Green University of Bangladesh
Department of Computer Science and Engineering(CSE)
Faculty of Sciences and Engineering
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LAB REPORT NO #3
Course Title:Database System lab
Course Code:CSE210   Section:PC-193D

Lab Experiment Name: Querying and Filtering data in MySQL Table.

Student Details

	Name	ID
1.	Jahid Hasan	193902001

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Course Teacher's Name	: MD. Moshiur Rahman

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Lab Report Status
Marks: ………………………………   Signature:.....................

Comments:...   Date:..............................

❖ TITLE OF THE LAB EXPERIMENT:

Querying and Filtering data in MySQL Table.

❖ OBJECTIVES/AIM:

In this lab report, we will implement query and filtering related commands in my MySQL.

❖ PROCEDURE / ANALYSIS / DESIGN:

First of all we will start the Mysql server and will write all our queries on that server.We will do this by **XAMPP** software.

❖ IMPLEMENTATION:

➢ List of topics:

● Using different relational operators
● And, or, not (logical operator)
● Limit,Order BY,IN,Not in,Between,Not between
● Like operator

Relational Operators : A relational operator is a programming language construct or operator that tests or defines some kind of relation between two entities. These include **numerical equality** (e.g., 5 = 5) and inequalities (e.g., 4 ≥ 3).

Logical operators : In SQL, all logical operators evaluate to TRUE, FALSE, or NULL (UNKNOWN). In MySQL, these are implemented as 1 (TRUE), 0 (FALSE), and NULL. Most of this is common to different SQL database servers, although some servers may return any nonzero value for TRUE.

Limit : MySQL provides a LIMIT clause that is used to specify the number of records to return.

ORDER BY : The ORDER BY keyword is used to sort the result-set in ascending or descending order.

IN operator : The IN operator allows you to determine if a value matches any value in a list of values. Here's the syntax of the IN operator

NOT IN operator : MySQL NOT IN() makes sure that the expression proceeded does not have any of the values present in the arguments.

BETWEEN : The BETWEEN operator selects values within a given range. The values can be numbers, text, or dates.

NOT BETWEEN: MySQL NOT BETWEEN AND operator checks whether a value is not present between a starting and a closing expression.

Like operator :The LIKE operator is used in a WHERE clause to search for a specified pattern in a column.

There are two wildcards often used in conjunction with the LIKE operator:

- The percent sign (%) represents zero, one, or multiple characters.
- The underscore sign (_) represents one, single character.

❖ MySQL Relational operators:

ID	Name	website_name
1001	10 minschool	www.10minuteschool.com
1002	khan academy	www.khanacademy.com
1003	amaderschool	www.amaderschool.com
1004	courseera	www.courseera.com
1005	goorilearing	www.goorilearning.com

- **Equality operator :**

```
SELECT * FROM learn WHERE Name = 'khan academy';
```

Output:

ID	Name	website_name
1002	khan academy	www.khanacademy.com

- **Inequality operator :**
-

```
SELECT * FROM learn WHERE Name <> 'courseera';
```

ID	Name	website_name
1001	10 minschool	www.10minuteschool.com
1002	khan academy	www.khanacademy.com
1003	amaderschool	www.amaderschool.com
1005	goorilearing	www.goorilearning.com

- **Greater than operator :**

```
SELECT * FROM learn WHERE ID > 1002;
```

ID	Name	website_name
1003	amaderschool	www.amaderschool.com
1004	courseera	www.courseera.com
1005	goorilearing	www.goorilearning.com

- **Greater than or Equal operator :**

```
SELECT * FROM learn WHERE ID >= 1003;
```

ID	Name	website_name
1003	amaderschool	www.amaderschool.com
1004	courseera	www.courseera.com
1005	goorilearing	www.goorilearning.com

- **Less than operator :**

```
SELECT * FROM learn WHERE ID < 1003;
```

ID	Name	website_name
1001	10 minschool	www.10minuteschool.com
1002	khan academy	www.khanacademy.com

- **Less than or Equal operator :**

```sql
SELECT * FROM learn WHERE ID <= 1004;
```

ID	Name	website_name
1001	10 minschool	www.10minuteschool.com
1002	khan academy	www.khanacademy.com
1003	amaderschool	www.amaderschool.com
1004	courseera	www.courseera.com

- **AND operator :**

```sql
SELECT * FROM learn
WHERE Name = 'courseera' AND website_name='www.courseera.com';
```

ID	Name	website_name
1004	courseera	www.courseera.com

- **OR operator :**

```sql
SELECT * FROM learn
WHERE Name = 'courseera' OR website_name='www.khanacademy.com';
```

ID	Name	website_name
1002	khan academy	www.khanacademy.com
1004	courseera	www.courseera.com

- **NOT and LIKE operator :**

```sql
SELECT * FROM learn WHERE Name NOT LIKE 'N%';
```

ID	Name	website_name
1001	10 minschool	www.10minuteschool.com
1002	khan academy	www.khanacademy.com
1003	amaderschool	www.amaderschool.com
1004	courseera	www.courseera.com
1005	goorilearing	www.goorilearning.com

- **LIMIT operator :**

```sql
SELECT * FROM learn
LIMIT 2;
```

ID	Name	website_name
1001	10 minschool	www.10minuteschool.com
1002	khan academy	www.khanacademy.com

- **ORDER BY :**

```sql
SELECT * FROM learn
ORDER BY Name;
```

ID	Name ▲ 1	website_name
1001	10 minschool	www.10minuteschool.com
1003	amaderschool	www.amaderschool.com
1004	courseera	www.courseera.com
1005	goorilearing	www.goorilearning.com
1002	khan academy	www.khanacademy.com

- **ORDER IN:**

```sql
SELECT * FROM learn
WHERE Name IN ('courseera','goorilearning','amaderschool');
```

Options

ID	Name	website_name
1003	amaderschool	www.amaderschool.com
1004	courseera	www.courseera.com

- **NOT IN operator :**

```sql
SELECT * FROM learn
WHERE Name NOT IN ('courseera','goorilearning','amaderschool');
```
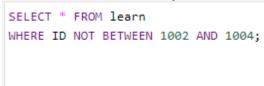
ID	Name	website_name
1001	10 minschool	www.10minuteschool.com
1002	khan academy	www.khanacademy.com
1005	goorilearing	www.goorilearning.com

- **BETWEEN operator :**

```sql
SELECT * FROM learn
WHERE ID BETWEEN 1002 AND 1004;
```
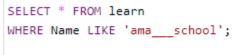
ID	Name	website_name
1002	khan academy	www.khanacademy.com
1003	amaderschool	www.amaderschool.com
1004	courseera	www.courseera.com

- **NOT BETWEEN operator :**

```
SELECT * FROM learn
WHERE ID NOT BETWEEN 1002 AND 1004;
```

ID	Name	website_name
1001	10 minschool	www.10minuteschool.com
1005	goorilearing	www.goorilearning.com

- **LIKE operator :**

```
SELECT * FROM learn
WHERE Name LIKE 'ama___school';
```

ID	Name	website_name
1003	amaderschool	www.amaderschool.com

❖ TEST RESULT / OUTPUT:

Run code successfully in MariaDB server by using XAMPP software and checked the validity.

❖ ANALYSIS AND DISCUSSION:

The lab report is usefull to Mysql to Using different relational operators, And, or, not (logical operator), Limit,Order BY,IN,Not in,Between,Not between ,Like operator.I did not face any problem when I work MariaDB.

❖ SUMMARY:

In this lab report, We have learn about filtering and querying in MySQL table.We executed our code in the xampp software.