Problem Statement 1 - Bank Database (MySQL)

```sql
-- Step 1: Create Database
CREATE DATABASE bank;
USE bank;

-- Step 2: Create Tables
CREATE TABLE branch(
   branch_name VARCHAR(30) PRIMARY KEY,
   branch_city VARCHAR(30) NOT NULL,
   assets INT CHECK(assets >= 0)
);

CREATE TABLE Account(
   Acc_no INT PRIMARY KEY,
   branch_name VARCHAR(30),
   balance INT CHECK(balance >= 0),
   FOREIGN KEY(branch_name) REFERENCES branch(branch_name)
);

CREATE TABLE customer(
   cust_name VARCHAR(30) PRIMARY KEY,
   cust_street VARCHAR(30),
   cust_city VARCHAR(30)
);

CREATE TABLE Depositor(
   cust_name VARCHAR(30),
   acc_no INT,
   PRIMARY KEY(cust_name, acc_no),
   FOREIGN KEY(cust_name) REFERENCES customer(cust_name),
   FOREIGN KEY(acc_no) REFERENCES Account(acc_no)
);

CREATE TABLE Loan(
   loan_no INT PRIMARY KEY,
   branch_name VARCHAR(30),
   amount INT CHECK(amount > 0),
   FOREIGN KEY(branch_name) REFERENCES branch(branch_name)
);

CREATE TABLE Borrower(
   cust_name VARCHAR(30),
   loan_no INT,
   PRIMARY KEY(cust_name, loan_no),
   FOREIGN KEY(cust_name) REFERENCES customer(cust_name),
   FOREIGN KEY(loan_no) REFERENCES Loan(loan_no)
);

-- Step 3: Insert Sample Data
INSERT INTO branch VALUES
('Akurdi','Pune',500000),
('Shivaji Nagar','Pune',650000),
('Kothrud','Pune',450000);
INSERT INTO customer VALUES
```

```
('Suyash','MG Road','Pune'),
('Rahul','Karve Road','Pune'),
('Amit','Akurdi Gaon','Pune');

INSERT INTO Account VALUES
(101,'Akurdi',20000),
(102,'Shivaji Nagar',15000),
(103,'Kothrud',30000);

INSERT INTO Depositor VALUES
('Suyash',101),
('Rahul',102),
('Amit',103);

INSERT INTO Loan VALUES
(201,'Akurdi',12000),
(202,'Shivaji Nagar',25000),
(203,'Kothrud',18000);

INSERT INTO Borrower VALUES
('Suyash',201),
('Rahul',202),
('Amit',203);

-- Step 4: Queries
-- 1) Branches that issued loans
SELECT DISTINCT branch_name FROM Loan;

-- 2) Loan numbers from Shivaji Nagar with amount > 12000
SELECT loan_no FROM Loan
WHERE branch_name = 'Shivaji Nagar' AND amount > 12000;

-- 3) Customer name, loan number and amount for all borrowers
SELECT Borrower.cust_name, Borrower.loan_no, Loan.amount
FROM Borrower
JOIN Loan ON Borrower.loan_no = Loan.loan_no;

-- 4) Customers with loan from Akurdi branch (alphabetically)
SELECT Borrower.cust_name
FROM Borrower
JOIN Loan ON Borrower.loan_no = Loan.loan_no
WHERE Loan.branch_name = 'Akurdi'
ORDER BY Borrower.cust_name ASC;
```