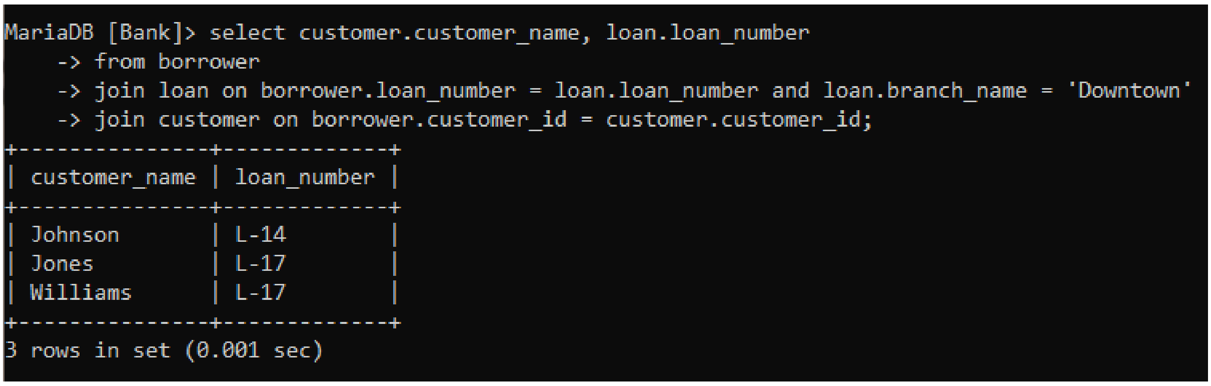
TASK - 01:

Objective: Finding the name and loan number of all customers having a loan at the Downtown branch.

Command=> *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;

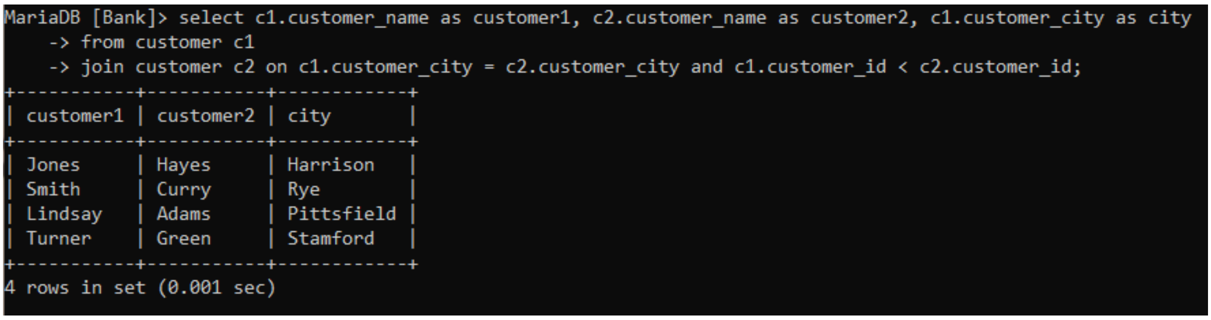


```
MariaDB [Bank]> select customer.customer_name, loan.loan_number
    -> from borrower
    -> join loan on borrower.loan_number = loan.loan_number and loan.branch_name = 'Downtown'
    -> join customer on borrower.customer_id = customer.customer_id;
+---------------+-------------+
| customer_name | loan_number |
+---------------+-------------+
| Johnson       | L-14        |
| Jones         | L-17        |
| Williams      | L-17        |
+---------------+-------------+
3 rows in set (0.001 sec)
```

TASK - 02:

Objective: Finding all the possible pairs of customers who are from the same city. showing in the format Customer1, Customer2, City.

Command=> *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;



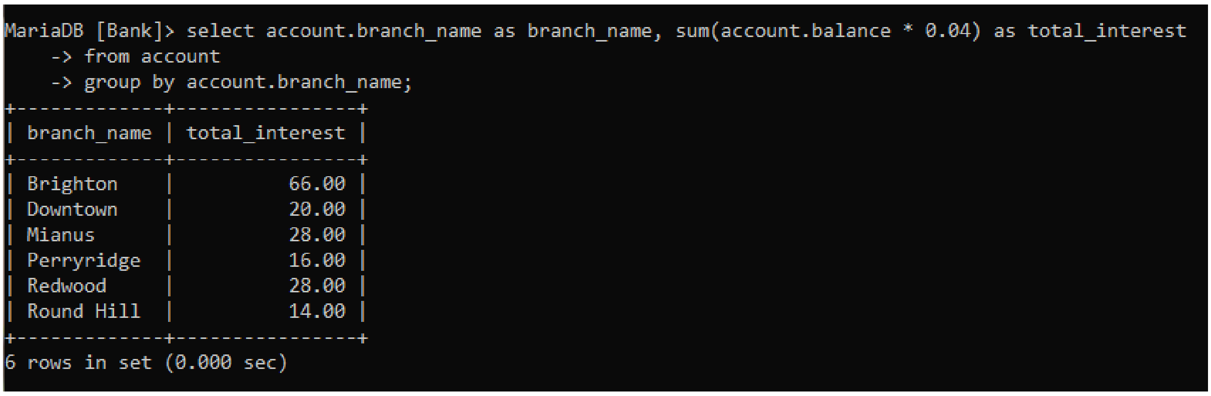
```
MariaDB [Bank]> select c1.customer_name as customer1, c2.customer_name as customer2, c1.customer_city as city
    -> from customer c1
    -> join customer c2 on c1.customer_city = c2.customer_city and c1.customer_id < c2.customer_id;
+-----------+-----------+------------+
| customer1 | customer2 | city       |
+-----------+-----------+------------+
| Jones     | Hayes     | Harrison   |
| Smith     | Curry     | Rye        |
| Lindsay   | Adams     | Pittsfield |
| Turner    | Green     | Stamford   |
+-----------+-----------+------------+
4 rows in set (0.001 sec)
```

TASK - 03:

Objective: If the bank gives out 4% interest to all accounts, showing the total interest across each branch. Printing Branch_name, Total_Interest.

Command=> *select account.branch_name as branch_name, sum(account.balance * 0.04) as total_interest*
-> from account

-> group by account.branch_name;



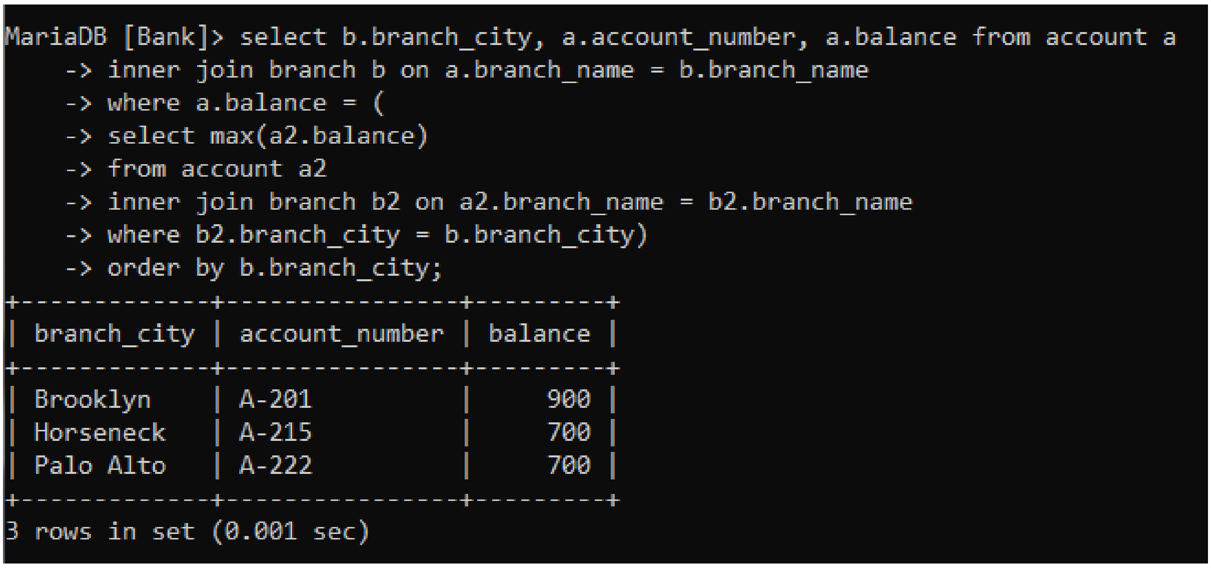
```
MariaDB [Bank]> select account.branch_name as branch_name, sum(account.balance * 0.04) as total_interest
    -> from account
    -> group by account.branch_name;
+-------------+----------------+
| branch_name | total_interest |
+-------------+----------------+
| Brighton    |          66.00 |
| Downtown    |          20.00 |
| Mianus      |          28.00 |
| Perryridge  |          16.00 |
| Redwood     |          28.00 |
| Round Hill  |          14.00 |
+-------------+----------------+
6 rows in set (0.000 sec)
```

TASK - 04:

Objective: Finding account numbers with the highest balances for each city in the database.

Command=> *select b.branch_city, a.account_number, a.balance from account a*

-> inner join branch b on a.branch_name = b.branch_name
-> where a.balance = (
-> select max(a2.balance)
-> from account a2
-> inner join branch b2 on a2.branch_name = b2.branch_name
-> where b2.branch_city = b.branch_city)
-> order by b.branch_city;



```
MariaDB [Bank]> select b.branch_city, a.account_number, a.balance from account a
    -> inner join branch b on a.branch_name = b.branch_name
    -> where a.balance = (
    -> select max(a2.balance)
    -> from account a2
    -> inner join branch b2 on a2.branch_name = b2.branch_name
    -> where b2.branch_city = b.branch_city)
    -> order by b.branch_city;
+-------------+----------------+---------+
| branch_city | account_number | balance |
+-------------+----------------+---------+
| Brooklyn    | A-201          |     900 |
| Horseneck   | A-215          |     700 |
| Palo Alto   | A-222          |     700 |
+-------------+----------------+---------+
3 rows in set (0.001 sec)
```

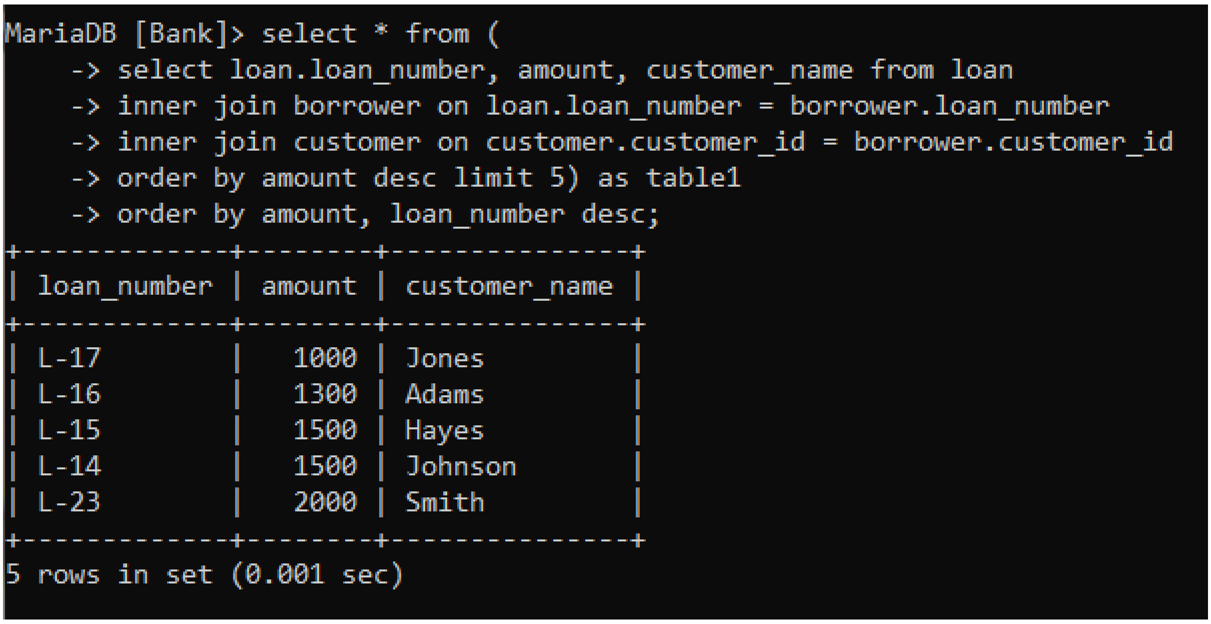
TASK - 05:

Objective: Showing the loan number, loan amount, and name of customers with the top 5 highest loan amounts. The data should be sorted by increasing amounts, then decreasing loan numbers in case of the same loan amount.

Command=> *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;

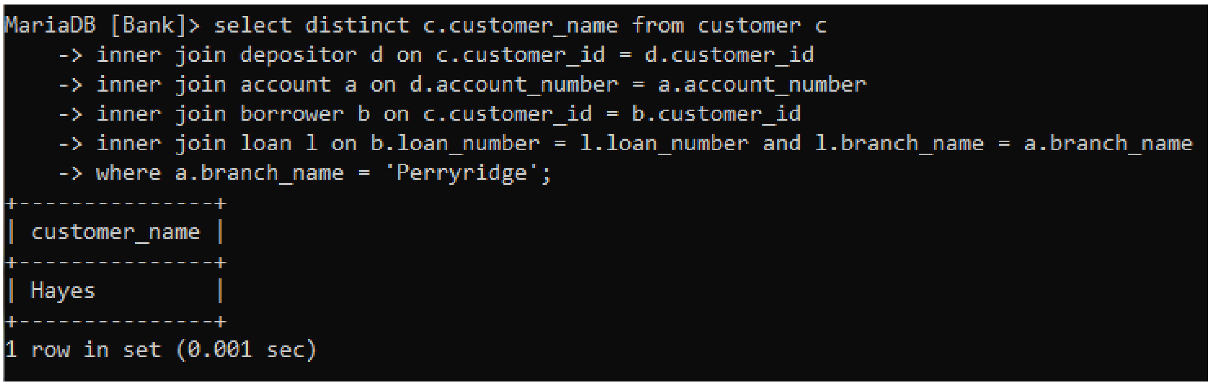


```
MariaDB [Bank]> select * from (
    -> select loan.loan_number, amount, customer_name from loan
    -> inner join borrower on loan.loan_number = borrower.loan_number
    -> inner join customer on customer.customer_id = borrower.customer_id
    -> order by amount desc limit 5) as table1
    -> order 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)
```

TASK - 06:

Objective: Finding the names of customers with an account and also a loan at the Perryridge branch.

Command=> *select distinct c.customer_name from customer c*
-> inner join depositor d on c.customer_id = d.customer_id
-> inner join account a on d.account_number = a.account_number
-> inner join borrower b on c.customer_id = b.customer_id
-> inner join loan l on b.loan_number = l.loan_number and l.branch_name =
a.branch_name
-> where a.branch_name = 'Perryridge';



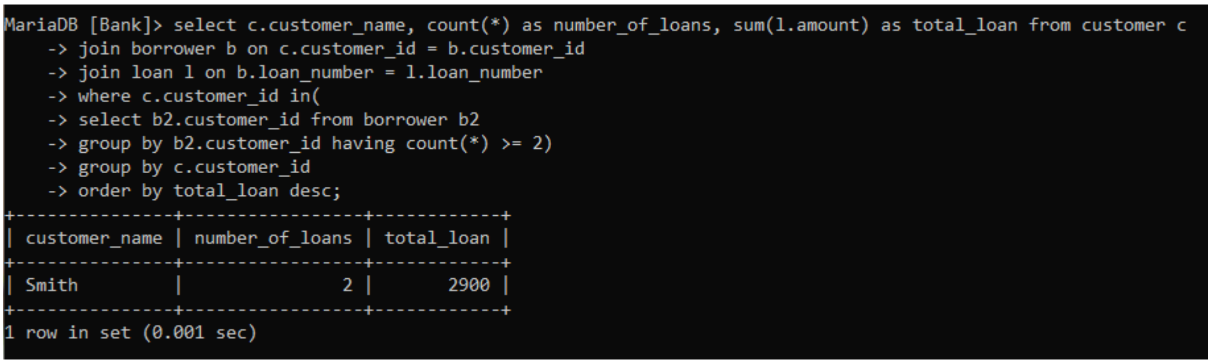
```
MariaDB [Bank]> select distinct c.customer_name from customer c
    -> inner join depositor d on c.customer_id = d.customer_id
    -> inner join account a on d.account_number = a.account_number
    -> inner join borrower b on c.customer_id = b.customer_id
    -> inner join loan l on b.loan_number = l.loan_number and l.branch_name = a.branch_name
    -> where a.branch_name = 'Perryridge';
+---------------+
| customer_name |
+---------------+
| Hayes         |
+---------------+
1 row in set (0.001 sec)
```

TASK - 07:

Objective: Finding the total loan amount of all customers having at least 2 loans from the bank. Showing in format customer name, total_loan.

Command=> *select c.customer_name, count(*) as number_of_loans, sum(l.amount) as total_loan from customer c*

```
    -> join borrower b on c.customer_id = b.customer_id
    -> join loan l on b.loan_number = l.loan_number
    -> where c.customer_id in(
    -> select b2.customer_id from borrower b2
    -> group by b2.customer_id having count(*) >= 2)
    -> group by c.customer_id
    -> order by total_loan desc;
```



```
MariaDB [Bank]> select c.customer_name, count(*) as number_of_loans, sum(l.amount) as total_loan from customer c
    -> join borrower b on c.customer_id = b.customer_id
    -> join loan l on b.loan_number = l.loan_number
    -> where c.customer_id in(
    -> select b2.customer_id from borrower b2
    -> group by b2.customer_id having count(*) >= 2)
    -> group by c.customer_id
    -> order by total_loan desc;
+---------------+-----------------+------------+
| customer_name | number_of_loans | total_loan |
+---------------+-----------------+------------+
| Smith         |               2 |       2900 |
+---------------+-----------------+------------+
1 row in set (0.001 sec)
```