## **Department of Computer Science and Engineering**

Course Code: CSE 370	Credits: 3.0
Course Name: Database Systems	

#### Lab Homework 1

## **TASK 1:**

create database lab2\_homework; use lab2\_homework;

```
MariaDB [(none)]> create database lab2_homework;
Query OK, 1 row affected (0.001 sec)
MariaDB [(none)]> use lab2_homework;
Database changed
```

### CREATE TABLE Developers (

- -> member id INT NOT NULL AUTO INCREMENT,
- -> name varchar(30),
- -> email varchar(70),
- -> influence\_count int(10),
- -> joining date date,
- -> multiplier int(5),
- -> PRIMARY KEY (member id)
- -> );

```
MariaDB [lab2_homework]> CREATE TABLE Developers (
-> member_id INT NOT NULL AUTO_INCREMENT,
-> name varchar(30),
-> email varchar(70),
-> influence_count int(10),
-> joining_date date,
-> multiplier int(5),
-> PRIMARY KEY (member_id)
-> );
Query OK, 0 rows affected (0.009 sec)
```

INSERT INTO Developers (member\_id, name, email, influence\_count, joining\_date, multiplier)

- -> VALUES
- -> (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);

```
(ariaDB [lab2_homework]> INSERT INTO Developers (member_id, name, email, influence_count, joining_date, multiplier
      -> VALUES
-> (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);
ry OK, 11 rows affected (0.004 sec)
       -> VALUES
-> (12, 'Satoshi Nakamoto', 'nakam
Query OK, 11 rows affected (0.004 sec)
 Records: 11 Duplicates: 0 Warnings: 0
MariaDB [lab2_homework]> select * from Developers;
   member id | name
                                                            email
                                                                                                               influence_count | joining_date | multiplier
                         Taylor Otwell
                                                             otwell@laravel.com
                                                                                                               739360
                                                                                                                                                 2020-06-10
                                                                                                                                                                                            10
                                                             ryan@nodejs.org
                                                                                                                                                 2020-04-22
                                                                                                                                                                                            10
                         Rvan Dahl
                                                                                                               633632
                         Brendan Eich
                                                                                                                                                 2020-05-07
                                                             eich@javascript.com
                                                                                                               939570
                         Evan You
                                                             you@vuejs.org
lerdorf@php.net
                                                                                                               982630
                                                                                                                                                 2020-06-11
                         Rasmus Lerdorf
                                                                                                                                                                                             8
                                                                                                               937927
                                                                                                                                                 2020-06-03
                                                                                                                                                                                            19
5
                         Guido van Rossum
                                                             guido@python.org
                                                                                                               968827
                                                                                                                                                 2020-07-18
                                                             adrian@djangoproject.com
                         Adrian Holovaty
                                                                                                                570724
                                                                                                                                                 2020-05-07
                                                             simon@djangoproject.com
                         Simon Willison
                                                                                                                864615
                                                                                                                                                 2020-04-30
                                                             james@java.com
                10
                         James Gosling
                                                                                                                719491
                                                                                                                                                 2020-05-18
                         Rod Johnson
                                                              rod@spring.io
                                                                                                                601744
                                                                                                                                                 2020-05-18
                         Satoshi Nakamoto
                                                             nakamoto@blockchain.com
                                                                                                                630488
                                                                                                                                                 2020-05-10
 1 rows in set (0.000 sec)
```

# TASK 2:

alter table Developers change column influence\_count followers int(10);

# TASK 3:

update Developers set followers= followers+10;

ember_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@djangoproject.com	570734	2020-05-07	5
9	Simon Willison	simon@djangoproject.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

# TASK 4:

select name, email, followers from Developers;

name	email 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 [lab2_homework]> select name, ((followers*100/1000000)*(multiplier*100/20))/100 as Efficiency from developers;
                     Efficiency
                     36.968500000000
 Taylor Otwell
 Ryan Dahl
                      31.682100000000
                      37.583200000000
34.392400000000
 Brendan Eich
 Evan You
                       37.517480000000
92.039515000000
 Rasmus Lerdorf
 Guido van Rossum
Adrian Holovaty
                      14.268350000000
17.292500000000
 Simon Willison
 James Gosling
                       17.987525000000
 Rod Johnson | 21.0613900000000
Satoshi Nakamoto | 31.524900000000
1 rows in set (0.001 sec)
```

#### **ALL SCREENSHOTS:**

```
Administrator: XAMPP for Windows - mysql -u root -p
       ariaDB [(none)]> create database lab2_homework;
uery OK, 1 row affected (0.001 sec)
       ariaDB [(none)]> use lab2_homework;
      lariaDB [(none)] use lab2_homework;
lariaDB [lab2_homework]> create table Developers;
lariaDB [lab2_homework]> create table Developers;
lariaDB [lab2_homework]> create table Developers
-> (member_id INT NOT NULL AUTO INCREMENT,
-> name varchar(30),
-> email varchar(70),
-> influence_count int(10),
-> joining_date date,
-> multiplier int(5)
-> )
       -> );
RROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'AUTO INCREM
RROR 1064 (42000),
NT,
NT,
name varchar(30),
email varchar(70),
influence count int(10),...' at line 2
MariaDB [lab2_homework]> CREATE TABLE Developers (
-> member_id INT NOT NULL AUTO_INCREMENT,
-> name varchar(30),
-> email varchar(70),
-> influence count int(10),
-> joining date date,
-> multiplier int(5),
-> PRIMARY KEY (member_id)
-> ;;
uscaffected (0.009 sec)
       ariaD8 [lab2_homework]> alter table Developers change column influence_count followers int(10);
uery OK, 0 rows affected (0.024 sec)
ecords: 0 Duplicates: 0 Warnings: 0
       ariaDB [lab2_homework]> select* from Developers;
mpty set (0.028 sec)
   MariaDB [lab2_homework]> alter table Developers change column followers influence_count char(10);
Query OK, 0 rows affected (0.033 sec)
Records: 0 Duplicates: 0 Warnings: 0
   Administrator: XAMPP for Windows - mysql -u root -p
      Administrator. XAMPP for Windows - mysql -u root -p

IariaDB [lab2_homework]> IMSERT INTO Developers (member_id, name, email, influence_count, joining_date, multiplier)

> VALUES

> (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, '2020-06-07', 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, '2020-06-03', 8),

> (8, 'Adrian Holovaty', 'adriangdjangorpoject.com', 570724, '2020-05-07', 5),

> (9, 'Simon Willison', 'simon@djangorpoject.com', 864615, '2020-04-30', 4),

> (10, 'James Gosling', 'james@javas.com', 719491, '2020-05-18', 7),

> (11, 'Rod Johnson', 'rod@spring.io', 601744, '2020-05-18', 7),

> (12, 'Satoshi Nakamoto', 'nakamoto@blockchain.com', 630488, '2020-05-10', 10);

Query OK, 11 rows affected (0.004 sec)

lecords: 11 Duplicates: 0 Warnings: 0
       ariaDB [lab2_homework]> select * from Developers;
                                                                                                                                                                           | influence_count | joining_date | multiplier
          member_id | name
                           1 Taylor Otwell otwell@laravel.com
2 Ryan Dahl ryan@nodejs.org
3 Brendan Eich eich@javascript.com
5 Evan You you@vuejs.org
6 Rasmus Lerdorf lerdorf@php.net
7 Guido van Rossum
8 Adrian Holovaty
9 Simon Willison simon@djangoproject.com
10 James Gosling james@java.com
11 Rod Johnson rou@spring.io
12 Satoshi Nakamoto nakamoto@blockchain.com
                                                                                                                                                                                                                                   2020-06-10
2020-04-22
2020-05-07
2020-06-11
2020-06-03
2020-07-18
2020-05-07
2020-04-30
2020-05-18
2020-05-18
                                                                                                                                                                               739360
633632
939570
982630
937927
968827
570724
864615
719491
601744
630488
                                                                                                                                                                                                                                                                                                        10
10
8
7
    11 rows in set (0.000 sec)
       ariaDB [lab2_homework]> alter table Developers change column influence_count followers int(10);
uery OK, 11 rows affected (0.031 sec)
ecords: 11 Duplicates: 0 Warnings: 0
       ariaDB [lab2_homework]> select * from Developers;
        member_id | name
                                                                                                                                                                            +----+
| followers | joining_date | multiplier |
                                                                                             email
```

Select Administrator: XAMPP for Windows - mysql -u root -p - o × ariaDB [lab2\_homework]> select \* from Developers; followers | joining\_date | multiplier member\_id | name ruman otwell@laravel.com
ryan@nodejs.org
eich@javascript.com
you@vuejs.org
lerdorf@php.net
guido@python.org
adrian@djangoproject.com
james@java.com
rod@spring.io
nakamoto@blockchain.com 739360 2020-06-10 633632 2020-04-12 939570 2020-05-07 932630 2020-05-13 937927 2020-06-03 96827 2020-05-18 570724 2020-05-18 64015 2020-05-18 601744 2020-05-18 630488 2020-05-10 1 | Taylor Otwell
2 | Ryan Dahl
3 | Brendan Eich
5 | Evan You
6 | Rasmus Lerdorf
7 | Guido van Rossum
8 | Adrian Holovaty
9 | Simon Willison
10 | James Gosling
11 | Rod Johnson
12 | Satoshi Nakamoto 11 rows in set (0.001 sec) ariaDB [lab2\_homework]> update Developers -> set followers= followers+10; uery OK, 11 rows affected (0.004 sec) ows matched: 11 Changed: 11 Warnings: 0 ariaDB [lab2\_homework]> select \* from Developers; | followers | joining\_date | multiplier | member\_id | name П 1 | Taylor Otwell
2 | Ryan Dahl
3 | Brendan Eich
5 | Evan You
6 | Rasmus Lerdorf
7 | Guido van Rossum
8 | Adrian Holovaty
9 | Simon Willison
10 | James Gosling
11 | Rod Johnson
12 | Satoshi Nakamoto otwell@laravel.com
ryan@nodejs.org
eich@javascript.com
you@vuejs.org
lerdorf@php.net
guido@python.org
adrian@djangoproject.com
simon@djangoproject.com
james@java.com
rod@spring.io
nakamoto@blockchain.com 730370 2020-66-10 633642 2020-64-22 930580 2020-69-67 982640 2020-66-03 95837 2020-66-03 95837 2020-67-38 570734 2020-65-07 864625 2020-64-38 719501 2020-65-18 630498 2020-65-18 1 rows in set (0.000 sec) MariaDB [lab2\_homework]> select name,email, followers from Developers; Select Administrator: XAMPP for Windows - mysql -u root -p | 10 | James Gosling | james@java.com | 11 | Rod Johnson | rod@spring.io | 12 | Satoshi Nakamoto | nakamoto@blockchain.com 7 | 11 rows in set (0.000 sec) ariaDB [lab2\_homework]> select name,email, followers from Developers; Taylor Otwell Ryan Dahl Brendan Eich 739370 633642 939580 982640 937937 968837 570734 864625 719501 601754 630498 ryan@nodejs.org eich@javascript.com Brendan Eich
Evan You
Rasmus Lerdorf
Guido van Rossum
Adrian Holovaty
Simon Willison
James Gosling
Rod Johnson
Satoshi Nakamoto eich@javascript.com
you@vuejs.org
lerdorf@php.net
guido@python.org
adrian@djangoproject.com
simon@djangoproject.com
james@java.com
rod@spring.io
nakamoto@blockchain.com 11 rows in set (0.000 sec) ariaDB [lab2\_homework]> select name, ((followers\*100/1000000)\*(multiplier\*100/20))/100 as Efficiency from developers; Taylor Otwell Ryan Dahl Brendan Eich 36.968500000000 31.682100000000 37.583200000000 34.392400000000 Brendan Eich Evan You Rasmus Lerdorf Guido van Rossum Adrian Holovaty Simon Willison James Gosling Rod Johnson Satoshi Nakamoto 34.392400000000
37.51748000000
92.039515000000
14.2683500000000
17.929500000000
21.061390000000
31.524900000000

1 rows in set (0.001 sec)