

Ex. No.: 4

Date:

SELECT with various clause – WHERE, pattern matching

AIM:

To view the records from the tables using SELECT commands with WHERE Clause and Pattern matching.

DESCRIPTION:

The SELECT statement allows you to get the data from tables. A table consists of rows and columns like a spreadsheet. Often, you want to see a subset rows, a subset of columns, or a combination of two. The result of the SELECT statement is called a result set that is a list of rows, each consisting of the same number of columns.

SELECT:

```
SELECT
column_1, column_2, ...
FROM
table_1
[INNER | LEFT | RIGHT] JOIN table_2 ON conditions
WHERE
conditions
GROUP BY column_1
HAVING group_conditions
ORDER BY column_1
LIMIT offset, length;
```

The SELECT statement consists of several clauses as explained in the following list:

- SELECT followed by a list of comma-separated columns or an asterisk (*) to indicate that you want to return all columns.
 - FROM specifies the table or view where you want to query the data.
 - JOIN gets related data from other tables based on specific join conditions.
 - WHERE clause filters row in the result set.
 - GROUP BY clause groups a set of rows into groups and applies aggregate functions on each group.
 - HAVING clause filters group based on groups defined by GROUP BY clause.
 - ORDER BY clause specifies a list of columns for sorting.
 - LIMIT constrains the number of returned rows.
-

Questions:

WHERE:

1. The student counsellor wanted to display the registration number, student name and date of birth for all the students.
2. The controller of examinations wanted to list all the female students
3. Who are the boy students registered for course with the course number "C001"
4. Display all faculty details joined before "November 2014"
5. Display all the courses not allotted to halls

LIKE:

6. List the students whose name ends with the substring "ma"
7. Display all students whose name contains the substring "ma"
8. Find all the students who are located in cities having "Sal" as substring
9. Display the students whose names do not contain six letters.
10. Find all the students whose names contains "th"

OUTPUTS:

1)

```
mysql> select RegNo,Name,DOB from student;
+-----+-----+-----+
| RegNo | Name  | DOB    |
+-----+-----+-----+
| 191711342 | jasmine | 2004-05-11 |
| 191711908 | karthika | 2006-04-21 |
| 192211087 | prem   | 2004-03-09 |
| 192211163 | mahith | 2005-07-10 |
| 192211164 | pavan  | 2005-06-23 |
+-----+-----+-----+
5 rows in set (0.00 sec)
```

2)

```
mysql> select * from student where Gender="F";
+-----+-----+-----+-----+-----+-----+
| Regno | Name  | Gender | DOB    | MobileNo | city    |
+-----+-----+-----+-----+-----+-----+
| 191711342 | jasmine | F      | 2004-05-11 | 789645322 | mydukur |
| 191711908 | karthika | F      | 2006-04-21 | 630931332 | chittor |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

3)

```
mysql> select * from student where courseno="C001";
```

RegNo	Name	Gender	DOB	MobileNo	City	courseno
1922211123	RAKESH	M	2004-12-15	987654329	TIRUPATHI	C001
1922211125	ROSY	F	2004-08-24	987654323	NELLORE	C001
1922211198	SRINIVAS	M	2004-06-17	986534256	VIZAG	C001

4)

```
mysql> select * from faculty where DOJ<"2014-11-01";
```

Facno	FacName	Gender	DOB	DOJ	MobileNo	DeptNo	Resigned	age
3	mahesh	M	1990-09-25	2009-08-14	675435853	C003	no	30
4	tharun	M	1992-06-29	2013-09-15	283022382	c004	no	32
5	siddu	M	1983-05-01	2007-03-05	283483973	c005	no	40

3 rows in set (0.01 sec)

5)

```
mysql> select * from student where courseno="C001";
```

RegNo	Name	Gender	DOB	MobileNo	City	courseno
1922211123	RAKESH	M	2004-12-15	987654329	TIRUPATHI	C001
1922211125	ROSY	F	2004-08-24	987654323	NELLORE	C001
1922211198	SRINIVAS	M	2004-06-17	986534256	VIZAG	C001

LIKE:

The LIKE operator is commonly used to select data based on patterns. Using the LIKE operator in the right way is essential to increase the query performance.

The LIKE operator allows you to select data from a table based on a specified pattern. Therefore, the LIKE operator is often used in the WHERE clause of the SELECT statement.

MySQL provides two wildcard characters for using with the LIKE operator, the percentage % and underscore _ .

- The percentage (%) wildcard allows you to match any string of zero or more characters.
- The underscore (_) wildcard allows you to match any single character.

6)

```
mysql> select * from student where Name like "%ma";  
Empty set (0.00 sec)
```

7)

```
mysql> select * from student where Name like "%ma%";  
+-----+-----+-----+-----+-----+-----+  
| Regno   | Name   | Gender | DOB       | MobileNo | city   |  
+-----+-----+-----+-----+-----+-----+  
| 192211163 | mahith | M      | 2005-07-10 | 630439357 | nellore |  
+-----+-----+-----+-----+-----+-----+  
1 row in set (0.00 sec)
```

8)

```
mysql> select * from student where city like "%sal%";  
Empty set (0.00 sec)
```

9)

```
mysql> select * from student where Name like "_____";  
+-----+-----+-----+-----+-----+-----+  
| Regno   | Name   | Gender | DOB       | MobileNo | city   |  
+-----+-----+-----+-----+-----+-----+  
| 192211163 | mahith | M      | 2005-07-10 | 630439357 | nellore |  
+-----+-----+-----+-----+-----+-----+  
1 row in set (0.00 sec)
```

10)

```
mysql> select * from student where Name like "%th%";  
+-----+-----+-----+-----+-----+-----+  
| Regno   | Name   | Gender | DOB       | MobileNo | city   |  
+-----+-----+-----+-----+-----+-----+  
| 191711908 | karthika | F      | 2006-04-21 | 630931332 | chittor |  
| 192211163 | mahith   | M      | 2005-07-10 | 630439357 | nellore |  
+-----+-----+-----+-----+-----+-----+  
2 rows in set (0.00 sec)
```

RESULT:

The records from the tables are displayed using SELECT commands with WHERE Clause and Pattern matching.