## **Module End Project**

## **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_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
```

 Query to create database library and tables branch ,employee, books,customer, issuestatus,returnstatus

```
1 • create database library;
2 •
      use library;
3
4 ● ⊖ create table branch(
5
      Branch_no int PRIMARY KEY ,
6
      Manager Id int,
      Branch address varchar(50),
7
      Contact no int);
8
9
      create table Employee
10 •
    11
      Emp_name varchar(50), Positon varchar(30),
12
13
      Salary int);
14
```

```
alter table Employee
 modify column salary decimal(10,3);
  create table Books
Book_title varchar(50),
 Category varchar(20),
 Rental_Price decimal(10,3),
 Stats varchar(3),
 Author varchar(30),
 Publisher varchar(30));
 SELECT CONSTRAINT_NAME, CONSTRAINT_TYPE
  FROM INFORMATION_SCHEMA.TABLE_CONSTRAINTS
 WHERE TABLE NAME = 'Books';
 alter table BOOKS
 modify column Isbn varchar(30);
  alter table BOOKS
 modify column Publisher varchar(100);
```

```
27 • SELECT CONSTRAINT_NAME, CONSTRAINT_TYPE
      FROM INFORMATION_SCHEMA.TABLE_CONSTRAINTS
      WHERE TABLE_NAME = 'Books';
29
30 • alter table BOOKS
    modify column Isbn varchar(30);
31
32 • alter table BOOKS
      modify column Publisher varchar(100);
33
34 • alter table BOOKS
      modify column Book_Title varchar(100);
35
36 • alter table BOOKS
37
      modify column category varchar(100);
     alter table BOOKS
38 •
      modify column author varchar(100);
39
41
     create table Customer
42 •
Customer_name varchar(30),
44
      Customer_address varchar(50),
45
      Reg date date);
```

```
create table IssueStatus
Issued_cust INT,
  FOREIGN KEY (Issued_cust) REFERENCES customer(Customer_Id),
  Issued book name varchar(50),
  Issue_date date,
  Isbn_book int,
  FOREIGN KEY (Isbn_book) references BOOKS(isbn));
  SELECT CONSTRAINT NAME, CONSTRAINT TYPE
  FROM INFORMATION_SCHEMA.TABLE_CONSTRAINTS
  WHERE TABLE_NAME = 'IssueStatus';
  alter table IssueStatus drop constraint Isbn_book;
  alter table IssueStatus
  modify column Isbn_book varchar(30);
  alter table Issuestatus
  ADD CONSTRAINT Isbn_book
  FOREIGN KEY (Isbn book)
  REFERENCES BOOKS(isbn);
```

```
create table ReturnStatus
(Return Id int PRIMARY KEY ,
 Return_cust int,
 Return_book_name varchar(30),
 Return_date date,
 Isbn_book2 int , FOREIGN KEY (Isbn_book2) references Books(isbn));
 SELECT CONSTRAINT_NAME, CONSTRAINT_TYPE
 FROM INFORMATION_SCHEMA.TABLE_CONSTRAINTS
 WHERE TABLE_NAME = 'ReturnStatus';
 alter table ReturnStatus drop constraint returnstatus_ibfk_1;
 alter table ReturnStatus
 modify column Isbn_book2 varchar(30);
 alter table ReturnStatus
 ADD CONSTRAINT Isbn_book2
 FOREIGN KEY (Isbn_book2)
 REFERENCES BOOKS(isbn);
```

 Inserting values to Branch, Employees, Books, Customer, ReturnStatus, Issuestatus

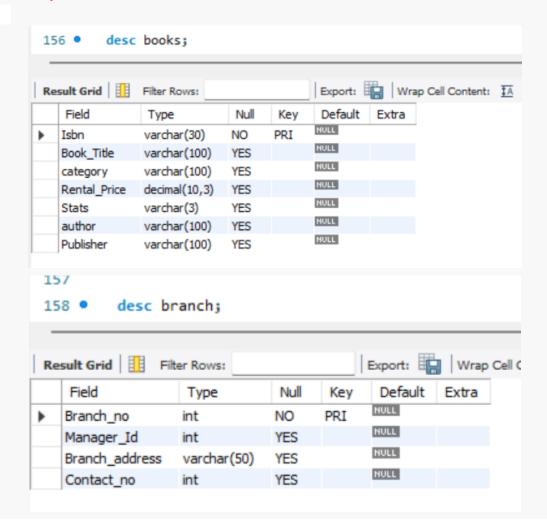
```
insert into Branch values
(100,1,"ABC street , Kochi, Kerala ,India",9999),
(101,2,"CDE street , Kannur, Kerala ,India",9998),
(102,3,"EFG street , Kollam, Kerala ,India",9997),
(103,4,"GHI street , Trivandum, Kerala ,India",9996),
(104,5,"IJK street , Palakkad, Kerala ,India",9995);

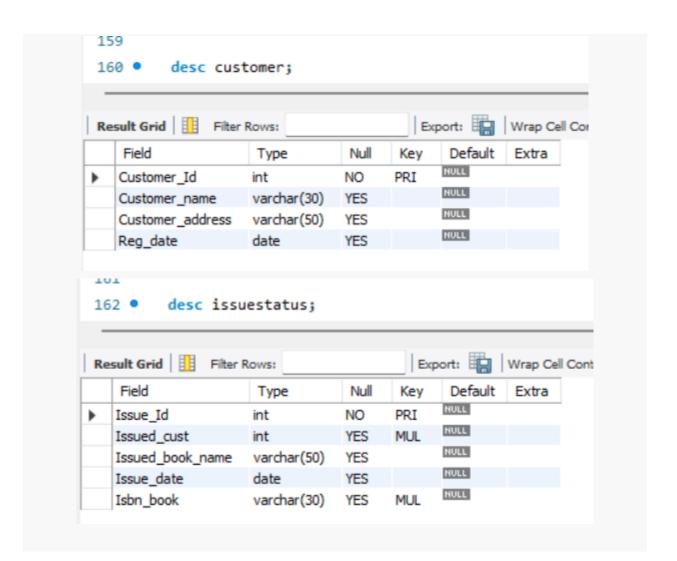
insert into employee values(200,"Abi","Librarian",30000),
(201,"Jibi","Library Assistant",23000),
(202,"Ebi","Library Director",50000),
(203,"Sibi","Technical Services Librarian",32000),
(204,"Sini","Information Specialist",32000),
(205,"Rini","Administrative Assistant",40000),
(206,"George","Cleaner",20000);
```

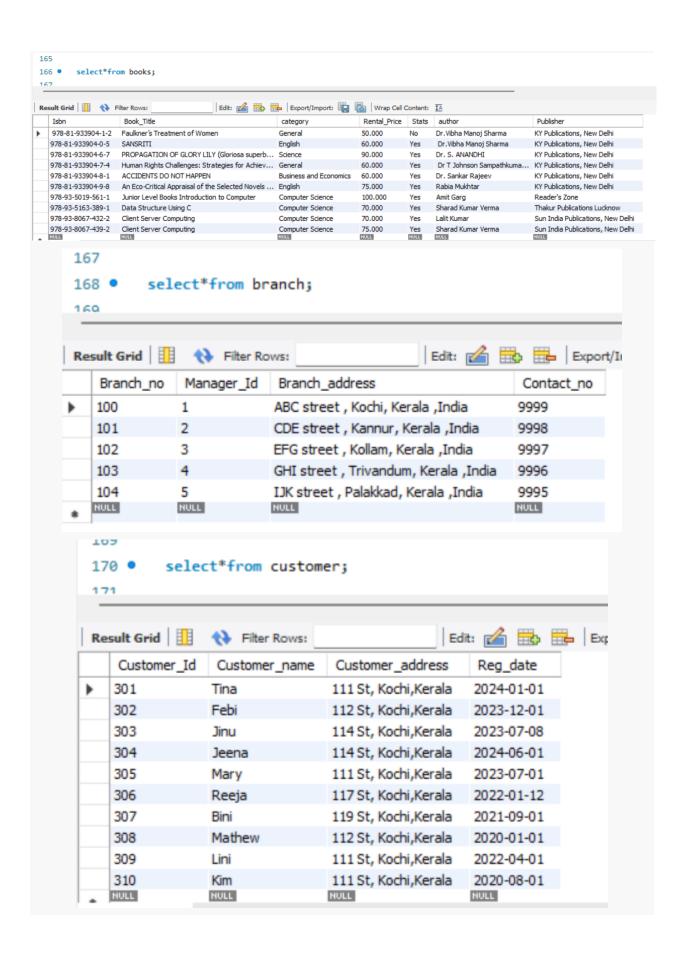
```
• ⊝ insert into books values ("978-93-8067-432-2","Client Server Computing","Computer Science",70,"Yes","Lalit Kumar",
  "Sun India Publications, New Delhi"),
 ⊕ ("978-93-5163-389-1", "Data Structure Using C", "Computer Science", 70, "Yes", "Sharad Kumar Verma",
  "Thakur Publications Lucknow"),
 "Sun India Publications, New Delhi"),
 ⊖ ("978-81-933904-9-8", "An Eco-Critical Appraisal of the Selected
  Novels of Amitav Ghosh", "English", 75, "Yes", "Rabia Mukhtar",
  "KY Publications, New Delhi"),
 "Dr. Sankar Rajeev", "KY Publications, New Delhi"),
 ⊕ ("978-81-933904-7-4", "Human Rights Challenges: Strategies for Achieving Global Peace and Prosperity",
   "General",60,"Yes"," Dr T Johnson Sampathkumar
  & Dr B Madhana Rekha", "KY Publications, New Delhi"),
 ○ ("978-81-933904-6-7", "PROPAGATION OF GLORY LILY
   (Gloriosa superba L.)", "Science",90, "Yes", "Dr. S. ANANDHI", "KY Publications, New Delhi"),
   (" 978-81-933904-1-2", "Faulkner's Treatment of Women", "General", 50, "No", "Dr. Vibha Manoj Sharma", "KY Publications, New Delhi"),
   ("978-81-933904-0-5","SANSRITI","English",60,"Yes"," Dr. Vibha Manoj Sharma","KY Publications, New Delhi")
   ;
```

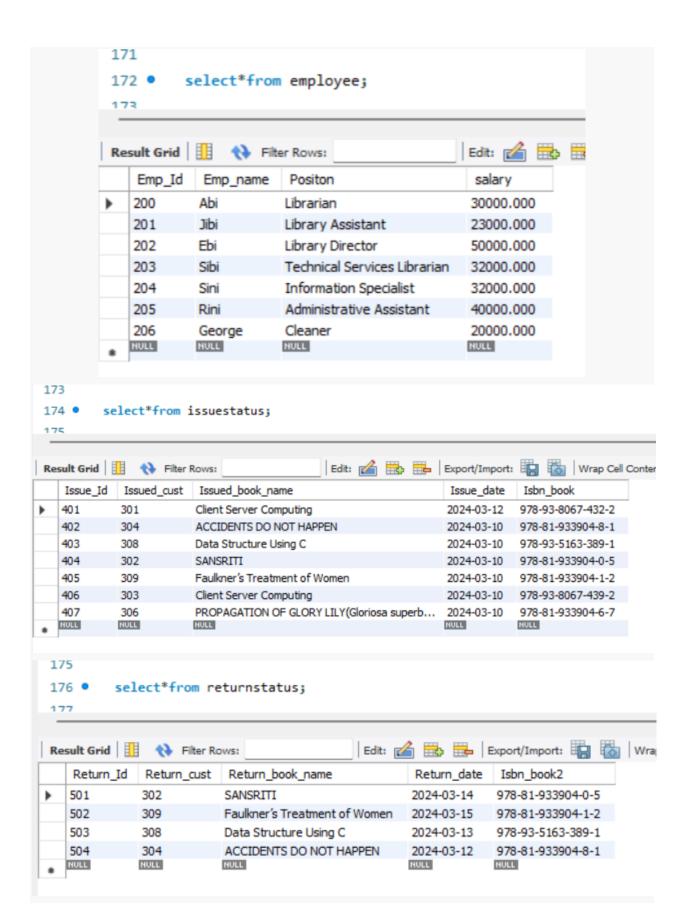
```
insert into customer values (301, "Tina", "111 St, Kochi, Kerala", "2024-01-01"),
 (302, "Febi", "112 St, Kochi, Kerala", "2023-12-01"),
 (303, "Jinu", "114 St, Kochi, Kerala", "2023-07-08"),
 (304, "Jeena", "114 St, Kochi, Kerala", "2024-06-01"),
 (305, "Mary", "111 St, Kochi, Kerala", "2023-07-01"),
 (306, "Reeja", "117 St, Kochi, Kerala", "2022-01-12"),
 (307, "Bini", "119 St, Kochi, Kerala", "2021-09-01"),
 (308, "Mathew", "112 St, Kochi, Kerala", "2020-01-01"),
 (309, "Lini", "111 St, Kochi, Kerala", "2022-04-01"),
 (310, "Kim", "111 St, Kochi, Kerala", "2020-08-01");
insert into issuestatus values (401,301,"Client Server Computing","2024-03-12","978-93-8067-432-2")
,(402,304,"ACCIDENTS DO NOT HAPPEN","2024-03-10","978-81-933904-8-1"),
(403,308, "Data Structure Using C", "2024-03-10", "978-93-5163-389-1"),
(404,302, "SANSRITI", "2024-03-10", "978-81-933904-0-5"),
(405,309, "Faulkner's Treatment of Women", "2024-03-10", "978-81-933904-1-2"),
(406,303, "Client Server Computing", "2024-03-10", "978-93-8067-439-2"),
(407,306, "PROPAGATION OF GLORY LILY(Gloriosa superba L.)", "2024-03-10", "978-81-933904-6-7");
```

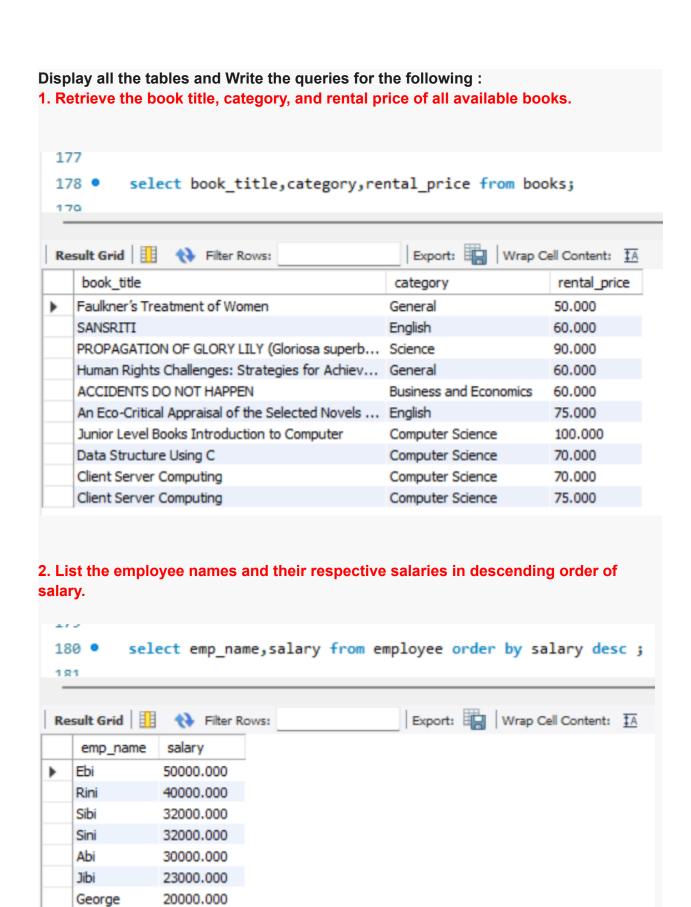
## Decription of tables and table contents

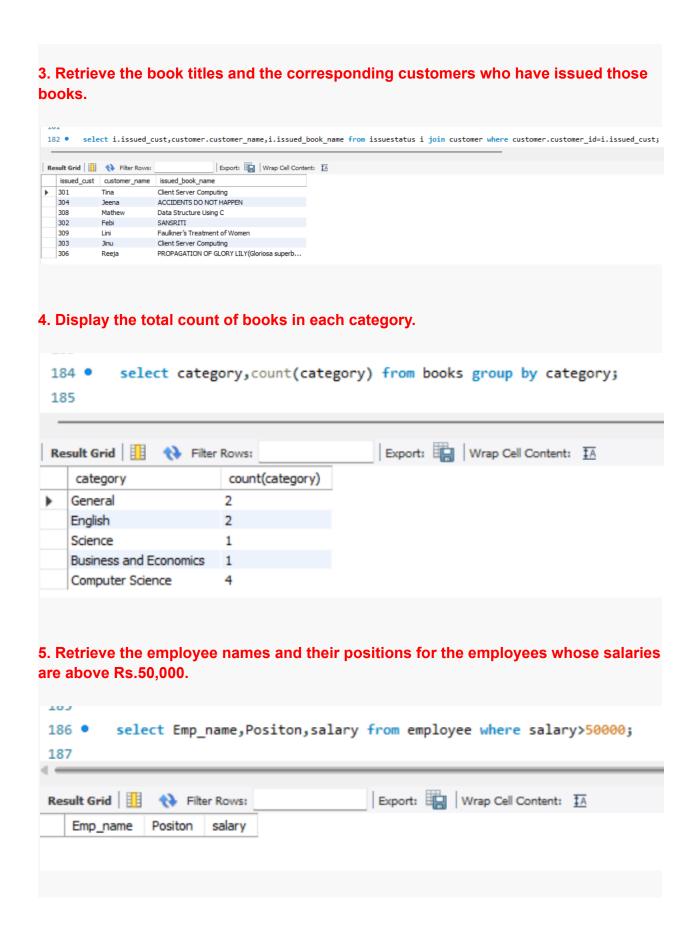


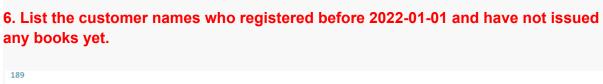


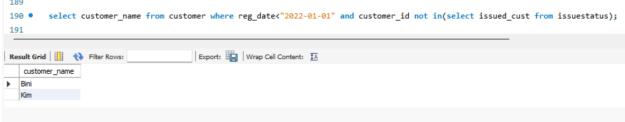




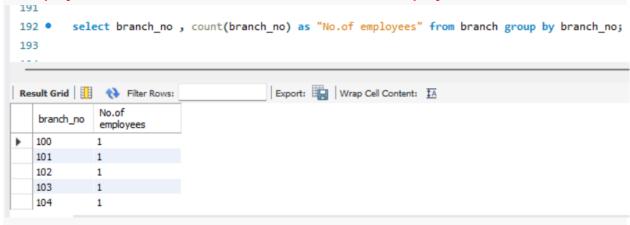








7. Display the branch numbers and the total count of employees in each branch.



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

193  194 • select customer_name from	m customer where customer_id in (sel	ect Issued_cust from issuestatus	where issue_date>="2023-06-01" a	and issue_date<="2023-06-30");
Result Grid Filter Rows:	Export: Wrap Cell Content: 🖽			
Issued_cust				