

Lab6

Derived Tables, Views and Joins

Name: Yash Gupta

Roll No.: S20200010234

```
mysql> create table branc(  
  -> branch_name varchar(30),  
  -> branch_city varchar(30),  
  -> assets numeric(8));  
Query OK, 0 rows affected (0.05 sec)
```

```
mysql> create table account(  
  -> account_number varchar(8),  
  -> branch_name varchar(30),  
  -> balance int);  
Query OK, 0 rows affected (0.05 sec)
```

```
mysql> create table depositor(  
  -> customer_name varchar(30),  
  -> account_number varchar(8));  
Query OK, 0 rows affected (0.05 sec)
```

```
mysql> create table loan(  
  -> loan_number varchar(5),  
  -> branch_name varchar(30),  
  -> amount int);  
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> create table borrower(  
  -> customer_name varchar(30),  
  -> loan_number varchar(5));  
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> create table customer(  
  -> customer_name varchar(30),  
  -> customer_street varchar(30),  
  -> customer_city varchar(30));  
Query OK, 0 rows affected (0.03 sec)
```

1st, 2nd)

```
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 (0.01 sec)

mysql> select depositor.customer_name, account.balance from depositor, account where depositor.account_number = account.account_number and account.balance >= 700;
+-----+-----+
| customer_name | balance |
+-----+-----+
| Johnson       | 900     |
| Jones         | 750     |
| Lindsay       | 700     |
| Smith         | 700     |
+-----+-----+
4 rows in set (0.00 sec)
```

3rd)

```
mysql> select sum(amount) as total_loan from (select * from loan as l natural join borrower as b where l.loan_number = b.loan_number) as f group by customer_name having customer_name in("Smith");
+-----+
| total_loan |
+-----+
| 2900       |
+-----+
1 row in set (0.00 sec)
```

4th)

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

6th)

```
mysql> select customer_city, sum(amount) as total_loan from(
-> select * from borrower as b natural join loan as l) as tg
-> right join customer as c on
-> tg.customer_name = c.customer_name
-> group by customer_city;
```

customer_city	total_loan
Pittsfield	1300
Brooklyn	NULL
Rye	3400
Woodside	NULL
Stamford	NULL
Harrison	2500
Palo Alto	NULL
Princeton	1000

8 rows in set (0.00 sec)

7th)

```
mysql> select customer_name, sum(balance) as total_balance from(
-> select customer_name as cn, balance from depositor natural join account as a) as tg
-> right join customer as c
-> on c.customer_name = tg.cn group by customer_name;
```

customer_name	total_balance
Adams	NULL
Brooks	NULL
Curry	NULL
Glenn	NULL
Green	NULL
Hayes	400
Johnson	1400
Jones	750
Lindsay	700
Smith	700
Turner	350
Williams	NULL

12 rows in set (0.00 sec)

8th)

```
mysql> select customer_name, sum(amount) as total_loan from(
-> select customer_name as cn, amount from borrower as b natural join loan as l) as tg
-> right join customer as c
-> on c.customer_name = tg.cn 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)
```

9th)

```
mysql> create view v as select customer_name, account_number, loan_number from( select account_number,c.customer_name,d.customer_name as dcn from customer as c left join depositor as d on c.customer_name=d.customer_name) as tg natural join (select loan_number,c.customer_name,l.customer_name as lcn from customer as c left join borrower as l on c.customer_name=l.customer_name) as tge;
```

```
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-201	NULL
Johnson	A-101	NULL
Jones	A-217	L-17
Lindsay	A-222	NULL
Smith	A-215	L-23
Smith	A-215	L-11
Turner	A-305	NULL
Williams	NULL	L-17

```
14 rows in set (0.00 sec)
```

10th)

```
mysql> create view d as select * from branc;
```

```
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> create or replace view v as select account_number, balance from account;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> insert into v values("A-100",100);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from v;
```

account_number	balance
A-101	500
A-102	400
A-201	900
A-215	700
A-217	750
A-222	700
A-305	350
A-100	100

```
8 rows in set (0.00 sec)
```

```
mysql> update v set balance = balance+100;
Query OK, 8 rows affected (0.01 sec)
Rows matched: 8  Changed: 8  Warnings: 0
```

```
mysql> select * from v;
```

account_number	balance
A-101	600
A-102	500
A-201	1000
A-215	800
A-217	850
A-222	800
A-305	450
A-100	200

```
8 rows in set (0.00 sec)
```

```
mysql> drop view v;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> drop view d;
Query OK, 0 rows affected (0.01 sec)
```

Thank you