DBMS
Lab test - 01

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Question - 1

```
mysql> create table Customer(customerid char(11), customername varchar(15), customerstreet varchar(20),
 customer_city varchar(20), accountnumber char(7));
Query OK, 0 rows affected (0.07 sec)

mysql> show tables;
+---------------+
| Tables_in_test |
+---------------+
| customer      |
| student       |
+---------------+
2 rows in set (0.00 sec)
```

```
mysql> create table Borrower(customerid char(11), loan_number char(4));
Query OK, 0 rows affected (0.03 sec)

mysql> show tables;
+---------------+
| Tables_in_test |
+---------------+
| borrower      |
| customer      |
| student       |
+---------------+
3 rows in set (0.01 sec)
```

```
mysql> create table Account(accountnumber char(12), branch_name varchar(20), balance int);
Query OK, 0 rows affected (0.03 sec)

mysql> show tables;
+----------------+
| Tables_in_test |
+----------------+
| account        |
| borrower       |
| customer       |
| student        |
+----------------+
4 rows in set (0.01 sec)
```

```
mysql> create table Branch(branchname varchar(20), branch_city varchar(20), assets int);
Query OK, 0 rows affected (0.02 sec)

mysql> show tables;
+----------------+
| Tables_in_test |
+----------------+
| account        |
| borrower       |
| branch         |
| customer       |
| student        |
+----------------+
5 rows in set (0.01 sec)
```

Question - 2

```
mysql> alter table customer modify accountnumber char(16);
Query OK, 0 rows affected (0.08 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> alter table customer add primary key (customerid);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> alter table account modify accountnumber char(16);
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

Question - 3

```
mysql> select * from customer;
+-------------+--------------+-----------------+---------------+---------------------+
| customerid  | customername | customerstreet  | customer_city | accountnumber       |
+-------------+--------------+-----------------+---------------+---------------------+
| 019-28-3746 | Smith        | 72 North St.    | Rye           | S20200010091-201    |
| 182-73-6091 | Turner       | 123 Putnam St.  | Stamford      | S20200010091-305    |
| 192-83-7465 | Johnson      | 12 Alma St.     | Palo Alto     | S20200010091-101    |
| 193-83-7465 | Johnson      | 12 Alma St.     | Palo Alto     | S20200010091-201    |
| 321-12-3123 | Jones        | 100 Main St.    | Harrison      | S20200010091-217    |
| 336-66-9999 | Lindsay      | 175 Park Ave    | Pittsfield    | S20200010091-222    |
| 677-89-9011 | Hayes        | 3 Main St.      | Harrison      | S20200010091-102    |
+-------------+--------------+-----------------+---------------+---------------------+
7 rows in set (0.00 sec)
```

```
mysql> select * from loan;
+---------------+-------------+--------+
| loan_number   | branch_name | amount |
+---------------+-------------+--------+
| L-11          | Round Hill  |    900 |
| L-14          | Downtown    |   1500 |
| L-15          | Perryridge  |   1500 |
| L-16          | Perryridge  |   1300 |
| L-17          | Downtown    |   1000 |
| L-23          | Redwood     |   2000 |
| L-93          | Mianus      |    500 |
+---------------+-------------+--------+
7 rows in set (0.00 sec)
```

```
mysql> select * from borrower;
+--------------+---------------+
| customerid   | loan_number   |
+--------------+---------------+
| 192-83-7465  | L-16          |
| 192-83-7465  | L-93          |
| 677-89-9011  | L-15          |
| 182-73-6091  | L-14          |
| 321-12-3123  | L-17          |
| 336-66-9999  | L-11          |
| 019-28-3746  | L-23          |
| 192-83-7465  | L-17          |
+--------------+---------------+
8 rows in set (0.00 sec)
```

```
mysql> select * from branch;
+-------------+-------------+---------+
| branchname  | branch_city | assets  |
+-------------+-------------+---------+
| Brighton    | Brooklyn    | 7100000 |
| Downtown    | Brooklyn    | 9000000 |
| Mianus      | Horseneck   |  400000 |
| North Town  | Rye         | 3700000 |
| Perryridge  | Horseneck   | 1700000 |
| Pownal      | Bennington  |  300000 |
| Redwood     | Palo Alto   | 2100000 |
| Round Hill  | Horseneck   | 8000000 |
+-------------+-------------+---------+
8 rows in set (0.00 sec)
```

```
mysql> select * from account;
+-------------------+-------------+---------+
| accountnumber     | branch_name | balance |
+-------------------+-------------+---------+
| S20200010091-101  | Downtown    |     500 |
| S20200010091-102  | Perryridge  |     400 |
| S20200010091-201  | Brighton    |     900 |
| S20200010091-215  | Mianus      |     700 |
| S20200010091-217  | Brighton    |     750 |
| S20200010091-222  | Redwood     |     700 |
| S20200010091-305  | Round Hill  |     350 |
+-------------------+-------------+---------+
7 rows in set (0.00 sec)
```

Question - 4

```
mysql> select Customer.customerid,Customer.accountnumber from Customer join Borrower on (Customer.customerid=Borrower.customerid) join Loan on
 (Borrower.loan_number=Loan.loan_number) where Loan.amount > all(select avg(amount) from Loan where branch_name=Loan.branch_name);
+-------------+-------------------+
| customerid  | accountnumber     |
+-------------+-------------------+
| 182-73-6091 | S20200010091-305  |
| 677-89-9011 | S20200010091-102  |
| 192-83-7465 | S20200010091-101  |
| 019-28-3746 | S20200010091-201  |
+-------------+-------------------+
4 rows in set (0.00 sec)
```

Question - 5

```
mysql> select c.customerid, a.accountnumber, a.branch_name from customer as c, account as a where a.accountnumber = c.accountnumber
 and a.balance > some(select a.balance from account as a);
+-------------+------------------+-------------+
| customerid  | accountnumber    | branch_name |
+-------------+------------------+-------------+
| 019-28-3746 | S20200010091-201 | Brighton    |
| 192-83-7465 | S20200010091-101 | Downtown    |
| 193-83-7465 | S20200010091-201 | Brighton    |
| 321-12-3123 | S20200010091-217 | Brighton    |
| 336-66-9999 | S20200010091-222 | Redwood     |
| 677-89-9011 | S20200010091-102 | Perryridge  |
+-------------+------------------+-------------+
6 rows in set (0.00 sec)
```