MySQL Assignment

1. Assignment 1 (CRUD Operations)

Create a new database User.
CREATE DATABASE User;

Create a new table user_details in the User database.
USE User;
CREATE TABLE user_details(

Add the given fields.
ID INT UNSIGNED AUTO_INCREMENT PRIMARY KEY,
First_Name CHAR(50),
Last_Name CHAR(50),
Username VARCHAR(50),
Gender CHAR(20),
Email VARCHAR(100),
Nationality CHAR(50),
Phone VARCHAR(20),
Date_of_Birth DATE,
Profile_Image VARCHAR(100));

Add 5 entries to the table

INSERT INTO
user_details(First_Name,Last_Name,Username,Gender,Email,Nationality,Phone,Date_of_Birth,
Profile_Image)
VALUES ('Cardinal', 'Tom B. Erichsen', 'Skagen_21','Male','Cardinal.tom@gmail.com',
'Pakistani',9182736455, '1987-04-30', 'Norway.png');

INSERT INTO
user_details(First_Name,Last_Name,Username,Gender,Email,Nationality,Phone,Date_of_Birth,
Profile_Image)
VALUES ('Tom', 'Maria', 'czech_56','Male','tommaria@gmail.com', 'Indian',54673652847,
'1956-010-05', 'Iceland.png');

INSERT INTO
user_details(First_Name,Last_Name,Username,Gender,Email,Nationality,Phone,Date_of_Birth, Profile_Image)
VALUES ('Jim', 'Parsons', 'sheldon_1','Male','sheldonlovestrain@yahoo.com',
'Isreali',8762728265, '1998-03-28', 'Sweden.png');

INSERT INTO
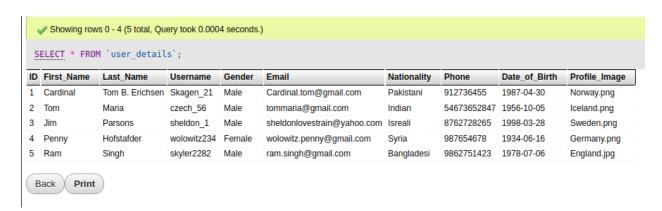user_details(First_Name,Last_Name,Username,Gender,Email,Nationality,Phone,Date_of_Birth, Profile_Image)
VALUES ('Penny', 'Hofstafder', 'wolowitz234','Female','wolowitz.penny@gmail.com',
'Syria',0987654678, '1934-06-16', 'Germany.png');

INSERT INTO
user_details(First_Name,Last_Name,Username,Gender,Email,Nationality,Phone,Date_of_Birth, Profile_Image)
VALUES ('Ram', 'Singh', 'skyler2282','Male','ram.singh@gmail.com', 'Bangladesi',9862751423,
'1978-07-06', 'England.jpg');

✅ Showing rows 0 - 4 (5 total, Query took 0.0004 seconds.)

```
SELECT * FROM `user_details`;
```

ID	First_Name	Last_Name	Username	Gender	Email	Nationality	Phone	Date_of_Birth	Profile_Image
1	Cardinal	Tom B. Erichsen	Skagen_21	Male	Cardinal.tom@gmail.com	Pakistani	912736455	1987-04-30	Norway.png
2	Tom	Maria	czech_56	Male	tommaria@gmail.com	Indian	54673652847	1956-10-05	Iceland.png
3	Jim	Parsons	sheldon_1	Male	sheldonlovestrain@yahoo.com	Isreali	8762728265	1998-03-28	Sweden.png
4	Penny	Hofstafder	wolowitz234	Female	wolowitz.penny@gmail.com	Syria	987654678	1934-06-16	Germany.png
5	Ram	Singh	skyler2282	Male	ram.singh@gmail.com	Bangladesi	9862751423	1978-07-06	England.jpg

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Update entry 2.
UPDATE user_details
SET First_Name = 'Doland Trump', Username = 'Frank09878', Phone = 5654326
WHERE ID = 2;

Delete entry 3
DELETE FROM user_details WHERE ID=3;

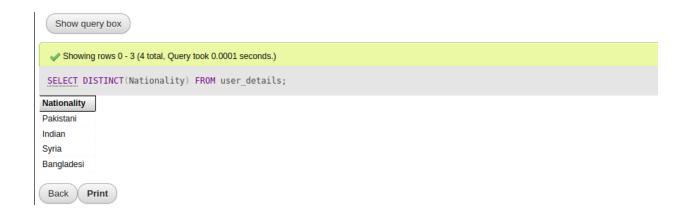## 2. Assignment 2

i.From the following table, write a SQL query to find the unique nationality of the student. Return nationality.

SELECT DISTINCT(Nationality) FROM user_details;

SELECT DISTINCT(Nationality) FROM user_details;

Showing rows 0 - 3 (4 total, Query took 0.0001 seconds.)

```
SELECT DISTINCT(Nationality) FROM user_details;
```

Nationality
Pakistani
Indian
Syria
Bangladesi

ii. From the following table, write a SQL query to find those students whose age is below 30. Return complete information about the student.

SELECT * FROM user_details

WHERE year(curdate())-year(Date_of_Birth)<30;

Showing rows 0 - 0 (1 total, Query took 0.0002 seconds.)

```
SELECT * FROM user_details WHERE year(curdate())-year(Date_of_Birth)<30;
```

ID	First_Name	Last_Name	Username	Gender	Email	Nationality	Phone	Date_of_Birth	Profile_Image
1	Cardinal	Tom B. Erichsen	Skagen_21	Male	Cardinal.tom@gmail.com	Pakistani	912736455	1996-04-30	Norway.png

3. Assignment 3-Joins

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

SELECT user_details.First_Name,user_details.Last_Name,user_marks.Rollno
FROM user_details
INNER JOIN user_marks
ON user_details.ID = user_marks.UserID;

✔✔ Showing rows 0 - 1 (2 total, Query took 0.0003 seconds.)

SELECT user_details.First_Name,user_details.Last_Name,user_marks.Rollno FROM user_details INNER JOIN user_marks ON user_details.

First_Name	Last_Name	Rollno
Cardinal	Tom B. Erichsen	540
Penny	Hofstafder	674

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.

SELECT user_details.First_Name,user_details.Last_Name,user_marks.Rollno
FROM user_details
LEFT JOIN user_marks
ON user_details.ID = user_marks.UserID;

✔✔ Showing rows 0 - 3 (4 total, Query took 0.0004 seconds.)

SELECT
user_details.First_Name,user_details.Last_Name,user_marks.Rollno
FROM user_details LEFT JOIN user_marks ON user_details.ID =
user_marks.UserID;

First_Name	Last_Name	Rollno
Cardinal	Tom B. Erichsen	540
Doland Trump	Maria	NULL
Penny	Hofstafder	NULL
Ram	Singh	674

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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.

```
SELECT user_details.First_Name,user_details.Last_Name,user_marks.Rollno
FROM user_details
RIGHT JOIN user_marks
ON user_details.ID = user_marks.UserID;
```

✔ Showing rows 0 - 2 (3 total, Query took 0.0001 seconds.)

```
SELECT
user_details.First_Name,user_details.Last_Name,user_marks.Rollno
FROM user_details RIGHT JOIN user_marks ON user_details.ID =
user_marks.UserID;
```
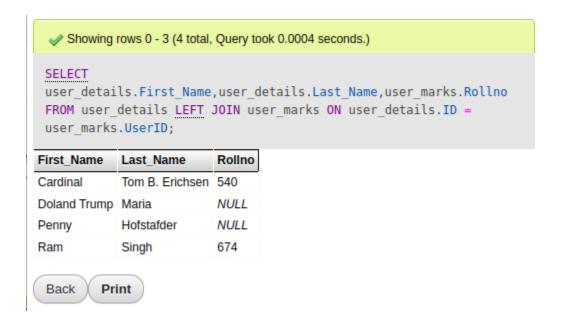
First_Name	Last_Name	Rollno
Cardinal	Tom B. Erichsen	540
Ram	Singh	674
NULL	NULL	345

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4. Assignment 4

ID	First_Name	Last_Name	Username	Gender	Email	Nationality	Phone	Date_of_Birth	Profile_Image
1	Cardinal	Tom B. Erichsen	Skagen_21	Male	Cardinal.tom@gmail.com	India	912736455	1996-04-30	Norway.png
2	Doland Trump	Maria	Frank09878	Male	tommaria@gmail.com	USA	5654326	1956-10-05	Iceland.png
3	Penny	Hofstafder	wolowitz234	Female	wolowitz.penny@gmail.com	India	987654678	1934-06-16	Germany.png
4	Ram	Singh	skyler2282	Male	ram.singh@gmail.com	UK	9862751423	1978-07-06	England.jpg

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a. Instruction - Refer to table 1 (Students data table)
b. List the number of students in each country.

```
SELECT Nationality, COUNT(*)
FROM user_details
GROUP BY Nationality;
```

Showing rows 0 - 2 (3 total, Query took 0.0002 seconds.)

```
SELECT Nationality, COUNT(*) FROM user_details GROUP BY
Nationality;
```

Nationality	COUNT(*)
India	2
USA	1
UK	1

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

SELECT Nationality, COUNT(*)
FROM user_details
GROUP BY Nationality ORDER BY COUNT(*) DESC;

Showing rows 0 - 2 (3 total, Query took 0.0002 seconds.)

```
SELECT Nationality, COUNT(*) FROM user_details GROUP BY
Nationality ORDER BY COUNT(*) DESC;
```

Nationality	COUNT(*) ▼ 1
India	2
USA	1
UK	1

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d. When displaying the student's table, refer to the table as Users instead of students.
e. Select all the records where the Country is either "UK" or "USA".

```
SELECT*FROM user_details WHERE Nationality="USA" OR Nationality="UK";
```

ID	First_Name	Last_Name	Username	Gender	Email	Nationality	Phone	Date_of_Birth	Profile_I
2	Doland Trump	Maria	Frank09878	Male	tommaria@gmail.com	USA	5654326	1956-10-05	Iceland.p
4	Ram	Singh	skyler2282	Male	ram.singh@gmail.com	UK	9862751423	1978-07-06	England.j

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5. Assignment 5

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

SELECT MIN(Physics)
AS Smallest_Grade
FROM user_marks;

```
SELECT MIN(Physics) AS Smallest_Grade FROM user_marks;
```

Smallest_Grade
87

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

SELECT MAX(Physics)
AS Maximum_Grade
FROM user_marks;

```
Showing rows 0 - 0 (1 total, Query took 0.0002 seconds.)

SELECT MAX(Physics) AS Maximum_Grade FROM user_marks;
```

Maximum_Grade
89

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

SELECT AVG(Maths)
AS Average_marks
FROM user_marks;

```
Showing rows 0 - 0 (1 total, Query took 0.0002 seconds.)

SELECT AVG(Maths) AS Average_marks FROM user_marks;
```

Average_marks
80.3333

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

SELECT COUNT(*) FROM user_marks
WHERE Maths>75;

Your SQL query has been executed successfully.

```
SELECT COUNT(*) FROM user_marks WHERE Maths>75;
```

COUNT(*)
2

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6. Assignment 6

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

✔ Showing rows 0 - 3 (4 total, Query took 0.0001 seconds.)

```
SELECT * FROM `user_details`
```

ID	First_Name	Last_Name	Username	Gender	Email	Nationality	Phone	Date_of_Birth	Profile_Image
1	Cardinal	Tom B. Erichsen	Skagen_21	Male	Cardinal.tom@gmail.com	India	912736455	1996-04-30	Norway.png
2	Doland Trump	Maria	Frank09878	Male	tommaria@gmail.com	USA	5654326	1956-10-05	Iceland.png
3	Penny	Hofstafder	wolowitz234	Female	wolowitz.penny@gmail.com	India		1934-06-16	Germany.png
4	Ram	Singh	skyler2282	Male	ram.singh@gmail.com	UK	9862751423	1978-07-06	England.jpg

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

SELECT*FROM user_details
WHERE Last_Name
LIKE '_o%';

```
SELECT*FROM user_details WHERE last_name LIKE '_o%';
```

ID	First_Name	Last_Name	Username	Gender	Email	Nationality	Phone	Date_of_Birth	Profile_Image
1	Cardinal	Tom B. Erichsen	Skagen_21	Male	Cardinal.tom@gmail.com	India	912736455	1996-04-30	Norway.png
3	Penny	Hofstafder	wolowitz234	Female	wolowitz.penny@gmail.com	India	987654678	1934-06-16	Germany.png

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

SELECT * FROM user_details
WHERE First_Name RLIKE '^[ABCDEF]';

```
SELECT * FROM user_details WHERE First_Name RLIKE '^[ABCDEF]';
```

ID	First_Name	Last_Name	Username	Gender	Email	Nationality	Phone	Date_of_Birth	Profile_Image
1	Cardinal	Tom B. Erichsen	Skagen_21	Male	Cardinal.tom@gmail.com	India	912736455	1996-04-30	Norway.png
2	Doland Trump	Maria	Frank09878	Male	tommaria@gmail.com	USA	5654326	1956-10-05	Iceland.png

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

SELECT * FROM user_details
WHERE Phone IS NULL;

✔ Showing rows 0 - 0 (1 total, Query took 0.0002 seconds.)

```
SELECT * FROM user_details WHERE Phone IS NULL;
```

ID	First_Name	Last_Name	Username	Gender	Email	Nationality	Phone	Date_of_Birth	Profile_Image
3	Penny	Hofstafder	wolowitz234	Female	wolowitz.penny@gmail.com	India	NULL	1934-06-16	Germany.png

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

SELECT * FROM user_details
ORDER BY Date_of_birth;

```sql
SELECT * FROM user_details ORDER BY Date_of_birth;
```

ID	First_Name	Last_Name	Username	Gender	Email	Nationality	Phone	Date_of_Birth	Profile_Image
3	Penny	Hofstafder	wolowitz234	Female	wolowitz.penny@gmail.com	India	*NULL*	1934-06-16	Germany.png
2	Doland Trump	Maria	Frank09878	Male	tommaria@gmail.com	USA	5654326	1956-10-05	Iceland.png
4	Ram	Singh	skyler2282	Male	ram.singh@gmail.com	UK	9862751423	1978-07-06	England.jpg
1	Cardinal	Tom B. Erichsen	Skagen_21	Male	Cardinal.tom@gmail.com	India	912736455	1996-04-30	Norway.png

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