CSE370

Database Systems

Spring-24

Lab Assignment - 1

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Section: 13

TASK 1

BEFORE CREATING DATABASE:

```
MariaDB [(none)]> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| phpmyadmin         |
| test               |
+--------------------+
5 rows in set (0.001 sec)
```

DATABASE + TABLE CREATE:

CREATE DATABASE 22301061_FAIAZ_PRONOY_LAB_01;

USE 22301061_FAIAZ_PRONOY_LAB_01;

CREATE TABLE Developers (

       member_id int,

       name varchar(30),

       email varchar(30),

       influence_count int,

       Joining_date date,

       multiplier int);

```
MariaDB [(none)]> CREATE DATABASE 22301061_FAIAZ_PRONOY_LAB_01;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]> USE 22301061_FAIAZ_PRONOY_LAB_01;
Database changed
MariaDB [22301061_FAIAZ_PRONOY_LAB_01]> CREATE TABLE Developers(
    -> member_id int,
    -> name varchar(30),
    -> email varchar(30),
    -> influence_count int,
    -> Joining_date date,
    -> multiplier int);
Query OK, 0 rows affected (0.007 sec)
```

SHOW TABLES;

```
MariaDB [22301061_FAIAZ_PRONOY_LAB_01]> SHOW TABLES;
+--------------------------------------+
| Tables_in_22301061_faiaz_pronoy_lab_01 |
+--------------------------------------+
| developers                           |
+--------------------------------------+
```

DESCRIBE Developers;

```
MariaDB [22301061_FAIAZ_PRONOY_LAB_01]> DESCRIBE Developers;
+-----------------+-------------+------+-----+---------+-------+
| Field           | Type        | Null | Key | Default | Extra |
+-----------------+-------------+------+-----+---------+-------+
| member_id       | int(11)     | YES  |     | NULL    |       |
| name            | varchar(30) | YES  |     | NULL    |       |
| email           | varchar(30) | YES  |     | NULL    |       |
| influence_count | int(11)     | YES  |     | NULL    |       |
| Joining_date    | date        | YES  |     | NULL    |       |
| multiplier      | int(11)     | YES  |     | NULL    |       |
+-----------------+-------------+------+-----+---------+-------+
6 rows in set (0.028 sec)
```

INSERT INTO Developers VALUES

(1, 'Taylor Otwell', 'otwell@laravel.com', 739360, '2020-6-10', 10),

(2, 'Ryan Dahl', 'ryan@nodejs.org', 633632, '2020-04-22', 10),

(3, 'Brendan Eich', 'eich@javascript.com', 939570, '2020-05-07', 8),

(4, 'Evan You', 'you@vuejs.org', 982630, '2020-06-11', 7),

(5, 'Rasmus Lerdorf', 'lerdorf@php.net', 937927, '2020-06-3', 8),

(6, 'Guido van Rossum', 'guido@python.org', 968827, '2020-07-18', 19),

(7, 'Adrian Holovaty', 'adrian@djangoproject.com', 570724, '2020-05-07', 5),

(8, 'Simon Willison', 'simon@djangoproject.com', 864615, '2020-04-30', 4),

(9, 'James Gosling', 'james@java.com', 719491, '2020-05-18', 5),

(10, 'Rod Johnson', 'rod@spring.io', 601744, '2020-05-18', 7),

(11, 'Satoshi Nakamoto', 'nakamoto@blockchain.com', 630488, '2020-05-10', 10);

```
MariaDB [22301061_FAIAZ_PRONOY_LAB_01]> INSERT INTO Developers VALUES
    -> (1, 'Taylor Otwell', 'otwell@laravel.com', 739360, '2020-6-10', 10),
    -> (2, 'Ryan Dahl', 'ryan@nodejs.org', 633632, '2020-04-22', 10),
    -> (3, 'Brendan Eich', 'eich@javascript.com', 939570, '2020-05-07', 8),
    -> (4, 'Evan You', 'you@vuejs.org', 982630, '2020-06-11', 7),
    -> (5, 'Rasmus Lerdorf', 'lerdorf@php.net', 937927, '2020-06-3', 8),
    -> (6, 'Guido van Rossum', 'guido@python.org', 968827, '2020-07-18', 19),
    -> (7, 'Adrian Holovaty', 'adrian@djangoproject.com', 570724, '2020-05-07', 5),
    -> (8, 'Simon Willison', 'simon@djangoproject.com', 864615, '2020-04-30', 4),
    -> (9, 'James Gosling', 'james@java.com', 719491, '2020-05-18', 5),
    -> (10, 'Rod Johnson', 'rod@spring.io', 601744, '2020-05-18', 7),
    -> (11, 'Satoshi Nakamoto', 'nakamoto@blockchain.com', 630488, '2020-05-10', 10);
Query OK, 11 rows affected (0.002 sec)
Records: 11  Duplicates: 0  Warnings: 0
```

SELECT * FROM Developers;

```
MariaDB [22301061_FAIAZ_PRONOY_LAB_01]> SELECT * FROM Developers;
+-----------+-----------------+---------------------------+-----------------+--------------+------------+
| member_id | name            | email                     | influence_count | Joining_date | multiplier |
+-----------+-----------------+---------------------------+-----------------+--------------+------------+
|         1 | Taylor Otwell   | otwell@laravel.com        |          739360 | 2020-06-10   |         10 |
|         2 | Ryan Dahl       | ryan@nodejs.org           |          633632 | 2020-04-22   |         10 |
|         3 | Brendan Eich    | eich@javascript.com       |          939570 | 2020-05-07   |          8 |
|         4 | Evan You        | you@vuejs.org             |          982630 | 2020-06-11   |          7 |
|         5 | Rasmus Lerdorf  | lerdorf@php.net           |          937927 | 2020-06-03   |          8 |
|         6 | Guido van Rossum| guido@python.org          |          968827 | 2020-07-18   |         19 |
|         7 | Adrian Holovaty | adrian@djangoproject.com  |          570724 | 2020-05-07   |          5 |
|         8 | Simon Willison  | simon@djangoproject.com   |          864615 | 2020-04-30   |          4 |
|         9 | James Gosling   | james@java.com            |          719491 | 2020-05-18   |          5 |
|        10 | Rod Johnson     | rod@spring.io             |          601744 | 2020-05-18   |          7 |
|        11 | Satoshi Nakamoto| nakamoto@blockchain.com   |          630488 | 2020-05-10   |         10 |
+-----------+-----------------+---------------------------+-----------------+--------------+------------+
11 rows in set (0.000 sec)
```

TASK 2

ALTER TABLE Developers CHANGE influence_count followers int not null;

SELECT * FROM Developers;

```
MariaDB [22301061_faiaz_pronoy_lab_01]> ALTER TABLE Developers CHANGE influence_count followers int not null;
Query OK, 0 rows affected (0.052 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [22301061_faiaz_pronoy_lab_01]> SELECT * FROM Developers;
+-----------+-----------------+---------------------------+-----------+--------------+------------+
| member_id | name            | email                     | followers | Joining_date | multiplier |
+-----------+-----------------+---------------------------+-----------+--------------+------------+
|         1 | Taylor Otwell   | otwell@laravel.com        |    739360 | 2020-06-10   |         10 |
|         2 | Ryan Dahl       | ryan@nodejs.org           |    633632 | 2020-04-22   |         10 |
|         3 | Brendan Eich    | eich@javascript.com       |    939570 | 2020-05-07   |          8 |
|         4 | Evan You        | you@vuejs.org             |    982630 | 2020-06-11   |          7 |
|         5 | Rasmus Lerdorf  | lerdorf@php.net           |    937927 | 2020-06-03   |          8 |
|         6 | Guido van Rossum| guido@python.org          |    968827 | 2020-07-18   |         19 |
|         7 | Adrian Holovaty | adrian@djangoproject.com  |    570724 | 2020-05-07   |          5 |
|         8 | Simon Willison  | simon@djangoproject.com   |    864615 | 2020-04-30   |          4 |
|         9 | James Gosling   | james@java.com            |    719491 | 2020-05-18   |          5 |
|        10 | Rod Johnson     | rod@spring.io             |    601744 | 2020-05-18   |          7 |
|        11 | Satoshi Nakamoto| nakamoto@blockchain.com   |    630488 | 2020-05-10   |         10 |
+-----------+-----------------+---------------------------+-----------+--------------+------------+
11 rows in set (0.001 sec)
```

TASK 3

UPDATE Developers SET followers = followers + 10;

SELECT * FROM Developers;

```
MariaDB [22301061_faiaz_pronoy_lab_01]> UPDATE Developers SET followers = followers + 10;
Query OK, 11 rows affected (0.002 sec)
Rows matched: 11  Changed: 11  Warnings: 0

MariaDB [22301061_faiaz_pronoy_lab_01]> SELECT * FROM Developers;
+-----------+-----------------+---------------------------+-----------+--------------+------------+
| member_id | name            | email                     | followers | Joining_date | multiplier |
+-----------+-----------------+---------------------------+-----------+--------------+------------+
|         1 | Taylor Otwell   | otwell@laravel.com        |    739370 | 2020-06-10   |         10 |
|         2 | Ryan Dahl       | ryan@nodejs.org           |    633642 | 2020-04-22   |         10 |
|         3 | Brendan Eich    | eich@javascript.com       |    939580 | 2020-05-07   |          8 |
|         4 | Evan You        | you@vuejs.org             |    982640 | 2020-06-11   |          7 |
|         5 | Rasmus Lerdorf  | lerdorf@php.net           |    937937 | 2020-06-03   |          8 |
|         6 | Guido van Rossum| guido@python.org          |    968837 | 2020-07-18   |         19 |
|         7 | Adrian Holovaty | adrian@djangoproject.com  |    570734 | 2020-05-07   |          5 |
|         8 | Simon Willison  | simon@djangoproject.com   |    864625 | 2020-04-30   |          4 |
|         9 | James Gosling   | james@java.com            |    719501 | 2020-05-18   |          5 |
|        10 | Rod Johnson     | rod@spring.io             |    601754 | 2020-05-18   |          7 |
|        11 | Satoshi Nakamoto| nakamoto@blockchain.com   |    630498 | 2020-05-10   |         10 |
+-----------+-----------------+---------------------------+-----------+--------------+------------+
11 rows in set (0.001 sec)
```

TASK 4

SELECT name, ((followers*100/1000000) * (multiplier*100/20))/100 AS Efficiency FROM Developers;

```
MariaDB [22301061_faiaz_pronoy_lab_01]> SELECT name, ((followers*100/1000000) * (multiplier*100/20))/100 AS Efficiency FROM Developers;
+-----------------+------------------+
| name            | Efficiency       |
+-----------------+------------------+
| Taylor Otwell   | 36.968500000000  |
| Ryan Dahl       | 31.682100000000  |
| Brendan Eich    | 37.583200000000  |
| Evan You        | 34.392400000000  |
| Rasmus Lerdorf  | 37.517480000000  |
| Guido van Rossum| 92.039515000000  |
| Adrian Holovaty | 14.268350000000  |
| Simon Willison  | 17.292500000000  |
| James Gosling   | 17.987525000000  |
| Rod Johnson     | 21.061390000000  |
| Satoshi Nakamoto| 31.524900000000  |
+-----------------+------------------+
11 rows in set (0.000 sec)
```

TASK 5

SELECT UPPER(name) AS Name, Joining_date FROM Developers ORDER BY Joining_date DESC;

```
MariaDB [22301061_FAIAZ_PRONOY_LAB_01]> SELECT UPPER(name) AS Name, Joining_date FROM Developers ORDER BY Joining_date DESC;
+------------------+--------------+
| Name             | Joining_date |
+------------------+--------------+
| GUIDO VAN ROSSUM | 2020-07-18   |
| EVAN YOU         | 2020-06-11   |
| TAYLOR OTWELL    | 2020-06-10   |
| RASMUS LERDORF   | 2020-06-03   |
| JAMES GOSLING    | 2020-05-18   |
| ROD JOHNSON      | 2020-05-18   |
| SATOSHI NAKAMOTO | 2020-05-10   |
| BRENDAN EICH     | 2020-05-07   |
| ADRIAN HOLOVATY  | 2020-05-07   |
| SIMON WILLISON   | 2020-04-30   |
| RYAN DAHL        | 2020-04-22   |
+------------------+--------------+
11 rows in set (0.008 sec)
```

TASK 6

SELECT member_id, name, email, followers FROM Developers where email LIKE '%.com' or email LIKE '%.net';

```
MariaDB [22301061_FAIAZ_PRONOY_LAB_01]> SELECT member_id, name, email, followers FROM Developers where email LIKE '%.com' or email LIKE '%.net';
+-----------+------------------+-------------------------+-----------+
| member_id | name             | email                   | followers |
+-----------+------------------+-------------------------+-----------+
|         1 | Taylor Otwell    | otwell@laravel.com      |    739360 |
|         3 | Brendan Eich     | eich@javascript.com     |    939570 |
|         5 | Rasmus Lerdorf   | lerdorf@php.net         |    937927 |
|         7 | Adrian Holovaty  | adrian@djangoproject.com|    570724 |
|         8 | Simon Willison   | simon@djangoproject.com |    864615 |
|         9 | James Gosling    | james@java.com          |    719491 |
|        11 | Satoshi Nakamoto | nakamoto@blockchain.com |    630488 |
+-----------+------------------+-------------------------+-----------+
7 rows in set (0.001 sec)
```