CSE370 : Database Systems

Assignment 03 | Spring 2025

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No 1 Query **(as Plain Text)**	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';
No 1 SS **(of Query & Output in Shell)**	MariaDB [Bank_24241122]> 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 | +---------------+-------------+
No 2 Query **(as Plain Text)**	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;
No 2 SS **(of Query & Output in Shell)**	MariaDB [Bank_24241122]> 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 | +-----------+-----------+-----------+
No 3 Query **(as Plain Text)**	SELECT branch_name, SUM(balance * 0.04) AS Total_Interest FROM account GROUP BY branch_name;

No 3 SS **(of Query & Output** **in Shell)**	``` MariaDB [Bank_24241122]> SELECT 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 | +-------------+----------------+ ```
No 4 Query **(as Plain Text)**	SELECT a.account_number, a.balance, b.branch_city FROM account a JOIN branch b ON a.branch_name = b.branch_name WHERE (b.branch_city, a.balance) IN (SELECT b2.branch_city, MAX(a2.balance) FROM account a2 JOIN branch b2 ON a2.branch_name = b2.branch_name GROUP BY b2.branch_city);

No 4 SS
(of Query & Output
in Shell)
	``
	MariaDB [Bank_24241122]> SELECT a.account_number, a.balance, b.branch_city FROM account a JOIN branch b ON a.branch_name = b.branch_name WHERE (b.branch_cit
	y, a.balance) IN (SELECT b2.branch_city, MAX(a2.balance) FROM account a2 JOIN branch b2 ON a2.branch_name = b2.branch_name GROUP BY b2.branch_city);
	+----------------+---------+-------------+
	| account_number
		balance	branch_city |
			+----------------+---------+-------------+
			| A-201
				900	Brooklyn

A-215	700	Horseneck
A-222	700	Palo Alto	 +----------------+---------+-------------+ ```
No 5 Query **(as Plain Text)**	SELECT loan_number, amount, customer_name FROM (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 DESC LIMIT 5) AS top_loans ORDER BY amount ASC, loan_number DESC;

| **No 5 SS**<br>**(of Query & Output**<br>**in Shell)** | ```MariaDB [Bank_24241122]> SELECT loan_number, amount, customer_name FROM (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 DESC LIMIT 5) AS top_loans ORDER BY amount ASC, loan_number DESC;``` <br> ```
+-------------+--------+---------------+
| 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         |
+-------------+--------+---------------+
``` |
| | |
| **No 6 Query**
(as Plain Text) | 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'; |
| **No 6 SS**<br>**(of Query & Output**<br>**in Shell)** | ```MariaDB [Bank_24241122]> 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';``` <br> ```
+---------------+
| customer_name |
+---------------+
| Hayes         |
+---------------+
``` |
| | |
| **No 7 Query**
(as Plain Text) | 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_id HAVING COUNT(b.loan_number) >= 2; |
| **No 7 SS**<br>**(of Query & Output**<br>**in Shell)** | ```MariaDB [Bank_24241122]> 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_id HAVING COUNT(b.loan_number) >= 2;``` <br> ```
+---------------+------------+
| customer_name | total_loan |
+---------------+------------+
| Smith         |       2900 |
+---------------+------------+
``` |
| | |