**SQL Dump File:**

**Creation of Database & Tables**

**Creating database**

CREATE DATABASE IF NOT EXISTS lms;

USE lms;

**Books Table**

CREATE TABLE Books (

ISBN VARCHAR(13) PRIMARY KEY,

Title VARCHAR(255) NOT NULL,

Author VARCHAR(255) NOT NULL,

Genre VARCHAR(100) NOT NULL,

PublicationYear YEAR NOT NULL

);

**Book Copies Table**

CREATE TABLE BookCopies (

SerialNumber INT AUTO\_INCREMENT PRIMARY KEY,

ISBN VARCHAR(13) NOT NULL,

AvailabilityStatus BOOLEAN NOT NULL DEFAULT TRUE,

FOREIGN KEY (ISBN) REFERENCES Books(ISBN)

);

**Borrowers Table**

CREATE TABLE Borrowers (

BorrowerID INT AUTO\_INCREMENT PRIMARY KEY,

Name VARCHAR(255) NOT NULL,

Email VARCHAR(255) NOT NULL UNIQUE,

ContactNumber VARCHAR(15) NOT NULL

);

**Transactions Table**

CREATE TABLE Transactions (

TransactionID INT AUTO\_INCREMENT PRIMARY KEY,

BorrowerID INT NOT NULL,

SerialNumber INT NOT NULL,

BorrowingDate DATE NOT NULL,

ReturnDate DATE,

FOREIGN KEY (BorrowerID) REFERENCES Borrowers(BorrowerID),

FOREIGN KEY (SerialNumber) REFERENCES BookCopies(SerialNumber)

);

**Insertion of Sample Data**

**Sample data into the Books table**

INSERT INTO Books (ISBN, Title, Author, Genre, PublicationYear)

VALUES

('1234567890123', 'The First Title', 'Author A', 'Fantasy', 2000),

('1234567890124', 'The Second Title', 'Author B', 'Sci-Fi', 2001),

('1234567890125', 'The Third Title', 'Author C', 'Mystery', 2002),

('1234567890126', 'The Fourth Title', 'Author D', 'Non-fiction', 2003),

('1234567890127', 'The Fifth Title', 'Author E', 'Romance', 2004);

**Sample data into the BookCopies table**

INSERT INTO BookCopies (ISBN, AvailabilityStatus)

VALUES

('1234567890123', TRUE),

('1234567890123', FALSE),

('1234567890123', TRUE),

('1234567890124', TRUE),

('1234567890124', TRUE),

('1234567890124', FALSE),

('1234567890125', TRUE),

('1234567890125', TRUE),

('1234567890125', FALSE);

**-- Assuming 5 copies per ISBN for simplicity**

INSERT INTO BookCopies (ISBN, AvailabilityStatus)

SELECT ISBN, TRUE FROM Books;

**Sample data into the Borrowers table**

INSERT INTO Borrowers (Name, Email, ContactNumber)

VALUES

('Alice Johnson', 'alice.johnson@email.com', '123-456-7890'),

('Bob Harris', 'bob.harris@email.com', '098-765-4321'),

('Cindy Lou', 'cindy.lou@email.com', '543-210-9876'),

('David Green', 'david.green@email.com', '210-543-6789'),

('Eva Stone', 'eva.stone@email.com', '678-901-2345');

**Sample data into the Transactions table**

-- Note: Dates and SerialNumber are arbitrary and for example purposes

INSERT INTO Transactions (BorrowerID, SerialNumber, BorrowingDate, ReturnDate)

VALUES

(1, 1, '2024-01-01', '2024-01-15'),

(2, 2, '2024-01-05', NULL),

(3, 3, '2024-02-01', '2024-02-15'),

(4, 4, '2024-02-10', NULL),

(5, 5, '2024-03-01', '2024-03-15');