MySQL PROJECT

Topic: Library Management System

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

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

Attributes for the tables:

1. Branch

Branch_no - Set as PRIMARY KEY Manager_Id Branch_address Contact_no

```
10
 11
         -- Insert 10 rows into the branch table
        INSERT INTO Branch (Branch_no, Manager_Id, Branch_address, Contact_no)
 12 •
        VALUES
 13
         (1, 101, '123_Main_St', '555-1234'),
 14
 15
        (2, 102, '456 Elm St', '555-5678'),
       (3, 103, '789 Oak St', '555-9012'),
 16
        (4, 104, '321 Pine St', '555-3456'),
 17
        (5, 105, '654 Maple St', '555-7890'),
 18
        (6, 106, '987 Cedar St', '555-2345'),
 19
       (7, 107, '654 Birch St', '555-6789'),
 20
        (8, 108, '321 Walnut St', '555-1234'),
 21
         (9, 109, '789 Cherry St', '555-5678'),
  22
                                        Edit: 🚄 🖶 Export/Import: 🗓 🐻 Wrap Cell Content: 🟗
Branch_no Manager_Id Branch_address Contact_no
   1
             101
                       123_Main_St
                                    555-1234
   2
             102
                       456 Elm St 555-5678
   3
             103
                       789 Oak St
                                    555-9012
   4
             104
                      321 Pine St 555-3456
                       654 Maple St
                                    555-7890
   6
                       987 Cedar St
                                    555-2345
Branch 1 ×
```

2. Employee

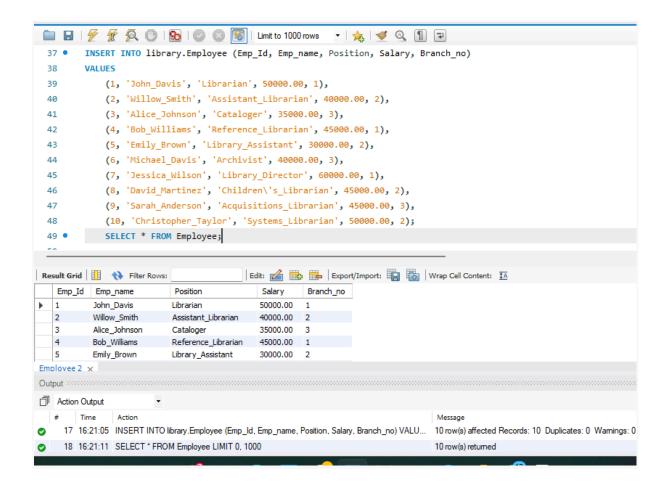
Emp_Id - Set as PRIMARY KEY

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

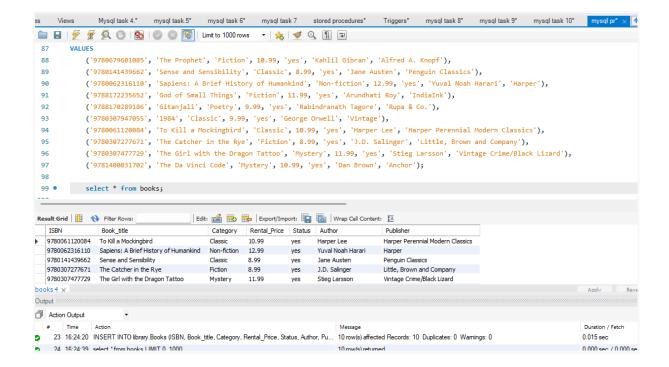
Category

Rental Price

Status [Give yes if book available and no if book not available]

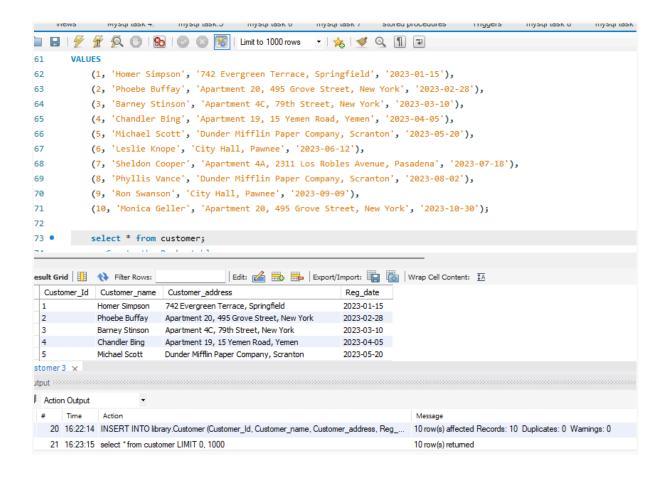
Author

Publisher



4. Customer

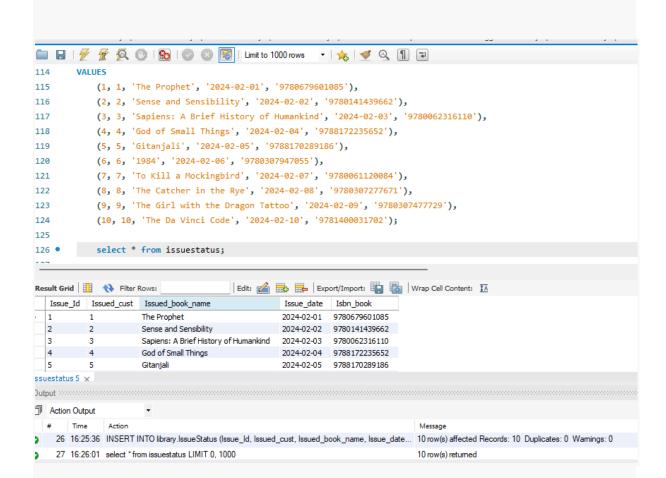
Customer_Id - Set as PRIMARY KEY
Customer_name
Customer_address
Reg_date



5. IssueStatus

table

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



6. ReturnStatus

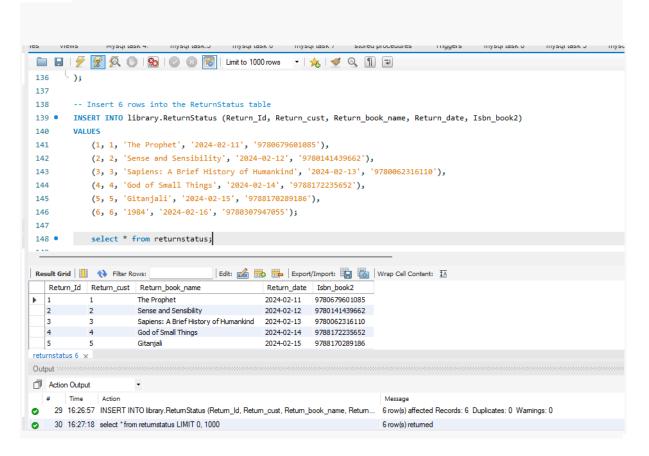
Return_Id - Set as PRIMARY KEY

Return cust

Return_book_name

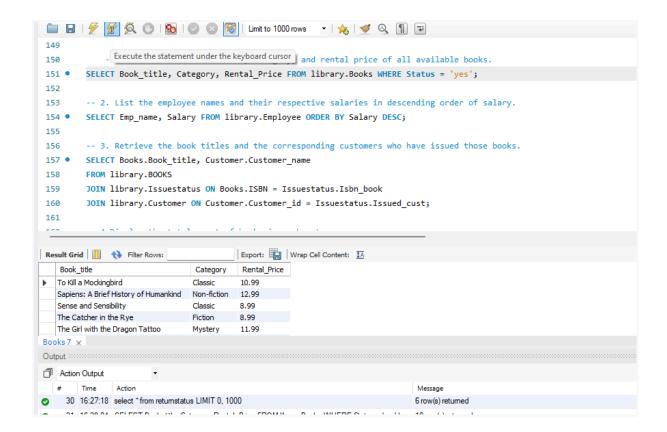
Return_date

Isbn_book2 - Set as FOREIGN KEY and it should refer isbn in BOOKS table

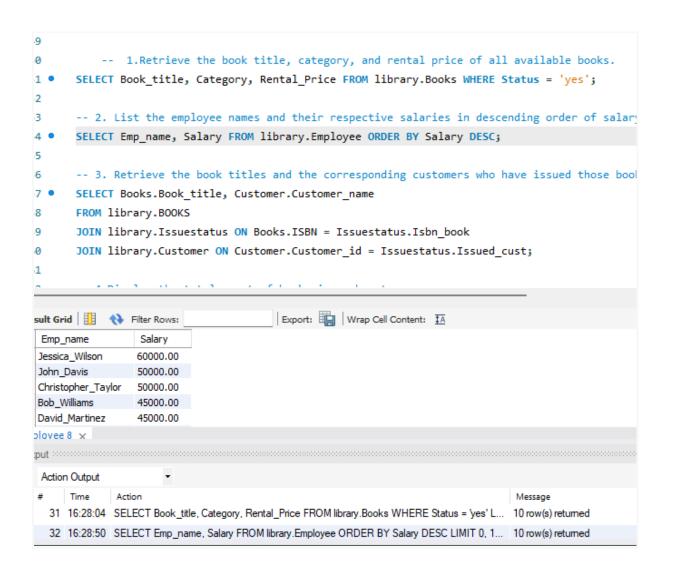


Display all the tables and Write the queries for the following:

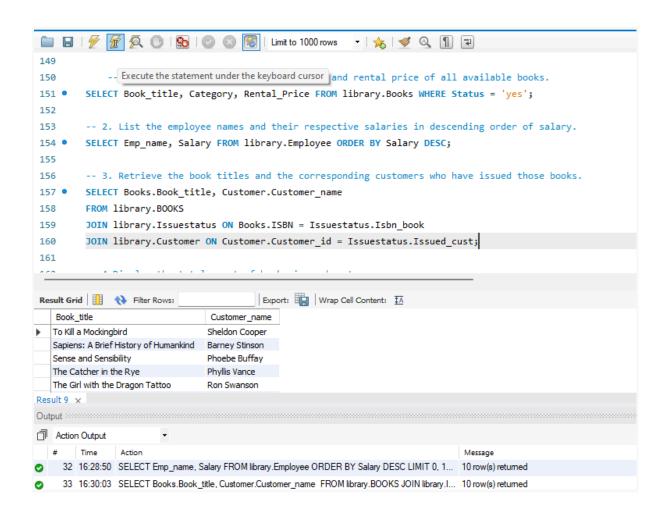
1. Retrieve the book title, category, and rental price of all available books.



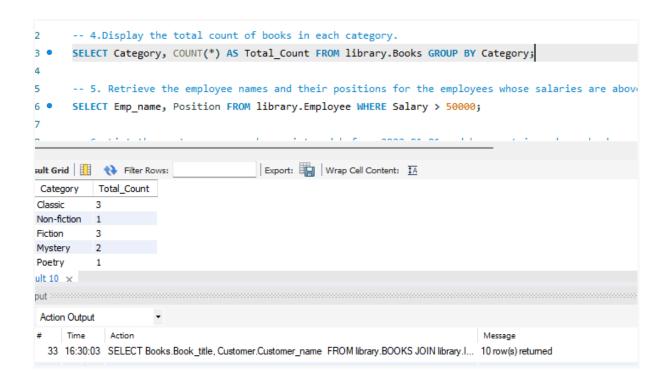
2. List the employee names and their respective salaries in descending order of salary.



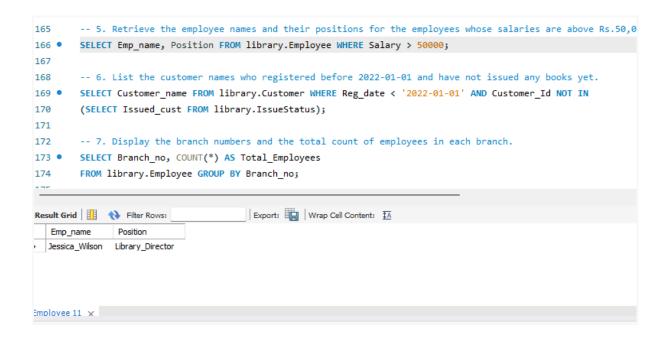
3. Retrieve the book titles and the corresponding customers who have issued those books



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.

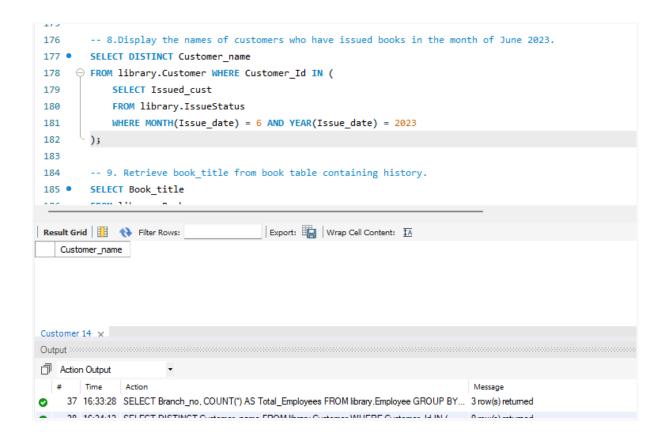


7. Display the branch numbers and the total count of employees in each branch.

```
-- 7. Display the branch numbers and the total count of employees in each branch.
172
        SELECT Branch_no, COUNT(*) AS Total_Employees
173 •
        FROM library.Employee GROUP BY Branch_no;
174
        -- 8.Display the names of customers who have issued books in the month of June 2023.
        SELECT DISTINCT Customer_name
178

→ FROM library.Customer WHERE Customer_Id IN (
179
           SELECT Issued_cust
Export: Wrap Cell Content: IA
  Branch_no Total_Employees
           3
  2
          4
 3
           3
Result 13 ×
Action Output
      Time
             Action
                                                                            Message
36 16:32:30 SELECT Customer_name FROM library.Customer WHERE Reg_date < '2022-01-01' AND... 0 row(s) returned
```

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.

```
184 -- 9. Retrieve book_title from book table containing history.

185 SELECT Book_title from where category="History";

186 select book_title from books

187 WHERE book_title LIKE '%history%' or book_title like "Histoty";

188 Select book_title LIKE '%history%' or book_title like "Histoty";

189 Select book_title LIKE '%history%' or book_title like "Histoty";

180 Select book_title LIKE '%history%' or book_title like "Histoty";

180 Select book_title LIKE '%history%' or book_title like "Histoty";

180 Select book_title LIKE '%history%' or book_title like "Histoty";

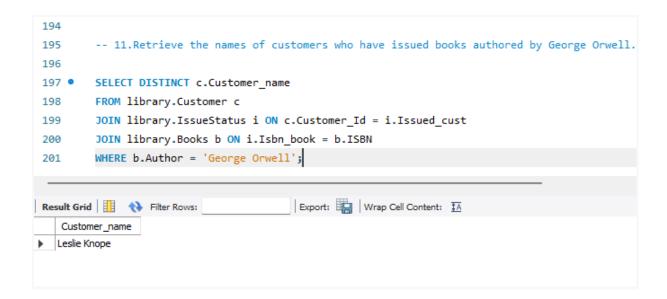
180 Select book_title LIKE '%history%' or book_title like "Histoty";

180 Select book_title LIKE '%history%' or book_title like "Histoty";
```

10.Retrieve the branch numbers along with the count of employees for branches having more than 5 employees



11.Retrieve the names of customers who have issued books authored by George Orwell.



12.Retrieve the names of customers who have issued books published by Penguin Classics

```
197 • SELECT DISTINCT c.Customer_name
198 FROM library.Customer c
        JOIN library.IssueStatus i ON c.Customer_Id = i.Issued_cust
        JOIN library.Books b ON i.Isbn_book = b.ISBN
200
        WHERE b.Author = 'George Orwell';
201
202
        -- 12.Retrieve the names of customers who have issued books published by Penguin Classics
203
205 •
      SELECT DISTINCT c.Customer_name
       enou 19 e i
                                    Export: Wrap Cell Content: $\overline{A}$
Customer_name
Leslie Knope
```

13. Display the total count of books issued in each month of 2024

```
-- 13.Display the total count of books issued in each month of 2024
1
12
L3 •
       SELECT MONTH(Issue_date) AS Issue_Month, COUNT(*) AS Total_Books_Issued
4
       FROM library.IssueStatus
       WHERE YEAR(Issue_date) = 2024
15
       GROUP BY MONTH(Issue_date);
16
                                       Export: Wrap Cell Content: 1A
sult Grid 🔢 💎 Filter Rows:
 Issue_Month Total_Books_Issued
2
            10
```

14.Retrieve the names of customers who have issued books authored by Jane Austen and have not returned them yet

```
-- 14.Retrieve the names of customers who have issued books authored by Jane Austen and have not returned them yet

219

220 • SELECT DISTINCT c.Customer_name

221 FROM library.Customer c

222 JOIN library.IssueStatus i ON c.Customer_Id = i.Issued_cust

223 JOIN library.Books b ON i.Isbn_book = b.ISBN

224 WHERE b.Author = 'Jane Austen'

225 AND c.Customer_Id NOT IN (SELECT Return_cust FROM library.ReturnStatus);

Result Grid 
Result Grid 
Filter Rows:

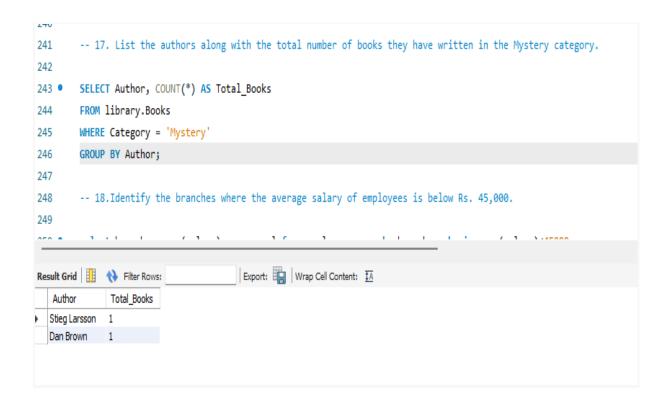
| Export: | Wrap Cell Content: | Export: | Wrap Cell Content: | Export: | Customer_name | Export: | Export:
```

15. Retrieve the names of employees who are not managers.

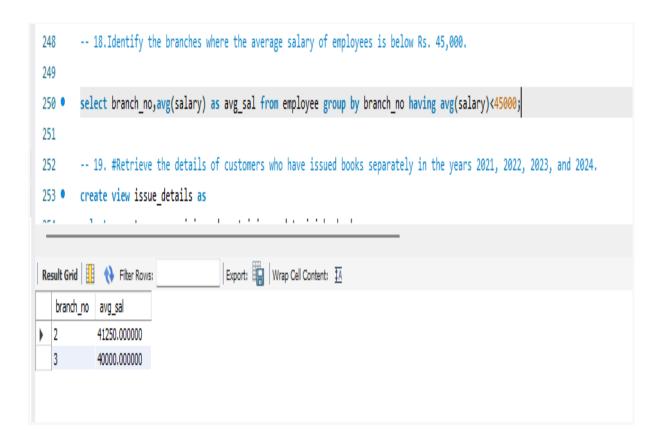
```
-- 15.Retrieve the names of employees who are not managers.
228
229
230 • SELECT Emp_name
       FROM library.Employee
231
        WHERE Emp_Id NOT IN (SELECT Manager_Id FROM library.Branch);
232
233
234
        -- 16.Display the total count of books issued by each customer.
235
236 • SELECT c.Customer_name, COUNT(i.Issue_Id) AS Total_Books_Issued
Export: Wrap Cell Content: IA
   Emp_name
John_Davis
  Willow_Smith
  Alice_Johnson
  Bob_Williams
  Emily_Brown
Employee 38 ×
```

16.Display the total count of books issued by each customer.

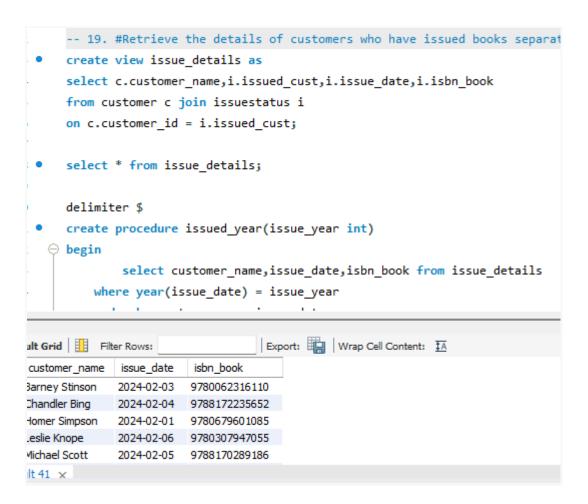
17. List the authors along with the total number of books they have written in the Mystery category.



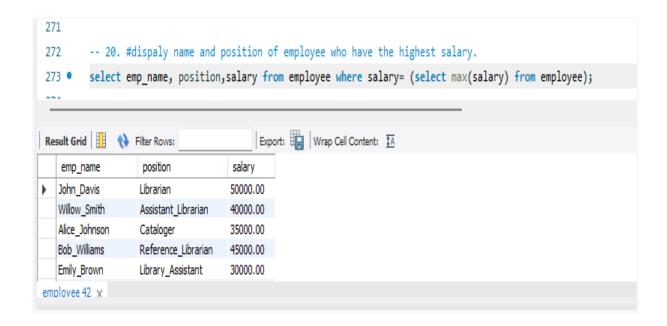
18.Identify the branches where the average salary of employees is below Rs. 45,000.



-- 19. #Retrieve the details of customers who have issued books separately in the years 2021, 2022, 2023, and 2024.



20. dispaly name and position of employee who have the highest salary.



Suchithra.p D18