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:

```
Attributes for the tables:
1. Branch
Branch no - Set as PRIMARY KEY
Manager Id
Branch address
Contact no
    -- 1. Creating Branch Table
Branch_no int unique PRIMARY KEY,
    Manager_Id int unique,
    Branch_address varchar(45),
    Contact_no bigint check (contact_no between 1111111111 and 9999999999));
   insert into Branch values
    (1256, 6001, 'Central Road - Kochi', 9952354656),
    (2256, 6002, 'Main Street - Kozhikode', 9563263678),
    (3256, 6003, 'Beach Road - Trivandrum', 9984965265),
    (4256, 6004, 'Market Road - Palakkad', 9785854875),
    (5256, 6005, 'Hilltop Drive - Wayanad', 8126265586),
    (6256, 6006, 'River View Road - Thrissur', 8656495627),
    (7256, 6007, 'Port Road - Kannur', 8129567448),
    (8256, 6008, 'Valley Road - Idukki', 8256401178),
    (9256, 6009, 'Main Ave - Kollam', 8129295770);
   29 •
            select * from Branch;
                 Filter Rows:
                                                  Edit: 🚄 🏗 🗒
  Result Grid
                 Manager Id
     Branch no
                             Branch address
                                                      Contact no
     1256
                6001
                             Central Road - Kochi
                                                     9952354656
     2256
                             Main Street - Kozhikode
                6002
                                                     9563263678
     3256
                6003
                             Beach Road - Trivandrum
                                                     9984965265
     4256
                6004
                             Market Road - Palakkad
                                                     9785854875
     5256
                6005
                             Hilltop Drive - Wayanad
                                                     8126265586
     6256
                6006
                             River View Road - Thrissur 8656495627
                             Port Road - Kannur
     7256
                6007
                                                     8129567448
     8256
                6008
                             Valley Road - Idukki
                                                     8256401178
     9256
                6009
                             Main Ave - Kollam
                                                     8129295770
    NULL
                NULL
```

```
Emp_Id - Set as PRIMARY KEY
Emp name
Position
Salary
Branch no - Set as FOREIGN KEY and it refer Branch no in Branch table
  -- 2. Creating Employee Table
create table Employee(
  Emp_Id int unique PRIMARY KEY,
  Emp_name varchar(30) not null,
  Position varchar(30),
  Salary int,
  Branch_no int,
  foreign key(Branch_no) references Branch(Branch_no) on delete cascade);
  insert into Employee values
  (1101, 'Anjali Krishna', 'Manager', 65000, 1256),
  (1102, 'Rohan Nair', 'Assistant Manager', 55000, 2256),
  (1103, 'Lakshmi Priya', 'Library Technician', 20000, 3256),
  (1104, 'Arjun Menon', 'Library Assistant', 18000, 4256),
  (1105, 'Sunita George', 'Cataloguer', 22000, 5256),
  (1106, 'Vishnu Pillai', 'Accountant', 52000, 6256),
  (1107, 'Priyanka Iyer', 'Assistant Librarian', 42000, 7256),
  (1108, 'Kiran Varma', 'Library Technician', 20000, 8256),
  (1109, 'Geetha Kumari', 'Library Assistant', 48000, 9256),
  (1110, 'Mohammed Anwar', 'Clerk', 22000, 1256);
   52 •
            select * from Employee;
  Result Grid
                                                   Edit: 🚄 🖶 🖶 Ex
                 Filter Rows:
     Emp_Id
              Emp_name
                                Position
                                                  Salary
                                                          Branch_no
     1101
              Anjali Krishna
                                                  65000
                                                          1256
                                Manager
     1102
              Rohan Nair
                                Assistant Manager
                                                  55000
                                                          2256
     1103
              Lakshmi Priya
                                Library Technician
                                                          3256
                                                  20000
     1104
              Arjun Menon
                                Library Assistant
                                                  18000
                                                          4256
     1105
              Sunita George
                                Cataloguer
                                                          5256
                                                  22000
     1106
              Vishnu Pillai
                                Accountant
                                                  52000
                                                          6256
     1107
              Priyanka Iyer
                                Assistant Librarian
                                                  42000
                                                          7256
              Kiran Varma
                                Library Technician
     1108
                                                  20000
                                                          8256
              Geetha Kumari
     1109
                                Library Assistant
                                                  48000
                                                          9256
              Mohammed Anwar
                                Clerk
                                                  22000
                                                          1256
     1110
    NULL
             NULL
                               NULL
                                                 NULL
                                                          NULL
```

2. Employee

3. Books ISBN - Set as PRIMARY KEY Book_title Category

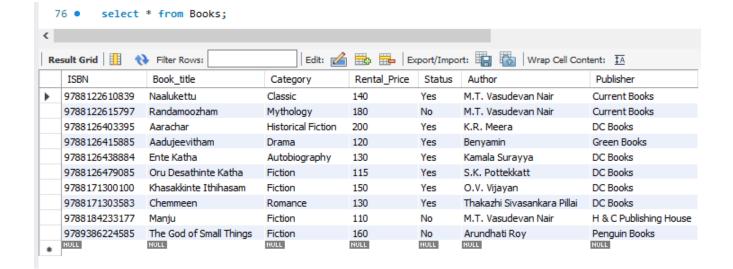
Status [Give yes if book available and no if book not available]

Author

Publisher

Rental Price

```
-- 3. Creating Books Table
create table Books(
  ISBN bigint PRIMARY KEY,
  Book_title varchar(100),
  Category varchar(50),
  Rental_Price int,
  Status enum('Yes', 'No') default 'Yes',
  Author Varchar(40),
  Publisher varchar(100));
  insert into Books values
  (9788171300100, 'Khasakkinte Ithihasam', 'Fiction', 150, 'Yes', 'O.V. Vijayan', 'DC Books'),
  (9788171303583, 'Chemmeen', 'Romance', 130, 'Yes', 'Thakazhi Sivasankara Pillai', 'DC Books'),
  (9788126415885, 'Aadujeevitham', 'Drama', 120, 'Yes', 'Benyamin', 'Green Books'),
  (9788122610839, 'Naalukettu', 'Classic', 140, 'Yes', 'M.T. Vasudevan Nair', 'Current Books'),
  (9788184233177, 'Manju', 'Fiction', 110, 'No', 'M.T. Vasudevan Nair', 'H & C Publishing House'),
  (9789386224585, 'The God of Small Things', 'Fiction', 160, 'No', 'Arundhati Roy', 'Penguin Books'),
  (9788126438884, 'Ente Katha', 'Autobiography', 130, 'Yes', 'Kamala Surayya', 'DC Books'),
  (9788126479085, 'Oru Desathinte Katha', 'Fiction', 115, 'Yes', 'S.K. Pottekkatt', 'DC Books'),
  (9788122615797, 'Randamoozham', 'Mythology', 180, 'No', 'M.T. Vasudevan Nair', 'Current Books'),
  (9788126403395, 'Aarachar', 'Historical Fiction', 200, 'Yes', 'K.R. Meera', 'DC Books');
```



4. Customer Customer_Id - Set as PRIMARY KEY Customer_name Customer_address Reg_date

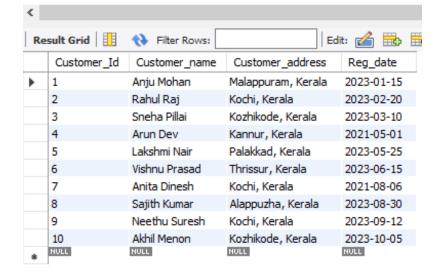
-- 4. Creating Customer Table

o create table Customer(
 Customer_Id int unique PRIMARY KEY,
 Customer_name varchar(30) not null,
 Customer_address varchar(40),
 Reg_date date);

insert into Customer values

```
(1, 'Anju Mohan', 'Malappuram, Kerala', '2023-01-15'),
(2, 'Rahul Raj', 'Kochi, Kerala', '2023-02-20'),
(3, 'Sneha Pillai', 'Kozhikode, Kerala', '2023-03-10'),
(4, 'Arun Dev', 'Kannur, Kerala', '2021-05-01'),
(5, 'Lakshmi Nair', 'Palakkad, Kerala', '2023-05-25'),
(6, 'Vishnu Prasad', 'Thrissur, Kerala', '2023-06-15'),
(7, 'Anita Dinesh', 'Kochi, Kerala', '2021-08-06'),
(8, 'Sajith Kumar', 'Alappuzha, Kerala', '2023-08-30'),
(9, 'Neethu Suresh', 'Kochi, Kerala', '2023-09-12'),
(10, 'Akhil Menon', 'Kozhikode, Kerala', '2023-10-05');
```

98 • select* from Customer;



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 -- 5. Creating IssueStatus Table create table IssueStatus(Issue_Id int not null PRIMARY KEY,

```
Issued_cust int,
Issued_book_name varchar(100),
Issue date date,
Isbn book bigint,
foreign key (Issued_cust) references Customer(Customer_id),
foreign key (Isbn_book) references Books(ISBN));
 insert into IssueStatus values
 (0001, 3, 'Chemmeen', '2024-03-05', 9788171303583),
 (0002, 9, 'Ente Katha', '2024-03-06', 9788126438884),
 (0003, 5, 'Khasakkinte Ithihasam', '2024-02-28', 9788171300100),
 (0004, 2, 'Aarachar', '2024-03-05', 9788126403395),
 (0005, 6, 'Chemmeen', '2023-06-10', 9788171303583);
118 •
         select * from IssueStatus;
                                             Edit: 🚄 🖶 🖶 Export/Impo
Result Grid Filter Rows:
   Issue_Id | Issued_cust | Issued_book_name
                                            Issue_date | Isbn_book
  1
            3
                        Chemmeen
                                            2024-03-05 9788171303583
  2
            9
                                            2024-03-06 9788126438884
                        Ente Katha
                        Khasakkinte Ithihasam
  3
            5
                                            2024-02-28 9788171300100
                        Aarachar
   4
            2
                                            2024-03-05 9788126403395
  5
            6
                        Chemmeen
                                            2023-06-10 9788171303583
  NULL
           NULL
                       NULL
                                           NULL
                                                       NULL
```

```
Return cust
Return_book_name
Return date
Isbn book2 - Set as FOREIGN KEY and it should refer isbn in BOOKS table
  -- 6. Creating ReturnStatus Table

    create table ReturnStatus()

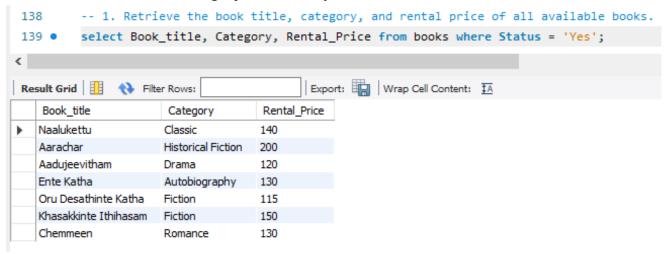
  Return_Id int not null PRIMARY KEY,
  Return_cust int,
  Return_book_name varchar(100),
  Return date date,
  Isbn_book2 bigint,
  foreign key (Isbn_book2) references Books(ISBN));
  insert into ReturnStatus values
  (01, 3, 'Chemmeen', '2024-03-07', 9788171303583),
  (02, 9, 'Ente Katha', '2024-03-07', 9788126438884),
  (03, 5, 'Khasakkinte Ithihasam', '2024-02-28', 9788171300100);
  135 •
           select * from ReturnStatus;
                                              Edit: 🚄 🖶 🖶 Export/Import:
  Return_Id Return_cust
                           Return_book_name
                                              Return_date | Isbn_book2
     1
               3
                          Chemmeen
                                             2024-03-07
                                                         9788171303583
               9
                          Ente Katha
     2
                                             2024-03-07 9788126438884
     3
               5
                          Khasakkinte Ithihasam
                                             2024-02-28
                                                         9788171300100
    NULL
              NULL
                          NULL
                                             NULL
                                                         NULL
```

6. ReturnStatus

Return_Id - Set as PRIMARY KEY

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

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



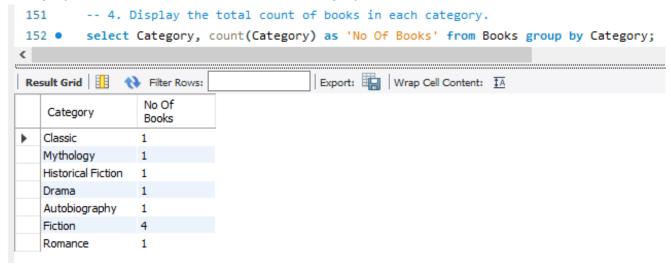
2. List the employee names and their respective salaries in descending order of salary.



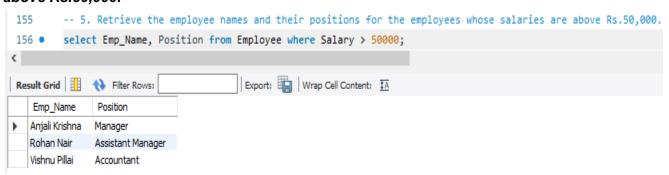
3. Retrieve the book titles and the corresponding customers who have issued those books.

```
146
         -- 3. Retrieve the book titles and the corresponding customers who have issued those books.
147 •
         select b.Book_title, c.Customer_Name from Books b
         join IssueStatus i on b.isbn = i.Isbn_book
148
         join Customer c on i.issued_cust = c.customer_Id;
149
Result Grid
               Filter Rows:
                                             Export: Wrap Cell Content: 1A
   Book_title
                       Customer_Name
                      Sneha Pillai
 Chemmeen
  Ente Katha
                      Neethu Suresh
  Khasakkinte Ithihasam
                      Lakshmi Nair
  Aarachar
                      Rahul Raj
  Chemmeen
                      Vishnu Prasad
```

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

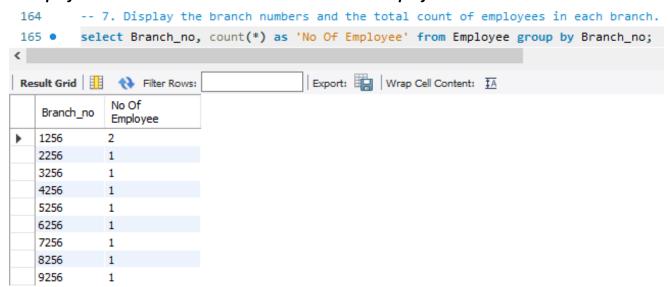


5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.

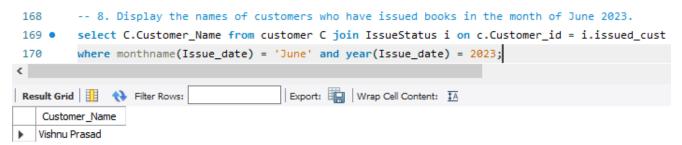


6. List the customer names who registered before 2022-01-01 and have not issued any books yet.

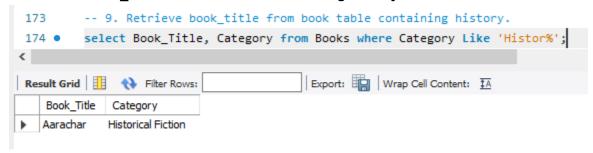
7. Display the branch numbers and the total count of employees in each branch.



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

