Lab Assignment-01

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Section: 05

Course code: CSE370

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Assignment

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

   ➢ **Command:**
   - create table table_name (
              Column1 datatype,
              Column2 datatype,
              Column3 datatype,
              ……..
              );

   - Insert   into   table_name(column1, column2, column3,……) value(value1, value2, value3,….);

   - select * from table_name;

       ✓ create table Developers
          -> (

```
    ->  member_id char(2),
    ->  name varchar(30),
    ->  email varchar(30),
    ->  influence_count int,
    ->  Joining_date date,
    ->  multiplier int
    -> );
```

✓ INSERT INTO Developers(member_id, name, email, influence_count, joining_date, multiplier)value

```
    ->        ('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);
```

✓ select * from developers;

```
MariaDB [area_120]> create table Developers
    -> (
    ->  member_id char(2),
    ->  name varchar(30),
    ->  email varchar(30),
    ->  influence_count int,
    ->  Joining_date date,
    ->  multiplier int
    -> );
Query OK, 0 rows affected (0.009 sec)

MariaDB [area_120]> show tables;
+-------------------+
| Tables_in_area_120 |
+-------------------+
| developers        |
+-------------------+
1 row in set (0.001 sec)

MariaDB [area_120]> describe developers;
+-----------------+-------------+------+-----+---------+-------+
| Field           | Type        | Null | Key | Default | Extra |
+-----------------+-------------+------+-----+---------+-------+
| member_id       | char(2)     | YES  |     | NULL    |       |
| name            | varchar(30) | YES  |     | NULL    |       |
| email           | varchar(30) | 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)
```

```
MariaDB [area_120]> INSERT INTO Developers(member_id, name, email, influence_count, joining_date, multiplier)value
    -> ('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);
Query OK, 11 rows affected (0.004 sec)
Records: 11  Duplicates: 0  Warnings: 0

MariaDB [area_120]> 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@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)
```

2. **Change the column name "influence_count". The new name should be "followers" and the data type should be integer:**

➢**Command:**
- alter table table_name change column old_name new_name datatype;

✓ alter table developers change column influence_count followers int;

```
MariaDB [area_120]> alter table developers change column  influence_count followers int;
Query OK, 0 rows affected (0.010 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [area_120]> 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)
```

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

➢ Command:

- update table_name set column_name=column_name+number ;

✓ update developers set followers=followers+10;

```
MariaDB [area_120]> update developers set followers=followers+10;
Query OK, 11 rows affected (0.004 sec)
Rows matched: 11  Changed: 11  Warnings: 0

MariaDB [area_120]> 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)
```

4. 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:

➢ **Command:**

- select column_name formula as given_name from table_name;

✓ select name, ((followers*100/1000000) * (multiplier*100/20))/100 as Efficiency from developers;

```
MariaDB [area_120]> 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 (0.000 sec)
```

5. Show the name and email of the developers who have the 5 highest numbers of followers:

➢**Command:**

- ▪ select column_name from table_name order by conditional_column_name desc limit number;
- ✓ select name, email from developers order by followers desc limit 5;

```
MariaDB [area_120]> select name, email from developers order by followers desc limit 5;
+------------------+-------------------------+
| name             | email                   |
+------------------+-------------------------+
| Evan You         | you@vuejs.org           |
| Guido van Rossum | guido@python.org        |
| Brendan Eich     | eich@javascript.com     |
| Rasmus Lerdorf   | lerdorf@php.net         |
| Simon Willison   | simon@djangoproject.com |
+------------------+-------------------------+
5 rows in set (0.001 sec)
```

6. Show the name of all users with the maximum multiplier among the developers whose number of followers is less than 700000:

➢**Command:**

▪ select column_name from table_name where conditional_column_name1<condition order by conditional_column_name2 desc;

✓ select name, multiplier from developers where followers<700000 order by

multiplier   desc;

```
MariaDB [area_120]> select name, multiplier from developers where followers<700000 order by multiplier desc;

+-----------------+------------+
| name            | multiplier |
+-----------------+------------+
| Ryan Dahl       |         10 |
| Satoshi Nakamoto|         10 |
| Rod Johnson     |          7 |
| Adrian Holovaty |          5 |
+-----------------+------------+
4 rows in set (0.000 sec)
```

7. Find the average of the number of followers but only consider the members who joined before 11 June 2020:

➤**Command:**

- select avg(column_name) as new_name from table_name where conditional_column_name<condition;

✓select avg(followers) as avg_followers from developers where joining_date<'2020-06-11';

8. Retrieve the member_ id, name, email and followers of the developers who have either ".com" or ".net" in their email address:

➢**Command:**

- ▪ select column_name from table_name where selected_column_name like '%clause1%' or selected_column_name like '%clause2%';

- ✓ select member_id, name, email, followers from developers where email like '%.com%' or email like '%.net%';

```
ariaDB [area_120]> 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 |
| 6         | Rasmus Lerdorf   | lerdorf@php.net           |    937937 |
| 8         | Adrian Holovaty  | adrian@djangoproject.com  |    570734 |
| 9         | Simon Willison   | simon@djangoproject.com   |    864625 |
| 10        | James Gosling    | james@java.com            |    719501 |
| 12        | Satoshi Nakamoto | nakamoto@blockchain.com   |    630498 |
+-----------+------------------+---------------------------+-----------+
rows in set (0.003 sec)
```