

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@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 [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@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);
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 |
+-----+-----+-----+-----+-----+-----+
| 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 (0.000 sec)
```

TASK 2:

alter table Developers change column influence_count followers int(10);

```
MariaDB [lab2_homework]> alter table Developers change column influence_count followers int(10);
Query OK, 11 rows affected (0.031 sec)
Records: 11 Duplicates: 0 Warnings: 0

MariaDB [lab2_homework]> 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@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         |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.001 sec)
```

TASK 3:

update Developers
set followers= followers+10;

```
MariaDB [lab2_homework]> 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@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         |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.000 sec)
```

TASK 4:

select name,email, followers from Developers;

```
MariaDB [lab2_homework]> 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 (0.000 sec)
```

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;
```

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)
```

ALL SCREENSHOTS:

```
Administrator: XAMPP for Windows - mysql -u root -p
MariaDB [(none)]> create database lab2_homework;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]> use lab2_homework;
Database changed
MariaDB [lab2_homework]> create table Developers;
ERROR 1113 (42000): A table must have at least 1 column
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)
-> );
ERROR 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 INCREMENT,
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)
-> );
Query OK, 0 rows affected (0.009 sec)

MariaDB [lab2_homework]> alter table Developers change column influence_count followers int(10);
Query OK, 0 rows affected (0.024 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [lab2_homework]> select* from Developers;
Empty 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
MariaDB [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@djangooproject.com', 570724, '2020-05-07', 5),
-> (9, 'Simon Willison', 'simon@djangooproject.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);
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 |
+-----+-----+-----+-----+-----+-----+
| 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@djangooproject.com | 570724          | 2020-05-07  | 5          |
| 9         | Simon Willison | simon@djangooproject.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 (0.000 sec)

MariaDB [lab2_homework]> alter table Developers change column influence_count followers int(10);
Query OK, 11 rows affected (0.031 sec)
Records: 11 Duplicates: 0 Warnings: 0

MariaDB [lab2_homework]> 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@djangooproject.com | 570724    | 2020-05-07  | 5          |
| 9         | Simon Willison | simon@djangooproject.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         |
+-----+-----+-----+-----+-----+-----+
```

```
Select Administrator: XAMPP for Windows - mysql -u root-p
MariaDB [lab2_homework]> 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)

MariaDB [lab2_homework]> update Developers
--> set followers= followers+10;
Query OK, 11 rows affected (0.004 sec)
Rows matched: 11 Changed: 11 Warnings: 0

MariaDB [lab2_homework]> 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 (0.000 sec)

MariaDB [lab2_homework]> 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 (0.000 sec)

MariaDB [lab2_homework]> 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 (0.000 sec)

MariaDB [lab2_homework]> 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)
```