Q1. Create the above table with appropriate data type for each column.
Ans:

Command : CREATE DATABASE Lab_Assignment_01;

```
mysql> CREATE DATABASE Lab_Assignment_01;
Query OK, 1 row affected (0.00 sec)
```

Command : USE Lab_Assignment_01;

```
mysql> USE lab_assignment_01;
Database changed
```

Command :

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

```
Database changed
mysql> 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 (0.02 sec)
```

Command : DESCRIBE developers;

```
mysql> 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 (0.02 sec)
```

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

```
mysql> 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),
    -> (5, "Evan You", "you@vuejs.org", 982630, "2020*6*11", 7),
    -> (6, "Rasmus Lerdorf", "lerdorf@php.net", 937927, "2020*6*3", 8),
    -> (7, "Guido van Rossum", "guido@python.org", 968827, "2020*7*18", 19),
    -> (8, "Adrian Holova", "adrian@djangoproject.com", 570724, "2020*5*7", 5),
    -> (9, "Simon Willison", "simon@djangoproject.com", 864615, "2020*4*30", 4),
    -> (10, "James Gosling", "james@java.com", 719491, "2020*5*18", 5),
    -> (11, "Rod Johnson", "rod@spring.io", 601744, "2020*5*18", 7),
    -> (12, "Satoshi Nakamoto", "nakamoto@blockchain.com", 630488, "2020*5*10", 10);
Query OK, 11 rows affected (0.01 sec)
Records: 11  Duplicates: 0  Warnings: 0
```

Command : SELECT * FROM developers;

```
mysql> 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 Holova   | 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 (0.00 sec)
```

Q2. Change the column name “influence_count”. The new name should be “followers” and the data type should be integer.

Command: ALTER TABLE developers CHANGE influence_count followers int;

```
mysql> ALTER TABLE developers
    -> CHANGE influence_count followers int;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> 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 Holova   | 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 (0.00 sec)
```

Q3. Update the number of followers of each developer by +10.
Command: UPDATE developers SET followers = followers + 10;

```
mysql> UPDATE developers
    -> SET followers = followers + 10;
Query OK, 11 rows affected (0.00 sec)
Rows matched: 11  Changed: 11  Warnings: 0

mysql> 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 Holova    | 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 (0.00 sec)
```

Q4. 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 name, ((followers*100/1000000) * (multiplier*100/20))/100 as Efficiency FROM developers;

```
mysql> 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 (0.00 sec)
```

Q5. Show the name and email of the developers who have the 5 highest numbers of followers.
Command: SELECT * FROM developers ORDER BY followers DESC LIMIT 5;

```
mysql> SELECT * FROM developers
    -> ORDER BY followers DESC
    -> LIMIT 5;
+-----------+-----------------+-----------------------+-----------+--------------+------------+
| member_id | name            | email                 | followers | Joining_date | multiplier |
+-----------+-----------------+-----------------------+-----------+--------------+------------+
|         5 | Evan You        | you@vuejs.org         |    982640 | 2020-06-11   |          7 |
|         7 | Guido van Rossum | guido@python.org      |    968837 | 2020-07-18   |         19 |
|         3 | Brendan Eich    | eich@javascript.com   |    939580 | 2020-05-07   |          8 |
|         6 | Rasmus Lerdorf  | lerdorf@php.net       |    937937 | 2020-06-03   |          8 |
|         9 | Simon Willison  | simon@djangoproject.com |    864625 | 2020-04-30   |          4 |
+-----------+-----------------+-----------------------+-----------+--------------+------------+
5 rows in set (0.00 sec)
```

Q6. Show the name of all users with the maximum multiplier among the developers whose number of followers is less than 700000.

Command:

```
SELECT name FROM developers
WHERE followers < 700000 AND multiplier = (
   SELECT MAX(multiplier) FROM developers
   WHERE followers < 700000
 );
```

```
mysql>
mysql> SELECT name
    -> FROM developers
    -> WHERE followers < 700000
    ->   AND multiplier = (
    ->     SELECT MAX(multiplier)
    ->     FROM developers
    ->     WHERE followers < 700000
    ->   );
+------------------+
| name             |
+------------------+
| Ryan Dahl        |
| Satoshi Nakamoto |
+------------------+
2 rows in set (0.00 sec)
```

Q7. Find the average of the number of followers but only consider the members who joined before 11 June 2020

Command:
SELECT AVG(followers) AS AverageFollowers
FROM developers
WHERE joining_date < “2020-06-11”;

```
mysql> SELECT AVG(followers) AS AverageFollowers
    -> FROM developers
    -> WHERE joining_date < '2020-06-11';
+------------------+
| AverageFollowers |
+------------------+
|      737515.6667 |
+------------------+
1 row in set (0.00 sec)
```

Q8. Retrieve the member_ id, name, email and followers of the developers who have either ".com" or ".net" in their email address.

Command:
SELECT member_id, name, email, followers
FROM developers
WHERE email LIKE "%.com" OR email LIKE "%.net";

```
mysql> 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 Holova   | 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 |
+-----------+-----------------+--------------------------+-----------+
7 rows in set (0.00 sec)
```