

# Bank Management System

## Database Design

### Entities of Bank Management System

1. Account
2. Branch
3. Bank
4. Customer
5. Employee

### 1. Bank(Entity)

Attributes:

Bank\_Name

Address

City

Code

Relationship :

**One to many** relationship with **Branch** and **Customer**.

```
sql> desc bank;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
address	varchar(255)	YES		NULL	
bankName	varchar(255)	YES		NULL	
city	varchar(255)	YES		NULL	
code	varchar(255)	YES		NULL	

rows in set (0.00 sec)

### 2. Account(Entity)

Attributes:

Attributes:

Account\_No

Balance

Relationship :

Is a relationship with Current and Saving Type

```
mysql> desc account;
```

Field	Type	Null	Key	Default	Extra
accountNo	int	NO	PRI	NULL	auto_increment
accountType	varchar(255)	YES		NULL	
balance	double	NO		NULL	
customer_id	int	YES	MUL	NULL	
employee_id	int	YES	MUL	NULL	
rows in set (0.16 sec)					

```
mysql> select * from account;
```

accountNo	accountType	balance	customer_id	employee_id
3	NULL	1589	1	NULL
row in set (0.12 sec)				

### 3.Branch(Entity)

Attributes:

Bank\_Name

Address

Branch\_code

Branch\_name

Relationship :

Many to One Relationship with Bank

```
mysql> desc branch;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
address	varchar(255)	YES		NULL	
branchCode	varchar(255)	YES		NULL	
branchName	varchar(255)	YES		NULL	
bank_id	int	YES	MUL	NULL	
rows in set (0.33 sec)					

```
mysql> select * from branch;
```

id	address	branchCode	branchName	bank_id
2	Noida	1023	ABC1	NULL
row in set (0.00 sec)				

## 4.Customer(Entity)

Attributes:

Bank\_Name

C\_id(CustomerID)

Name (First Name & Last name )

Phone

Address

Acc\_no

Relationship :

Many to one relationship with account and employee entity

```
mysql> desc customer;
+-----+-----+-----+-----+-----+-----+
Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
id         | int       | NO   | PRI | NULL    | auto_increment |
address    | varchar(255) | YES  |     | NULL    |              |
customerId | varchar(255) | YES  |     | NULL    |              |
firstName  | varchar(255) | YES  |     | NULL    |              |
lastName   | varchar(255) | YES  |     | NULL    |              |
bank_id    | int       | YES  | MUL | NULL    |              |
employee_id | int       | YES  | MUL | NULL    |              |
+-----+-----+-----+-----+-----+-----+
rows in set (0.05 sec)

mysql> select * from customer;
+-----+-----+-----+-----+-----+-----+-----+
id | address                | customerId | firstName | lastName | bank_id | employee_id |
+-----+-----+-----+-----+-----+-----+-----+
1  | Greater Noida          | 2001      | Ajay     | yadav   | NULL    | NULL        |
2  | aplha1 greater noida  | 3         | Anjila   | choudhary | NULL    | NULL        |
+-----+-----+-----+-----+-----+-----+-----+
rows in set (0.05 sec)
```

## 6.Employee(Entity)

Attributes:

Employee\_Name

E\_id(EmployeeID)

Phone

Address

Relationship :

One to many relationship with Customer and Account

```

sql> desc Employee;
+-----+-----+-----+-----+-----+-----+
Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
empId      | int       | NO   | PRI | NULL    | auto_increment |
address    | varchar(255) | YES  |     | NULL    |      |
empName    | varchar(255) | YES  |     | NULL    |      |
mobileNo   | varchar(255) | YES  |     | NULL    |      |
branch_id  | int       | YES  | MUL | NULL    |      |
+-----+-----+-----+-----+-----+-----+

rows in set (0.00 sec)

sql> select * from Employee;
+-----+-----+-----+-----+-----+
empId | address | empName | mobileNo | branch_id |
+-----+-----+-----+-----+-----+
4     | Alpha 1 | Aarfa   | 1234567890 | 2         |
5     | Alpha 1 | Aarfa   | 1234567890 | 2         |
+-----+-----+-----+-----+-----+

```

## ER Diagram of Bank Management System

