DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FALL 2022 COURSE CODE:CSE370

LAB HOMEWORK:01 SECTION:05 NAME:NUR-E-JANNAT ID:21301744

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 one the tables of one of the project databases. The table name is "Developers" which is shown below.

member _id	name	email	influence_co unt	Joining_dat e	multipli er
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@djangoprojec t.com	570724	2020-05-07	5
9	Simon Willison	simon@djangoprojec t.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

Satoshi nakamoto@blockcha 630488 2020-05-	-10 10
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Write the queries of the tasks given below $[5 \times 2 = 10]$.

- 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.

 Efficiency = ((followers*100/1000000) * (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
  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@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@blockchain.com', '630488', '2020-05-10', 10);

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@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@blockchain.com	630488	2020-05-10	10

TASK:2

ALTER TABLE Developers CHANGE COLUMN influence_count followers int;

0_hw02]> describ 		;				
+	+ Null Kev					
		Default	Extra	-+		
int(11) varchar(40) varchar(50) int(11) date int(11)		NULL NULL NULL NULL NULL NULL				
(0.020 sec) 0_hw02]> SELECT	* FROM Devel					
 name	-+	opers; 	-	followers	joining_date	+ multiplier
name Taylor Otwell	-+			followers 739360	joining_date	+ multiplier
 Taylor Otwell Ryan Dahl	-+ email -+ otwell@la ryan@node	ravel.com	- 	739360 633632	2020-06-10 2020-04-22	
Taylor Otwell Nyan Dahl Brendan Eich	-+ email -+ otwell@la ryan@node eich@java	ravel.com js.org script.com	-	739360 633632 939570	2020-06-10 2020-04-22 2020-05-07	10 10 8
Taylor Otwell Ryan Dahl Brendan Eich Evan You	-+ email -+ otwell@la ryan@node eich@java you@vuejs	ravel.com js.org script.com	 	739360 633632 939570 982630	2020-06-10 2020-04-22 2020-05-07 2020-06-11	10 10 8 7
Taylor Otwell Ryan Dahl Brendan Eich Evan You Rasmus Lerdorf	-+	ravel.com js.org script.com .org hp.net		739360 633632 939570 982630 937927	2020-06-10 2020-04-22 2020-05-07 2020-06-11 2020-06-03	10 10 8 7
Taylor Otwell Ryan Dahl Brendan Eich Evan You Rasmus Lerdorf Guido van Rossum	-+	ravel.com js.org script.com .org hp.net hon.org		739360 633632 939570 982630 937927 968827	2020-06-10 2020-04-22 2020-05-07 2020-06-11 2020-06-03 2020-07-18	10 10 8 7 8
Taylor Otwell Ryan Dahl Brendan Eich Evan You Rasmus Lerdorf Guido van Rossum Adrian Holovaty	-+	ravel.com js.org script.com .org hp.net hon.org		739360 633632 939570 982630 937927 968827 570724	2020-06-10 2020-04-22 2020-05-07 2020-06-11 2020-06-03 2020-07-18 2020-05-07	10 10 8 7 8 19
Taylor Otwell Ryan Dahl Brendan Eich Evan You Rasmus Lerdorf Guido van Rossum Adrian Holovaty Simon Willison	-+	ravel.com js.org script.com .org hp.net hon.org angoproject		739360 633632 939570 982630 937927 968827 570724 864615	2020-06-10 2020-04-22 2020-05-07 2020-06-11 2020-06-03 2020-07-18 2020-05-07 2020-04-30	10 10 8 7 8 19 5
Taylor Otwell Ryan Dahl Brendan Eich Evan You Rasmus Lerdorf Guido van Rossum Adrian Holovaty	-+	ravel.com js.org script.com .org hp.net hon.org angoproject a.com		739360 633632 939570 982630 937927 968827 570724	2020-06-10 2020-04-22 2020-05-07 2020-06-11 2020-06-03 2020-07-18 2020-05-07	10 10 10 8 7 8 19
(int(11)	int(11)	int(11)	int(11)	int(11)	int(11)

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
              Taylor Otwell
                                  otwell@laravel.com
                                                                  739370
                                                                           2020-06-10
                                                                                                   10
          2
              Ryan Dahl
                                  ryan@nodejs.org
                                                                 633642
                                                                           2020-04-22
                                                                                                   10
              Brendan Eich
                                                                 939580
                                                                           2020-05-07
          3
                                  eich@javascript.com
                                                                                                    8
              Evan You
                                  you@vuejs.org
                                                                  982640
                                                                           2020-06-11
              Rasmus Lerdorf
                                  lerdorf@php.net
                                                                  937937
                                                                           2020-06-03
                                                                                                    8
                                  guido@python.org
              Guido van Rossum
                                                                  968837
                                                                           2020-07-18
                                                                                                   19
              Adrian Holovaty
                                  adrian@djangoproject.com
                                                                  570734
                                                                           2020-05-07
              Simon Willison
                                  simon@djangoproject.com
                                                                           2020-04-30
                                                                  864625
         10
              James Gosling
                                  james@java.com
                                                                  719501
                                                                           2020-05-18
              Rod Johnson
                                  rod@spring.io
                                                                  601754
                                                                           2020-05-18
         11
         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;

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@djangoproject.com	570734
Simon Willison	simon@djangoproject.com	864625
James Gosling	james@java.com	719501
Rod Johnson	rod@spring.io	601754
Satoshi Nakamoto	nakamoto@blockchain.com	630498

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;
                      | Efficiency
 name
                      36.968500000000
  Taylor Otwell
                      31.682100000000
  Ryan Dahl
                      37.583200000000
34.392400000000
 Brendan Eich
  Evan You
  Rasmus Lerdorf
                      37.517480000000
 Guido van Rossum | 92.039515000000
Adrian Holovaty | 14.268350000000
Simon Willison | 17.292500000000
                      17.987525000000
  James Gosling
 Rod Johnson
                       21.061390000000
 Satoshi Nakamoto | 31.524900000000 |
11 rows in set (0.001 sec)
```