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Prof. VB

CS457L

9/24/2022

HW 1B

   1.

```
MariaDB [19610dm]> create table teachers(
    -> first_name varchar(25),
    -> last_name varchar(50),
    -> school varchar(50),
    -> hire_date varchar(10),
    -> salary numeric);
Query OK, 0 rows affected (0.014 sec)
```

   2.

```
MariaDB [19610dm]> insert into teachers(first_name, last_name, school, hire_date, salary)
    -> values ('Janet', 'Smith', 'F.D.Roosevelt HS', '2011-10-30', 36200),
    ->     ('Lee', 'Reynolds', 'F.D. Roosevelt HS', '1993-05-22', 65000),
    ->     ('Samuel', 'Cole', 'Myers Middle School', '2005-08-01', 43500),
    ->     ('Bethy', 'Diaz', 'Myers Middle School', '2005-08-30', 43500),
    ->     ('Kathleen', 'Diaz', 'F.D. Roosevelt HS', '2010-10-22', 38500),
    ->     ('David', 'Reynolds', 'Myers Middle School', '2003-11-25', 56300),
    ->     ('Joseph', 'Daniel', 'Foxcroft Academy', '1997-03-28', 47800),
    ->     ('Charles', 'Dan', 'Foxcroft Academy', '2000-12-30', 57200),
    ->     ('Roberto', 'Regan', 'Foxcroft Academy', '2004-01-29', 39100),
    ->     ('Lionel', 'Guth', 'F.D. Roosevelt HS', '1999-07-21', 40200);
Query OK, 10 rows affected (0.003 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

   3.

```
MariaDB [19610dm]> select * from teachers;
+------------+-----------+---------------------+------------+--------+
| first_name | last_name | school              | hire_date  | salary |
+------------+-----------+---------------------+------------+--------+
| Janet      | Smith     | F.D. Roosevelt HS   | 2011-10-30 |  36200 |
| Lee        | Reynolds  | F.D. Roosevelt HS   | 1993-05-22 |  65000 |
| Samuel     | Cole      | Myers Middle School | 2005-08-01 |  43500 |
| Bethy      | Diaz      | Myers Middle School | 2005-08-30 |  43500 |
| Kathleen   | Diaz      | F.D. Roosevelt HS   | 2010-10-22 |  38500 |
| David      | Reynolds  | Myers Middle School | 2003-11-25 |  56300 |
| Joseph     | Daniel    | Foxcroft Academy    | 1997-03-28 |  47800 |
| Charles    | Dan       | Foxcroft Academy    | 2000-12-30 |  57200 |
| Roberto    | Regan     | Foxcroft Academy    | 2004-01-29 |  39100 |
| Lionel     | Guth      | F.D. Roosevelt HS   | 1999-07-21 |  40200 |
+------------+-----------+---------------------+------------+--------+
10 rows in set (0.000 sec)
```

4.

```
MariaDB [19610dm]> select last_name, first_name, salary from teachers;
+-----------+------------+--------+
| last_name | first_name | salary |
+-----------+------------+--------+
| Smith     | Janet      |  36200 |
| Reynolds  | Lee        |  65000 |
| Cole      | Samuel     |  43500 |
| Diaz      | Bethy      |  43500 |
| Diaz      | Kathleen   |  38500 |
| Reynolds  | David      |  56300 |
| Daniel    | Joseph     |  47800 |
| Dan       | Charles    |  57200 |
| Regan     | Roberto    |  39100 |
| Guth      | Lionel     |  40200 |
+-----------+------------+--------+
10 rows in set (0.000 sec)
```

```
MariaDB [19610dm]> select last_name, hire_date, salary from teachers;
+-----------+------------+--------+
| last_name | hire_date  | salary |
+-----------+------------+--------+
| Smith     | 2011-10-30 |  36200 |
| Reynolds  | 1993-05-22 |  65000 |
| Cole      | 2005-08-01 |  43500 |
| Diaz      | 2005-08-30 |  43500 |
| Diaz      | 2010-10-22 |  38500 |
| Reynolds  | 2003-11-25 |  56300 |
| Daniel    | 1997-03-28 |  47800 |
| Dan       | 2000-12-30 |  57200 |
| Regan     | 2004-01-29 |  39100 |
| Guth      | 1999-07-21 |  40200 |
+-----------+------------+--------+
10 rows in set (0.000 sec)


MariaDB [19610dm]> select hire_date, salary from teachers;
+------------+--------+
| hire_date  | salary |
+------------+--------+
| 2011-10-30 |  36200 |
| 1993-05-22 |  65000 |
| 2005-08-01 |  43500 |
| 2005-08-30 |  43500 |
| 2010-10-22 |  38500 |
| 2003-11-25 |  56300 |
| 1997-03-28 |  47800 |
| 2000-12-30 |  57200 |
| 2004-01-29 |  39100 |
| 1999-07-21 |  40200 |
+------------+--------+
10 rows in set (0.000 sec)
```

5.

```
MariaDB [19610dm]> select distinct school from teachers;
+---------------------+
| school              |
+---------------------+
| F.D. Roosevelt HS   |
| Myers Middle School |
| Foxcroft Academy    |
+---------------------+
3 rows in set (0.000 sec)
```

6.

```
MariaDB [19610dm]> select distinct school, salary from teachers;
+---------------------+--------+
| school              | salary |
+---------------------+--------+
| F.D. Roosevelt HS   |  36200 |
| F.D. Roosevelt HS   |  65000 |
| Myers Middle School |  43500 |
| F.D. Roosevelt HS   |  38500 |
| Myers Middle School |  56300 |
| Foxcroft Academy    |  47800 |
| Foxcroft Academy    |  57200 |
| Foxcroft Academy    |  39100 |
| F.D. Roosevelt HS   |  40200 |
+---------------------+--------+
9 rows in set (0.000 sec)
```

7.

```
MariaDB [19610dm]> select first_name, last_name, salary from teachers order by salary desc;
+------------+-----------+--------+
| first_name | last_name | salary |
+------------+-----------+--------+
| Lee        | Reynolds  |  65000 |
| Charles    | Dan       |  57200 |
| David      | Reynolds  |  56300 |
| Joseph     | Daniel    |  47800 |
| Samuel     | Cole      |  43500 |
| Bethy      | Diaz      |  43500 |
| Lionel     | Guth      |  40200 |
| Roberto    | Regan     |  39100 |
| Kathleen   | Diaz      |  38500 |
| Janet      | Smith     |  36200 |
+------------+-----------+--------+
10 rows in set (0.000 sec)
```

8.

```
MariaDB [19610dm]> select last_name, school, hire_date from teachers order by school asc, hire_date desc;
+-----------+--------------------+------------+
| last_name | school             | hire_date  |
+-----------+--------------------+------------+
| Smith     | F.D. Roosevelt HS  | 2011-10-30 |
| Diaz      | F.D. Roosevelt HS  | 2010-10-22 |
| Guth      | F.D. Roosevelt HS  | 1999-07-21 |
| Reynolds  | F.D. Roosevelt HS  | 1993-05-22 |
| Regan     | Foxcroft Academy   | 2004-01-29 |
| Dan       | Foxcroft Academy   | 2000-12-30 |
| Daniel    | Foxcroft Academy   | 1997-03-28 |
| Diaz      | Myers Middle School | 2005-08-30 |
| Cole      | Myers Middle School | 2005-08-01 |
| Reynolds  | Myers Middle School | 2003-11-25 |
+-----------+--------------------+------------+
10 rows in set (0.000 sec)
```

9.

```
MariaDB [19610dm]> select first_name, last_name, school from teachers where first_name = 'Janet';
+------------+-----------+-------------------+
| first_name | last_name | school            |
+------------+-----------+-------------------+
| Janet      | Smith     | F.D. Roosevelt HS |
+------------+-----------+-------------------+
1 row in set (0.000 sec)
```

10.

```
MariaDB [19610dm]> select school from teachers where school != 'F.D. Roosevelt HS';
+--------------------+
| school             |
+--------------------+
| Myers Middle School |
| Myers Middle School |
| Myers Middle School |
| Foxcroft Academy    |
| Foxcroft Academy    |
| Foxcroft Academy    |
+--------------------+
6 rows in set (0.000 sec)
```

11.

```
MariaDB [19610dm]> select first_name, last_name, hire_date from teachers where hire_date < '2000-01-01';
+------------+-----------+------------+
| first_name | last_name | hire_date  |
+------------+-----------+------------+
| Lee        | Reynolds  | 1993-05-22 |
| Joseph     | Daniel    | 1997-03-28 |
| Lionel     | Guth      | 1999-07-21 |
+------------+-----------+------------+
3 rows in set (0.000 sec)
```

12.

```
MariaDB [19610dm]> select first_name, last_name, salary from teachers where salary >= 43500;
+------------+-----------+--------+
| first_name | last_name | salary |
+------------+-----------+--------+
| Lee        | Reynolds  |  65000 |
| Samuel     | Cole      |  43500 |
| Bethy      | Diaz      |  43500 |
| David      | Reynolds  |  56300 |
| Joseph     | Daniel    |  47800 |
| Charles    | Dan       |  57200 |
+------------+-----------+--------+
6 rows in set (0.000 sec)
```

13.

```
MariaDB [19610dm]> select first_name from teachers where first_name like 'sam%';
+------------+
| first_name |
+------------+
| Samuel     |
+------------+
1 row in set (0.000 sec)

MariaDB [19610dm]> select first_name from teachers where first_name like binary 'sam%';
Empty set (0.000 sec)
```

The normal '*like*' wildcard in MySQL will match the case-insensitive value. Thus, the value

"Samuel" is still selected. Adding '*binary*' into the wildcard will choose the case-sensitive value.

In this case, since there is no first_name as 'sam%' (case-sensitive), no rows will be selected.

14.

```
MariaDB [19610dm]> select first_name from teachers where first_name like 'Sam%';
+------------+
| first_name |
+------------+
| Samuel     |
+------------+
1 row in set (0.000 sec)

MariaDB [19610dm]> select first_name from teachers where first_name like binary 'Sam%';
+------------+
| first_name |
+------------+
| Samuel     |
+------------+
1 row in set (0.000 sec)
```

The same thing happens when we search for 'Sam%'

15.

```
MariaDB [19610dm]> select first_name from teachers where first_name like '%et';
+------------+
| first_name |
+------------+
| Janet      |
+------------+
1 row in set (0.000 sec)
```

16.

```
MariaDB [19610dm]> select first_name from teachers where first_name like '%ia%';
Empty set (0.000 sec)
```

17.

```
MariaDB [19610dm]> select first_name from teachers where first_name like 'J___t';
+------------+
| first_name |
+------------+
| Janet      |
+------------+
1 row in set (0.000 sec)
```

18.

```
MariaDB [19610dm]> select first_name from teachers where first_name like 'L%';
+------------+
| first_name |
+------------+
| Lee        |
| Lionel     |
+------------+
2 rows in set (0.000 sec)
```

19.

```
MariaDB [19610dm]> select first_name from teachers where first_name like 'Le_';
+------------+
| first_name |
+------------+
| Lee        |
+------------+
1 row in set (0.000 sec)
```

20.

```
MariaDB [19610dm]> select last_name, school, hire_date from teachers order by school asc, hire_date desc;
+-----------+---------------------+------------+
| last_name | school              | hire_date  |
+-----------+---------------------+------------+
| Smith     | F.D. Roosevelt HS   | 2011-10-30 |
| Diaz      | F.D. Roosevelt HS   | 2010-10-22 |
| Guth      | F.D. Roosevelt HS   | 1999-07-21 |
| Reynolds  | F.D. Roosevelt HS   | 1993-05-22 |
| Regan     | Foxcroft Academy    | 2004-01-29 |
| Dan       | Foxcroft Academy    | 2000-12-30 |
| Daniel    | Foxcroft Academy    | 1997-03-28 |
| Diaz      | Myers Middle School | 2005-08-30 |
| Cole      | Myers Middle School | 2005-08-01 |
| Reynolds  | Myers Middle School | 2003-11-25 |
+-----------+---------------------+------------+
10 rows in set (0.000 sec)
```

21.

```
MariaDB [19610dm]> select last_name, school, hire_date from teachers where school = 'Myers Middle School';
+-----------+---------------------+------------+
| last_name | school              | hire_date  |
+-----------+---------------------+------------+
| Cole      | Myers Middle School | 2005-08-01 |
| Diaz      | Myers Middle School | 2005-08-30 |
| Reynolds  | Myers Middle School | 2003-11-25 |
+-----------+---------------------+------------+
3 rows in set (0.000 sec)
```

22.

```
MariaDB [19610dm]> select first_name, last_name, school from teachers where first_name = 'janet';
+------------+-----------+-------------------+
| first_name | last_name | school            |
+------------+-----------+-------------------+
| Janet      | Smith     | F.D. Roosevelt HS |
+------------+-----------+-------------------+
1 row in set (0.000 sec)
```

23.

```
MariaDB [19610dm]> select school from teachers where school != 'F.D.Roosevelt HS';
+---------------------+
| school              |
+---------------------+
| F.D. Roosevelt HS   |
| F.D. Roosevelt HS   |
| Myers Middle School |
| Myers Middle School |
| F.D. Roosevelt HS   |
| Myers Middle School |
| Foxcroft Academy    |
| Foxcroft Academy    |
| Foxcroft Academy    |
| F.D. Roosevelt HS   |
+---------------------+
10 rows in set (0.000 sec)
```

Since there is no space in the search query '*F.D.Roosevelt HS*', the name of the school is still

selected since it is '*F.D. Roosevelt HS*' (with space)

24.

```
MariaDB [19610dm]> select * from teachers where school = 'Myers Middle School' and
Empty set (0.000 sec)
```

25.

```
MariaDB [19610dm]> select * from teachers where last_name = 'Cole' or last_name = 'Bush';
+------------+-----------+---------------------+------------+--------+
| first_name | last_name | school              | hire_date  | salary |
+------------+-----------+---------------------+------------+--------+
| Samuel     | Cole      | Myers Middle School | 2005-08-01 |  43500 |
+------------+-----------+---------------------+------------+--------+
1 row in set (0.000 sec)
```

26.

```
MariaDB [19610dm]> select * from teachers where school = 'F.D. Roosevelt HS' and (salary < 38000 or salary > 40000);
+------------+-----------+-------------------+------------+--------+
| first_name | last_name | school            | hire_date  | salary |
+------------+-----------+-------------------+------------+--------+
| Janet      | Smith     | F.D. Roosevelt HS | 2011-10-30 |  36200 |
| Lee        | Reynolds  | F.D. Roosevelt HS | 1993-05-22 |  65000 |
| Lionel     | Guth      | F.D. Roosevelt HS | 1999-07-21 |  40200 |
+------------+-----------+-------------------+------------+--------+
3 rows in set (0.000 sec)
```

27.

```
MariaDB [19610dm]> select first_name, last_name, school, hire_date, salary from
teachers where school like '%Roos%' order by hire_date desc;
+------------+-----------+-------------------+------------+--------+
| first_name | last_name | school            | hire_date  | salary |
+------------+-----------+-------------------+------------+--------+
| Janet      | Smith     | F.D. Roosevelt HS | 2011-10-30 |  36200 |
| Kathleen   | Diaz      | F.D. Roosevelt HS | 2010-10-22 |  38500 |
| Lionel     | Guth      | F.D. Roosevelt HS | 1999-07-21 |  40200 |
| Lee        | Reynolds  | F.D. Roosevelt HS | 1993-05-22 |  65000 |
+------------+-----------+-------------------+------------+--------+
4 rows in set (0.000 sec)
```