CSE370

LAB ASSIGNMENT-03

Task-1

```
SELECT c.customer_name, l.loan_number
   -> FROM customer c
   -> INNER JOIN borrower b on c.customer_id = b.customer_id
   -> INNER 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
    -> INNER JOIN borrower b on c.customer_id = b.customer_id
    -> INNER 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        |
+---------------+-------------+
3 rows in set (0.044 sec)
```

Task-2

```
SELECT DISTINCT c1.customer_name AS Customer1, c2.customer_name AS Customer2,
c1.customer_city AS City
   -> FROM customer c1
   -> INNER JOIN customer c2 ON c1.customer_city = c2.customer_city
   -> WHERE c1.customer_id < c2.customer_id;
```

```
MariaDB [bank]> SELECT DISTINCT c1.customer_name AS Customer1, c2.customer_name AS Customer2, c1.customer_city AS City
    -> FROM customer c1
    -> INNER JOIN customer c2 ON c1.customer_city = c2.customer_city
    -> WHERE 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-3

```
SELECT branch_name AS Branch_name, SUM(balance * 0.04) AS Total_Interest
    -> FROM account
    -> GROUP BY branch_name;
```

```
MariaDB [bank]> SELECT branch_name AS Branch_name, SUM(balance * 0.04) AS Total_Interest
    -> FROM account
    -> GROUP BY 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 (0.002 sec)
```

Task-4

```
SELECT b.branch_city, a.account_number, MAX(a.balance) AS max_balance
    -> FROM branch b
    -> INNER JOIN account a ON b.branch_name = a.branch_name
    -> GROUP BY b.branch_city;
```

```
MariaDB [bank]> SELECT b.branch_city, a.account_number, MAX(a.balance) AS max_balance
    -> FROM branch b
    -> INNER JOIN account a ON b.branch_name = a.branch_name
    -> GROUP BY b.branch_city;
+-------------+----------------+-------------+
| branch_city | account_number | max_balance |
+-------------+----------------+-------------+
| Brooklyn    | A-101          |         900 |
| Horseneck   | A-102          |         700 |
| Palo Alto   | A-222          |         700 |
+-------------+----------------+-------------+
3 rows in set (0.005 sec)
```

Task-5

```
SELECT subquery.loan_number, subquery.amount, subquery.customer_name
    -> FROM (
    ->     SELECT l.loan_number, l.amount, c.customer_name
    ->     FROM customer c
    ->     INNER JOIN borrower b ON c.customer_id = b.customer_id
    ->     INNER JOIN loan l ON b.loan_number = l.loan_number
    ->     ORDER BY l.amount DESC
    ->     LIMIT 5
    -> ) AS subquery
    -> ORDER BY subquery.amount ASC, subquery.loan_number DESC;
```

```
MariaDB [bank]> SELECT subquery.loan_number, subquery.amount, subquery.customer_name
    -> FROM (
    ->     SELECT l.loan_number, l.amount, c.customer_name
    ->     FROM customer c
    ->     INNER JOIN borrower b ON c.customer_id = b.customer_id
    ->     INNER JOIN loan l ON b.loan_number = l.loan_number
    ->     ORDER BY l.amount DESC
    ->     LIMIT 5
    -> ) AS subquery
    -> ORDER BY subquery.amount ASC, subquery.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 (0.154 sec)
```

Task-6

```
SELECT c.customer_name, a.account_number, l.loan_number
   -> 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
   -> WHERE a.branch_name = 'Perryridge';
```

```
MariaDB [bank]> SELECT c.customer_name, a.account_number, l.loan_number
    -> 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
    -> WHERE a.branch_name = 'Perryridge';
+---------------+----------------+-------------+
| customer_name | account_number | loan_number |
+---------------+----------------+-------------+
| Hayes         | A-102          | L-15        |
+---------------+----------------+-------------+
1 row in set (0.003 sec)
```

Task-7

```
SELECT c.customer_name, SUM(l.amount) AS total_loan
   -> FROM customer c
   -> INNER JOIN borrower b ON c.customer_id = b.customer_id
   -> INNER JOIN loan l ON b.loan_number = l.loan_number
   -> GROUP BY c.customer_id
   -> HAVING COUNT(b.loan_number) >= 2;
```

```
MariaDB [bank]> SELECT c.customer_name, SUM(l.amount) AS total_loan
    -> FROM customer c
    -> INNER JOIN borrower b ON c.customer_id = b.customer_id
    -> INNER JOIN loan l ON b.loan_number = l.loan_number
    -> GROUP BY c.customer_id
    -> HAVING COUNT(b.loan_number) >= 2;
+---------------+------------+
| customer_name | total_loan |
+---------------+------------+
| Smith         |       2900 |
+---------------+------------+
1 row in set (0.001 sec)
```