Practice Questions
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Q1.

```
mysql> select branch_name from account natural join depositor
    -> where account.account_number in
    -> (select account_number from depositor
    -> where customer_name in
    -> (select customer_name from customer
[   -> where customer_city = "Pittsfield"));
+-------------+
| branch_name |
+-------------+
| Redwood     |
+-------------+
1 row in set (0.00 sec)
```

Q2.

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

Q3.

```
mysql> select sum(amount) as total from loan
    -> where loan_number in
    -> (select loan_number from borrower
[   -> where customer_name = "Smith");
+-------+
| total |
+-------+
|  2900 |
+-------+
1 row in set (0.05 sec)
```

Q4.

```
mysql> select branch_city, count(branch_city) from branch
[    -> group by branch_city having count(branch_city) > 1;
+-------------+--------------------+
| branch_city | count(branch_city) |
+-------------+--------------------+
| Brooklyn    |                  2 |
| Horseneck   |                  3 |
+-------------+--------------------+
2 rows in set (0.01 sec)
```

Q5.

```
mysql> select customer_name, branch_name, branch_city
    -> from depositor natural join account natural join branch where branch_city   in
[    -> (select branch_city from branch group by branch_city having count(branch_city) > 1);
+---------------+-------------+-------------+
| customer_name | branch_name | branch_city |
+---------------+-------------+-------------+
| Johnson       | Downtown    | Brooklyn    |
| Hayes         | Perryridge  | Horseneck   |
| Johnson       | Brighton    | Brooklyn    |
| Smith         | Mianus      | Horseneck   |
| Jones         | Brighton    | Brooklyn    |
| Turner        | Round Hill  | Horseneck   |
+---------------+-------------+-------------+
6 rows in set (0.01 sec)
```

Q6.

```
mysql> select customer_city, amount from customer left join borrower
    -> on customer.customer_name = borrower.customer_name
[    -> left join loan on loan.loan_number = borrower.loan_number;
+---------------+--------+
| customer_city | amount |
+---------------+--------+
| Pittsfield    |   1300 |
| Brooklyn      |   NULL |
| Rye           |    500 |
| Woodside      |   NULL |
| Stamford      |   NULL |
| Harrison      |   1500 |
| Palo Alto     |   NULL |
| Harrison      |   1000 |
| Pittsfield    |   NULL |
| Rye           |    900 |
| Rye           |   2000 |
| Stamford      |   NULL |
| Princeton     |   1000 |
+---------------+--------+
13 rows in set (0.00 sec)
```

Q7.

```
mysql> select customer_name, sum(balance)
    -> from customer  left  join depositor using(customer_name)
[   -> left join account using(account_number) group by customer_name;
+---------------+--------------+
| customer_name | sum(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 (0.01 sec)
```

Q8.

```
mysql> select customer_name,  sum(amount)from customer
    -> left join borrower using(customer_name)
[   -> left join loan using (loan_number) group by customer_name;
+---------------+--------------+
| customer_name | sum(amount)  |
+---------------+--------------+
| 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)
```

Q9.

```
mysql> create view view1 as select customer_name,account_number,loan_number
    -> from ((customer natural left join borrower)natural left outer join
[   -> depositor)natural left outer join account;
Query OK, 0 rows affected (0.03 sec)

[mysql> select * from view1;
+----------------+----------------+-------------+
| 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 (0.00 sec)
```

Q10

```
mysql> create view view2 as
    -> select customer_name, customer_city from customer;
Query OK, 0 rows affected (0.01 sec)

mysql> insert  into view2 values("Anushthan", "Agra");
ERROR 1062 (23000): Duplicate entry 'Anushthan' for key 'customer.PRIMARY'
mysql> desc view2;
+---------------+----------+------+-----+---------+-------+
| Field         | Type     | Null | Key | Default | Extra |
+---------------+----------+------+-----+---------+-------+
| customer_name | char(20) | NO   |     | NULL    |       |
| customer_city | char(30) | YES  |     | NULL    |       |
+---------------+----------+------+-----+---------+-------+
2 rows in set (0.01 sec)

mysql> select * from view2;
+---------------+---------------+
| customer_name | customer_city |
+---------------+---------------+
| Adams         | Pittsfield    |
| Anushthan     | Agra          |
| Brooks        | Brooklyn      |
| Curry         | Rye           |
| Glenn         | Woodside      |
| Green         | Stamford      |
| Hayes         | Harrison      |
| Johnson       | Palo Alto     |
| Jones         | Harrison      |
| Lindsay       | Pittsfield    |
| Smith         | Rye           |
| Turner        | Stamford      |
| Williams      | Princeton     |
+---------------+---------------+
13 rows in set (0.01 sec)
```

```
mysql> create view view3 as
    -> select account_number, branch_name, max(balance) from account;
ERROR 1050 (42S01): Table 'view3' already exists
mysql> insert into view3("A1", "Pittsfield", 2000);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your
 MySQL server version for the right syntax to use near '"A1", "Pittsfield", 2000)' at line 1
```

```
mysql> create view view4 as
    -> select account_number, branch_name, balance from account
    -> group by balance;
Query OK, 0 rows affected (0.03 sec)

mysql> insert into view4("A1", "Creekside", 100000);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your
 MySQL server version for the right syntax to use near '"A1", "Creekside", 100000)' at line 1
```

```
mysql> create view view5 as select * from  customer,  account;
Query OK, 0 rows affected (0.00 sec)

mysql> insert into view5 values("Anushthan", "BankA", "Agra", "A1", "Another Bank", 10000);
ERROR 1394 (HY000): Can not insert into join view 'lab6.view5' without fields list
```