Module End Project

DSML D19 VISHNU E P

Topic: 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
- 5. 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 date

```
Return_Id - Set as PRIMARY KEY
Return_cust
Return_book_name
```

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

```
1
         #LIBRARY MANAGEMENT SYSTEM
  2 •
        create database LMS;
        USE LMS;
  5 • \ominus create table Branch(Branch_no int primary key,
        Manager_id int,
  6
       Branch_address varchar(30),
  8
        contact_no int);
  9 • desc branch:
 10 •
        drop table branch;
 11 •
        insert into branch values (1,001, 'mlptm branch', 987456321);
 12 • insert into branch values (2,002, 'mlptm branch', 987456322);
 13 • insert into branch values (3,003, 'mlptm branch', 987456323);
 14 • insert into branch values (4,004, 'mlptm branch', 987456324);
 15 • insert into branch values (5,005, 'mlptm branch', 987456325);
 16 • select * from branch;
                                          | Edit: 🔏 🖶 | Export/Import: 🏣 👸 | Wrap Cell Content: 🏗
Branch_no Manager_id Branch_address contact_no
  1 1 mlptm branch 987456321
2 2 mlptm branch 987456322
                        mlptm branch
                                      987456323
  5 miptm branch 987456323
4 4 mlptm branch 987456324
5 5 mlptm branch 987456325

NOLL NOLL NOLL NOLL
 18 • ⊖ create table employee(emp_id int primary key,
 19
        emp name varchar(30),
        position varchar(30),
 20
 21
        salary int.
 22
        branch_no int,
      foreign key(branch_no) references Branch(Branch_no));
 23
 24 • desc employee;
 25 •
        insert into employee values(101, 'abhinav', 'lib assistant',17000,1);
        insert into employee values(102, 'abhijith', 'lib manager',53000,2);
 27 • insert into employee values(103, 'abhiraj', 'librerian', 20000, 3);
 28 • insert into employee values(104, 'abhinand', 'lib assistant',15000,4);
 29 •
        insert into employee values(105, 'abhina', 'lib manager', 45000, 5);
        insert into employee values(106, 'pranav', 'librerian',17000,4);
 31 • insert into employee values(107, 'naveen', 'lib manager',41000,2);
 32 • insert into employee values(108, 'avishna', 'lib assistant', 20500, 3);
 33 •
        insert into employee values(109, 'vishnu', 'lib manager', 59000,4);
        insert into employee values(110, 'nandhana', 'lib manager',51000,1);
 35 •
        select * from employee;
| Edit: 🚄 🔜 🖶 | Export/Import: 识 🐻 | Wrap Cell Content: 🖽
   emp_id emp_name position
                               salary branch_no
          abhinav
101
                    lib assistant 17000
   102 abhijith lib manager 53000 2
   103
          abhirai
                    librerian
                               20000 3
   104 abhinand lib assistant 15000 4
   105
          abhina
                               45000

        105
        abhina
        lib manager
        45000
        5

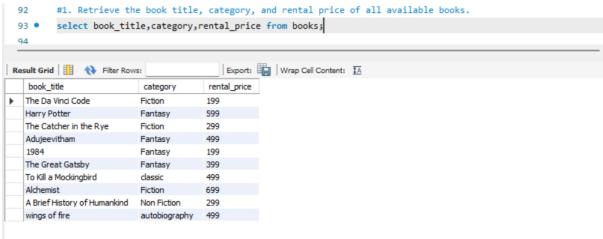
        106
        pranav
        librerian
        17000
        4

   107
          naveen
                    lib manager
                               41000 2
  108 avishna lib assistant 20500 3
employee 2 x
```

```
38 • ⊝ create table Books(ISBN int PRIMARY KEY,
39
        Book_title varchar(30),
        Category varchar(28),
40
41
        Rental_price float,
42
        status char(5),
43
        Author varchar(50),
44
        Publisher varchar(30));
45 •
       desc books;
        insert into books values(9754221, 'Harry Potter', 'Fantasy', 599, 'yes', 'J.K. Rowling', 'Scholastic'),
47
           (9780930, 'To Kill a Mockingbird', 'classic', 499, 'yes', 'Harper lee', 'Scholastic'),
           (9780439, 'Adujeevitham', 'Fantasy', 499, 'yes', 'benniyamin', 'DC books'),
48
49
            (9780839, 'The Great Gatsby', 'Fantasy', 399, 'yes', ' F. Scott Fitzgerald ', 'Scribner'),
           (9780465, '1984', 'Fantasy', 199, 'no', 'George Orwell', 'Secker & Warburg'),
50
           (9780071, 'The Catcher in the Rye', 'Fiction', 299, 'yes', 'J.D. Salinger', 'Little Brown and Company'),
51
52
           (9749700, 'The Da Vinci Code', 'Fiction', 199, 'no', 'Dan Brown', 'Ss books'),
           (9783427, 'A Brief History of Humankind', 'Non Fiction', 299, 'yes', ' Yuval Noah Harar', 'Bloomsbury'),
53
           (9784735, 'wings of fire', 'autobiography', 499, 'yes', 'APJ abdul kalam', 'DC books'),
           (9781483, 'Alchemist', 'Fiction', 699, 'yes', 'paulo coelho', 'Bloomsbury');
55
56 •
      select * from books;
Edit: 🚄 🖶 🖶 Export/Import: 🏣 👸 | Wrap Cell Content: 🖽
                                 Category
 ISBN
           Book title
                                              Rental_price status Author
                                                                                Publisher
  9749700
           The Da Vinci Code
                                 Fiction
                                                         no
                                                                Dan Brown
  9754221 Harry Potter
                                 Fantasy
                                              599
                                                        yes
                                                               J.K. Rowling
                                                                               Scholastic
  9780071
           The Catcher in the Rye
                                 Fiction
                                                                J.D. Salinger
                                                                                Little Brown and Company
                                                         yes
  9780439 Adujeevitham
                                Fantasy
                                              499
                                                               benniyamin
                                                                               DC books
                                                         yes
                                 Fantasy
  9780465
           1984
                                              199
                                                                George Orwell
                                                                                Secker & Warburg
                                           399
                                                               F. Scott Fitzgerald Scribner
  9780839 The Great Gatsby
                                Fantasy
                                                      yes
  9780930
          To Kill a Mockingbird
                                 classic
                                              499
                                                         yes
                                                               Harper lee
                                                                                Scholastic
                                                        yes
                                             699
  9781483 Alchemist
                                Fiction
                                                               paulo coelho
                                                                               Bloomsbury
          A Brief History of Humankind Non Fiction
  9783427
                                              299
                                                         yes
                                                                Yuval Noah Harar
                                                                               Bloomsbury
  9784735
                                                                AP1 abdul kalam
          wings of fire
                                 autobiography
                                            499
                                                                               DC books
                                                         ves
ooks 3 ×
 58 • ⊖ create table customer(customer_id int primary key,
 59
         customer_name varchar(25),
 60
         customer_address varchar(30),
  61
         Reg_date date);
  62 •
       desc customer;
 63
 64 • insert into customer values(1001, 'vishnu', 'alavoor house', '2021-06-11'),
         (1002, 'shanu', 'deva house', '2022-3-21'), (1003, 'vishak', 'pp house', '2023-09-14'),
 65
         (1004, 'anu', 'ram house', '2024-04-19'), (1005, 'vinod', 'mr house', '2022-10-24');
 66
 67 • select * from customer;
| Edit: 🔏 🖶 🖶 | Export/Import: 🏭 👸 | Wrap Cell Content: 🔣
   customer_id customer_name customer_address Reg_date
  1001
               vishnu
                             alavoor house
                                             2021-06-11
                                          2022-03-21
                           deva house
  1002
              shanu
   1003
                                             2023-09-14
              vishak
                             pp house
             anu
   1004
                            ram house
                                            2024-04-19
   1005
              vinod
                            mr house
                                             2022-10-24
```

```
69 • ⊖ create table IssueStatus(issue_id int primary key,
70
       issued cus int,
71
       foreign key (issued_cus) references customer(customer_id),
72
       issued date date,
73
       Isbn book int,foreign key (Isbn book) references Books(ISBN));
      desc Issuestatus;
      insert into IssueStatus values(10001,1001,'2020-2-14',9754221),
        (10002,1002,'2024-05-22',9754221),(10003,1003,'2024-07-20',9780071),
78
        (10004,1004,'2023-05-12',9780439),(10005,1005,'2024-05-22',9780465);
       select * from Issuestatus;
79 •
80
Result Grid 🔢 🙌 Filter Rows:
                                      | Edit: 🚄 🖶 🖶 | Export/Import: 🏣 👸 | Wrap Cell Content: 🖽
  issue_id issued_cus issued_date Isbn_book
  10001
                   2020-02-14 9754221
  10002
        1002
                2024-05-22 9754221
  10003
         1003
                   2024-07-20 9780071
  10004 1004 2023-05-12 9780439
  10005
          1005
                   2024-05-22
                             9780465
   81 • 

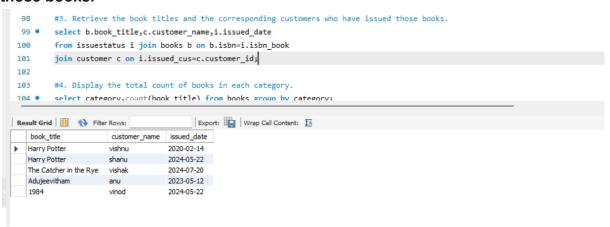
create table ReturnStatus(Return_id int primary key,
   82
          Return_cus varchar(25),
   83
          Return_book_name varchar(30),
          Return_date date,
   84
        Isbn_book2 int, foreign key (Isbn_book2) references Books(ISBN));
   85
   86 • desc ReturnStatus:
         drop table returnstatus;
   88 • insert into ReturnStatus values(01, 'vishnu', 'Harry Potter', '2020-01-13', 9754221),
   89
          (02, 'anu', 'Adujeevitham', '2024-04-29', 9780439);
          select * from ReturnStatus;
   90 •
   91
          #1. Retrieve the book title, category, and rental price of all available books.
   92
 | Edit: 🚄 🖶 | Export/Import: 📳 🐻 | Wrap Cell Content: 🖽
    Return_id Return_cus Return_book_name Return_date Isbn_book2
                       Harry Potter
                                      2020-01-13 9754221
 2
* NULL
                                      2024-04-29 9780439
                       Adujeevitham
1. Retrieve the book title, category, and rental price of all available books.
           #1. Retrieve the book title, category, and rental price of all available books.
           select book_title,category,rental_price from books;
   93 •
   94
 Export: Wrap Cell Content: IA
```



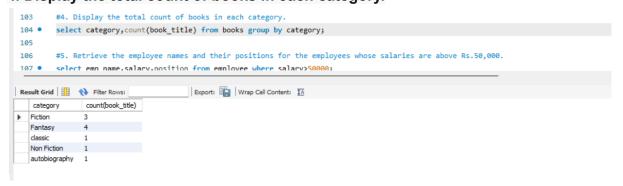
2. List the employee names and their respective salaries in descending order of salary.



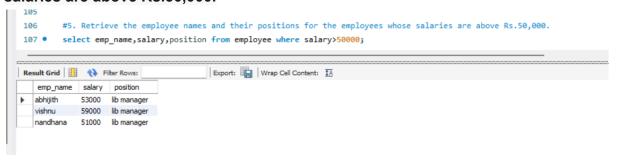
3. Retrieve the book titles and the corresponding customers who have issued those books.



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

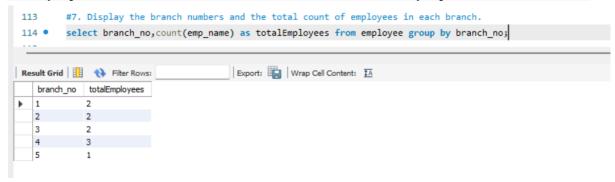


5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.

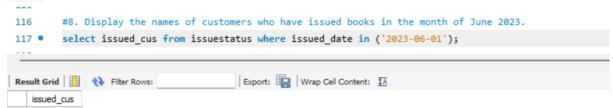


6. List the customer names who registered before 2022-01-01 and have not issued any books yet.

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.

select book_title, category from books where category='history';	
Result Grid Filter Rows: Export: Wrap Cell Content: IA	

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

122 123 •		the branch numbers along with the count of employees for branches having more than 3 employees ch_no,count(emp_name) as TotleEmployees from employee group by branch_no having count(emp_name)>=3;	
	select bi a	in_noscount(emp_name) as fortermployees from employee group by branch_no having count(emp_name)?-53	
Result	Grid 🔢 🙌 Fi	Rows: Export: Wrap Cell Content:]	
bra ▶ 4	anch_no TotleEmp	yees	