

## CSE370 : Database Systems

### Assignment 03 | Spring 2025

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<b>No 1 Query (as Plain Text)</b>	select customer.customer_name,loan.loan_number from borrower inner join loan on borrower.loan_number = loan.loan_number inner join customer on borrower.customer_id = customer.customer_id where loan.branch_name = 'Downtown';
<b>No 1 SS (of Query &amp; Output in Shell)</b>	<pre>MariaDB [bank_22301202]&gt; SELECT customer.customer_name, loan.loan_number -&gt; FROM borrower -&gt; INNER JOIN loan ON borrower.loan_number = loan.loan_number -&gt; INNER JOIN customer ON borrower.customer_id = customer.customer_id -&gt; WHERE loan.branch_name = 'Downtown';  +-----+-----+   customer_name   loan_number   +-----+-----+   Johnson         L-14            Jones           L-17            Williams        L-17          +-----+-----+ 3 rows in set (0.003 sec)</pre>
<b>No 2 Query (as Plain Text)</b>	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 and c1.customer_id < c2.customer_id;

No 2 SS  
(of Query & Output  
in Shell)

```
MariaDB [bank_22301202]> 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 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 (0.002 sec)
```

No 3 Query  
(as Plain Text)

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

**No 3 SS**  
(of Query & Output  
in Shell)

```
MariaDB [bank_22301202]> SELECT account.branch_name, SUM(account.balance * 0.04)
AS total_interest
-> FROM account
-> GROUP BY account.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)

**No 4 Query**  
(as Plain Text)

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

No 4 SS  
(of Query & Output  
in Shell)

```
MariaDB [bank_22301202]> SELECT account.account_number, account.balance, customer
.customer_city
-> FROM account
-> INNER JOIN depositor ON account.account_number = depositor.account_number
-> INNER JOIN customer ON depositor.customer_id = customer.customer_id
-> WHERE (account.balance) IN (
->     SELECT MAX(account.balance)
->     FROM account
->     INNER JOIN depositor ON account.account_number = depositor.account_num
ber
->     INNER JOIN customer ON depositor.customer_id = customer.customer_id
->     GROUP BY customer.customer_city
-> )
-> ORDER BY customer.customer_city;
+-----+-----+-----+
| account_number | balance | customer_city |
+-----+-----+-----+
| A-217          | 750    | Harrison      |
| A-201          | 900    | Palo Alto     |
| A-222          | 700    | Pittsfield    |
| A-215          | 700    | Rye           |
| A-305          | 350    | Stamford      |
+-----+-----+-----+
5 rows in set (0.004 sec)
```

No 5 Query  
(as Plain Text)

```
select loan.loan_number, loan.account, customer.customer_name from loan inner join borrower on loan.loan_number =
borrower.loan_number inner join customer on borrower.customer_id = customer.customer_id order by loan.amount asc,
loan.loan_number desc limit 5;
```

**No 5 SS**  
(of Query & Output  
in Shell)

```
MariaDB [bank_22301202]> SELECT loan.loan_number, loan.amount, customer.customer_
name
-> FROM loan
-> INNER JOIN borrower ON loan.loan_number = borrower.loan_number
-> INNER JOIN customer ON borrower.customer_id = customer.customer_id
-> ORDER BY loan.amount ASC, loan.loan_number DESC
-> LIMIT 5;
```

loan_number	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 (0.002 sec)

**No 6 Query**  
(as Plain Text)

select distinct customer.customer\_name from customer inner join depositor on customer.customer\_id = depositor.customer\_id inner join account on depositor.account\_number = account.account\_number inner join borrower on customer.customer\_id = borrower.customer\_id where account.branch\_name = 'Perryridge' and loan.branch\_name = 'Perryridge';

<p><b>No 6 SS</b> (of Query &amp; Output in Shell)</p>	<pre> MariaDB [bank_22301202]&gt; SELECT DISTINCT customer.customer_name -&gt; FROM customer -&gt; INNER JOIN depositor ON customer.customer_id = depositor.customer_id -&gt; INNER JOIN account ON depositor.account_number = account.account_number -&gt; INNER JOIN borrower ON customer.customer_id = borrower.customer_id -&gt; INNER JOIN loan ON borrower.loan_number = loan.loan_number -&gt; WHERE account.branch_name = 'Perryridge' -&gt; AND loan.branch_name = 'Perryridge';  +-----+   customer_name   +-----+   Hayes           +-----+ 1 row in set (0.002 sec) </pre>
<p><b>No 7 Query</b> (as Plain Text)</p>	<pre> select customer.customer_name,sum(loan.amount) as total_loan from customer inner join borrower on customer.customer_id = borrower.customer_id inner join loan on borrower.loan_number = loan.loan_number group by customer.customer_name having count(loan.loan_number) &gt;= 2; </pre>

No 7 SS  
(of Query & Output  
in Shell)

```
MariaDB [bank_22301202]> SELECT customer.customer_name, SUM(loan.amount) AS total
_loan
-> FROM customer
-> INNER JOIN borrower ON customer.customer_id = borrower.customer_id
-> INNER JOIN loan ON borrower.loan_number = loan.loan_number
-> GROUP BY customer.customer_name
-> HAVING COUNT(loan.loan_number) >= 2;
+-----+-----+
| customer_name | total_loan |
+-----+-----+
| Smith         |         2900 |
+-----+-----+
1 row in set (0.004 sec)
```