1. Bank: Represents the banks involved in the system.

2. Customer: Represents the customers of the bank.

3. Account: Represents the various types of accounts customers can have in a bank.

4. Transaction: Represents the transactions made by customers on their accounts.

Attributes for Each Entity:

1. Bank:

- BankID (Primary Key)

- Name

2. Customer:

- CustomerID (Primary Key)

- Name

- Address

- Phone

- Email

3. Account:

- AccountNumber (Primary Key)

- CustomerID (Foreign Key referencing Customer)

- BankID (Foreign Key referencing Bank)

- AccountType

- Balance

4. Transaction:

- TransactionID (Primary Key)

- TransactionType

- Amount

- Date

Relationships:

1. A bank can have many customers.

3. An account belongs to only one customer.

4. An account can have multiple transactions.

ER Diagram:

Name

Address

Name

BankID

Phone

Customer

has

BANK

1 M

1

CustomerID

has

Email

AccountNumber

1

Transaction

has

Account

M

1

CustomerID

TransactionID

Balance

AccountType

BankID

Date

TransactionType

Amount

Normalization:

1. First Normal Form (1NF): Each attribute contains only atomic values, and there are no repeating groups.

- The entities and attributes are already in 1NF.

2. Second Normal Form (2NF): All attributes are fully functionally dependent on the primary key.

- AccountType depends only on the AccountNumber, so it's in 2NF.

3. Third Normal Form (3NF): There should be no transitive dependencies.

- Balance depends only on AccountNumber, and AccountType doesn't depend on Balance, so it's in 3NF.