Library Management System

You are going to build a project based on Library Management System. It keeps track of all information about books in the library, their cost, status and total number of books available in the library. Create a database named library and following TABLES in the database: 1. Branch 2. Employee 3. Books 4. Customer 5. IssueStatus 6. ReturnStatus Attributes for the tables: 1. Branch Branch_no - Set as PRIMARY KEY Manager_Id Branch_address Contact_no 2. Employee Emp_Id – Set as PRIMARY KEY Emp_name Position Salary Branch_no - Set as FOREIGN KEY and it refer Branch_no in Branch table 3. Books ISBN - Set as PRIMARY KEY Book_title Category Rental_Price Status [Give yes if book available and no if book not available] Author Publisher 4. Customer Customer_Id - Set as PRIMARY KEY Customer_name Customer_address Reg_date 5. IssueStatus Issue_Id - Set as PRIMARY KEY Issued_cust – Set as FOREIGN KEY and it refer customer_id in CUSTOMER table Issued_book_name Issue_date Isbn_book – Set as FOREIGN KEY and it should refer isbn in BOOKS table 6. ReturnStatus Return_Id - Set as PRIMARY KEY Return_cust Return_book_name Return_date Isbn_book2 - Set as FOREIGN KEY and it should refer isbn in BOOKS table Display all the tables and Write the queries for the following : 1. Retrieve the book title, category, and rental price of all available books. 2. List the employee names and their respective salaries in descending order of salary. 3. Retrieve the book titles and the corresponding customers who have issued those books. 4. Display the total count of books in each category. 5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000. 6. List the customer names who registered before 2022-01-01 and have not issued any books yet. 7. Display the branch numbers and the total count of employees in each branch. 8. Display the names of customers who have issued books in the month of June 2023. 9. Retrieve book_title from book table containing history. 10.Retrieve the branch numbers along with the count of employees for branches having more than 5 employees 11. Retrieve the names of employees who manage branches and their respective branch addresses. 12. Display the names of customers who have issued books with a rental price higher than Rs. 25.

```
CREATE DATABASE LIBRARY;

USE LIBRARY;

CREATE TABLE Branch(

Branch_No INT PRIMARY KEY,

Manager_Id INT,
```

```
Branch_Address VARCHAR(255),
Contact_No INT
);

CREATE TABLE Employee (
Emp_Id INT PRIMARY KEY,
Emp_Name VARCHAR(100),
Position VARCHAR(50),
Salary DECIMAL(10, 2),
Branch_No INT,
FOREIGN KEY (Branch_No) REFERENCES Branch(Branch_No)
);

CREATE TABLE Books (
ISBN INT PRIMARY KEY,
Book_Title VARCHAR(255),
Category VARCHAR(100),
Rental_Price DECIMAL(10, 2),
Status VARCHAR(3) CHECK (Status IN ('Yes', 'No')) NOT NULL,
Author VARCHAR(100),
Publisher VARCHAR(100)
);

CREATE TABLE Customer (
```

```
Customer_Id INT PRIMARY KEY,
Customer_Name VARCHAR(100),
Customer_Address VARCHAR(255),
Reg_Date DATE
);

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)
);

CREATE TABLE ReturnStatus (
Return_Id INT PRIMARY KEY,
Return_Cust INT,
Return_Book_Name VARCHAR(255),
Return_Date DATE,
ISBN_Book2 INT,
FOREIGN KEY (Return_Cust) REFERENCES Customer(Customer_Id),
FOREIGN KEY (Isbn_book2) REFERENCES Books(ISBN)
```

```
);

INSERT INTO Branch(Branch_No, Manager_Id, Branch_Address, Contact_No)
VALUES
   (1, 111, '123 Elm Street, New York, NY', 212555123),
   (2, 222, '456 Maple Avenue, Los Angeles, CA', 323555234),
   (3, 333, '789 Pine Road, Chicago, IL', 312555345),
   (4, 444, '321 Oak Street, Houston, TX', 713555456),
   (5, 555, '654 Cedar Avenue, Phoenix, AZ', 602555567);

INSERT INTO Employee (Emp_Id, Emp_Name, Position, Salary, Branch_No)
VALUES
   (111, 'John Doe', 'Manager', 55000.00, 1),
   (202, 'Jane Smith', 'Assistant Manager', 45000.00, 2),
   (203, 'Michael Brown', 'Librarian', 40000.00, 3),
   (204, 'Emily Davis', 'Clerk', 35000.00, 4),
   (222, 'William Wilson', 'Manager', 56000.00, 5),
   (206, 'Alice Johnson', 'Senior Librarian', 50000.00, 3),
   (207, 'Bob Miller', 'Librarian', 42000.00, 3),
   (208, 'Charlie Taylor', 'Assistant Librarian', 40000.00, 3),
   (209, 'David Anderson', 'Clerk', 35000.00, 3),
   (210, 'Eve Martinez', 'Janitor', 30000.00, 3),
   (211, 'Michael Brown', 'Librarian', 42000.00, 2),
   (212, 'Emily Davis', 'Clerk', 36000.00, 2),
```

(213, 'William Wilson', 'Janitor', 30000.00, 2),

(214, 'Olivia Taylor', 'Assistant Librarian', 40000.00, 2),

(215, 'James Anderson', 'IT Support', 45000.00, 2);

INSERT INTO Books (ISBN, Book_Title, Category, Rental_Price, Status, Author, Publisher)

VALUES

(1001, 'The C Programming Language', 'Programming', 25.99, 'Yes', 'Brian W. Kernighan Dennis M. Ritchie', 'Prentice Hall'),

(1002, 'Head First Java', 'Programming', 26.50, 'No', 'Kathy Sierra Bert Bates', 'O Reilly Media'),

(1003, 'The Great Gatsby', 'Fiction', 3.75, 'Yes', 'F. Scott Fitzgerald', 'Scribner'),

(1004, 'Introduction to Algorithms', 'Computer Science', 48.99, 'No', 'Thomas H. Cormen', 'MIT Press'),

(1005, '1984', 'Dystopian', 4.25, 'Yes', 'George Orwell', 'Signet Classics'),

(1006, 'The History of the Ancient World', 'History', 74.99, 'Yes', 'Susan Wise Bauer', 'W. W. Norton & Company'),

(1007, 'Guns, Germs, and Steel', 'History', 16.50, 'No', 'Jared Diamond', 'W. W. Norton & Company'),

(1008, 'The Silk Roads: A New History of the World', 'History', 22.25, 'Yes', 'Peter Frankopan', 'Vintage Books');

INSERT INTO Customer (Customer_Id, Customer_Name, Customer_Address, Reg_Date)

VALUES

(301, 'Alice Johnson', '789 Birch Lane, Seattle, WA', '2024-01-15'),

(302, 'Bob Miller', '456 Oak Drive, Austin, TX', '2024-02-10'),

(303, 'Charlie Taylor', '123 Pine Avenue, Boston, MA', '2024-03-05'),

(304, 'David Anderson', '321 Elm Road, Denver, CO', '2024-04-01'),

(305, 'Eve Martinez', '654 Cedar Street, Nashville, TN', '2024-05-12'),

(306, 'EMMA MARIA', '432 SAND FRANCISCO, USA', '2020-01-15'),

(307, 'TEKIE SEMAHAR', '775 JEBEL ALI, UAE', '2022-10-14'),

(308, 'JOHN LUKKA', '22 BLUE BERRY ROAD, CO', '2021-10-14');

INSERT INTO IssueStatus (Issue_Id, Issued_Cust, Issued_Book_Name, Issue_Date, ISBN_Book)

VALUES

(401, 301, 'The C Programming Language', '2024-06-01', 1001),

(402, 302, '1984', '2023-06-15', 1005),

(403, 303, 'Head First Java', '2024-07-01', 1002),

(404, 304, 'The Great Gatsby', '2023-06-10', 1003),

(405, 305, 'Introduction to Algorithms', '2024-08-01', 1004);

INSERT INTO ReturnStatus (Return_Id, Return_Cust, Return_Book_Name, Return_Date, ISBN_Book2)

VALUES

(501, 301, 'The C Programming Language', '2024-06-20', 1001),

(502, 302, '1984', '2024-06-25', 1005),

(503, 303, 'Head First Java', '2024-07-15', 1002),

(504, 304, 'The Great Gatsby', '2024-07-20', 1003),

(505, 305, 'Introduction to Algorithms', '2024-08-15', 1004);

select Book_Title, category,Rental_Price from Books ;

Book_Title	category	Rental_Price
The C Programming Language	Programming	25.99
Head First Java	Programming	26.50
The Great Gatsby	Fiction	3.75
Introduction to Algorithms	Computer Science	48.99
1984	Dystopian	4.25
The History of the Ancient World	History	74.99
Guns, Germs, and Steel	History	16.50
The Silk Roads: A New History of the World	History	22.25

select Salary,Emp_Name from employee

order by salary desc;

Salary	Emp_Name
56000.00	William Wilson
55000.00	John Doe
50000.00	Alice Johnson
45000.00	Jane Smith
45000.00	James Anderson
42000.00	Bob Miller
42000.00	Michael Brown
40000.00	Michael Brown
40000.00	Charlie Taylor
40000.00	Olivia Taylor
36000.00	Emily Davis
35000.00	Emily Davis
35000.00	David Anderson
30000.00	Eve Martinez
30000.00	William Wilson

select books.Book_Title ,customer.Customer_Name from issuestatus

join books on issuestatus.ISBN_Book=books.ISBN

join customer on issuestatus.issued_Cust=customer.customer_id;

Book_Title	Customer_Name
The C Programming Language	Alice Johnson
1984	Bob Miller
Head First Java	Charlie Taylor
The Great Gatsby	David Anderson
Introduction to Algorithms	Eve Martinez

select Issued_Book_Name,Issued_Cust from issuestatus ;

Issued_Book_Name	Issued_Cust
The C Programming Language	301
1984	302
Head First Java	303
The Great Gatsby	304
Introduction to Algorithms	305

select Category, count(Book_Title) from books

group by Category;

Category	count(Book_Title)
Programming	2
Fiction	1
Computer Science	1
Dystopian	1
History	3

select Emp_Name, Position from employee

where Salary>50000;

Emp_Name	Position
John Doe	Manager
William Wilson	Manager

select Customer_Name from customer

where Reg_Date < "2022-01-01";

	Customer_Name
▶	EMMA MARIA
	JOHN LUKKA

select Branch_No, count(*) as Total_Emp

from employee

group by Branch_No;

	Branch_No	Total_Emp
▶	1	1
	2	6
	3	6
	4	1
	5	1

select Issued_Cust from issuestatus

where Issue_Date between "2023-06-01" and "2023-06-30";

	Issued_Cust
▶	302
	304

select customer.Customer_Name from customer

INNER JOIN issuestatus on customer.Customer_Id=issuestatus.Issued_Cust

where Issue_Date between "2023-06-01" and "2023-06-30";

	Customer_Name
▶	Bob Miller
	David Anderson

select Book_Title from books where Category = "history";

Book_Title
The History of the Ancient World
Guns, Germs, and Steel
The Silk Roads: A New History of the World

select Branch_No, count(*) as count from employee

group by Branch_No having count(*)>5;

Branch_No	count
2	6
3	6

select employee.Emp_Name ,branch.Branch_Address from employee

inner join branch on employee.Emp_id=branch.Manager_Id;

Emp_Name	Branch_Address
John Doe	123 Elm Street, New York, NY
William Wilson	456 Maple Avenue, Los Angeles, CA

select distinct Customer_Name from customer

inner join issuestatus on customer.Customer_Id=issuestatus.Issued_Cust

join books on issuestatus.ISBN_Book=books.isbn

where books.Rental_Price>25;

Customer_Name
Alice Johnson
Charlie Taylor
Eve Martinez