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**Project Report on**

**“BANKING SYSTEM”**

**Relational Database Management System**

**B.Tech** *2ND YEAR*

**(Branch – CSE)**

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**Submitted To: Submitted By:**

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**ACKNOWLEDGEMENT**

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**Student’s Name**

**VED BHATKAR**

**KUNJ JOSHI**

**Introduction**

The “Bank Account Management System” project is a model database handling project. This model enables the customers to perform the basic banking transactions by sitting at their office or at homes through PC or laptop. The system provides the access to the customer to create an account, deposit/withdraw the cash from his account, also to view reports of all accounts present. The customers can access the banks website for viewing their Account details and perform the transactions on account as per their requirements.

The primary aim of this “Bank Account Management System” is to provide an improved design methodology, which envisages the future expansion, and modification, which is necessary for a core sector like banking. This necessitates the design to be expandable and modifiable and so a modular approach is used in developing the application software.

Anybody who is an Account holder in this bank can become a member of Bank Account

Management System. He has to fill a form with his personal details and Account Number.

Bank is the place where customers feel the sense of safety for their property. In the bank, customers deposit and withdraw their money. Transaction of money also is a part where customer takes shelter of the bank. Now to keep the belief and trust of customers, there is the positive need for management of the bank, which can handle all this with comfort and ease.

Smooth and efficient management affects the satisfaction of the customers and staff members, indirectly. And of course, it encourages management committee in taking some needed decision for future enhancement of the bank.

Now a day’s, managing a bank is tedious job up to certain limit. So, software that reduces the work is essential. Also, today’s world is a genuine computer world and is getting faster and faster day-by-day. Thus, considering above necessities, the software for bank management has become necessary which would be useful in managing the bank more efficiently.

All transactions are carried out online by transferring from accounts in the same Bank or international bank. The software is meant to overcome the drawbacks of the manual system.

**Abstract**

* The Bank Account Management System is an application for maintaining a person's account in a bank.
* In this project I tried to show the working of a banking account system and cover the basic functionality of a Bank Account Management System.
* To develop a project for solving financial applications of a customer in banking environment to nurture the needs of an end banking user by providing various ways to perform banking tasks.
* Also, to enable the user’s workspace to have additional functionalities which are not provided under a conventional banking project.
* This project is made possible with python language and MySQL.

**AIM of this project.**

* The main aim of designing and developing this banking System Python primarily based.
* Engineering project is to provide secure and efficient net banking facilities to the banking customers over the internet.
* Python GUI, MYSQL database used to develop this bank application where all banking customers can use,

this GUI to enter details and use it to see their accounts.

* Users will have all options and features in the project,

ranging from creating new account, withdraw amount, amount deposit, Display Customer Details,

Closing a bank account.

**Main Purpose**

* The Traditional way of maintaining details of a user in a bank was to enter the details and record them. Every time the user needs to perform some transactions he has to go to bank and perform the necessary actions, which may not be so feasible all the time.
* It may be a hard-hitting task for the users and the bankers too.
* The project gives real life understanding of Online Banking System and activities performed by various roles in the supply chain.
* Here, we provide automation for banking system through Internet. Online Banking System project captures activities performed by different roles in real life banking which provides enhanced techniques for maintaining the required information up to date, which results in efficiency.
* The project gives real life understanding of Online Banking System and activities performed by various roles in the supply chain.

**Conclusion**

* This project is developed to nurture the needs of a user in a banking sector by embedding all the tasks of transactions taking place in a bank. Future version of this project will still be much enhanced than the current version.
* Banks are providing internet banking services also so that the customers can be attracted. By asking the bank employs we came to know that maximum numbers of internet bank account holders are youth and businessman.
* Online banking is an innovative tool that is fast becoming a necessity. It is a successful strategic weapon for banks to remain profitable in a volatile and competitive marketplace of today. If proper training should be given to customer by the bank employs to open an account will be beneficial secondly the GUI should be made friendlier from where the first-time customers can directly make and access their accounts.
* Thus, the Bank Management System it is developed and executed successfully.

**Reference**

1. Fundamentals of database systems by (Elmasri Navathe, 2000),

Website: https://archive.org/stream/FundamentalsOfDatabaseSystemselmasrinavathe#

page/n51/mode/2up

2. Online Bank Account Management System

Website: https://www.geeksforgeeks.org/er-diagram-of-bank-management-system/

3. Learning MYSQL, Python GUI

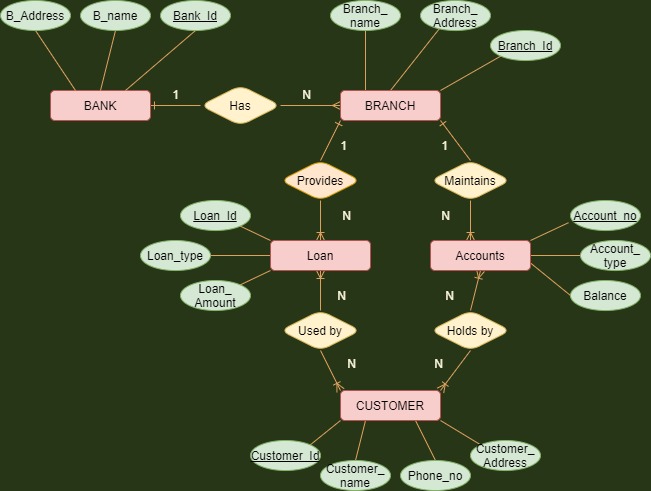
Website: http://www.w3schools.com

4. MySQL video tutorials

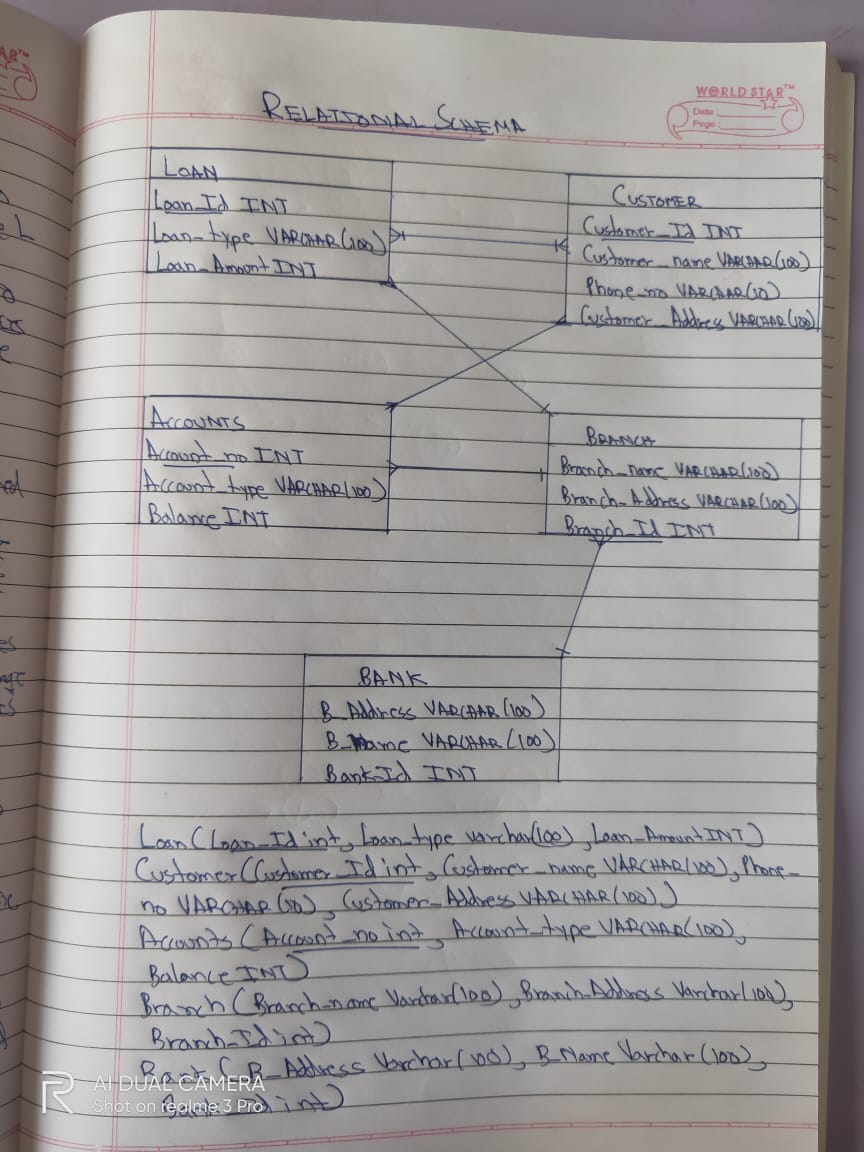
Website: http://www.freehinditutorial.com, http://www.youtube.com

**DATABASE MANAGEMENT PART**

**ER DIAGRAM**



**RELATIONAL SCHEMA**



**MySQL Code:**

Enter password: \*\*\*\*\*\*\*\*

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 18

Server version: 8.0.22 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database BankSystem;

Query OK, 1 row affected (0.04 sec)

mysql> use BankSystem;

Database changed

mysql> create table Bank(B\_Address varchar(100) , B\_name varchar(100) , Bank\_Id int , primary key (Bank\_Id));

Query OK, 0 rows affected (0.05 sec)

mysql> create table Branch(Branch\_name varchar(100) , Branch\_Address varchar(100) , Branch\_Id int , primary key (Branch\_Id));

Query OK, 0 rows affected (0.02 sec)

mysql> create table Accounts(Account\_no int , Account\_type varchar(100) , Balance int , primary key (Account\_no));

Query OK, 0 rows affected (0.09 sec)

mysql> create table Customer(Customer\_Id int , Customer\_name varchar(100) , Phone\_no varchar(10) , Customer\_Address varchar(100));

Query OK, 0 rows affected (0.02 sec)

mysql> create table Loan(Loan\_Id int , Loan\_type varchar(100) , Loan\_Amount int , primary key (Loan\_Id));

Query OK, 0 rows affected (0.05 sec)

mysql> show tables;

+----------------------+

| Tables\_in\_banksystem |

+----------------------+

| accounts |

| bank |

| branch |

| customer |

| loan |

+----------------------+

5 rows in set (0.05 sec)

mysql> desc Bank;

+-----------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-----------+--------------+------+-----+---------+-------+

| B\_Address | varchar(100) | YES | | NULL | |

| B\_name | varchar(100) | YES | | NULL | |

| Bank\_Id | int | NO | PRI | NULL | |

+-----------+--------------+------+-----+---------+-------+

3 rows in set (0.02 sec)

mysql> desc Branch;

+----------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+----------------+--------------+------+-----+---------+-------+

| Branch\_name | varchar(100) | YES | | NULL | |

| Branch\_Address | varchar(100) | YES | | NULL | |

| Branch\_Id | int | NO | PRI | NULL | |

+----------------+--------------+------+-----+---------+-------+

3 rows in set (0.00 sec)

mysql> desc Customer;

+------------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+------------------+--------------+------+-----+---------+-------+

| Customer\_Id | int | YES | | NULL | |

| Customer\_name | varchar(100) | YES | | NULL | |

| Phone\_no | varchar(10) | YES | | NULL | |

| Customer\_Address | varchar(100) | YES | | NULL | |

+------------------+--------------+------+-----+---------+-------+

4 rows in set (0.00 sec)

mysql> alter table Customer add primary key (Customer\_Id);

Query OK, 0 rows affected (0.04 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc Customer;

+------------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+------------------+--------------+------+-----+---------+-------+

| Customer\_Id | int | NO | PRI | NULL | |

| Customer\_name | varchar(100) | YES | | NULL | |

| Phone\_no | varchar(10) | YES | | NULL | |

| Customer\_Address | varchar(100) | YES | | NULL | |

+------------------+--------------+------+-----+---------+-------+

4 rows in set (0.01 sec)

mysql> desc Accounts;

+--------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+--------------+------+-----+---------+-------+

| Account\_no | int | NO | PRI | NULL | |

| Account\_type | varchar(100) | YES | | NULL | |

| Balance | int | YES | | NULL | |

+--------------+--------------+------+-----+---------+-------+

3 rows in set (0.01 sec)

mysql> desc Loan;

+-------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-------------+--------------+------+-----+---------+-------+

| Loan\_Id | int | NO | PRI | NULL | |

| Loan\_type | varchar(100) | YES | | NULL | |

| Loan\_Amount | int | YES | | NULL | |

+-------------+--------------+------+-----+---------+-------+

3 rows in set (0.00 sec)

mysql> alter table Accounts add Customer\_Id int;

Query OK, 0 rows affected (0.06 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table Accounts add Branch\_Id int;

Query OK, 0 rows affected (0.02 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table Accounts add foreign key Branch\_Id references Branch(Branch\_Id);

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table Accounts add foreign key Customer\_Id references Customer(Customer\_Id);

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> insert into Bank values("Bangalore" , "Axis" , "1001");

Query OK, 1 row affected (0.02 sec)

mysql> insert into Bank values("Mumbai" , "PNB" , "1002");

Query OK, 1 row affected (0.04 sec)

mysql> insert into Bank values("Kolkatta" , "WBM" , "1003");

Query OK, 1 row affected (0.01 sec)

mysql> select \* from Bank;

+-----------+--------+---------+

| B\_Address | B\_name | Bank\_Id |

+-----------+--------+---------+

| Bangalore | Axis | 1001 |

| Mumbai | PNB | 1002 |

| Kolkatta | WBM | 1003 |

+-----------+--------+---------+

3 rows in set (0.01 sec)

mysql> insert into Branch values("West Zone" , "Bangalore" , "101");

Query OK, 1 row affected (0.02 sec)

mysql> insert into Branch values("South Zone" , "Mumbai" , "102");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Branch values("East Zone" , "Kolkatta" , "103");

Query OK, 1 row affected (0.01 sec)

mysql> update Branch set Branch\_name="West Zone" where Branch\_Id="102";

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> update Branch set Branch\_name="South Zone" where Branch\_Id="101";

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from Brnach;

ERROR 1146 (42S02): Table 'banksystem.brnach' doesn't exist

mysql> select \* from Branch;

+-------------+----------------+-----------+

| Branch\_name | Branch\_Address | Branch\_Id |

+-------------+----------------+-----------+

| South Zone | Bangalore | 101 |

| West Zone | Mumbai | 102 |

| East Zone | Kolkatta | 103 |

+-------------+----------------+-----------+

3 rows in set (0.00 sec)

mysql> insert into Customer values ("9001" , "Mike" , "1234567890" , "Bangalore");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Customer values ("9002" , "Alex" , "1234567891" , "Bangalore");

Query OK, 1 row affected (0.00 sec)

mysql> insert into Customer values ("8001" , "Tim" , "1234567892" , "Mumbai");

Query OK, 1 row affected (0.04 sec)

mysql> insert into Customer values ("8002" , "Kim" , "1234567893" , "Mumbai");

Query OK, 1 row affected (0.04 sec)

mysql> insert into Customer values ("7001" , "Pam" , "1234567894" , "Kolkatta");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Customer values ("7002" , "Joe" , "1234567895" , "Kolkatta");

Query OK, 1 row affected (0.01 sec)

mysql> select \* from Customer;

+-------------+---------------+------------+------------------+

| Customer\_Id | Customer\_name | Phone\_no | Customer\_Address |

+-------------+---------------+------------+------------------+

| 7001 | Pam | 1234567894 | Kolkatta |

| 7002 | Joe | 1234567895 | Kolkatta |

| 8001 | Tim | 1234567892 | Mumbai |

| 8002 | Kim | 1234567893 | Mumbai |

| 9001 | Mike | 1234567890 | Bangalore |

| 9002 | Alex | 1234567891 | Bangalore |

+-------------+---------------+------------+------------------+

6 rows in set (0.00 sec)

mysql> insert into Accounts values("11" , "Savings" , "50000");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Accounts values("12" , "Current" , "60000");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Accounts values("13" , "Fixed Deposit" , "80000");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Accounts values("14" , "Savings" , "90000");

Query OK, 1 row affected (0.00 sec)

mysql> select \* from Accounts;

+------------+---------------+---------+

| Account\_no | Account\_type | Balance |

+------------+---------------+---------+

| 11 | Savings | 50000 |

| 12 | Current | 60000 |

| 13 | Fixed Deposit | 80000 |

| 14 | Savings | 90000 |

+------------+---------------+---------+

4 rows in set (0.00 sec)

mysql> insert into Loan values("91" , "Home Loan" , "150000");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Loan values("92" , "Education Loan" , "250000");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Loan values("93" , "Startup Loan" , "350000");

Query OK, 1 row affected (0.00 sec)

mysql> select \* from Loan;

+---------+----------------+-------------+

| Loan\_Id | Loan\_type | Loan\_Amount |

+---------+----------------+-------------+

| 91 | Home Loan | 150000 |

| 92 | Education Loan | 250000 |

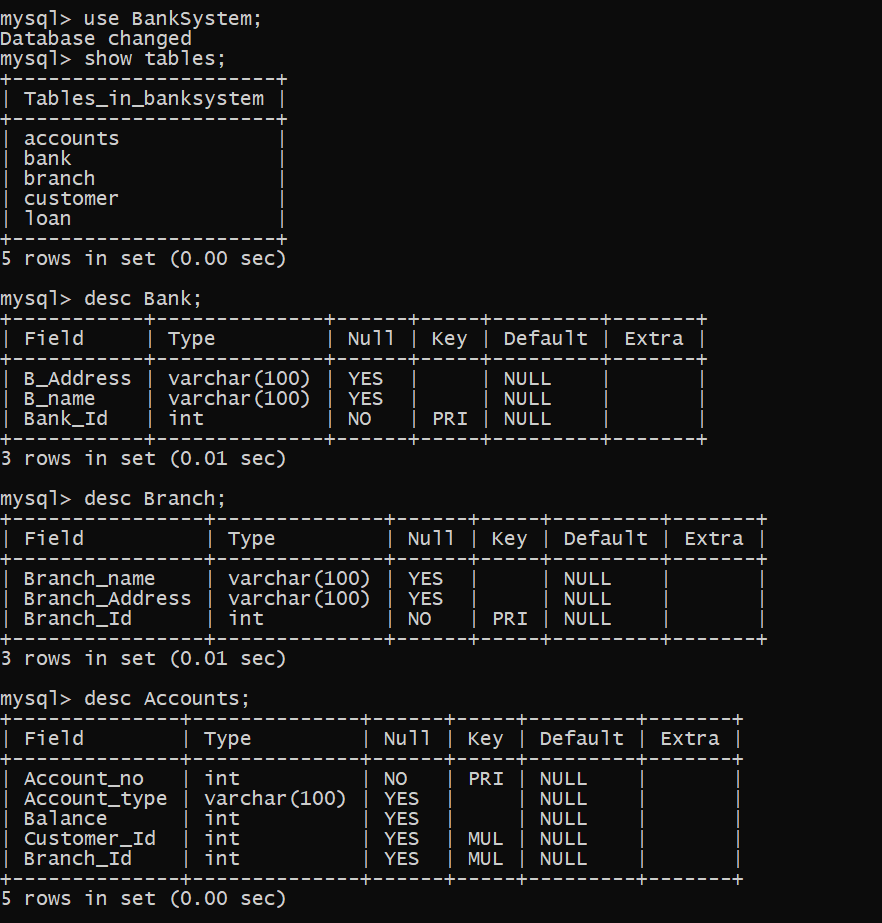
| 93 | Startup Loan | 350000 |

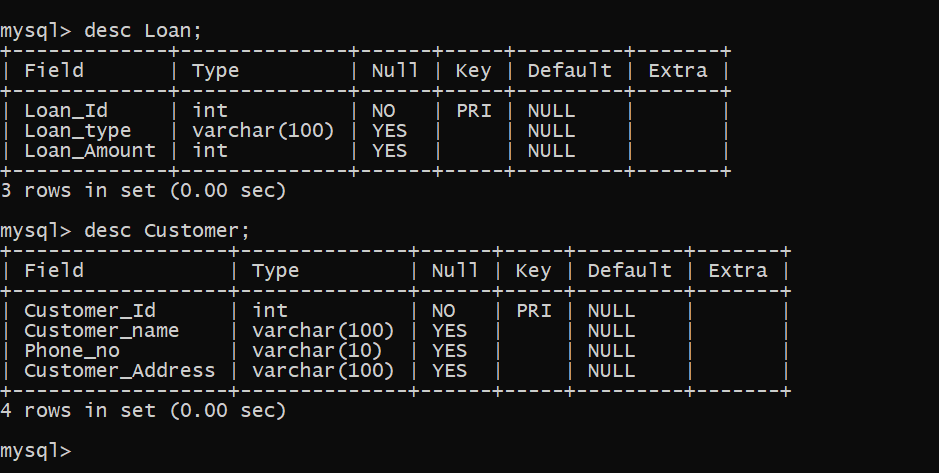
+---------+----------------+-------------+

3 rows in set (0.00 sec)

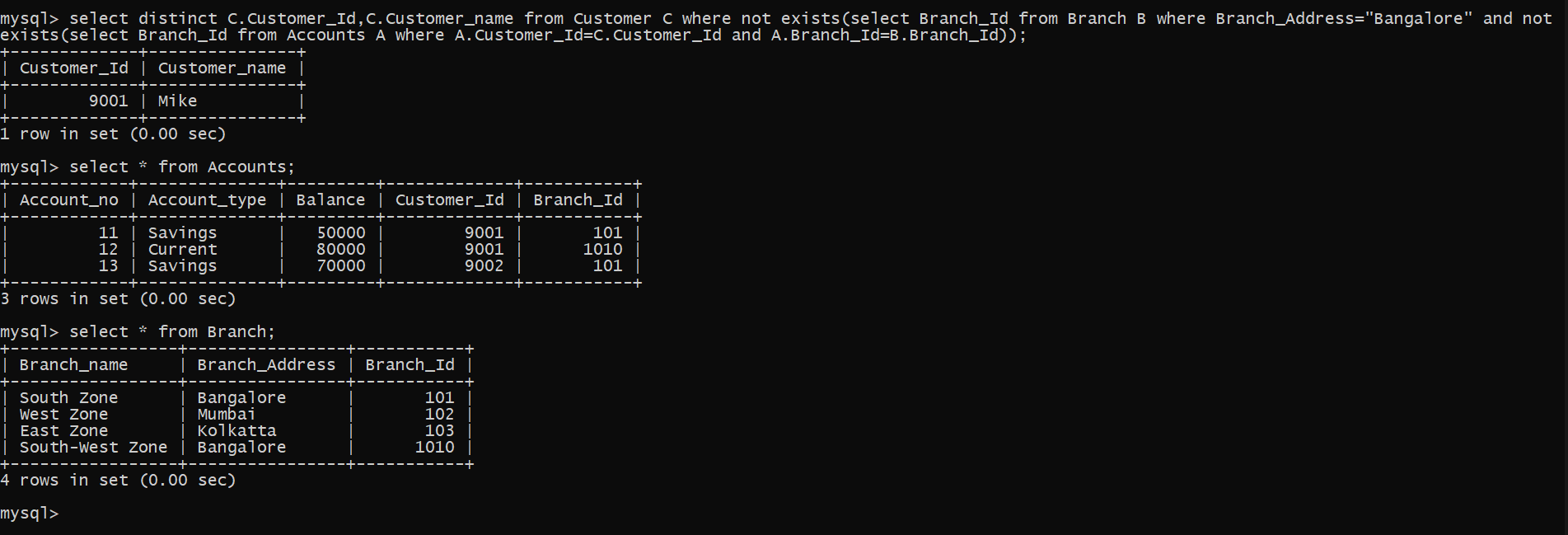
mysql>

**SNAPSHOTS:**





**Q)** **Find name of customer having account in all branches located in Bangalore(Asked in Project Viva)**



**Query:**

select distinct C.Customer\_Id,C.Customer\_name from Customer C where not exists(select Branch\_Id from Branch B where Branch\_Address="Bangalore" and not exists(select Branch\_Id from Accounts A where A.Customer\_Id=C.Customer\_Id and A.Branch\_Id=B.Branch\_Id));