BANK STRUCTURE DBMS PROJECT

Database of a Bank structure

intended to portray the banking activities such as, maintaining customer details, account details, loan managements through various distributed bank branches.

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TABLE OF CONTENT

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THANKS AGAIN TO ALL OF THEM WHO HELPED ME.

INTRODUCTION

A **database** is a collection of related data which represents some aspect of the real world. A database system is designed to be built and populated with data for a certain task.

Database Management System (DBMS) is a software for storing and retrieving users' data while considering appropriate security measures. It consists of a group of programs which manipulate the database. The DBMS accepts the request for data from an application and instructs the operating system to provide the specific data. In large systems, a DBMS helps users and other third-party software to store and retrieve data.

DBMS allows users to create their own databases as per their requirement. The term “DBMS” includes the user of the database and other application programs. It provides an interface between the data and the software application.

People want money for personal and commercial purposes and banks are the oldest lending institutions in Indian scenario. They are providing facilities to all citizens for their own purposes according to their terms. To survive in this modern market every bank implements various novel and innovative ideas, strategies as well as advanced technologies.

For that they give each and every minute detail about their institution and projects to public. They are providing ample facilities to satisfy their customers i.e. Net Banking, Mobile Banking, Door to Door facility, Instant facility, Investment facility, Demat facility, Credit Card facility, Loans and Advances, Account facility etc. And such banks get success to create their own image in public and corporate world.

OBJECTIVE

This project has been developed to carry out the processes easily and quickly, which is not possible with the manuals systems, which are overcome by this software.

Creating and managing requirements is a challenge of IT, systems and product development projects or indeed for any activity where It is needed to manage a contractual relationship. Organization needs to effectively define and manage requirements to ensure they are meeting needs of the customer, while proving compliance and staying on the schedule and within budget.

DATA TYPES AND ITS DESCRIPTION

SQL Data Type is an attribute that specifies the type of data of any object. Each column, variable and expression have a related data type in SQL.

Data types used in this project are listed below −

- **INT (size):** A medium integer. Signed range is from -2147483648 to 2147483647. Unsigned range is from 0 to 4294967295. The size parameter specifies the maximum display width (which is 255).
- **CHAR (size):** A FIXED length string (can contain letters, numbers, and special characters). The size parameter specifies the column length in characters - can be from 0 to 255. Default is 1.
- **DATE:** A date. Format: YYYY-MM-DD. The supported range is from '1000-01-01' to '9999-12-31'.
- **FLOAT (size, d):** A floating point number. The total number of digits is specified in size. The number of digits after decimal point id specified in d parameter.

DATA REQUIREMENTS

ENTITIES

- Branch
- Loan
- Account
- Customer
- Availed_By
- Hold_By

ATTRIBUTES

- **Branch Entity –**
  - Branch_id
  - Name
  - Est_date
- **Loan Entity –**
  - Loan_id
  - Loan_type
  - Amount
- **Account Entity –**
  - Acc_no
  - Acc_type
  - Balance
- **Customer Entity –**
  - Cust_Id
  - Name
  - Age
  - Phone

- Address
- **Availed_By**
- **Hold_By**

RELATIONSHIPS – CARDINALITY

Branch maintain Accounts => 1 : N

One Branch can have many Accounts but one Account can not belong to many Branches, so the relationship between Branch and Account is one to many relationships.

Branch offer Loans => 1 : N

One Branch can have many Loans but one Loan cannot belong to many Branches, so the relationship between Branch and Loan is one to many relationships.

Account held by Customers => M : N

One Customer can have more than one Accounts and also One Account can be held by one or more Customers, so the relationship between Account and Customers is many to many relationships.

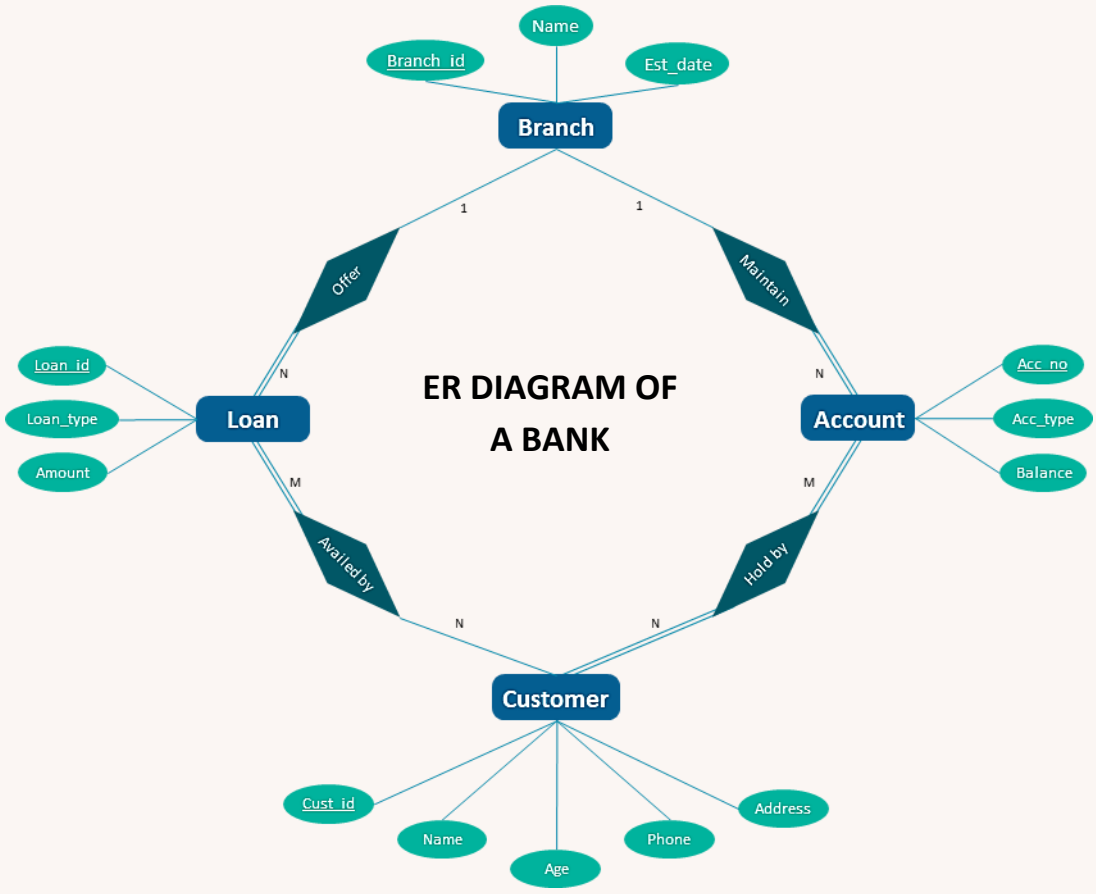
Loan availed by Customer => M : N

(Assume loan can be jointly held by many Customers).

One Customer can have more than one Loans and also One Loan can be availed by one or more Customers, so the relationship between Loan and Customers is many to many relationships.

ENTITY – RELATIONSHIP DIAGRAM

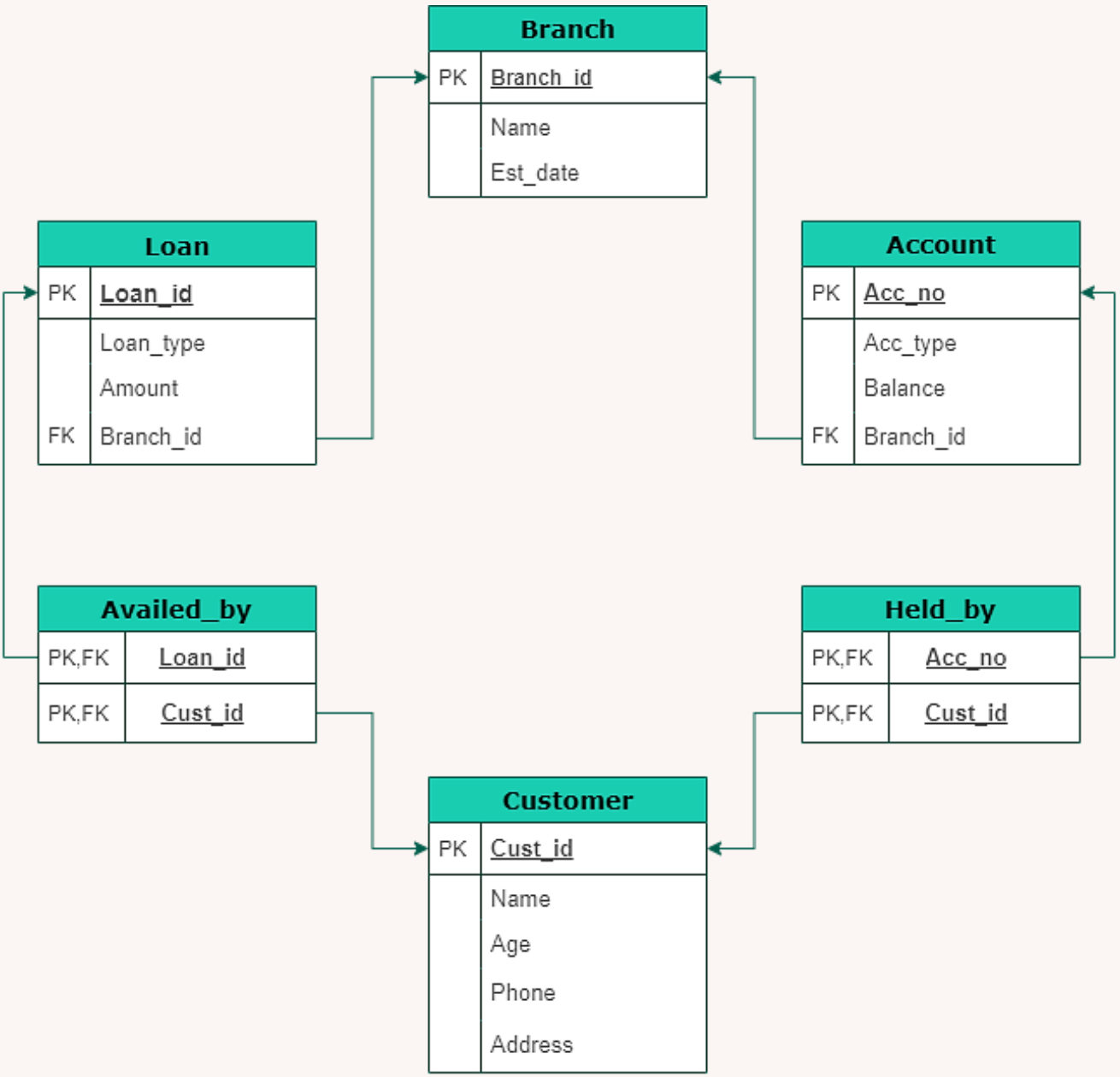
An Entity–relationship model (ER model) describes the structure of a database with the help of a diagram, which is known as Entity Relationship Diagram (ER Diagram). An ER model is a design or blueprint of a database that can later be implemented as a database. The main components of E-R model are: entity set and relationship set.



This bank ER diagram illustrates key information about bank, including entities such as branches, customers, accounts, and loans. It allows us to understand the relationships between entities.

SCHEMA DIAGRAM

A database schema is the skeleton structure that represents the logical view of the entire database, defining how the data is organized and how the relations are associated. It formulates all the constraints that are to be applied on the data.



IMPLIMENTING DATABASE USING MYSQL

CREATING DATABASE

```
mysql> create database Bank;
Query OK, 1 row affected (0.01 sec)
mysql> use Bank;
Database changed
```

CREATING TABLES

CREATING BRANCH TABLE

```
mysql> create table branch(
    -> B_Id char(6) primary key,
    -> B_name char(30),
    -> Est_date date);
Query OK, 0 rows affected (0.05 sec)
```

CREATING CUSTOMER TABLE

```
mysql> create table Customer(
    -> C_Id char(6) primary key,
    -> C_Name char(30),
    -> C_age int(3),
    -> C_phone int(12),
    -> C_address char(50));
Query OK, 0 rows affected, 2 warnings (0.03 sec)
```

CREATING LOAN TABLE

```
mysql> create table Loan(
    -> L_Id char(6) primary key,
    -> L_Type char(10),
    -> L_amount float(10,2),
    -> B_id char(6),
    -> foreign key (B_id) references branch(B_id) on update
cascade on delete restrict);
Query OK, 0 rows affected, 1 warning (0.02 sec)
```

CREATING ACCOUNT TABLE

```
mysql> Create table Account(
    -> Acc_no int primary key,
    -> Acc_type char(10),
    -> Balance float(10,2),
    -> B_id char(6),
    -> foreign key(B_id) references branch(B_id) on update
cascade on delete restrict
    -> );
Query OK, 0 rows affected, 1 warning (0.05 sec)
```

CREATING AVAILED_BY TABLE

```
mysql> Create table Availed_by(
    -> L_id char(6),
    -> C_id char(6),
    -> primary key(L_id,C_id),
    -> foreign key(L_id) references loan(L_id) on update
cascade on delete restrict,
    -> foreign key(C_id) references Customer(C_id) on update
cascade on delete restrict
    -> );
Query OK, 0 rows affected (0.05 sec)
```

CREATING HELD_BY TABLE

```
mysql> Create table Held_by(
    -> Acc_no int,
    -> C_id char(6),
    -> primary key(Acc_no,C_id),
    -> foreign key(C_id) references Customer(C_id) on update
cascade on delete restrict,
    -> foreign key(Acc_no) references Account(Acc_no) on update
cascade on delete restrict
    -> );
Query OK, 0 rows affected (0.02 sec)
```

TABLES IN DATABASE

```
mysql> Show tables;
+----------------+
| Tables_in_bank |
+----------------+
| Account        |
| Availed_by     |
| branch         |
| Customer       |
| Held_by        |
| Loan           |
+----------------+
6 rows in set (0.07 sec)
```

TABLE DESCRIPTIONS

BRANCH TABLE DESCRIPTION

```
mysql> desc branch;
+----------+----------+------+-----+---------+-------+
| Field    | Type     | Null | Key | Default | Extra |
+----------+----------+------+-----+---------+-------+
| B_Id     | char(6)  | NO   | PRI | NULL    |       |
| B_name   | char(30) | YES  |     | NULL    |       |
| Est_date | date     | YES  |     | NULL    |       |
+----------+----------+------+-----+---------+-------+
3 rows in set (0.02 sec)
```

CUSTOMER TABLE DESCRIPTION

```
mysql> desc customer;
+-----------+----------+------+-----+---------+-------+
| Field     | Type     | Null | Key | Default | Extra |
+-----------+----------+------+-----+---------+-------+
| C_Id      | char(6)  | NO   | PRI | NULL    |       |
| C_Name    | char(30) | YES  |     | NULL    |       |
| C_age     | int      | YES  |     | NULL    |       |
| C_phone   | int      | YES  |     | NULL    |       |
| C_address | char(50) | YES  |     | NULL    |       |
+-----------+----------+------+-----+---------+-------+
5 rows in set (0.01 sec)
```

LOAN TABLE DESCRIPTION

```
mysql> desc loan;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| L_Id     | char(6)     | NO   | PRI | NULL    |       |
| L_Type   | char(10)    | YES  |     | NULL    |       |
| L_amount | float(10,2) | YES  |     | NULL    |       |
| B_id     | char(6)     | YES  | MUL | NULL    |       |
+----------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

ACCOUNT TABLE DESCRIPTION

```
mysql> Desc Account;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| Acc_no   | int         | NO   | PRI | NULL    |       |
| Acc_type | char(10)    | YES  |     | NULL    |       |
| Balance  | float(10,2) | YES  |     | NULL    |       |
| B_id     | char(6)     | YES  | MUL | NULL    |       |
+----------+-------------+------+-----+---------+-------+
4 rows in set (0.02 sec)
```

AVAILED_BY TABLE DESCRIPTION

```
mysql> desc Availed_by;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| L_id  | char(6) | NO   | PRI | NULL    |       |
| C_id  | char(6) | NO   | PRI | NULL    |       |
+-------+---------+------+-----+---------+-------+
2 rows in set (0.02 sec)
```

HELD_BY TABLE DESCRIPTION

```
mysql> desc Held_by;
+--------+---------+------+-----+---------+-------+
| Field  | Type    | Null | Key | Default | Extra |
+--------+---------+------+-----+---------+-------+
| Acc_no | int     | NO   | PRI | NULL    |       |
| C_id   | char(6) | NO   | PRI | NULL    |       |
+--------+---------+------+-----+---------+-------+
2 rows in set (0.01 sec)
```

INSERTING RECORDS

INSERTING RECORDS IN BRANCH TABLE

```
mysql> Insert into Branch(B_Id,B_name,Est_date) values
    -> ("BB101","Behala","1999-07-21"),
    -> ("BB102","Barasat","1989-03-11"),
    -> ("BB103","Asansol","1969-09-17"),
    -> ("BB104","Ahmadpur","2005-02-13"),
    -> ("BB105","Dunlop","1999-07-25"),
    -> ("BB106","Konnagar","1957-04-15"),
    -> ("BB107","Barrackpur","1973-11-08"),
    -> ("BB108","Dankuni","1983-07-16"),
    -> ("BB109","Dumdum","1983-02-20"),
    -> ("BB110","Birati","2001-03-28");
Query OK, 10 rows affected (0.00 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

INSERTING RECORDS IN CUSTOMER TABLE

```
mysql> Insert into
Customer(C_Id,C_name,C_age,C_phone,C_address) values
    -> ("Cus101","Anubhab Paul","32","84663578","Behala"),
    -> ("Cus102","Asmita Das","54","23423234","Barasat"),
    -> ("Cus103","Suvam Bit","19","98763210","Asansol"),
    -> ("Cus104","Sumegh Singh","76","97436897","Ahmadpur"),
    -> ("Cus105","Pronoto Saha","21","83246423","Konnagar"),
    -> ("Cus106","Paromita Dawn","62","43533785","Dunlop"),
    -> ("Cus107","Samragni Maity","86","56565577","Dankuni"),
    -> ("Cus108","Arpita Mandal","43","44756776","Dumdum"),
    -> ("Cus109","Rituporno
Acharya","36","56743566","Barrackpur"),
    -> ("Cus110","Souryadip Modi","69","764635487","Birati");
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

INSERTING RECORDS IN LOAN TABLE

```
mysql> Insert into loan(L_Id,L_Type,L_amount,B_id) values
    -> ("Ln101","Bussiness","21132323.20","BB107"),
    -> ("Ln102","Home","2313112.50","BB108"),
    -> ("Ln103","Personal","1241242.00","BB101"),
    -> ("Ln104","Car","924124.00","BB106"),
    -> ("Ln105","Personal","466744.00","BB103"),
    -> ("Ln106","Car","321414.20","BB102"),
    -> ("Ln107","Bussiness","13412213.00","BB103"),
    -> ("Ln108","Home","3434321.00","BB106"),
    -> ("Ln109","Home","3241242.00","BB101"),
    -> ("Ln110","Car","214124.00","BB108");
Query OK, 10 rows affected (0.06 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

INSERTING RECORDS IN ACCOUNT TABLE

```
mysql> Insert into Account(Acc_no,Acc_type,Balance,B_id) values
    -> ("282475249","Savings","4123323.20","BB108"),
    -> ("162265007","Current","2423112.50","BB101"),
    -> ("984943658","FD","4541242.00","BB110"),
    -> ("114410893","Current","9234224.00","BB105"),
    -> ("470211272","Savings","462444.00","BB106"),
    -> ("101027544","Savings","42414.20","BB103"),
    -> ("145785087","Savings","23213.00","BB106"),
    -> ("145877792","Current","3434321.00","BB105"),
    -> ("200723770","FD","32442.00","BB110"),
    -> ("877723292","FD","214224.00","BB101"),
    -> ("732402112","Savings","873458.00","BB108"),
    -> ("226234504","Savings","623234.00","BB101"),
    -> ("723546872","Savings","523523.00","BB110"),
    -> ("282132249","Savings","3243223.20","BB107"),
    -> ("162435007","Current","54212.50","BB109"),
    -> ("947443658","FD","3421242.00","BB107"),
    -> ("234610893","Current","324224.00","BB104"),
    -> ("470269762","Savings","78644.00","BB102");
Query OK, 18 rows affected (0.09 sec)
Records: 18  Duplicates: 0  Warnings: 0
```

INSERTING RECORDS IN AVAILED_BY TABLE

```
mysql> Insert into Availed_by(L_id,C_id) values
    -> ("Ln101","Cus110"),
    -> ("Ln102","Cus103"),
    -> ("Ln103","Cus102"),
    -> ("Ln104","Cus107"),
    -> ("Ln105","Cus108"),
    -> ("Ln106","Cus105"),
    -> ("Ln107","Cus106"),
    -> ("Ln108","Cus104"),
    -> ("Ln109","Cus102"),
    -> ("Ln110","Cus103");
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

INSERTING RECORDS IN HELD_BY TABLE

```
mysql> Insert into Held_by(Acc_no,C_id) values
    -> ("282475249","Cus110"),
    -> ("162265007","Cus103"),
    -> ("984943658","Cus102"),
    -> ("114410893","Cus107"),
    -> ("470211272","Cus101"),
    -> ("101027544","Cus105"),
    -> ("145785087","Cus108"),
    -> ("145877792","Cus104"),
    -> ("200723770","Cus102"),
    -> ("877723292","Cus103"),
    -> ("732402112","Cus110"),
    -> ("226234504","Cus109"),
    -> ("723546872","Cus102"),
    -> ("282132249","Cus106"),
    -> ("162435007","Cus108"),
    -> ("947443658","Cus105"),
    -> ("234610893","Cus101"),
    -> ("470269762","Cus107");
Query OK, 18 rows affected (0.01 sec)
Records: 18  Duplicates: 0  Warnings: 0
```

VIEWING TABLES

BRANCH TABLE

```
mysql> Select * from Branch;
+-------+------------+------------+
| B_Id  | B_name     | Est_date   |
+-------+------------+------------+
| BB101 | Behala     | 1999-07-21 |
| BB102 | Barasat    | 1989-03-11 |
| BB103 | Asansol    | 1969-09-17 |
| BB104 | Ahmadpur   | 2005-02-13 |
| BB105 | Dunlop     | 1999-07-25 |
| BB106 | Konnagar   | 1957-04-15 |
| BB107 | Barrackpur | 1973-11-08 |
| BB108 | Dankuni    | 1983-07-16 |
| BB109 | Dumdum     | 1983-02-20 |
| BB110 | Birati     | 2001-03-28 |
+-------+------------+------------+
10 rows in set (0.00 sec)
```

CUSTOMER TABLE

```
mysql> select * from customer;
+--------+-------------------+-------+-----------+------------+
| C_Id   | C_Name            | C_age | C_phone   | C_address  |
+--------+-------------------+-------+-----------+------------+
| Cus101 | Anubhab Paul      |    32 |  84663578 | Behala     |
| Cus102 | Asmita Das        |    54 |  23423234 | Barasat    |
| Cus103 | Suvam Bit         |    19 |  98763210 | Asansol    |
| Cus104 | Sumegh Singh      |    76 |  97436897 | Ahmadpur   |
| Cus105 | Pronoto Saha      |    21 |  83246423 | Konnagar   |
| Cus106 | Paromita Dawn     |    62 |  43533785 | Dunlop     |
| Cus107 | Samragni Maity    |    86 |  56565577 | Dankuni    |
| Cus108 | Arpita Mandal     |    43 |  44756776 | Dumdum     |
| Cus109 | Rituporno Acharya |    36 |  56743566 | Barrackpur |
| Cus110 | Souryadip Modi    |    69 | 764635487 | Birati     |
+--------+-------------------+-------+-----------+------------+
10 rows in set (0.00 sec)
```

LOAN TABLE

```
mysql> Select * from loan;
+-------+-----------+-------------+-------+
| L_Id  | L_Type    | L_amount    | B_id  |
+-------+-----------+-------------+-------+
| Ln101 | Bussiness | 21132324.00 | BB107 |
| Ln102 | Home      |  2313112.50 | BB108 |
| Ln103 | Personal  |  1241242.00 | BB101 |
| Ln104 | Car       |   924124.00 | BB106 |
| Ln105 | Personal  |   466744.00 | BB103 |
| Ln106 | Car       |   321414.19 | BB102 |
| Ln107 | Bussiness | 13412213.00 | BB103 |
| Ln108 | Home      |  3434321.00 | BB106 |
| Ln109 | Home      |  3241242.00 | BB101 |
| Ln110 | Car       |   214124.00 | BB108 |
+-------+-----------+-------------+-------+
10 rows in set (0.00 sec)
```

ACCOUNT TABLE

```
mysql> Select * from account;
+-----------+----------+------------+-------+
| Acc_no    | Acc_type | Balance    | B_id  |
+-----------+----------+------------+-------+
| 101027544 | Savings  |   42414.20 | BB103 |
| 114410893 | Current  | 9234224.00 | BB105 |
| 145785087 | Savings  |   23213.00 | BB106 |
| 145877792 | Current  | 3434321.00 | BB105 |
| 162265007 | Current  | 2423112.50 | BB101 |
| 162435007 | Current  |   54212.50 | BB109 |
| 200723770 | FD       |   32442.00 | BB110 |
| 226234504 | Savings  |  623234.00 | BB101 |
| 234610893 | Current  |  324224.00 | BB104 |
| 282132249 | Savings  | 3243223.25 | BB107 |
| 282475249 | Savings  | 4123323.25 | BB108 |
| 470211272 | Savings  |  462444.00 | BB106 |
| 470269762 | Savings  |   78644.00 | BB102 |
| 723546872 | Savings  |  523523.00 | BB110 |
| 732402112 | Savings  |  873458.00 | BB108 |
```

```
| 877723292 | FD       |  214224.00 | BB101 |
| 947443658 | FD       | 3421242.00 | BB107 |
| 984943658 | FD       | 4541242.00 | BB110 |
+-----------+----------+------------+-------+
18 rows in set (0.00 sec)
```

AVAILED_BY TABLE

```
mysql> Select * from availed_by;
+-------+--------+
| L_id  | C_id   |
+-------+--------+
| Ln103 | Cus102 |
| Ln109 | Cus102 |
| Ln102 | Cus103 |
| Ln110 | Cus103 |
| Ln108 | Cus104 |
| Ln106 | Cus105 |
| Ln107 | Cus106 |
| Ln104 | Cus107 |
| Ln105 | Cus108 |
| Ln101 | Cus110 |
+-------+--------+
10 rows in set (0.00 sec)
```

HELD_BY TABLE

```
mysql> Select * from held_by;
+-----------+--------+
| Acc_no    | C_id   |
+-----------+--------+
| 234610893 | Cus101 |
| 470211272 | Cus101 |
| 200723770 | Cus102 |
| 723546872 | Cus102 |
| 984943658 | Cus102 |
| 162265007 | Cus103 |
| 877723292 | Cus103 |
| 145877792 | Cus104 |
| 101027544 | Cus105 |
| 947443658 | Cus105 |
```

```
| 282132249 | Cus106 |
| 114410893 | Cus107 |
| 470269762 | Cus107 |
| 145785087 | Cus108 |
| 162435007 | Cus108 |
| 226234504 | Cus109 |
| 282475249 | Cus110 |
| 732402112 | Cus110 |
+-----------+--------+
18 rows in set (0.00 sec)
```

TEST QUERIES

How many senior citizens currently have a debt of over 2lacs?

```
mysql> select c.*,l.l_amount from customer as c,loan as l,availed_by as a where
c.C_id=a.C_id and l.L_id=a.L_id and l.l_amount > 200000 and c.C_age > 60;
+--------+----------------+-------+-----------+-----------+-------------+
| C_Id   | C_Name         | C_age | C_phone   | C_address | l_amount    |
+--------+----------------+-------+-----------+-----------+-------------+
| Cus104 | Sumegh Singh   |    76 |  97436897 | Ahmadpur  |  3434321.00 |
| Cus106 | Paromita Dawn  |    62 |  43533785 | Dunlop    | 13412213.00 |
| Cus107 | Samragni Maity |    86 |  56565577 | Dankuni   |   924124.00 |
| Cus110 | Souryadip Modi |    69 | 764635487 | Birati    | 21132324.00 |
+--------+----------------+-------+-----------+-----------+-------------+
4 rows in set (0.01 sec)
```

How many people in age range50-60 have a balance over 10lacs?

```
mysql> select c.*,a.Acc_no,balance from customer as c,account as a,held_by as h
where c.C_id=h.C_id and h.Acc_no=a.Acc_no and balance > 1000000 and c_age>50 a
nd c_age<60;
+--------+------------+-------+----------+-----------+-----------+------------+
| C_Id   | C_Name     | C_age | C_phone  | C_address | Acc_no    | balance    |
+--------+------------+-------+----------+-----------+-----------+------------+
| Cus102 | Asmita Das |    54 | 23423234 | Barasat   | 984943658 | 4541242.00 |
+--------+------------+-------+----------+-----------+-----------+------------+
1 row in set (0.00 sec)
```

How many car loans over 5lacs?

```
mysql> select count(*) as car_loan_moreThan_5lac from loan where l_type="car" and
l_amount>500000;
+------------------------+
| car_loan_moreThan_5lac |
+------------------------+
|                      1 |
+------------------------+
1 row in set (0.00 sec)
```

What is the total amount of business loan taken from all the branches?

```
mysql> select sum(l_amount) from loan where l_type="bussiness";
+---------------+
| sum(l_amount) |
+---------------+
|   34544537.00 |
+---------------+
1 row in set (0.01 sec)
```

How many customers from Barasat?

```
mysql> select * from customer where C_address="barasat";
+--------+------------+-------+----------+-----------+
| C_Id   | C_Name     | C_age | C_phone  | C_address |
+--------+------------+-------+----------+-----------+
| Cus102 | Asmita Das |    54 | 23423234 | Barasat   |
+--------+------------+-------+----------+-----------+
1 row in set (0.00 sec)
```

Which is the oldest branch?

```
mysql> select * from branch where est_date= (select min(est_date) from branch);
+-------+----------+------------+
| B_Id  | B_name   | Est_date   |
+-------+----------+------------+
| BB106 | Konnagar | 1957-04-15 |
+-------+----------+------------+
1 row in set (0.00 sec)
```

Which the latest branch?

```
mysql> select * from branch where est_date= (select max(est_date) from branch);
+-------+----------+------------+
| B_Id  | B_name   | Est_date   |
+-------+----------+------------+
| BB104 | Ahmadpur | 2005-02-13 |
+-------+----------+------------+
1 row in set (0.02 sec)
```

How many branches were established in the 20th century?

```
mysql> select * from branch where est_date < "2000-01-01";
+-------+------------+------------+
| B_Id  | B_name     | Est_date   |
+-------+------------+------------+
| BB101 | Behala     | 1999-07-21 |
| BB102 | Barasat    | 1989-03-11 |
| BB103 | Asansol    | 1969-09-17 |
| BB105 | Dunlop     | 1999-07-25 |
| BB106 | Konnagar   | 1957-04-15 |
| BB107 | Barrackpur | 1973-11-08 |
| BB108 | Dankuni    | 1983-07-16 |
| BB109 | Dumdum     | 1983-02-20 |
+-------+------------+------------+
8 rows in set (0.01 sec)
```

How many branches were established in the 21st century?

```
mysql> select * from branch where est_date >=  "2000-01-01";
+-------+----------+------------+
| B_Id  | B_name   | Est_date   |
+-------+----------+------------+
| BB104 | Ahmadpur | 2005-02-13 |
| BB110 | Birati   | 2001-03-28 |
+-------+----------+------------+
2 rows in set (0.00 sec)
```

CONCLUSION

The bank management system needs to be computerized to reduce human errors and to increase the efficiency. The proposed bank management system in this proposal will be a computerized management system developed to maintain all the daily work of bank. Bank management systems are designed to store all the information about accounts and loans. The main focus of this project is to lessen human effort and encourage efficient record keeping.