# **Project: Library Management System**

# **Submitted by: Listy Stephen**

Create a database named library and following TABLES in the database:

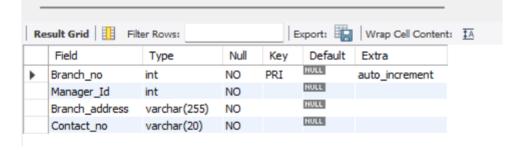
- 1. Branch
- 2. Employee
- 3. Books
- 4. Customer
- 5. IssueStatus
- 6. ReturnStatus

# Attributes for the tables:

# 1. Branch

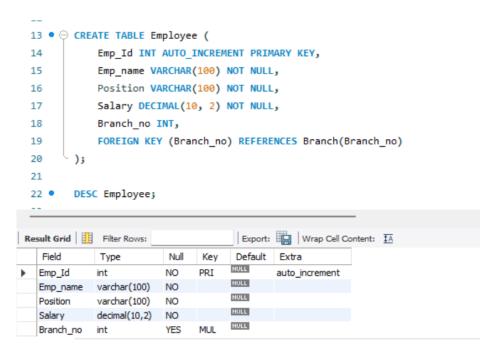
- Branch\_no Set as PRIMARY KEY
- Manager\_Id
- Branch\_address
- Contact\_no

```
CREATE DATABASE library;
1 •
       USE library;
2 •
3
4 • ⊖ CREATE TABLE Branch (
5
           Branch no INT AUTO INCREMENT PRIMARY KEY,
           Manager_Id INT NOT NULL,
6
           Branch address VARCHAR(255) NOT NULL,
7
           Contact_no VARCHAR(20) NOT NULL
8
9
       );
10
       DESC Branch;
11 •
12
```



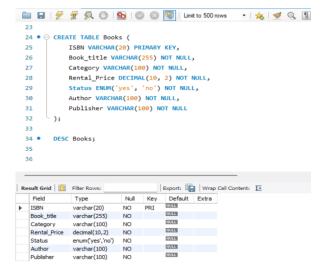
# 2. Employee

- 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



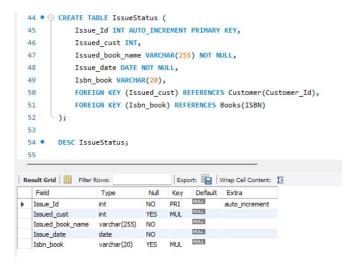
#### 4. Customer

- Customer\_Id Set as PRIMARY KEY
- Customer\_name
- Customer\_address
- Reg\_date

```
36 • ○ CREATE TABLE Customer (
              Customer Id INT AUTO INCREMENT PRIMARY KEY,
 37
 38
              Customer name VARCHAR(100) NOT NULL,
              Customer address VARCHAR(255) NOT NULL,
 39
              Reg_date DATE NOT NULL
 40
 41
         );
 42 •
         DESC Customer;
 43
 44
                                         Export: Wrap Cell Content: IA
Result Grid Filter Rows:
   Field
                                              Default
                                 Null
                                                       Extra
                                             NULL
  Customer_Id
                    int
                                 NO
                                       PRI
                                                      auto_increment
                                             NULL
   Customer_name
                                 NO
                    varchar(100)
                                             NULL
   Customer address
                    varchar(255)
                                 NO
                                             NULL
   Reg_date
                    date
                                 NO
```

#### 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

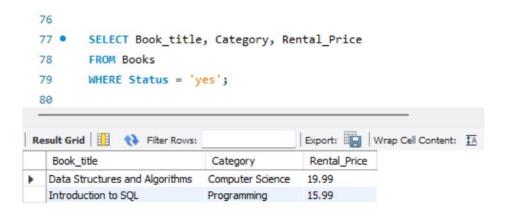


#### 6. ReturnStatus

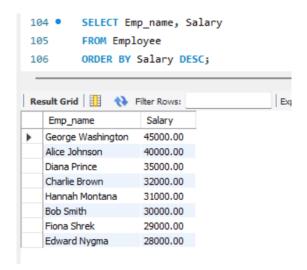
- Return\_Id Set as PRIMARY KEY
- Return\_cust
- Return\_book\_name
- Return\_date
- Isbn\_book2 Set as FOREIGN KEY and it should refer isbn in BOOKS table

```
56 • ○ CREATE TABLE ReturnStatus (
 57
             Return Id INT AUTO INCREMENT PRIMARY KEY,
             Return_cust INT,
 58
             Return book name VARCHAR(255) NOT NULL,
 59
             Return_date DATE NOT NULL,
 60
              Isbn book2 VARCHAR(20),
             FOREIGN KEY (Isbn_book2) REFERENCES Books(ISBN)
 62
         );
 63
 64
 65 •
         DESC ReturnStatus;
 66
Result Grid | Filter Rows:
                                        Export: Wrap Cell Content: IA
   Field
                                              Default
                    Type
                                 Null
                                        Key
                                                      Extra
                                             NULL
                                       PRI
 Return_Id
                    int
                                 NO
                                                      auto_increment
                                             NULL
  Return_cust
                    int
                                 YES
                                             NULL
  Return_book_name
                                 NO
                   varchar(255)
                                             HULL
  Return_date
                    date
                                 NO
                                             NULL
  Isbn_book2
                                 YES
                                       MUL
                    varchar(20)
```

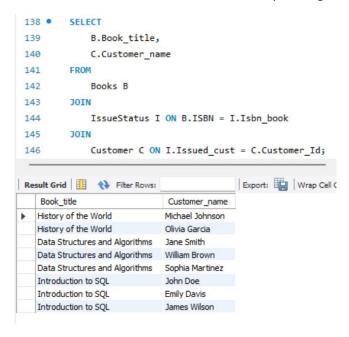
1. Retrieve the book title, category, and rental price of all available books.



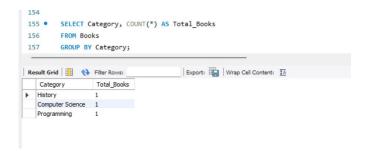
2. List the employee names and their respective salaries in descending order of salary.



3. Retrieve the book titles and the corresponding customers who have issued those books.



4. Display the total count of books in each category.



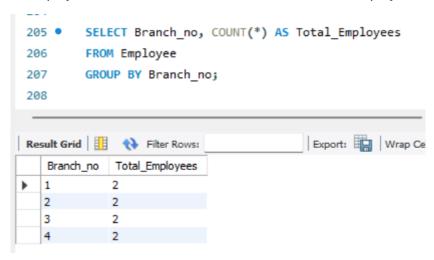
5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.



6. List the customer names who registered before 2022-01-01 and have not issued any books yet.



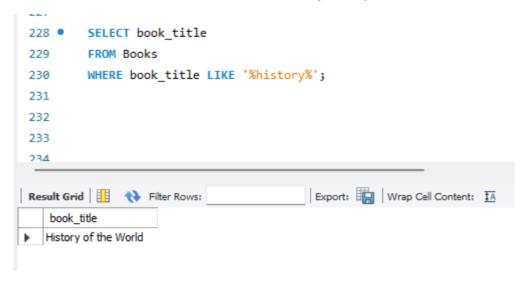
7. Display the branch numbers and the total count of employees in each branch.



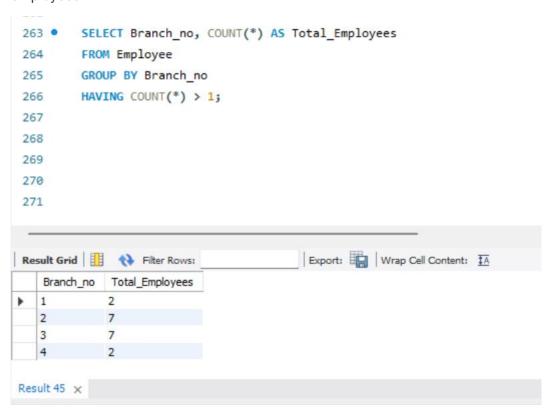
8. Display the names of customers who have issued books in the month of June 2023.

```
211 •
        UPDATE IssueStatus
        SET Issue_date = '2023-06-15'
212
213
        WHERE Issue Id = 1;
214
215 •
        UPDATE IssueStatus
        SET Issue date = '2023-06-20'
216
217
        WHERE Issue_Id = 2;
218
219 •
        SELECT Customer_Customer_name
220
        FROM Customer
221
        JOIN IssueStatus ON Customer.Customer_Id = IssueStatus.Issued_cust
        WHERE IssueStatus.Issue date BETWEEN '2023-06-01' AND '2023-06-30';
222
223
224
225
Result Grid Filter Rows:
                                        Export: Wrap Cell Content: 1A
  Customer_name
 John Doe
  Jane Smith
```

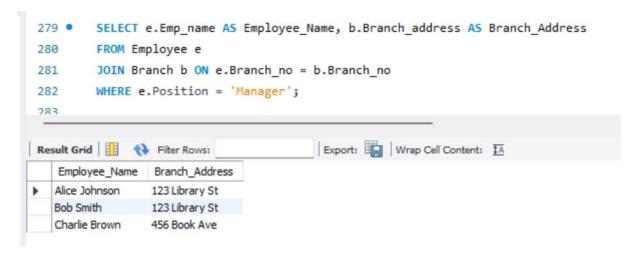
9. Retrieve book\_title from book table containing history.



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.

