Mysql-1Consider following Relation Account (Acc_no, branch_name,balance) Branch(branch_name,branch_city,assets) Customer(cust_name,cust_street,cust_city) Depositor(cust_name,acc_no) Loan(loan_no,branch_name,amount) Borrower(cust_name,loan_no) Create above tables with appropriate constraints like primary key, foreign key, not null etc.

1. Find the names of all branches in loan relation.

2. Find all loan numbers for loans made at 'Wadia College' Branch with loan amount > 12000.

3. Find all customers who have a loan from bank. Find their names,loan_no and loan amount.

4. List all customers in alphabetical order who have loan from 'Wadia College' branch.

5. Display distinct cities of branch.

```
-- Branch Table
CREATE TABLE Branch (
    branch_name VARCHAR(50) PRIMARY KEY,
    branch_city VARCHAR(50) NOT NULL,
    assets DECIMAL(15,2) CHECK (assets >= 0)
);

-- Account Table
CREATE TABLE Account (
    acc_no INT PRIMARY KEY,
    branch_name VARCHAR(50) NOT NULL,
    balance DECIMAL(15,2) CHECK (balance >= 0),
    FOREIGN KEY (branch_name) REFERENCES Branch(branch_name)
        ON DELETE CASCADE ON UPDATE CASCADE
);
```

-- Customer Table

```
CREATE TABLE Customer (
    cust_name VARCHAR(50) PRIMARY KEY,
    cust_street VARCHAR(100),
    cust_city VARCHAR(50)
);

-- Depositor Table (Many-to-Many between Customer and Account)
CREATE TABLE Depositor (
    cust_name VARCHAR(50),
    acc_no INT,
    PRIMARY KEY (cust_name, acc_no),
    FOREIGN KEY (cust_name) REFERENCES Customer(cust_name)
        ON DELETE CASCADE ON UPDATE CASCADE,
    FOREIGN KEY (acc_no) REFERENCES Account(acc_no)
        ON DELETE CASCADE ON UPDATE CASCADE
);

-- Loan Table
CREATE TABLE Loan (
    loan_no INT PRIMARY KEY,
    branch_name VARCHAR(50) NOT NULL,
    amount DECIMAL(15,2) CHECK (amount >= 0),
```

```
    FOREIGN KEY (branch_name) REFERENCES Branch(branch_name)
        ON DELETE CASCADE ON UPDATE CASCADE
);

-- Borrower Table (Many-to-Many between Customer and Loan)
CREATE TABLE Borrower (
    cust_name VARCHAR(50),
    loan_no INT,
    PRIMARY KEY (cust_name, loan_no),
    FOREIGN KEY (cust_name) REFERENCES Customer(cust_name)
        ON DELETE CASCADE ON UPDATE CASCADE,
    FOREIGN KEY (loan_no) REFERENCES Loan(loan_no)
        ON DELETE CASCADE ON UPDATE CASCADE
);
```

Step 1: Insert Data into Branch Table

```
INSERT INTO Branch (branch_name, branch_city, assets) VALUES
('Wadia College', 'Pune', 1500000),
('Camp Branch', 'Pune', 1000000),
('FC Road', 'Pune', 1200000),
('Deccan', 'Mumbai', 2000000),
('MG Road', 'Nashik', 1800000);
```

step 2: Insert Data into Account Table

```
INSERT INTO Account (acc_no, branch_name, balance) VALUES
(101, 'Wadia College', 50000),
(102, 'Camp Branch', 35000),
(103, 'FC Road', 25000),
(104, 'Deccan', 75000),
(105, 'Wadia College', 15000);
```

Step 3: Insert Data into Customer Table

```
INSERT INTO Customer (cust_name, cust_street, cust_city) VALUES
('Amit', 'Laxmi Road', 'Pune'),
('Sneha', 'MG Road', 'Nashik'),
('Rahul', 'JM Road', 'Pune'),
('Priya', 'Deccan Gym', 'Mumbai'),
('Kiran', 'FC Road', 'Pune');
```

Step 4: Insert Data into Depositor Table

```
INSERT INTO Depositor (cust_name, acc_no) VALUES
('Amit', 101),
('Sneha', 102),
('Rahul', 103),
('Priya', 104),
('Kiran', 105);
```

Step 5: Insert Data into Loan Table

```
INSERT INTO Loan (loan_no, branch_name, amount) VALUES
(201, 'Wadia College', 10000),
(202, 'Camp Branch', 15000),
(203, 'Wadia College', 25000),
(204, 'Deccan', 18000),
(205, 'MG Road', 12000);
```

Step 6: Insert Data into Borrower Table

```
INSERT INTO Borrower (cust_name, loan_no) VALUES
('Amit', 201),
('Sneha', 202),
('Rahul', 203),
('Priya', 204),
('Kiran', 205);
```

Step 7: Test the Queries

✅ **Query 1 – Branch names in Loan relation**

```
SELECT DISTINCT branch_name FROM Loan;
```

Output:

```
Wadia College
Camp Branch
Deccan
MG Road
```

Query 2 – Loan numbers from Wadia College branch with amount > 12000

```
SELECT loan_no FROM Loan
WHERE branch_name = 'Wadia College' AND amount > 12000;
```

Output:

```
203
```

Query 3 – Customers with a loan (cust_name, loan_no, amount)

```
SELECT B.cust_name, L.loan_no, L.amount
FROM Borrower B
JOIN Loan L ON B.loan_no = L.loan_no;
```

Output:

```
Amit   | 201 | 10000
Sneha  | 202 | 15000
Rahul  | 203 | 25000
Priya  | 204 | 18000
Kiran  | 205 | 12000
```

Query 4 – Customers (alphabetically) who have a loan from Wadia College branch

```
SELECT DISTINCT B.cust_name
FROM Borrower B
JOIN Loan L ON B.loan_no = L.loan_no
WHERE L.branch_name = 'Wadia College'
ORDER BY B.cust_name ASC;
```

Query 5 – Distinct branch cities

```
SELECT DISTINCT branch_city FROM Branch;
```

Output:

```
Pune
Mumbai
Nashik
```