
|  5 | Harsh | Singh | harsh_123 | male   | harshsinghrana9@gmail.com | Indian     | 7000945229 | 2000-06-28 | harsh.jpg   |
+----+-------+-------+-----------+--------+--------------------------+-------------+------------+------------+-------------+
```

# ASSIGNMENT 3:

**TABLE 2 (STUDENTS-GRADE)-CREATED:**

```
+----+---------+-------+---------+
| id | Roll_no | Maths | Physics |
+----+---------+-------+---------+
|  4 |     674 |    78 |      87 |
|  1 |     540 |    65 |      89 |
|  9 |     345 |    98 |      87 |
+----+---------+-------+---------+
```

**a)INNER JOIN:**

**mysql> SELECT
user_details.fname,user_details.lname,students_grade.Roll_no
FROM user_details
INNER JOIN students_grade
 ON user_details.id=students_grade.id;**

```
+--------+----------+---------+
| fname  | lname    | Roll_no |
+--------+----------+---------+
| Andy   | Ross     |     540 |
| Jessie | Williams |     674 |
+--------+----------+---------+
```

**b)LEFT JOINS:**

**mysql> SELECT**
**user_details.fname,user_details.lname,students_grade.Roll_no**
**FROM user_details**
**LEFT JOIN students_grade**
**ON user_details.id=students_grade.id;**

```
+---------+-----------+----------+
| fname   | lname     | Roll_no  |
+---------+-----------+----------+
| Andy    | Ross      |      540 |
| Ben     | Henderson |     NULL |
| John    | Doe       |     NULL |
| Jessie  | Williams  |      674 |
| Harsh   | Singh     |     NULL |
+---------+-----------+----------+
```

**C)RIGHT JOINS:**

**mysql> SELECT**
**user_details.fname,user_details.lname,students_grade.Roll_no**
**FROM user_details**
**RIGHT JOIN students_grade**
**ON user_details.id=students_grade.id;**

```
+--------+-----------+----------+
| fname  | lname     | Roll_no  |
+--------+-----------+----------+
| Andy   | Ross      |      540 |
| Jessie | Williams  |      674 |
| NULL   | NULL      |      345 |
+--------+-----------+----------+
```
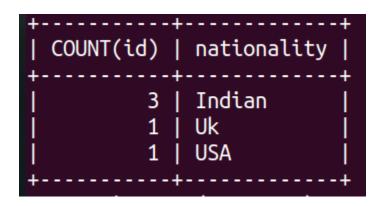
# ASSIGNMENT 4:

**a)**
**b)**
**Refer table 1 and list no of students in each country:**

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

```
+-----------+-------------+
| COUNT(id) | nationality |
+-----------+-------------+
|         3 | Indian      |
|         1 | Uk          |
|         1 | USA         |
+-----------+-------------+
```

**c)List the number of students in each country,orderby country with most number of students first:**

**mysql> SELECT COUNT(id),nationality**
** FROM user_details**
**GROUP BY nationality**
**ORDER BY COUNT(id) DESC;**

```
+--------------+-------------+
| COUNT(id)    | nationality |
+--------------+-------------+
|            3 | Indian      |
|            1 | Uk          |
|            1 | USA         |
+--------------+-------------+
```

**d) When displaying the student's table, refer to the table as Users instead of students:**

**mysql> SELECT ***
**FROM user_details**
**AS Users ;**

```
+----+--------+----------+-------------+--------+--------------------------+-------------+------------+------------+-------------+
| id | fname  | lname    | username    | gender | email                    | nationality | Number     | dob        | profile_img |
+----+--------+----------+-------------+--------+--------------------------+-------------+------------+------------+-------------+
|  1 | Andy   | Ross     | andyross01  | female | andyr@gmail.com          | Indian      | 9893969812 | 1975-06-23 | andy.jpg    |
|  2 | Ben    | Henderson| jade_h      | female | ben_hen@gmail.com        | Uk          | 9876969812 | 1981-07-26 | ben.jpg     |
|  3 | John   | Doe      | Jdoe        | male   | john.doe@gmail.com       | Indian      | 9896269812 | 1979-01-13 | john.jpg    |
|  4 | Jessie | Williams | Jessie_will | male   | jessie.w@gmail.com       | USA         | 9896269820 | 1969-10-10 | jw.jpg      |
|  5 | Harsh  | Singh    | harsh_123   | male   | harshsinghrana9@gmail.com| Indian      | 7000945229 | 2000-06-28 | harsh.jpg   |
+----+--------+----------+-------------+--------+--------------------------+-------------+------------+------------+-------------+
```

**e) Select all the records where the Country is either "UK" or "USA":**

```
mysql> SELECT *
FROM user_details
 WHERE nationality IN ("Uk","USA");
```

```
+----+--------+----------+-------------+--------+--------------------+-------------+------------+------------+-------------+
| id | fname  | lname    | username    | gender | email              | nationality | Number     | dob        | profile_img |
+----+--------+----------+-------------+--------+--------------------+-------------+------------+------------+-------------+
|  2 | Ben    | Henderson| jade_h      | female | ben_hen@gmail.com  | Uk          | 9876969812 | 1981-07-26 | ben.jpg     |
|  4 | Jessie | Williams | Jessie_will | male   | jessie.w@gmail.com | USA         | 9896269820 | 1969-10-10 | jw.jpg      |
+----+--------+----------+-------------+--------+--------------------+-------------+------------+------------+-------------+
```

# ASSIGNMENT 5:

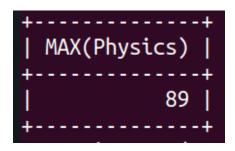**i). Select the record with the smallest Grade value in the Physics column:**

**mysql> SELECT MIN(Physics)**
**FROM students_grade;**

```
+--------------+
| MIN(Physics) |
+--------------+
|           87 |
+--------------+
```

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

**mysql> SELECT MAX(Physics)**
**FROM students_grade;**

```
+--------------+
| MAX(Physics) |
+--------------+
|           89 |
+--------------+
```
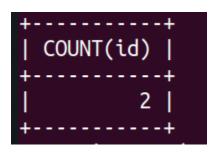
**iii). Calculate the average Grade value in Maths of all students:**

**mysql> SELECT AVG(Maths)**
**FROM students_grade;**

```
+--------------+
| AVG(Maths)   |
+--------------+
|      80.3333 |
+--------------+
```

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

**mysql> SELECT COUNT(id)**
**FROM students_grade**
**WHERE Maths>75;**

```
+--------------+
| COUNT(id)    |
+--------------+
|            2 |
+--------------+
```

# ASSIGNMENT 6:

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%';

```
+----+-------+-------+-----------+--------+--------------------+-------------+------------+------------+-------------+
| id | fname | lname | username  | gender | email              | nationality | Number     | dob        | profile_img |
+----+-------+-------+-----------+--------+--------------------+-------------+------------+------------+-------------+
|  1 | Andy  | Ross  | andyross01| female | andyr@gmail.com    | Indian      | 9893969812 | 1975-06-23 | andy.jpg    |
|  3 | John  | Doe   | Jdoe      | male   | john.doe@gmail.com | Indian      | 9896269812 | 1979-01-13 | john.jpg    |
+----+-------+-------+-----------+--------+--------------------+-------------+------------+------------+-------------+
```

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 LIKE 'a%'
OR fname LIKE 'b%'
OR fname LIKE 'c%'
 OR fname LIKE 'd%'
OR fname LIKE 'e%'
OR fname LIKE 'f%';

```
+----+-------+----------+-----------+--------+------------------+-------------+------------+------------+-------------+
| id | fname | lname    | username  | gender | email            | nationality | Number     | dob        | profile_img |
+----+-------+----------+-----------+--------+------------------+-------------+------------+------------+-------------+
|  1 | Andy  | Ross     | andyross01| female | andyr@gmail.com  | Indian      | 9893969812 | 1975-06-23 | andy.jpg    |
|  2 | Ben   | Henderson| jade_h    | female | ben_hen@gmail.com| Uk          | 9876969812 | 1981-07-26 | ben.jpg     |
+----+-------+----------+-----------+--------+------------------+-------------+------------+------------+-------------+
```

**iii). Select all records where the Phone number column is empty:**

**mysql> SELECT \***
**FROM user_details**
**WHERE Number IS NULL;**
**Empty set (0.00 sec)-------("NO RECORDS ARE PRESENT WITH**
**EMPTY VALUE OF PHONE NUMBER IN OUR TABLE").**


**v). Select all records and sort the result in ascending order by the
column dob:**

**mysql> SELECT \***
**FROM user_details**
**ORDER BY dob;**

| id | fname | lname | username | gender | email | nationality | Number | dob | profile_img |
|---|---|---|---|---|---|---|---|---|---|
| 4 | Jessie | Williams | Jessie_will | male | jessie.w@gmail.com | USA | 9896269820 | 1969-10-10 | jw.jpg |
| 1 | Andy | Ross | andyross01 | female | andyr@gmail.com | Indian | 9893969812 | 1975-06-23 | andy.jpg |
| 3 | John | Doe | Jdoe | male | john.doe@gmail.com | Indian | 9896269812 | 1979-01-13 | john.jpg |
| 2 | Ben | Henderson | jade_h | female | ben_hen@gmail.com | Uk | 9876969812 | 1981-07-26 | ben.jpg |
| 5 | Harsh | Singh | harsh_123 | male | harshsinghrana9@gmail.com | Indian | 7000945229 | 2000-06-28 | harsh.jpg |