



Inspiring Excellence

CSE 370: Database Systems
Lab Homework 2
Section: 07



Submitted by:

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Current database State(starting from previous lab state)

```
MariaDB [370]> SELECT * FROM `Developers`;
```

member_id	name	email	followers	Joining_date	multipliers
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 (0.001 sec)
```

1. Show all the unique dates of the users joining in ascending order. [1]

Query for above solution, as asked in the question, showing only dates without any other information though it looks random but dates are queried in ascending order. Below is the query and output of the query.

```
SELECT DISTINCT `joining_date` as `Joined` FROM `Developers` ORDER BY  
`joining_date` ASC;
```

Output:

```
MariaDB [370]> SELECT DISTINCT `joining_date` as `Joined` FROM `Developers` ORDER BY `joining_date` ASC;
```

Joined
2020-04-22
2020-04-30
2020-05-07
2020-05-10
2020-05-18
2020-06-03
2020-06-10
2020-06-11
2020-07-18

```
9 rows in set (0.001 sec)
```

2. Show the name and email of the developers who have the 5 highest numbers of followers. [2]

Query for required solution, as asked, here is the query for retrieving name and email of 5 users with highest fan following. And from the data, it looks like the Vue.js creator Evan You has the most fan following.

```
SELECT `name`,`email` FROM `Developers` ORDER BY `followers` DESC LIMIT 5;
```

Output:

```
MariaDB [370]> 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@django-project.com |
+-----+-----+
5 rows in set (0.000 sec)

MariaDB [370]>
```

3. Count the number of developers in each multiplier [2]

The query for task 4, this query shows frequency of developer in each multiplier. Apart from what was asked, the query also sorts the results based on how many developers exist with the same multipliers.

```
SELECT `multipliers`,COUNT(*) AS `Number of Developer` FROM `Developers`
GROUP BY `multipliers` ORDER BY `Number of Developer`;
```

Output:

```
MariaDB [370]> SELECT `multipliers`,COUNT(*) AS `Number of Developer`
-> FROM `Developers` GROUP BY `multipliers` ORDER BY `Number of Developer`;
+-----+-----+
| multipliers | Number of Developer |
+-----+-----+
| 19         | 1                   |
| 4          | 1                   |
| 5          | 2                   |
| 8          | 2                   |
| 7          | 2                   |
| 10         | 3                   |
+-----+-----+
6 rows in set (0.001 sec)
```

4. Show the name of the user with the maximum multiplier among the developers whose number of followers is less than 700000. [2]

As asked, the result is below. In addition, the query also sorts the result based on the number of followers after sorting by multipliers in both ascending and descending order. After sorting followers in ascending order, we got the user Satoshi Nakamoto and with descending order sorting got Ryan Dahl..

```
SELECT `name`,`followers`,`multipliers` FROM `Developers` WHERE
```

```
`followers` < 700000 ORDER BY `multipliers` DESC, `followers` ASC LIMIT 1;
```

Outputs:

```
MariaDB [370]> SELECT `name`,`followers`,`multipliers` FROM `Developers` WHERE `followers` < 700000 ORDER BY `multipliers` DESC, `followers` ASC LIMIT 1;
+-----+-----+-----+
| name          | followers | multipliers |
+-----+-----+-----+
| Satoshi Nakamoto | 630498   | 10          |
+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [370]>
MariaDB [370]> SELECT `name`,`followers`,`multipliers` FROM `Developers` WHERE `followers` < 700000 ORDER BY `multipliers` DESC, `followers` DESC LIMIT 1;
+-----+-----+-----+
| name          | followers | multipliers |
+-----+-----+-----+
| Ryan Dahl     | 633642   | 10          |
+-----+-----+-----+
1 row in set (0.000 sec)
```

5. Find the average of the number of followers but only consider the members who joined before 11 June 2020. [2]

Answer to the question 5,

```
SELECT AVG(`followers`) AS `average_followers` of users who joined before 2020-06-11` FROM `Developers` WHERE `Joining_date` < '2020-06-11';
```

Outputs:

```
MariaDB [370]> SELECT AVG(`followers`) AS `average_followers` of users who joined before 2020-06-11` FROM `Developers` WHERE `Joining_date` < '2020-06-11';
+-----+
| average_followers of users who joined before 2020-06-11 |
+-----+
| 737515.6667 |
+-----+
1 row in set (0.001 sec)
```

6. Retrieve the id, name, email, and followers of the developers who have either “.com” or “.net” in their email address. [1]

Answer the the question 6,

```
SELECT `member_id` AS `Developer ID`, `name`, `email`, `followers` FROM `Developers` WHERE `email` LIKE '%.com' OR `email` LIKE '%.net';
```

Outputs:

```
MariaDB [370]> SELECT `member_id` AS `Developer ID`, `name`, `email`, `followers` FROM `Developers` WHERE `email` LIKE '%.com' OR `email` LIKE '%.net';
+-----+-----+-----+-----+
| Developer 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@django project.com | 570734    |
| 9            | Simon Willison | simon@django project.com | 864625    |
| 10           | James Gosling  | james@java.com      | 719501    |
| 12           | Satoshi Nakamoto | nakamoto@blockchain.com | 630498    |
+-----+-----+-----+-----+
7 rows in set (0.004 sec)
```