Create table queries:

```
mysql> create table customer(
    -> cid varchar(5) primary key,
    -> cname varchar(20));

mysql> create table branch(
    -> bid varchar(5) primary key,
    -> bname varchar(20),
    -> num_acc int);

mysql> create table account(
    -> aid varchar(5) primary key,
    -> atype varchar(10));

mysql> create table transaction(
    -> tid varchar(5) primary key,
    -> ttype varchar(10),
    -> aid varchar(5),
    -> foreign key(aid) references account(aid) on delete cascade on update cascade);

mysql> create table cust_details(
      -> cid varchar(5),
      -> aid varchar(5),
      -> primary key(cid,aid),
      -> foreign key(cid) references customer(cid) on delete cascade on update cascade,
      -> foreign key(aid) references account(aid) on delete cascade on update cascade);

mysql> create table branch_details(
    -> bid varchar(5),
    -> aid varchar(5),
    -> primary key(bid,aid),
    -> foreign key(bid) references branch(bid) on delete cascade on update cascade,
    -> foreign key(aid) references account(aid) on delete cascade on update cascade);

mysql> INSERT INTO customer (cid, cname) VALUES
    -> ('C1001', 'Alice'),
    -> ('C1002', 'Bob'),
    -> ('C1003', 'Carol'),
    -> ('C1004', 'David');

mysql> INSERT INTO branch (bid, bname, num_acc) VALUES
    -> ('B2001', 'Branch A', 50),
    -> ('B2002', 'Branch B', 75),
    -> ('B2003', 'Branch C', 60);

mysql> INSERT INTO account (aid, atype) VALUES
    -> ('A3001', 'saving'),
    -> ('A3002', 'current'),
    -> ('A3003', 'saving'),
    -> ('A3004', 'current');

mysql> INSERT INTO transaction (tid, ttype, aid) VALUES
    -> ('T4001', 'withdrawal', 'A3001'),
    -> ('T4002', 'deposit', 'A3002'),
    -> ('T4003', 'deposit', 'A3003'),
```

```
    -> ('T4004', 'withdrawal', 'A3004');
mysql> INSERT INTO transaction (tid, ttype, aid) VALUES
    -> ('T4005', 'withdrawal', 'A3001'),
    -> ('T4006', 'deposit', 'A3001'),
    -> ('T4007', 'deposit', 'A3001'));

mysql> INSERT INTO cust_details (cid, aid) VALUES
    -> ('C1001', 'A3001'),
    -> ('C1002', 'A3002'),
    -> ('C1003', 'A3003'),
    -> ('C1004', 'A3004');
mysql> INSERT INTO cust_details (cid, aid) VALUES ('C1001','A3005');

mysql> INSERT INTO branch_details (bid, aid) VALUES
    -> ('B2001', 'A3001'),
    -> ('B2002', 'A3002'),
    -> ('B2003', 'A3003');
```

Select statements:

```
mysql> select * from customer;
+-------+-------+
| cid   | cname |
+-------+-------+
| C1001 | Alice |
| C1002 | Bob   |
| C1003 | Carol |
| C1004 | David |
+-------+-------+
4 rows in set (0.00 sec)

mysql> select * from branch;
+-------+----------+---------+
| bid   | bname    | num_acc |
+-------+----------+---------+
| B2001 | Branch A |      50 |
| B2002 | Branch B |      75 |
| B2003 | Branch C |      60 |
+-------+----------+---------+
3 rows in set (0.00 sec)

mysql> select * from account;
+-------+---------+
| aid   | atype   |
+-------+---------+
| A3001 | saving  |
| A3002 | current |
| A3003 | saving  |
| A3004 | current |
| A3005 | current |
+-------+---------+
5 rows in set (0.00 sec)

mysql> select * from transaction;
+-------+------------+-------+
| tid   | ttype      | aid   |
```

```
+-------+------------+-------+
| T4001 | withdrawal | A3001 |
| T4002 | deposit    | A3002 |
| T4003 | deposit    | A3003 |
| T4004 | withdrawal | A3004 |
| T4005 | withdrawal | A3001 |
| T4006 | deposit    | A3001 |
| T4007 | deposit    | A3001 |
+-------+------------+-------+
7 rows in set (0.00 sec)

mysql> select * from cust_details;
+-------+-------+
| cid   | aid   |
+-------+-------+
| C1001 | A3001 |
| C1002 | A3002 |
| C1003 | A3003 |
| C1004 | A3004 |
| C1001 | A3005 |
+-------+-------+
5 rows in set (0.00 sec)

mysql> select * from branch_details;
+-------+-------+
| bid   | aid   |
+-------+-------+
| B2001 | A3001 |
| B2002 | A3002 |
| B2003 | A3003 |
+-------+-------+
3 rows in set (0.00 sec)
```

1. Obtain the details of customers who have both Savings and Current Account

```
mysql> SELECT * FROM customer WHERE cid IN (SELECT cid FROM cust_details
GROUP BY cid HAVING COUNT(*) > 1);
+-------+-------+
| cid   | cname |
+-------+-------+
| C1001 | Alice |
+-------+-------+
1 row in set (0.01 sec)
```

2. Retrieve the details of branches and the number of accounts in each branch.

```
mysql> select * from branch;
+-------+----------+---------+
| bid   | bname    | num_acc |
+-------+----------+---------+
| B2001 | Branch A |      50 |
| B2002 | Branch B |      75 |
| B2003 | Branch C |      60 |
+-------+----------+---------+
3 rows in set (0.00 sec)
```

3. Obtain the details of customers who have performed at least 3 transactions.

```
mysql> select aid,count(*) from transaction group by aid having count(*) > 2;
+-------+----------+
| aid     | count(*) |
+-------+----------+
| A3001 |            4 |
+-------+----------+
1 row in set (0.00 sec)
```

4. List the details of branches where the number of accounts is less than the average number of accounts in all branches.

```
mysql> select bid,bname,num_acc from branch group by bid having num_acc > (select
avg(num_acc) from branch);
+-------+----------+---------+
| bid     | bname      | num_acc |
+-------+----------+---------+
| B2002 | Branch B |         75 |
+-------+----------+---------+
1 row in set (0.00 sec)
```