

Home Work 4

Name: MD Ikramul Kayes

ID: 21301576

Sec: 09

1. Find the name and loan number of all customers having a loan at the Downtown branch. [2]

Ans:

```
select customer_name, loan.loan_number from ((customer inner join borrower on
customer.customer_id = borrower.customer_id) inner join loan on loan.loan_number
= borrower.loan_number) where loan.branch_name = 'Downtown';
```

```
MariaDB [labsubmit_04]> select customer_name, loan.loan_number from ((customer inner join borrower on customer.customer_id = borrower.customer_id) inner join loan on loan.loan_number = borrower.loan_number) where loan.branch_name = 'Downtown';
+-----+-----+
| customer_name | loan_number |
+-----+-----+
| Johnson       | L-14        |
| Jones         | L-17        |
| Williams      | L-17        |
+-----+-----+
3 rows in set (0.000 sec)
```

2. Find all the possible pairs of customers who are from the same city. show in the format Customer1, Customer2, City. [2]

Ans:

```
select 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;
```

```

t line 1
MariaDB [labsubmit_04]> select 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      |
+-----+-----+-----+
| 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 (0.000 sec)
```

3. If the bank gives out 4% interest to all accounts, show the total interest across each branch. Print Branch_name, Total_Interest [1]

Ans:

```
select branch_name as Branch_name, sum(balance*0.04) as Total_Interest from
account group by branch_name;
```

```
MariaDB [labsubmit_04]> 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 (0.000 sec)
```

4. Find account numbers with the highest balances for each city in the database [1]

Ans:

select customer_city, account.account_number, max(balance) from customer inner join depositor on customer.customer_id = depositor.customer_id inner join account on account.account_number = depositor.account_number group by customer_city;

```
MariaDB [labsubmit_04]> select customer_city, account.account_number, max(balance) from customer inner join depositor on customer.customer_id = depositor.customer_id inner join account on account.account_number = depositor.account_number group by customer_city;
```

customer_city	account_number	max(balance)
Harrison	A-217	750
Palo Alto	A-101	900
Pittsfield	A-222	700
Rye	A-215	700
Stamford	A-305	350

```
5 rows in set (0.000 sec)
```

5. Show the loan number, loan amount, and name of customers who have 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. [Hint for top 5 check the "limit" keyword in mysql] [2]

Ans:

select loan.loan_number, amount as loan_amount, customer_name from ((customer inner join borrower on borrower.customer_id = customer.customer_id) inner join loan on loan.loan_number = borrower.loan_number) order by amount desc , loan.loan_number asc limit 5;

```

MariaDB [labsubmit_04]> select loan.loan_number, amount as loan_amount, customer_name from ((customer inner join borrower
r on borrower.customer_id = customer.customer_id) inner join loan on loan.loan_number = borrower.loan_number) order by a
mount desc , loan.loan_number asc limit 5;
+-----+-----+-----+
| loan_number | loan_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)

```

6. Find the names of customers with an account and also a loan at the Perryridge branch. [2]

Ans:

select distinct c1.customer_name from customer c1 inner join depositor d1 on c1.customer_id = d1.customer_id inner join account a1 on a1.account_number = d1.account_number inner join borrower b1 on c1.customer_id = b1.customer_id inner join loan l1 on b1.loan_number = l1.loan_number where a1.branch_name = 'Perryridge' and l1.branch_name = 'Perryridge';

```

t line 1
MariaDB [labsubmit_04]> select distinct c1.customer_name from customer c1 inner join depositor d1 on c1.customer_id = d1
.customer_id inner join account a1 on a1.account_number = d1.account_number inner join borrower b1 on c1.customer_id = b
1.customer_id inner join loan l1 on b1.loan_number = l1.loan_number where a1.branch_name = 'Perryridge' and l1.branch_na
me = 'Perryridge';
+-----+
| customer_name |
+-----+
| Hayes         |
+-----+
1 row in set (0.001 sec)

```

7. Find the total loan amount of all customers having at least 2 loans from the bank. Show in format customer name, total_loan. [2]

Ans:

select c1.customer_name, sum(l1.amount) as total_loan from customer c1 inner join borrower b1 on c1.customer_id = b1.customer_id inner join loan l1 on b1.loan_number = l1.loan_number group by c1.customer_name having count(b1.loan_number) >= 2;

```

MariaDB [labsubmit_04]> select c1.customer_name, sum(l1.amount) as total_loan from customer c1 inner join borrower b1 o
n c1.customer_id = b1.customer_id inner join loan l1 on b1.loan_number = l1.loan_number group by c1.customer_name having
count(b1.loan_number) >= 2;
+-----+-----+
| customer_name | total_loan |
+-----+-----+
| Smith        | 2900       |
+-----+-----+
1 row in set (0.001 sec)

MariaDB [labsubmit_04]>

```

