CREATE DATABASE Library;

USE Library;

CREATE TABLE Branch (Branch\_no INT PRIMARY KEY,

Manager\_Id INT,

Branch\_address VARCHAR(255),

Contact\_no VARCHAR(15));

desc Branch;

INSERT INTO Branch VALUES

(1, 101, 'Downtown', '123-456-7890'),

(2, 102, 'Uptown', '123-456-7891'),

(3, 103, 'Suburban', '123-456-7892'),

(4, 104, 'City Center', '123-456-7893'),

(5, 105, 'Eastside', '123-456-7894');

select \* from Branch;

CREATE TABLE Employee (Emp\_Id INT PRIMARY KEY,

Emp\_name VARCHAR(100),

Position VARCHAR(100),

Salary DECIMAL(10, 2),

Branch\_no INT,

FOREIGN KEY (Branch\_no) REFERENCES Branch(Branch\_no));

desc employee;

INSERT INTO Employee VALUES

(101, 'Alice', 'Manager', 60000, 1),

(102, 'Bob', 'Librarian', 45000, 2),

(103, 'Charlie', 'Assistant', 35000, 3),

(104, 'Diana', 'Manager', 55000, 4),

(105, 'Eve', 'Librarian', 42000, 5),

(106, 'Frank', 'Assistant', 30000, 1),

(107, 'Grace', 'Assistant', 28000, 2),

(108, 'Hannah', 'Manager', 65000, 3),

(109, 'Ivy', 'Librarian', 50000, 4),

(110, 'Jack', 'Assistant', 32000, 5);

SELECT \* FROM EMPLOYEE;

CREATE TABLE Books (ISBN INT PRIMARY KEY,

Book\_title VARCHAR(255),

Category VARCHAR(100),

Rental\_Price DECIMAL(10, 2),

Status VARCHAR(3),

Author VARCHAR(100),

Publisher VARCHAR(100));

DESC Books;

INSERT INTO Books VALUES

(1001, 'Python Basics', 'Programming', 30.00, 'yes', 'John Doe', 'TechBooks'),

(1002, 'Advanced SQL', 'Database', 35.00, 'no', 'Jane Smith', 'DataBooks'),

(1003, 'History of Rome', 'History', 25.00, 'yes', 'Peter Paul', 'HistoryPress'),

(1004, 'Java for Beginners', 'Programming', 28.00, 'yes', 'Lucy Brown', 'TechBooks'),

(1005, 'World War II', 'History', 40.00, 'no', 'George White', 'HistoryPress'),

(1006, 'Data Science 101', 'Data Science', 45.00, 'yes', 'Alice Green', 'DataBooks'),

(1007, 'Algorithms Unlocked', 'Computer Science', 50.00, 'yes', 'Mike Blue', 'TechBooks'),

(1008, 'Modern Art', 'Arts', 20.00, 'no', 'Emma Black', 'ArtBooks'),

(1009, 'Ancient Egypt', 'History', 22.00, 'yes', 'Sophia Gold', 'HistoryPress'),

(1010, 'Cooking Mastery', 'Lifestyle', 15.00, 'yes', 'Ethan Gray', 'FoodBooks');

select \* from books;

CREATE TABLE Customer (Customer\_Id INT PRIMARY KEY,

Customer\_name VARCHAR(100),

Customer\_address VARCHAR(255),

Reg\_date DATE);

desc Customer;

INSERT INTO Customer VALUES

(1, 'Oliver', '123 Maple St', '2021-12-20'),

(2, 'Emma', '456 Oak St', '2022-02-15'),

(3, 'Noah', '789 Pine St', '2020-11-30'),

(4, 'Ava', '321 Birch St', '2023-06-10'),

(5, 'Sophia', '654 Cedar St', '2023-06-12');

select \* from customer;

CREATE TABLE IssueStatus (Issue\_Id INT PRIMARY KEY,

Issued\_cust INT,

Issued\_book\_name VARCHAR(255),

Issue\_date DATE,

Isbn\_book INT,

FOREIGN KEY (Issued\_cust) REFERENCES Customer(Customer\_Id),

FOREIGN KEY (Isbn\_book) REFERENCES Books(ISBN));

desc IssueStatus;

INSERT INTO IssueStatus VALUES

(1, 1, 'Python Basics', '2021-12-21', 1001),

(2, 2, 'Data Science 101', '2022-02-20', 1006),

(3, 4, 'History of Rome', '2023-06-11', 1003),

(4, 5, 'Ancient Egypt', '2023-06-13', 1009);

select \* from IssueStatus;

CREATE TABLE ReturnStatus (Return\_Id INT PRIMARY KEY,

Return\_cust INT,

Return\_book\_name VARCHAR(255),

Return\_date DATE,

Isbn\_book2 INT,

FOREIGN KEY (Isbn\_book2) REFERENCES Books(ISBN));

desc ReturnStatus;

INSERT INTO ReturnStatus VALUES

(1, 1, 'Python Basics', '2021-12-30', 1001),

(2, 2, 'Data Science 101', '2022-03-01', 1006);

select \* from ReturnStatus;

-- Question No 1

SELECT Book\_title, Category, Rental\_Price

FROM Books

WHERE Status = 'yes';

-- Question No 2

SELECT Emp\_name, Salary

FROM Employee

ORDER BY Salary DESC;

-- Question No 3

SELECT B.Book\_title, C.Customer\_name

FROM Books B

JOIN IssueStatus I ON B.ISBN = I.Isbn\_book

JOIN Customer C ON I.Issued\_cust = C.Customer\_Id;

-- Question No 4

SELECT Category, COUNT(\*) AS Book\_Count

FROM Books

GROUP BY Category;

-- Question No 5

SELECT Emp\_name, Position

FROM Employee

WHERE Salary > 50000;

-- Question No 6

SELECT C.Customer\_name

FROM Customer C

LEFT JOIN IssueStatus I ON C.Customer\_Id = I.Issued\_cust

WHERE C.Reg\_date < '2022-01-01' AND I.Issue\_Id IS NULL;

-- Question No 7

SELECT Branch\_no, COUNT(\*) AS Employee\_Count

FROM Employee

GROUP BY Branch\_no;

-- Question No 8

SELECT C.Customer\_name

FROM Customer C

JOIN IssueStatus I ON C.Customer\_Id = I.Issued\_cust

WHERE I.Issue\_date BETWEEN '2023-06-01' AND '2023-06-30';

-- Question No 9

SELECT Book\_title

FROM Books

WHERE Category LIKE '%History%';

-- Question No 10

SELECT Branch\_no, COUNT(\*) AS Employee\_Count

FROM Employee

GROUP BY Branch\_no

HAVING COUNT(\*) > 5;

-- Question No 11

SELECT E.Emp\_name, B.Branch\_address

FROM Employee E

JOIN Branch B ON E.Emp\_Id = B.Manager\_Id;

-- Question No 12

SELECT C.Customer\_name

FROM Customer C

JOIN IssueStatus I ON C.Customer\_Id = I.Issued\_cust

JOIN Books B ON I.Isbn\_book = B.ISBN

WHERE B.Rental\_Price > 25;