Lab_Assingment-3 (Cse 370)

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Sec : 02

Task-1(ans)

select c.customer_name, b.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_21301201]> select c.customer_name, b.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        |
+---------------+-------------+
3 rows in set (0.000 sec)

MariaDB [Bank_21301201]>
```

Task-2(ans)

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_21301201]> 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-3(ans)

select a.branch_name, sum(a.balance * 0.04) as total_interest
    -> from account a
    -> group by a.branch_name;

```
MariaDB [Bank_21301201]> select 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 |
+-------------+----------------+
6 rows in set (0.000 sec)
```

Task-4(ans)

select c.customer_city, a.account_number, a.balance
    -> from customer c
    -> join depositor d on c.customer_id = d.customer_id
    -> join account a on d.account_number = a.account_number
    -> where (c.customer_city, a.balance) in (
    ->   select c.customer_city, max(a.balance)
    ->   from customer c
    ->   join depositor d on c.customer_id = d.customer_id
    ->   join account a on d.account_number = a.account_number
    ->   group by c.customer_city
    ->);

```
MariaDB [Bank_21301201]> select c.customer_city, a.account_number, a.balance
    -> from customer c
    -> join depositor d on c.customer_id = d.customer_id
    -> join account a on d.account_number = a.account_number
    -> where (c.customer_city, a.balance) in (
    ->      select c.customer_city, max(a.balance)
    ->      from customer c
    ->      join depositor d on c.customer_id = d.customer_id
    ->      join account a on d.account_number = a.account_number
    ->      group by c.customer_city
    -> );
+---------------+----------------+---------+
| customer_city | account_number | balance |
+---------------+----------------+---------+
| Harrison      | A-217          |     750 |
| Rye           | A-215          |     700 |
| Pittsfield    | A-222          |     700 |
| Stamford      | A-305          |     350 |
| Palo Alto     | A-201          |     900 |
+---------------+----------------+---------+
5 rows in set (0.001 sec)
```

Task-5(ans)

select l.loan_number, l.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 desc, l.loan_number asc
   -> limit 5;

```
MariaDB [Bank_21301201]> select l.loan_number, l.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 desc, l.loan_number asc
    -> limit 5;
+-------------+--------+---------------+
| loan_number | amount | customer_name |
+-------------+--------+---------------+
| L-23        |   2000 | Smith         |
| L-14        |   1500 | Johnson       |
| L-15        |   1500 | Hayes         |
| L-16        |   1300 | Adams         |
| L-17        |   1000 | Jones         |
+-------------+--------+---------------+
5 rows in set (0.000 sec)
```

Task-6(ans)

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
   -> where a.branch_name = 'perryridge' and l.branch_name = 'perryridge';

```
MariaDB [Bank_21301201]> 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
    -> where a.branch_name = 'perryridge' and l.branch_name = 'perryridge';
+---------------+
| customer_name |
+---------------+
| Hayes         |
+---------------+
1 row in set (0.000 sec)
```

Task-7(ans)

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_name
   -> having count(b.loan_number) >= 2;

```
MariaDB [Bank_21301201]> 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_name
    -> having count(b.loan_number) >= 2;
+---------------+------------+
| customer_name | total_loan |
+---------------+------------+
| Smith         |       2900 |
+---------------+------------+
1 row in set (0.000 sec)
```