

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FALL 2022

COURSE CODE:CSE370

LAB HOMEWORK:01

SECTION:05

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Soon after joining Google's elite dev team, Area 120, you were assigned to a project using MySQL since it was your specialty. The project was a social media platform specialized in allowing developers from all over the globe to connect to each other, and it would have features similar to Facebook. For your first task, you have been assigned to work on the tables of one of the project databases. The table name is "Developers" which is shown below.

member_id	name	email	influence_count	Joining_date	multiplier
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
5	Evan You	you@vuejs.org	982630	2020-06-11	7
6	Rasmus Lerdorf	lerdorf@php.net	937927	2020-06-3	8
7	Guido van Rossum	guido@python.org	968827	2020-07-18	19
8	Adrian Holovaty	adrian@djangoproject.com	570724	2020-05-07	5
9	Simon Willison	simon@djangoproject.com	864615	2020-04-30	4
10	James Gosling	james@java.com	719491	2020-05-18	5
11	Rod Johnson	rod@spring.io	601744	2020-05-18	7

12	Satoshi Nakamoto	nakamoto@blockcha in.com	630488	2020-05-10	10
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Write the queries of the tasks given below [5 X 2 = 10].

1. Create the above table with appropriate data type for each column
2. Change the column name “influence\_count”. The new name should be “followers” and the data type should be integer.
3. Update the number of followers of each developer by +10.
4. Show the name, email, and follower number of the developers.
5. There is a formula to find the efficiency of the developers.  

$$\text{Efficiency} = ((\text{followers} * 100 / 1000000) * (\text{multipliers} * 100 / 20)) / 100.$$
Show the efficiency of each developer in a column named “Efficiency” along with their name.

## TASK:1

```
CREATE TABLE Developers(  
member_id int,  
name varchar(40),  
email varchar(50),  
Influence_count int,  
joining_date date,  
multiplier int  
);
```

```
Setting environment for using XAMPP for Windows.  
Asus@DESKTOP-3C0VH90 c:\xampp  
# mysql -u root -p  
Enter password:  
Welcome to the MariaDB monitor.  Commands end with ; or \g.  
Your MariaDB connection id is 9  
Server version: 10.4.25-MariaDB mariadb.org binary distribution  
  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
MariaDB [(none)]> use cse370_hw02;  
Database changed  
MariaDB [cse370_hw02]> show tables;  
Empty set (0.001 sec)  
  
MariaDB [cse370_hw02]> CREATE TABLE Developers(  
-> member_id int,  
-> name varchar(40),  
-> email varchar(50),  
-> influence_count int,  
-> joining_date date,  
-> multiplier int  
-> );  
Query OK, 0 rows affected (0.043 sec)  
  
MariaDB [cse370_hw02]> describe Developers;  
+-----+-----+-----+-----+-----+-----+  
| Field          | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| member_id      | int(11)       | YES  |     | NULL    |       |  
| name           | varchar(40)   | YES  |     | NULL    |       |  
| email          | varchar(50)   | YES  |     | NULL    |       |  
| influence_count | int(11)       | YES  |     | NULL    |       |  
| joining_date   | date          | YES  |     | NULL    |       |  
| multiplier     | int(11)       | YES  |     | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
6 rows in set (0.016 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), ('5', 'Evan You', 'you@vuejs.org', '982630', '2020-06-11', 7), ('6', 'Rasmus Lerdorf', 'lerdorf@php.net', '937927', '2020-06-3', 8), ('7', 'Guido van Rossum', 'guido@python.org', '968827', '2020-07-18', 19), ('8', 'Adrian Holovaty', 'adrian@django project.com', '570724', '2020-05-07', 5), ('9', 'Simon Willison', 'simon@django project.com', '864615', '2020-04-30', 4), ('10', 'James Gosling', 'james@java.com', '719491', '2020-05-18', 5), ('11', 'Rod Johnson', 'rod@spring.io', '601744', '2020-05-18', 7), ('12', 'Satoshi Nakamoto', 'nakamoto@blockchain.com', '630488', '2020-05-10', 10);`

```
MariaDB [cse370_hw02]> 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
5	Evan You	you@vuejs.org	982630	2020-06-11	7
6	Rasmus Lerdorf	lerdorf@php.net	937927	2020-06-03	8
7	Guido van Rossum	guido@python.org	968827	2020-07-18	19
8	Adrian Holovaty	adrian@django project.com	570724	2020-05-07	5
9	Simon Willison	simon@django project.com	864615	2020-04-30	4
10	James Gosling	james@java.com	719491	2020-05-18	5
11	Rod Johnson	rod@spring.io	601744	2020-05-18	7
12	Satoshi Nakamoto	nakamoto@blockchain.com	630488	2020-05-10	10

11 rows in set (0.001 sec)

## TASK:2

**ALTER TABLE** Developers **CHANGE COLUMN** influence\_count followers int;

```
MariaDB [cse370_hw02]> ALTER TABLE Developers CHANGE COLUMN influence_count followers int;
Query OK, 0 rows affected (0.019 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
MariaDB [cse370_hw02]> describe Developers;
```

Field	Type	Null	Key	Default	Extra
member_id	int(11)	YES		NULL	
name	varchar(40)	YES		NULL	
email	varchar(50)	YES		NULL	
followers	int(11)	YES		NULL	
joining_date	date	YES		NULL	
multiplier	int(11)	YES		NULL	

```
6 rows in set (0.020 sec)
```

```
MariaDB [cse370_hw02]> 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
5	Evan You	you@vuejs.org	982630	2020-06-11	7
6	Rasmus Lerdorf	lerdorf@php.net	937927	2020-06-03	8
7	Guido van Rossum	guido@python.org	968827	2020-07-18	19
8	Adrian Holovaty	adrian@django-project.com	570724	2020-05-07	5
9	Simon Willison	simon@django-project.com	864615	2020-04-30	4
10	James Gosling	james@java.com	719491	2020-05-18	5
11	Rod Johnson	rod@spring.io	601744	2020-05-18	7
12	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;

```
MariaDB [cse370_hw02]> UPDATE Developers SET followers=followers+10;  
Query OK, 11 rows affected (0.007 sec)  
Rows matched: 11  Changed: 11  Warnings: 0
```

```
MariaDB [cse370_hw02]> 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
5	Evan You	you@vuejs.org	982640	2020-06-11	7
6	Rasmus Lerdorf	lerdorf@php.net	937937	2020-06-03	8
7	Guido van Rossum	guido@python.org	968837	2020-07-18	19
8	Adrian Holovaty	adrian@django project.com	570734	2020-05-07	5
9	Simon Willison	simon@django project.com	864625	2020-04-30	4
10	James Gosling	james@java.com	719501	2020-05-18	5
11	Rod Johnson	rod@spring.io	601754	2020-05-18	7
12	Satoshi Nakamoto	nakamoto@blockchain.com	630498	2020-05-10	10

```
11 rows in set (0.001 sec)
```

#### TASK:4

`SELECT` name,email,followers `FROM` Developers;

```
MariaDB [cse370_hw02]> SELECT name,email,followers FROM Developers;
+-----+-----+-----+
| name          | email                      | followers |
+-----+-----+-----+
| Taylor Otwell | otwell@laravel.com        | 739370   |
| Ryan Dahl     | ryan@nodejs.org           | 633642   |
| Brendan Eich  | eich@javascript.com       | 939580   |
| Evan You      | you@vuejs.org             | 982640   |
| Rasmus Lerdorf| lerdorf@php.net           | 937937   |
| Guido van Rossum| guido@python.org         | 968837   |
| Adrian Holovaty| adrian@django project.com | 570734   |
| Simon Willison| simon@django project.com  | 864625   |
| James Gosling  | james@java.com            | 719501   |
| Rod Johnson    | rod@spring.io             | 601754   |
| Satoshi Nakamoto| nakamoto@blockchain.com  | 630498   |
+-----+-----+-----+
11 rows in set (0.001 sec)
```

## **TASK:5**

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

```
MariaDB [cse370_hw02]> 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 (0.001 sec)
```