# ASSIGNMENT -1 (BANKING SYSTEM)

**Tasks 1: Database Design:**

1. **Create the database named "HMBank"**

**5. Create appropriate Primary Key and Foreign Key constraints for referential integrity.**

**6. Write SQL scripts to create the mentioned tables with appropriate data types, constraints, and relationships. • Customers • Accounts • Transactions**

CREATE DATABASE HMBank;

**2. Define the schema for the Customers, Accounts, and Transactions tables based on the provided schema.**

USE HMBank;

CREATE TABLE customers (

customer\_id INT PRIMARY KEY,

first\_name VARCHAR(50) NOT NULL,

last\_name VARCHAR(50) NOT NULL,

DOB DATE,

email VARCHAR(100) UNIQUE,

phone\_number VARCHAR(15) UNIQUE,

address TEXT

);

CREATE TABLE accounts (

account\_id INT PRIMARY KEY,

customer\_id INT,

account\_type ENUM('savings', 'current', 'zero\_balance') NOT NULL,

balance DECIMAL(10,2) NOT NULL,

CONSTRAINT fk\_customer FOREIGN KEY (customer\_id)

REFERENCES customers(customer\_id) ON DELETE CASCADE

);

CREATE TABLE transactions (

transaction\_id INT PRIMARY KEY,

account\_id INT,

transaction\_type ENUM('deposit', 'withdrawal', 'transfer') NOT NULL,

amount DECIMAL(10,2) NOT NULL CHECK (amount > 0),

transaction\_date DATE NOT NULL DEFAULT (CURRENT\_DATE),

CONSTRAINT fk\_account FOREIGN KEY (account\_id)

REFERENCES accounts(account\_id) ON DELETE CASCADE

);

4. **Create an ERD (Entity Relationship Diagram) for the database**

