```
Setting environment for using XAMPP for Windows.
rauf@RAUFBISWAS 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.

MariaDB [(none)]>
```

Command:

1. mysql -u root -p
2. SHOW DATABASES;
3. CREATE DATABASE BANK_22201782;
4. USE BANK_22201782;

Answers of the queries:

1. SELECT customer.customer_name, loan.loan_number FROM borrower
   JOIN loan ON borrower.loan_number = loan.loan_number
   AND loan.branch_name = 'Downtown'
   JOIN customer ON borrower.customer_id = customer.customer_id;

```
MariaDB [BANK_22201782]> SELECT customer.customer_name, loan.loan_number FROM borrower
    -> JOIN loan ON borrower.loan_number = loan.loan_number
    -> AND loan.branch_name = 'Downtown'
    -> JOIN customer ON borrower.customer_id = customer.customer_id;
+---------------+-------------+
| customer_name | loan_number |
+---------------+-------------+
| Johnson       | L-14        |
| Jones         | L-17        |
| Williams      | L-17        |
+---------------+-------------+
3 rows in set (0.001 sec)
```

2. SELECT c1.customer_name AS Customer1, c2.customer_name AS Customer2, c1.customer_city AS City FROM customer c1
   JOIN customer c2 ON c1.customer_city = c2.customer_city
   AND c1.customer_id < c2.customer_id;

```
MariaDB [BANK_22201782]> SELECT c1.customer_name AS Customer1, c2.customer_name AS Customer2, c1.customer_city AS City FROM customer c1
    -> JOIN customer c2 ON c1.customer_city = c2.customer_city
    -> AND c1.customer_id < c2.customer_id;
+-----------+-----------+-----------+
| Customer1 | Customer2 | City      |
+-----------+-----------+-----------+
| Jones     | Hayes     | Harrison  |
| Smith     | Curry     | Rye       |
| Lindsay   | Adams     | Pittsfield |
| Turner    | Green     | Stamford  |
+-----------+-----------+-----------+
4 rows in set (0.001 sec)
```

3. SELECT account.branch_name AS Branch_name,
   SUM(account.balance * 0.04) AS Total_Interest
   FROM account GROUP BY account.branch_name;

```
MariaDB [BANK_22201782]> SELECT account.branch_name AS Branch_name, SUM(account.balance * 0.04) AS Total_Interest
    -> FROM account GROUP BY account.branch_name;
+-------------+----------------+
| Branch_name | Total_Interest |
+-------------+----------------+
| Brighton    |          66.00 |
| Downtown    |          20.00 |
| Mianus      |          28.00 |
| Perryridge  |          16.00 |
| Redwood     |          28.00 |
| Round Hill  |          14.00 |
+-------------+----------------+
6 rows in set (0.000 sec)
```

4. SELECT acc.account_number, acc.balance, b.branch_city FROM account acc
   INNER JOIN branch b ON acc.branch_name = b.branch_name
   WHERE acc.balance = (
   SELECT MAX(acc2.balance) FROM account acc2
   INNER JOIN branch b2 ON acc2.branch_name = b2.branch_name
   WHERE b2.branch_city = b.branch_city
)

```
ORDER BY b.branch_city;
```

```
MariaDB [BANK_22201782]> SELECT acc.account_number, acc.balance, b.branch_city FROM account acc
    -> INNER JOIN branch b ON acc.branch_name = b.branch_name
    -> WHERE acc.balance = (
    -> SELECT MAX(acc2.balance) FROM account acc2
    -> INNER JOIN branch b2 ON acc2.branch_name = b2.branch_name
    -> WHERE b2.branch_city = b.branch_city
    -> )
    -> ORDER BY b.branch_city;
+----------------+---------+-------------+
| account_number | balance | branch_city |
+----------------+---------+-------------+
| A-201          |     900 | Brooklyn    |
| A-215          |     700 | Horseneck   |
| A-222          |     700 | Palo Alto   |
+----------------+---------+-------------+
3 rows in set (0.001 sec)
```

5.
```
SELECT * FROM (
SELECT loan.loan_number, amount, customer_name FROM loan
INNER JOIN borrower ON loan.loan_number =
borrower.loan_number
INNER JOIN customer ON customer.customer_id =
borrower.customer_id
order BY amount DESC limit 5
)
AS table1 ORDER BY amount, loan_number DESC;
```

```
MariaDB [BANK_22201782]> SELECT * FROM (
    -> SELECT loan.loan_number, amount, customer_name FROM loan
    -> INNER JOIN borrower ON loan.loan_number = borrower.loan_number
    -> INNER JOIN customer ON customer.customer_id = borrower.customer_id
    -> order BY amount DESC limit 5
    -> )
    -> AS table1 ORDER BY amount, loan_number DESC;
+-------------+--------+---------------+
| loan_number | amount | customer_name |
+-------------+--------+---------------+
| L-17        |   1000 | Jones         |
| L-16        |   1300 | Adams         |
| L-15        |   1500 | Hayes         |
| L-14        |   1500 | Johnson       |
| L-23        |   2000 | Smith         |
+-------------+--------+---------------+
5 rows in set (0.001 sec)
```

6. SELECT DISTINCT c.customer_name FROM customer c
   INNER JOIN depositor d ON c.customer_id = d.customer_id
   INNER JOIN account acc ON d.account_number =
   acc.account_number
   INNER JOIN borrower brr ON c.customer_id = brr.customer_id
   INNER JOIN loan l ON brr.loan_number = l.loan_number
   AND l.branch_name = acc.branch_name
   WHERE acc.branch_name = 'Perryridge';

```
MariaDB [BANK_22201782]> SELECT DISTINCT c.customer_name FROM customer c
    -> INNER JOIN depositor d ON c.customer_id = d.customer_id
    -> INNER JOIN account acc ON d.account_number = acc.account_number
    -> INNER JOIN borrower brr ON c.customer_id = brr.customer_id
    -> INNER JOIN loan l ON brr.loan_number = l.loan_number
    -> AND l.branch_name = acc.branch_name
    -> WHERE acc.branch_name = 'Perryridge';
+---------------+
| customer_name |
+---------------+
| Hayes         |
+---------------+
1 row in set (0.009 sec)
```

7. SELECT c.customer_name, SUM(l.amount) AS total_loan FROM customer c
   JOIN borrower brr ON c.customer_id = brr.customer_id
   JOIN loan l ON brr.loan_number = l.loan_number
   WHERE c.customer_id IN (
   SELECT brr2.customer_id FROM borrower brr2 GROUP BY brr2.customer_id HAVING COUNT(*) >= 2
)
   GROUP BY c.customer_id ORDER BY total_loan DESC;

```
MariaDB [BANK_22201782]> SELECT c.customer_name, SUM(l.amount) AS total_loan FROM customer c
    -> JOIN borrower brr ON c.customer_id = brr.customer_id
    -> JOIN loan l ON brr.loan_number = l.loan_number
    -> WHERE c.customer_id IN (
    -> SELECT brr2.customer_id FROM borrower brr2 GROUP BY brr2.customer_id HAVING COUNT(*) >= 2
    -> )
    -> GROUP BY c.customer_id ORDER BY total_loan DESC;
+---------------+------------+
| customer_name | total_loan |
+---------------+------------+
| Smith         |       2900 |
+---------------+------------+
1 row in set (0.001 sec)
```