Bank Management System

Database Design

Entities of Bank Management System

1. Accountant
2. Account
3. UserInfo

Accountant

- **Attributes:**
  FirstName
  LastName
  Email
  Password

- **Relationship**
  One **Accountant** Adds More Than One **User** (**one to many**).

User

- **Attributes:**
  UID (Primary Key)
  FirstName
  LastName
  Email
  Password
  Mobile
  Address

- **Relationship**
  Many **Users** have many **Accounts (many to many)**

Account

- **Attributes:**
  AccountNumber (Primary Key)
  Balance
  UID (Foreign Key)

- **Relationship**
  Many **Accounts** are managed by one **Accountant (many to one)**

Table Structure

1.) Accountant

```
mysql> desc accountant
    -> ;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| FirstName | varchar(255) | NO   |     | NULL    |       |
| LastName  | varchar(255) | NO   |     | NULL    |       |
| Email     | varchar(255) | NO   |     | NULL    |       |
| Password  | varchar(255) | NO   |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```


2.) UserInfo

```
mysql> Desc userinfo;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| UID       | varchar(50)  | NO   | PRI | NULL    |       |
| FirstName | varchar(255) | NO   |     | NULL    |       |
| LastName  | varchar(255) | NO   |     | NULL    |       |
| Email     | varchar(255) | NO   |     | NULL    |       |
| Password  | varchar(255) | NO   |     | NULL    |       |
| Mobile    | varchar(100) | NO   |     | NULL    |       |
| Address   | varchar(255) | NO   |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
7 rows in set (0.00 sec)
```

3.) Account

```
mysql> Desc account;
+---------------+-------------+------+-----+---------+----------------+
| Field         | Type        | Null | Key | Default | Extra          |
+---------------+-------------+------+-----+---------+----------------+
| AccountNumber | bigint      | NO   | PRI | NULL    | auto_increment |
| Balance       | int         | YES  |     | NULL    |                |
| Id            | varchar(50) | YES  | MUL | NULL    |                |
+---------------+-------------+------+-----+---------+----------------+
3 rows in set (0.04 sec)
```

ER Diagram
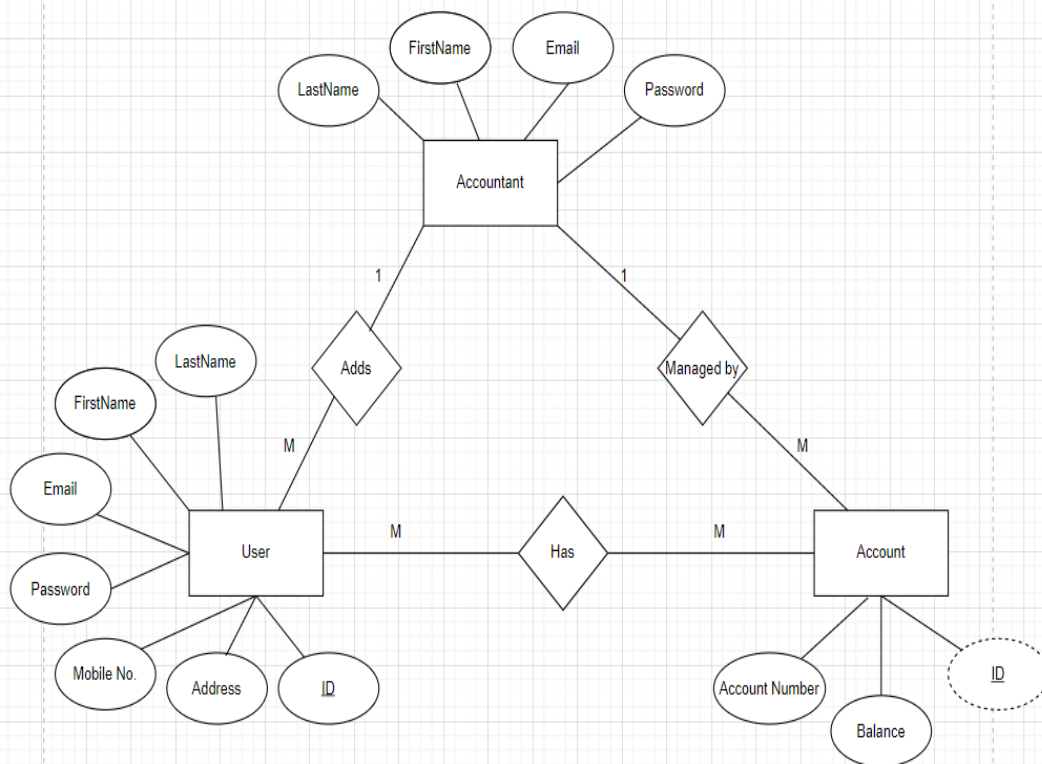
Creating the tables for each entity

```sql
Create table Accountant (
FirstName varchar(255) not null,
LastName varchar(255) not null,
Email varchar(255) not null,
Password varchar(255) not null
);


Create table UserInfo (
UID varchar(50) primary key,
FirstName varchar(255) not null,
LastName varchar(255) not null,
Email varchar(255) not null,
Password varchar(255) not null,
Mobile varchar(100) not null,
Address varchar(255) not null
);


Create table Account (
AccountNumber bigint primary key auto_increment,
Balance int,
Id varchar(50),
foreign key(Id) references UserInfo(UID) on delete cascade);
);
```