CSE370 : Database Systems

Assignment 03 | Fall 2024

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No 1 Query (as Plain Text)	select customer.customer_name , loan.loan_number from customer join borrower on customer.customer_id = borrower.customer_id join loan on loan.loan_number = borrower.loan_number where loan.branch_name = 'Downtown';
| **No 1 SS (of Query & Output in Shell)** | ```
MariaDB [Bank_22301206]> select customer.customer_name , loan.loan_number from customer join borrower on customer.customer_id
= borrower.customer_id 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 (0.001 sec)
``` |
| | |
| **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_22301206]> 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_ci
ty = 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)
``` |
| | |

No 3 Query (as Plain Text)	select branch_name, sum(balance * (4/100)) as Total_interest from account group by branch_name;
| **No 3 SS** (of Query & Output in Shell) | ```
MariaDB [Bank_22301206]> select branch_name, sum(balance * ( 4/100)) as Total_interest from account 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)
``` |
| | |
| **No 4 Query** (as Plain Text) | select C1.customer_city, A1.account_number, A1.balance from account A1, depositor D1, customer C1 where A1.account_number = D1.acco unt_number AND D1.customer_id = C1.customer_id AND A1.balance = (select max(A2.balance) from account A2, depositor D2, customer C2 where A2.account_number = D2.account_number AND D2.customer_id = C2.customer_id and C2.customer_city = C1.customer_city); |
| **No 4 SS** (of Query & Output in Shell) | ```
MariaDB [Bank_22301206]> select C1.customer_city, A1.account_number, A1.balance from account A1, depositor D1, customer C1 where A1.account_number = D1.acco
unt_number AND D1.customer_id = C1.customer_id AND A1.balance = (select max(A2.balance) from account A2, depositor D2, customer C2 where A2.account_number =
D2.account_number AND D2.customer_id = C2.customer_id and C2.customer_city = C1.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 (0.002 sec)
``` |
| | |

No 5 Query **(as Plain Text)**	select loan_number, amount as loan_amount, customer_name from (select L1.loan_number, L1.amount, C1.customer_name from loan L1 join borrower B1 on L1.loan_number = B1.loan_number join customer C1 on B1.customer_id = C1.customer_id order by L1.amount desc limit 5) as top_loans order by loan_amount asc, loan_number desc;
| **No 5 SS**<br>**(of Query & Output**<br>**in Shell)** | ```
MariaDB [Bank_22301206]> select loan_number, amount as loan_amount, customer_name from (select L1.loan_number, L1.amount, C1.customer_name from loan L1 join
 borrower B1 on L1.loan_number = B1.loan_number join customer C1 on B1.customer_id = C1.customer_id order by L1.amount desc limit 5) as top_loans order by l
oan_amount asc, loan_number desc;
+-------------+-------------+---------------+
| loan_number | loan_amount | customer_name |
+-------------+-------------+---------------+
| L-17        |        1000 | Jones         |
| L-16        |        1300 | Adams         |
| L-15        |        1500 | Hayes         |
| L-14        |        1500 | Johnson       |
| L-23        |        2000 | Smith         |
+-------------+-------------+---------------+
5 rows in set (0.001 sec)
``` |
| | |
| **No 6 Query**
(as Plain Text) | select distinct C1.customer_name from customer C1 join depositor D1 on C1.customer_id = D1.customer_id join account A1 on D1.account_number = A1.account_number join borrower B1 on C1.customer_id = B1.customer_id join loan L1 on B1.loan_number = L1.loan_number where A1.branch_name = 'Perryridge' and L1.branch_name = 'Perryridge'; |
| **No 6 SS**<br>**(of Query & Output**<br>**in Shell)** | ```
MariaDB [Bank_22301206]> select distinct C1.customer_name from customer C1 join depositor D1 on C1.customer_id = D1.customer_id join account A1 on D1.account_number = A1.account_number join borrower B1 on C1.
customer_id = B1.customer_id join loan L1 on B1.loan_number = L1.loan_number where A1.branch_name = 'Perryridge' and L1.branch_name = 'Perryridge';
+---------------+
| customer_name |
+---------------+
| Hayes         |
+---------------+
1 row in set (0.001 sec)
``` |
| | |
| **No 7 Query**
(as Plain Text) | select C1.customer_name, sum(L1.amount) as total_loan from customer C1 join borrower B1 on C1.customer_id = B1.customer_id join loan L1 on B1.loan_number = L1.loan_number group by C1.customer_id having count(B1.loan_number) >= 2; |

**No 7 SS
(of Query & Output
in Shell)**

```
MariaDB [Bank_22301206]> select C1.customer_name, sum(L1.amount) as total_loan from customer C1 join borrower B1 on C1.customer_id = B1.customer_id join loan L1 on B1.loan_number = L1.loan
_number group by C1.customer_id having count(B1.loan_number) >= 2;
+---------------+------------+
| customer_name | total_loan |
+---------------+------------+
| Smith         |       2900 |
+---------------+------------+
1 row in set (0.002 sec)
```