

# CSE370: Database Systems

## LAB Assignment 01

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*Lab Section: 07*

**1. Create the above table with the appropriate data type for each column.**

**Query:**

mysql -u root -p

```
Setting environment for using XAMPP for Windows.  
Ishrak@DESKTOP-AN8S517 c:\xampp  
# mysql -u root -p  
Enter password:  
Welcome to the MariaDB monitor.  Commands end with ; or \g.  
Your MariaDB connection id is 8  
Server version: 10.4.32-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.
```

**Query:**

CREATE DATABASE 20301027\_LAB01;

```
MariaDB [(none)]> CREATE DATABASE 20301027_LAB01;  
Query OK, 1 row affected (0.011 sec)
```

**Query:**

USE 20301027\_LAB01;

```
MariaDB [(none)]> USE 20301027_LAB01;  
Database changed
```

**Query:**

CREATE TABLE Developers

```
(  
  
    member_id int,  
  
    name varchar(30),  
  
    email varchar(100),  
  
    influence_count int,  
  
    Joining_date date,  
  
    multiplier int  
  
);
```

```
MariaDB [20301027_LAB01]> CREATE TABLE Developers (  
-> member_id int,  
-> name varchar(30),  
-> email varchar(100),  
-> influence_count int,  
-> Joining_date date,  
-> multiplier int  
-> );  
Query OK, 0 rows affected (0.399 sec)
```

### Query:

DESCRIBE Developers;

```
MariaDB [20301027_LAB01]> DESCRIBE Developers;  
+-----+-----+-----+-----+-----+-----+  
| Field          | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| member_id      | int(11)       | YES  |     | NULL    |      |  
| name           | varchar(30)   | YES  |     | NULL    |      |  
| email          | varchar(100)  | YES  |     | NULL    |      |  
| influence_count | int(11)       | YES  |     | NULL    |      |  
| Joining_date   | date          | YES  |     | NULL    |      |  
| multiplier     | int(11)       | YES  |     | NULL    |      |  
+-----+-----+-----+-----+-----+-----+  
6 rows in set (0.005 sec)
```

### Query:

INSERT INTO Developers values

(1, "Taylor Otwell", "otwell@laravel.com", 739360, "2020\*6\*10", 10),

(2, "Ryan Dahl", "ryan@nodejs.org", 633632, "2020\*4\*22", 10),

```
(3, "Brendan Eich", "eich@javascript.com", 939570, "2020*5*07", 8),
(4, "Evan You", "you@vuejs.org", 982630, "2020*6*11", 7),
(5, "Rasmus Lerdorf", "lerdorf@php.net", 937927, "2020*6*3", 8),
(6, "Guido van Rossum", "guido@python.org", 968827, "2020*7*18", 19),
(7, "Adrian Holova", "adrian@django project.com", 570724, "2020*5*7", 5),
(8, "Simon Willison", "simon@django project.com", 864615, "2020*4*30", 4),
(9, "James Gosling", "james@java.com", 719491, "2020*5*18", 5),
(10, "Rod Johnson", "rod@spring.io", 601744, "2020*5*18", 7),
(11, "Satoshi Nakamoto", "nakamoto@blockchain.com", 630488, "2020*5*10", 10);
```

```
MariaDB [20301027_LAB01]> INSERT INTO Developers values
-> (1, "Taylor Otwell", "otwell@laravel.com", 739360, "2020*6*10", 10),
-> (2, "Ryan Dahl", "ryan@nodejs.org", 633632, "2020*4*22", 10),
-> (3, "Brendan Eich", "eich@javascript.com", 939570, "2020*5*07", 8),
-> (4, "Evan You", "you@vuejs.org", 982630, "2020*6*11", 7),
-> (5, "Rasmus Lerdorf", "lerdorf@php.net", 937927, "2020*6*3", 8),
-> (6, "Guido van Rossum", "guido@python.org", 968827, "2020*7*18", 19),
-> (7, "Adrian Holova", "adrian@django project.com", 570724, "2020*5*7", 5),
-> (8, "Simon Willison", "simon@django project.com", 864615, "2020*4*30", 4),
-> (9, "James Gosling", "james@java.com", 719491, "2020*5*18", 5),
-> (10, "Rod Johnson", "rod@spring.io", 601744, "2020*5*18", 7),
-> (11, "Satoshi Nakamoto", "nakamoto@blockchain.com", 630488, "2020*5*10", 10);
Query OK, 11 rows affected (0.325 sec)
Records: 11 Duplicates: 0 Warnings: 0
```

## Query:

```
SELECT * FROM Developers;
```

```
MariaDB [20301027_LAB01]> 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 Holova	adrian@django project.com	570724	2020-05-07	5
8	Simon Willison	simon@django project.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 (0.026 sec)
```

2. Change the column name "influence\_count". The new name should be "followers," and the data type should be integer.

Query:

```
ALTER TABLE Developers CHANGE influence_count followers int;
```

```
MariaDB [20301027_LAB01]> ALTER TABLE Developers CHANGE influence_count followers int;
Query OK, 0 rows affected (0.118 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Query:

```
SELECT * FROM Developers;
```

```
MariaDB [20301027_LAB01]> 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 Holova	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)
```

3. Update the number of followers of each developer by +10.

Query:

```
UPDATE Developers SET followers = followers + 10;
```

```
MariaDB [20301027_LAB01]> UPDATE Developers SET followers = followers + 10;
Query OK, 11 rows affected (0.149 sec)
Rows matched: 11 Changed: 11 Warnings: 0
```

Query:

```
SELECT * FROM Developers;
```

```
MariaDB [20301027_LAB01]> 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 Holova	adrian@django-project.com	570734	2020-05-07	5
8	Simon Willison	simon@django-project.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)
```

4. There is a formula to find the efficiency of the developers. Efficiency =  $((\text{followers} * 100 / 1000000) * (\text{multiplier} * 100 / 20)) / 100$ . Show the efficiency of each developer in a column named "Efficiency" along with their name.

Query:

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

```
MariaDB [20301027_LAB01]> 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 Holova	14.268350000000
Simon Willison	17.292500000000
James Gosling	17.987525000000
Rod Johnson	21.061390000000
Satoshi Nakamoto	31.524900000000

```
11 rows in set (0.047 sec)
```

5. Show the name of the developers in UpperCase and the descending order of their Joining\_date.

Query:

```
SELECT UPPER(name) AS name_uppercase, Joining_date
```

```
FROM Developers
```

ORDER BY Joining\_date DESC;

```
MariaDB [20301027_LAB01]> SELECT UPPER(name) AS name_uppercase, Joining_date
-> FROM Developers
-> ORDER BY Joining_date DESC;
```

name_uppercase	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 HOLOVA	2020-05-07
SIMON WILLISON	2020-04-30
RYAN DAHL	2020-04-22

11 rows in set (0.000 sec)

**6. Retrieve the member\_id, name, email and followers of the developers who have either ".com" or ".net" in their email address.**

**Query:**

SELECT member\_id, name, email, followers

FROM Developers

WHERE email LIKE '%.com' OR email LIKE '%.net';

```
MariaDB [20301027_LAB01]> 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	739370
3	Brendan Eich	eich@javascript.com	939580
5	Rasmus Lerdorf	lerdorf@php.net	937937
7	Adrian Holova	adrian@djangoproject.com	570734
8	Simon Willison	simon@djangoproject.com	864625
9	James Gosling	james@java.com	719501
11	Satoshi Nakamoto	nakamoto@blockchain.com	630498

7 rows in set (0.062 sec)