



CSE370

Database Systems

Spring-24

Lab Assignment - 3

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Section: 13

TASK_01

```
SELECT c.customer_name, l.loan_number FROM customer c, loan l, borrower b  
  
WHERE c.customer_id = b.customer_id AND l.loan_number = b.loan_number AND  
  
branch_name = 'Downtown';
```

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

TASK_02

```
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_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, customer c2  
-> WHERE 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

```
SELECT a.branch_name AS Branch_name,  
       SUM(a.balance * (4/100)) AS Total_Interest  
FROM account a  
GROUP BY Branch_Name;
```

```
MariaDB [BANK]> SELECT a.branch_name AS Branch_name,  
-> SUM(a.balance * (4/100)) AS Total_Interest  
-> FROM account a  
-> GROUP BY Branch_Name;  
+-----+-----+  
| Branch_name | Total_Interest |  
+-----+-----+  
| Brighton   | 66.0000       |  
| Downtown   | 20.0000       |  
| Mianus      | 28.0000       |  
| Perryridge | 16.0000       |  
| Redwood    | 28.0000       |  
| Round Hill | 14.0000       |  
+-----+-----+  
6 rows in set (0.001 sec)
```

TASK_04

```
SELECT c.customer_city, d.account_number, a.balance AS highest_balance FROM customer c, depositor d,  
account a  
WHERE c.customer_id = d.customer_id AND d.account_number = a.account_number AND  
(c.customer_city, a.balance) IN (SELECT c2.customer_city, MAX(a2.balance) FROM customer c2,  
depositor d2, account a2 WHERE c2.customer_id = d2.customer_id AND d2.account_number =  
a2.account_number AND c2.customer_city = c.customer_city) GROUP BY c.customer_city;
```

```
MariaDB [BANK]> SELECT c.customer_city, d.account_number, a.balance AS highest_balance FROM customer c, depositor d, account a  
-> WHERE c.customer_id = d.customer_id AND d.account_number = a.account_number AND  
-> (c.customer_city, a.balance) IN (SELECT c2.customer_city, MAX(a2.balance) FROM customer c2,  
-> depositor d2, account a2 where c2.customer_id = d2.customer_id and d2.account_number =  
-> a2.account_number and c2.customer_city = c.customer_city) GROUP BY c.customer_city;  
+-----+-----+-----+  
| customer_city | account_number | highest_balance |  
+-----+-----+-----+  
| Harrison      | A-217          | 750             |  
| Palo Alto     | A-201          | 900             |  
| Pittsfield    | A-222          | 700             |  
| Rye           | A-215          | 700             |  
| Stamford      | A-305          | 350             |  
+-----+-----+-----+  
5 rows in set (0.001 sec)
```

TASK_05

```
SELECT l.loan_number, l.amount, c.customer_name FROM customer c, loan l, borrower b

WHERE c.customer_id = b.customer_id AND b.loan_number = l.loan_number

ORDER BY l.amount DESC, l.loan_number DESC

LIMIT 5;
```

```
MariaDB [BANK]> SELECT l.loan_number, l.amount, c.customer_name FROM customer c, loan l, borrower b
-> WHERE c.customer_id = b.customer_id AND b.loan_number = l.loan_number
-> ORDER BY l.amount DESC, l.loan_number DESC
-> LIMIT 5;
+-----+-----+-----+
| loan_number | amount | customer_name |
+-----+-----+-----+
| L-23       | 2000   | Smith         |
| L-15       | 1500   | Hayes         |
| L-14       | 1500   | Johnson       |
| L-16       | 1300   | Adams         |
| L-17       | 1000   | Jones         |
+-----+-----+-----+
5 rows in set (0.001 sec)
```

TASK_06

```
SELECT DISTINCT c.customer_name FROM customer c, depositor d, account a,

borrower b, loan l, branch br

WHERE c.customer_id = d.customer_id AND d.account_number = a.account_number

AND c.customer_id = b.customer_ID AND b.loan_number = l.loan_number AND

l.branch_name = 'Perryridge';
```

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

TASK_07

```
SELECT c.customer_name, SUM(l.amount) as total_loan  
FROM customer c, loan l, borrower b  
WHERE c.customer_id = b.customer_id AND b.loan_number = l.loan_number  
GROUP BY c.customer_name  
HAVING COUNT(l.loan_number) >= 2;
```

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