LAB3

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Section: 10

Task 1

```
SELECT c.customer_name, l.loan_number

FROM customer c

JOIN borrower b ON c.customer_id = b.customer_id
JOIN loan l ON b.loan_number = l.loan_number
WHERE l.branch_name= 'Downtown';
```

```
MariaDB [Bank]> SELECT c.customer_name, l.loan_number
    -> FROM customer c
    -> JOIN borrower b ON c.customer_id = b.customer_id
    -> JOIN loan l ON b.loan_number = l.loan_number
    -> WHERE l.branch_name= 'Downtown';
+---------------+-------------+
| customer_name | loan_number |
+---------------+-------------+
| Johnson       | L-14        |
| Jones         | L-17        |
| Williams      | L-17        |
+---------------+-------------+
```

Task 2

```
SELECT  c1.customer_name AS Customer1,  c2.customer_name AS Customer2,

c1.customer_city as City FROM customer c1,  customer c2

WHERE c1.customer_city = c2.customer_city AND c1.customer_name != c2.customer_name;
```

```
MariaDB [Bank]> SELECT c1.customer_name AS Customer1, c2.customer_name AS Customer2,
    -> c1.customer_city as City FROM customer c1, customer c2
    -> WHERE c1.customer_city = c2.customer_city AND c1.customer_name != c2.customer_name;
+-----------+-----------+-----------+
| Customer1 | Customer2 | City      |
+-----------+-----------+-----------+
| Hayes     | Jones     | Harrison  |
| Curry     | Smith     | Rye       |
| Jones     | Hayes     | Harrison  |
| Smith     | Curry     | Rye       |
| Adams     | Lindsay   | Pittsfield |
| Green     | Turner    | Stamford  |
| Lindsay   | Adams     | Pittsfield |
| Turner    | Green     | Stamford  |
+-----------+-----------+-----------+
8 rows in set (0.001 sec)
```

Task 3

SELECT a.branch_name as Branch_name,
SUM(a.balance * 0.04) as Total_Interest

FROM account a
GROUP BY a.branch_name;

```
    -> SUM(a.balance * 0.04) as Total_Interest
    -> FROM account a
    -> GROUP BY a.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 |
+-------------+----------------+
```

Task 4

```
SELECT b.branch_city, a.account_number, a.balance
FROM account a
JOIN branch b ON a.branch_name = b.branch_name
WHERE (b.branch_city, a.balance) IN (
SELECT branch_city, MAX(balance)
FROM branch b
JOIN account a ON b.branch_name = a.branch_name
GROUP BY branch_city);
```

```
MariaDB [Bank]> SELECT b.branch_city, a.account_number, a.balance
    -> FROM account a
    -> JOIN branch b ON a.branch_name = b.branch_name
    -> WHERE (b.branch_city, a.balance) IN (
    -> SELECT branch_city, MAX(balance)
    -> FROM branch b
    -> JOIN account a ON b.branch_name = a.branch_name
    -> GROUP BY 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 5

```
select  l.loan_number,   l.amount as loan_amount,  c.customer_name
FROM loan l

JOIN borrower b ON l.loan_number = b.loan_number
JOIN customer c ON b.customer_id = c.customer_id
ORDER BY l.amount ASC, l.loan_number DESC
LIMIT 5;
```

```
MariaDB [Bank]> SELECT l.loan_number, l.amount as loan_amount, c.customer_name
    -> FROM loan l
    -> JOIN borrower b ON l.loan_number = b.loan_number
    -> JOIN customer c ON b.customer_id = c.customer_id
    -> ORDER BY l.amount ASC, l.loan_number DESC
    -> LIMIT 5;
+-------------+-------------+---------------+
| loan_number | loan_amount | customer_name |
+-------------+-------------+---------------+
| L-93        |         500 | Curry         |
| L-11        |         900 | Smith         |
| L-17        |        1000 | Jones         |
| L-17        |        1000 | Williams      |
| L-16        |        1300 | Adams         |
+-------------+-------------+---------------+
5 rows in set (0.001 sec)
```

Task_6

select DISTINCT c.customer_name
From customer c
JOIN depositor d ON c.customer_id = d.customer_id
JOIN account a ON d.account_number = a.account_number
JOIN borrower b ON c.customer_id = b.customer_id
JOIN loan l ON b.loan_number = l.loan_number
JOIN branch br ON a.branch_name = br.branch_name
WHERE br.branch_name = 'Perryridge';

```
MariaDB [Bank]> SELECT DISTINCT c.customer_name
    -> FROM customer c
    -> JOIN depositor d ON c.customer_id = d.customer_id
    -> JOIN account a ON d.account_number = a.account_number
    -> JOIN borrower b ON c.customer_id = b.customer_id
    -> JOIN loan l ON b.loan_number = l.loan_number
    -> JOIN branch br ON a.branch_name = br.branch_name
    -> WHERE br.branch_name = 'Perryridge';
+---------------+
| customer_name |
+---------------+
| Hayes         |
+---------------+
1 row in set (0.001 sec)
```

Task 7

SELECT c.customer_name, 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
GROUP BY c.customer_id, c.customer_name
HAVING COUNT(b.loan_number) >= 2;

```
MariaDB [Bank]> SELECT c.customer_name, 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
    -> GROUP BY c.customer_id, c.customer_name
    -> HAVING COUNT(b.loan_number) >= 2;
+---------------+------------+
| customer_name | total_loan |
+---------------+------------+
| Smith         |       2900 |
+---------------+------------+
1 row in set (0.002 sec)
```