DBMS LAB-6

NAME:- ABHISHIKTH BODA

ROLL NUMBER:- S20210010044

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Practice questions: [Run these queries and attach screenshot]

1. Find the names of all branches with customers who have an account in the bank and who live in “Pittsfield”, using exactly one join.

```
mysql> select branch_name from account
    -> where account_number in (select account_number from
    -> depositor natural join customer
    -> where customer_city = 'Pittsfield');
+-------------+
| branch_name |
+-------------+
| Redwood     |
+-------------+
1 row in set (0.10 sec)

mysql>
```

2. Display name and balance of the customers whose balance is 700 and above.

```
mysql> select customer_name,balance from account natural join depositor
    -> where balance >= 700;
+---------------+---------+
| customer_name | balance |
+---------------+---------+
| Johnson       |  900.00 |
| Smith         |  700.00 |
| Jones         |  750.00 |
| Lindsay       |  700.00 |
+---------------+---------+
4 rows in set (0.00 sec)

mysql>
```

3. Find the total loan amount taken by ‘Smith’.

```
mysql> select sum(amount) as total_loan
    -> from loan natural join borrower
    -> where customer_name = 'Smith';
+------------+
| total_loan |
+------------+
|       2900 |
+------------+
1 row in set (0.00 sec)

mysql>
```

4. Find the branch cities that occurred more than once in the branch table.

```
mysql> select branch_city,count(branch_city) as count from branch
    -> group by branch_city having count(branch_city)>1;
+-------------+-------+
| branch_city | count |
+-------------+-------+
| Brooklyn    |     2 |
| Horseneck   |     3 |
+-------------+-------+
2 rows in set (0.00 sec)

mysql>
```

5. Find the names of customers(along with branch name and city) who have account at banks, present in the same (branch) city.

```
mysql> select customer_name,branch_name,branch_city
    -> from depositor natural join branch natural join account
    -> where branch_city in (select branch_city from branch
    -> group by branch_city
    -> having count(branch_city) > 1)
    -> order by branch_name asc;
+---------------+-------------+-------------+
| customer_name | branch_name | branch_city |
+---------------+-------------+-------------+
| Johnson       | Brighton    | Brooklyn    |
| Jones         | Brighton    | Brooklyn    |
| Johnson       | Downtown    | Brooklyn    |
| Smith         | Mianus      | Horseneck   |
| Hayes         | Perryridge  | Horseneck   |
| Turner        | Round Hill  | Horseneck   |
+---------------+-------------+-------------+
6 rows in set (0.00 sec)

mysql>
```

6. Display all customer cities and total loan amount taken by all customers from each of those cities (loan_amount 1000$ can be considered for both customers of L-17)

```
mysql> select customer_city, sum(amount) as total_loan
    -> from (customer natural left outer join borrower)natural left join loan
    -> group by customer_city
    -> order by amount desc;
+---------------+------------+
| customer_city | total_loan |
+---------------+------------+
| Harrison      |       2500 |
| Pittsfield    |       1300 |
| Princeton     |       1000 |
| Rye           |       3400 |
| Brooklyn      |       NULL |
| Woodside      |       NULL |
| Stamford      |       NULL |
| Palo Alto     |       NULL |
+---------------+------------+
8 rows in set (0.00 sec)

mysql>
```

7. Display total balance amount of each customer in customer table(display null for those who do not have account).

```
mysql> select customer_name,sum(balance) as total_balance
    -> from (customer natural left outer join depositor) natural left outer join account
    -> group by customer_name;
+---------------+---------------+
| customer_name | total_balance |
+---------------+---------------+
| Adams         |          NULL |
| Brooks        |          NULL |
| Curry         |          NULL |
| Glenn         |          NULL |
| Green         |          NULL |
| Hayes         |        400.00 |
| Johnson       |       1400.00 |
| Jones         |        750.00 |
| Lindsay       |        700.00 |
| Smith         |        700.00 |
| Turner        |        350.00 |
| Williams      |          NULL |
+---------------+---------------+
12 rows in set (0.00 sec)

mysql>
```

8. Display total loan amount of each customer in customer table(display null for those who did not take loan)

```
mysql> select customer_name,sum(amount) as total_loan
    -> from (customer natural left outer join borrower) natural left outer join loan
    -> group by customer_name;
+---------------+------------+
| customer_name | total_loan |
+---------------+------------+
| Adams         |       1300 |
| Brooks        |       NULL |
| Curry         |        500 |
| Glenn         |       NULL |
| Green         |       NULL |
| Hayes         |       1500 |
| Johnson       |       NULL |
| Jones         |       1000 |
| Lindsay       |       NULL |
| Smith         |       2900 |
| Turner        |       NULL |
| Williams      |       1000 |
+---------------+------------+
12 rows in set (0.00 sec)

mysql>
```

9. Create a view that displays customer_name, account_number and loannumber(null if there is no data for any of the column).

```
mysql> create view v as
    -> select customer_name,account_number,loan_number
    -> from((customer natural left outer join borrower) natural left outer join depositor)
    -> natural left outer join account;
Query OK, 0 rows affected (0.03 sec)

mysql> select * from v;
+---------------+----------------+-------------+
| customer_name | account_number | loan_number |
+---------------+----------------+-------------+
| Adams         | NULL           | L-16        |
| Brooks        | NULL           | NULL        |
| Curry         | NULL           | L-93        |
| Glenn         | NULL           | NULL        |
| Green         | NULL           | NULL        |
| Hayes         | A-102          | L-15        |
| Johnson       | A-101          | NULL        |
| Johnson       | A-201          | NULL        |
| Jones         | A-217          | L-17        |
| Lindsay       | A-222          | NULL        |
| Smith         | A-215          | L-11        |
| Smith         | A-215          | L-23        |
| Turner        | A-305          | NULL        |
| Williams      | NULL           | L-17        |
+---------------+----------------+-------------+
14 rows in set (0.01 sec)

mysql>
```

10. Try creating and inserting into view for each of the conditions mentioned above for views, under which you can't insert data into views.

```
mysql> insert into v values ('Abhi', A-435, 'L-11');
ERROR 1471 (HY000): The target table v of the INSERT is not insertable-into
mysql>
```

←THE END→