MySQL PROJECT

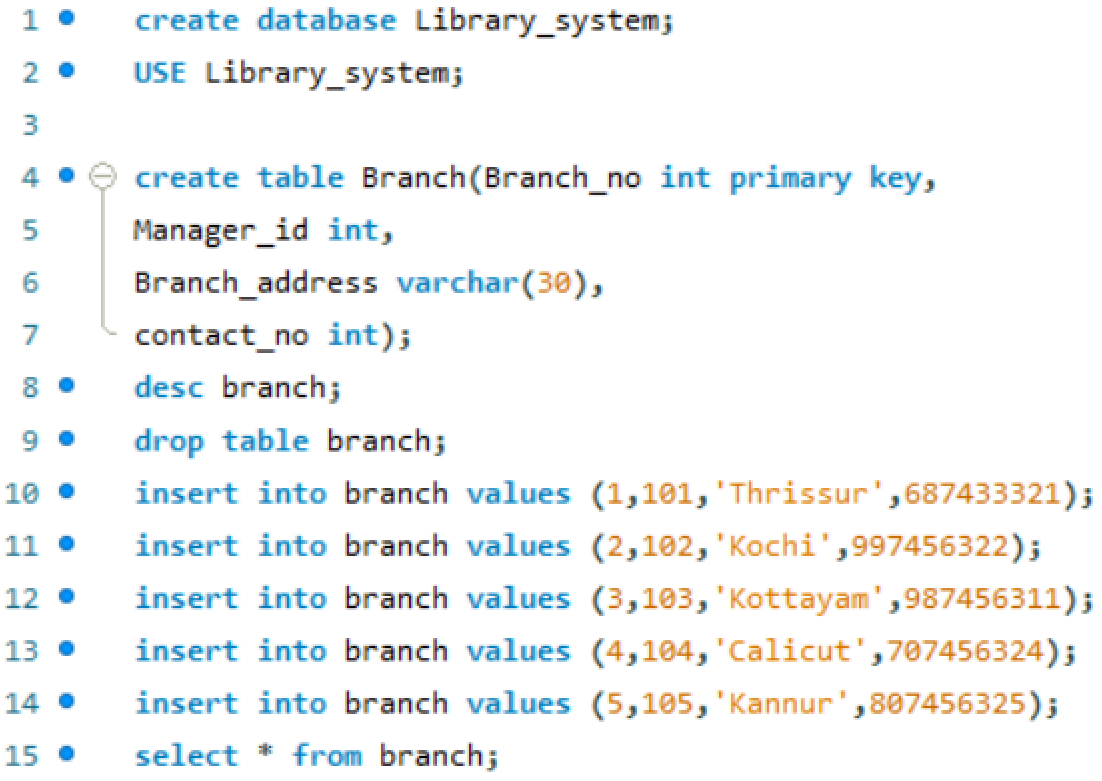
TOPIC:LIBRARY MANAGEMENT SYSTEM

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.

Creating 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_adress
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_adress
Reg_date

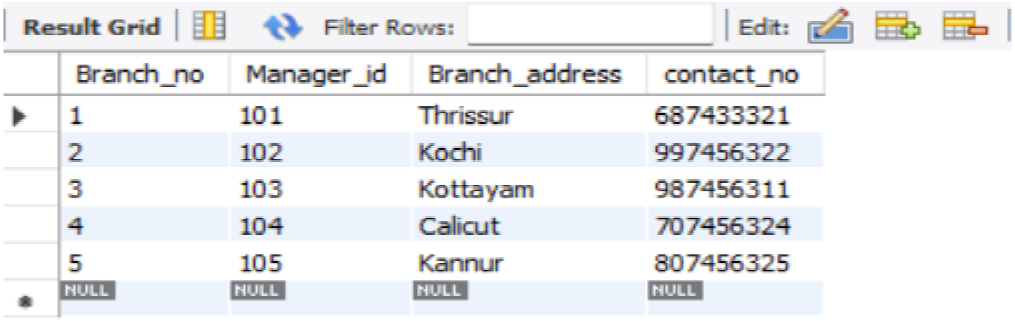
5.IssueStatus
Issue_id– set as PRIMARY KEY
Issueed_cust – set as FOREIGN KEY and it refer customer_id in CUSTOMER table
Issued_book_name
Issued_date
Isbn_book – set as FOREIGN KEY and it should refer isbn in BOOKS table
6.ReturnStatus
Return_id – set as PRIMARY KEY
Return_cust
Return_book_name
Return_date
Isbn_book2 – set as FOREIGN KEY and it should refer isbn in BOOKS table .
Display all the tables and write the queries for the following

Creating Branch Table



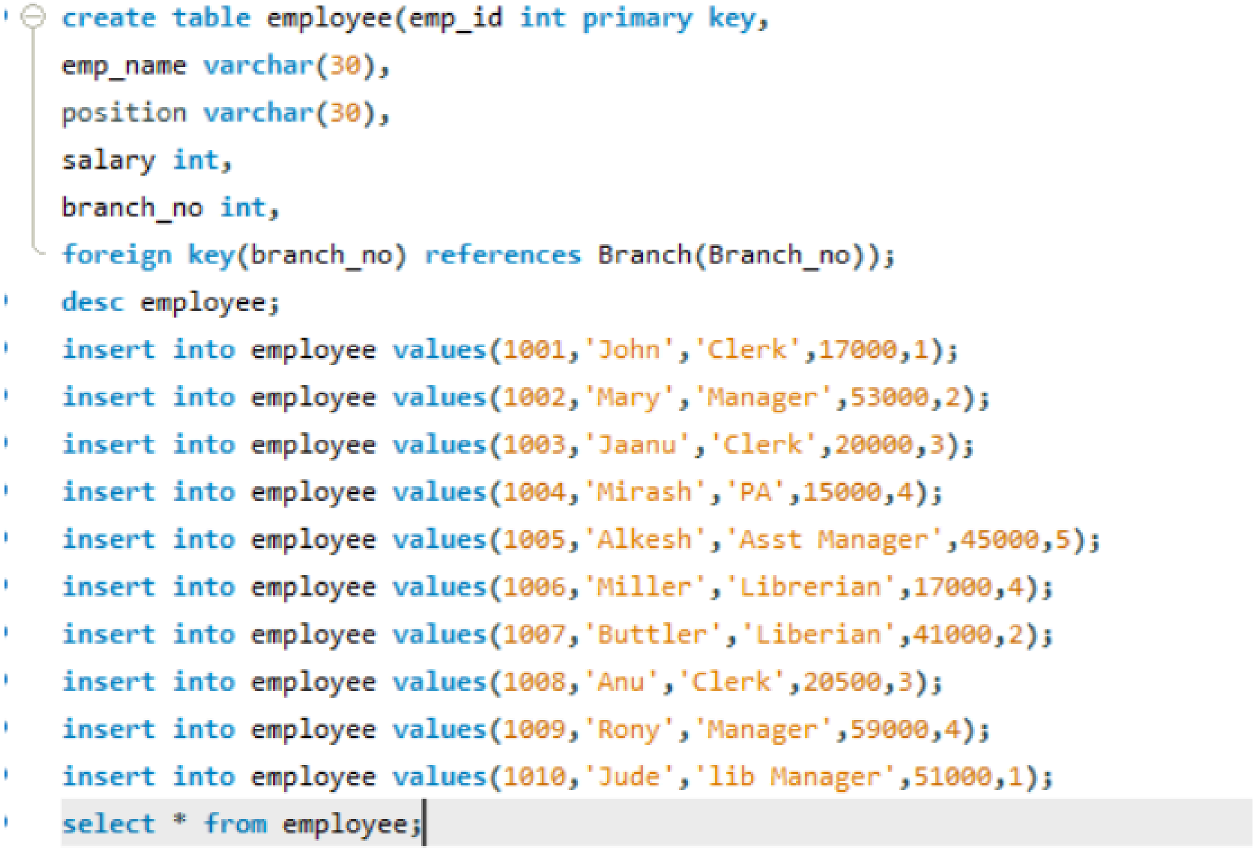
```
create database Library_system;
USE Library_system;

create table Branch(Branch_no int primary key,
Manager_id int,
Branch_address varchar(30),
contact_no int);
desc branch;
drop table branch;
insert into branch values (1,101,'Thrissur',687433321);
insert into branch values (2,102,'Kochi',997456322);
insert into branch values (3,103,'Kottayam',987456311);
insert into branch values (4,104,'Calicut',707456324);
insert into branch values (5,105,'Kannur',807456325);
select * from branch;
```

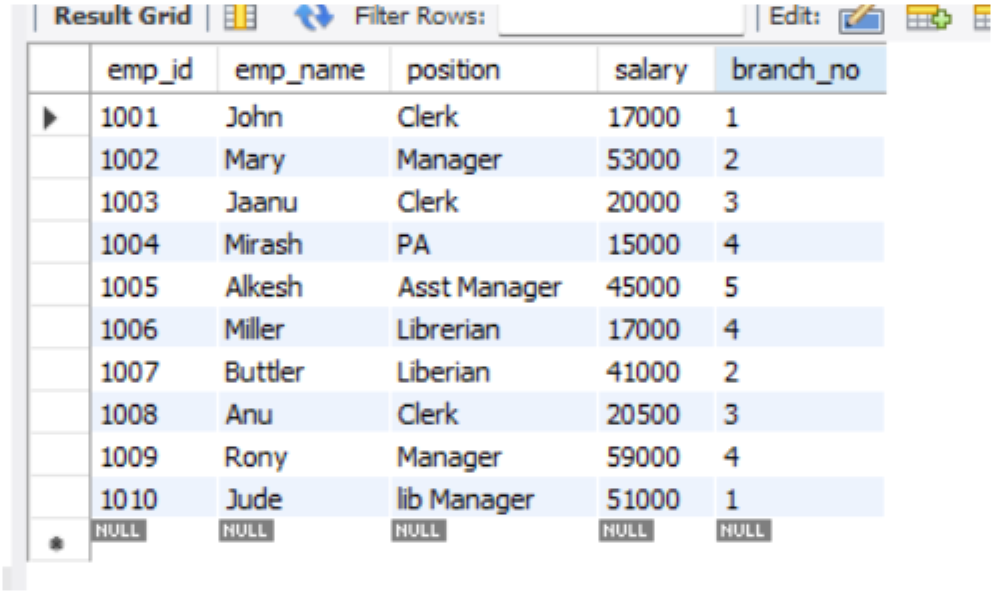


Branch_no	Manager_id	Branch_address	contact_no
1	101	Thrissur	687433321
2	102	Kochi	997456322
3	103	Kottayam	987456311
4	104	Calicut	707456324
5	105	Kannur	807456325
NULL	NULL	NULL	NULL

Creating Employee Table

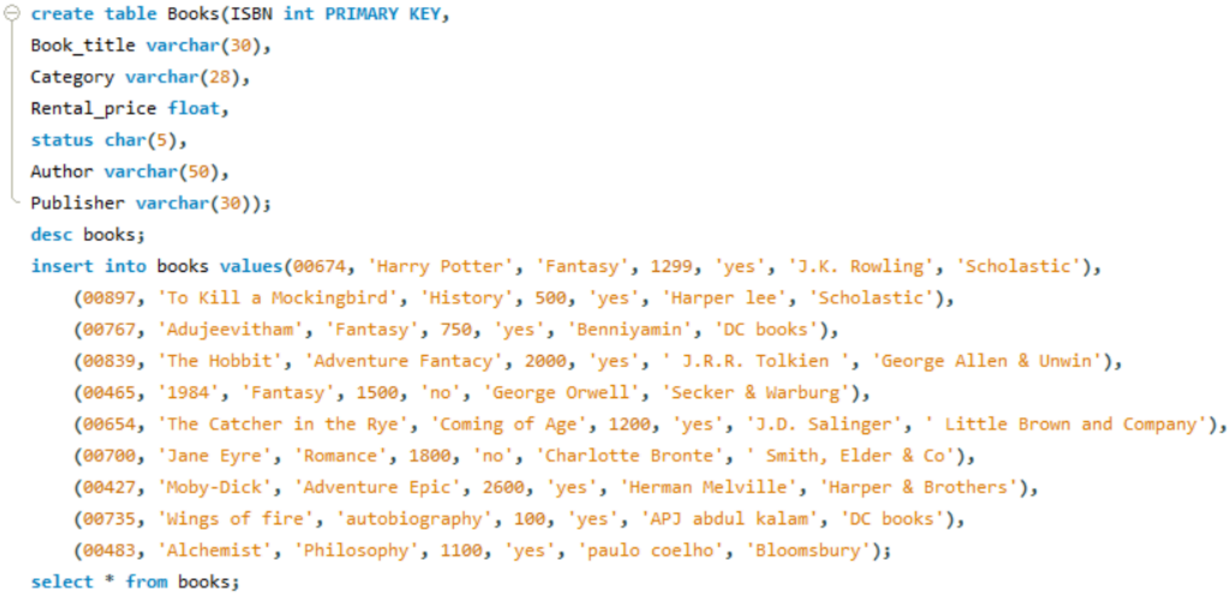


```
create table employee(emp_id int primary key,
emp_name varchar(30),
position varchar(30),
salary int,
branch_no int,
foreign key(branch_no) references Branch(Branch_no));
desc employee;
insert into employee values(1001,'John','Clerk',17000,1);
insert into employee values(1002,'Mary','Manager',53000,2);
insert into employee values(1003,'Jaanu','Clerk',20000,3);
insert into employee values(1004,'Mirash','PA',15000,4);
insert into employee values(1005,'Alkesh','Asst Manager',45000,5);
insert into employee values(1006,'Miller','Librerian',17000,4);
insert into employee values(1007,'Buttler','Liberian',41000,2);
insert into employee values(1008,'Anu','Clerk',20500,3);
insert into employee values(1009,'Rony','Manager',59000,4);
insert into employee values(1010,'Jude','lib Manager',51000,1);
select * from employee;
```

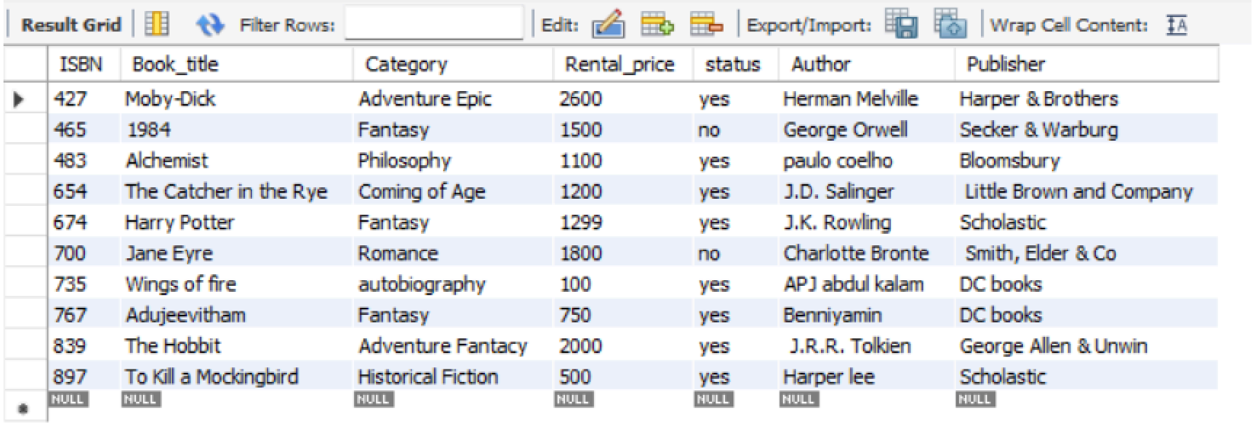


emp_id	emp_name	position	salary	branch_no
1001	John	Clerk	17000	1
1002	Mary	Manager	53000	2
1003	Jaanu	Clerk	20000	3
1004	Mirash	PA	15000	4
1005	Alkesh	Asst Manager	45000	5
1006	Miller	Librerian	17000	4
1007	Buttler	Liberian	41000	2
1008	Anu	Clerk	20500	3
1009	Rony	Manager	59000	4
1010	Jude	lib Manager	51000	1
NULL	NULL	NULL	NULL	NULL

Creating Books Table

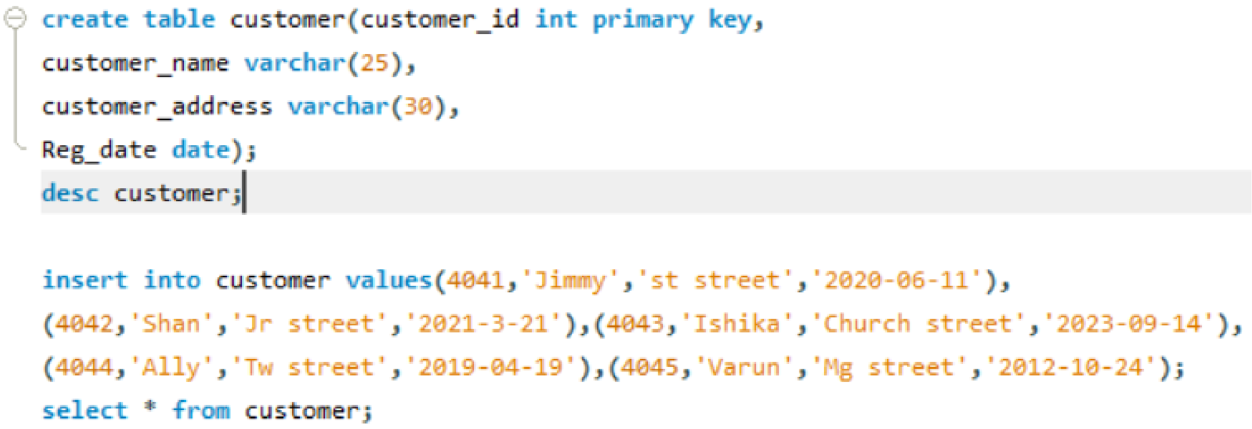


```
create table Books(ISBN int PRIMARY KEY,
Book_title varchar(30),
Category varchar(28),
Rental_price float,
status char(5),
Author varchar(50),
Publisher varchar(30));
desc books;
insert into books values(00674, 'Harry Potter', 'Fantasy', 1299, 'yes', 'J.K. Rowling', 'Scholastic'),
    (00897, 'To Kill a Mockingbird', 'History', 500, 'yes', 'Harper lee', 'Scholastic'),
    (00767, 'Adujeevitham', 'Fantasy', 750, 'yes', 'Benniyamin', 'DC books'),
    (00839, 'The Hobbit', 'Adventure Fantacy', 2000, 'yes', ' J.R.R. Tolkien ', 'George Allen & Unwin'),
    (00465, '1984', 'Fantasy', 1500, 'no', 'George Orwell', 'Secker & Warburg'),
    (00654, 'The Catcher in the Rye', 'Coming of Age', 1200, 'yes', 'J.D. Salinger', ' Little Brown and Company'),
    (00700, 'Jane Eyre', 'Romance', 1800, 'no', 'Charlotte Bronte', ' Smith, Elder & Co'),
    (00427, 'Moby-Dick', 'Adventure Epic', 2600, 'yes', 'Herman Melville', 'Harper & Brothers'),
    (00735, 'Wings of fire', 'autobiography', 100, 'yes', 'APJ abdul kalam', 'DC books'),
    (00483, 'Alchemist', 'Philosophy', 1100, 'yes', 'paulo coelho', 'Bloomsbury');
select * from books;
```



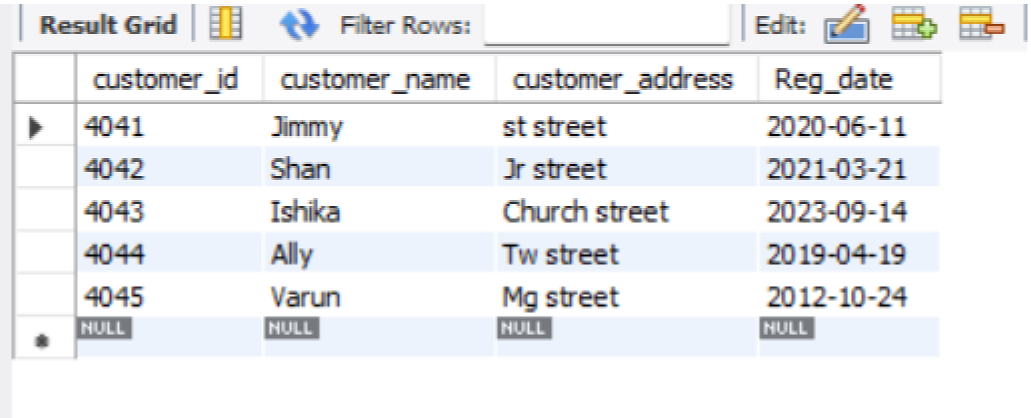
ISBN	Book_title	Category	Rental_price	status	Author	Publisher
427	Moby-Dick	Adventure Epic	2600	yes	Herman Melville	Harper & Brothers
465	1984	Fantasy	1500	no	George Orwell	Secker & Warburg
483	Alchemist	Philosophy	1100	yes	paulo coelho	Bloomsbury
654	The Catcher in the Rye	Coming of Age	1200	yes	J.D. Salinger	Little Brown and Company
674	Harry Potter	Fantasy	1299	yes	J.K. Rowling	Scholastic
700	Jane Eyre	Romance	1800	no	Charlotte Bronte	Smith, Elder & Co
735	Wings of fire	autobiography	100	yes	APJ abdul kalam	DC books
767	Adujeevitham	Fantasy	750	yes	Benniyamin	DC books
839	The Hobbit	Adventure Fantacy	2000	yes	J.R.R. Tolkien	George Allen & Unwin
897	To Kill a Mockingbird	Historical Fiction	500	yes	Harper lee	Scholastic
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Customer Table



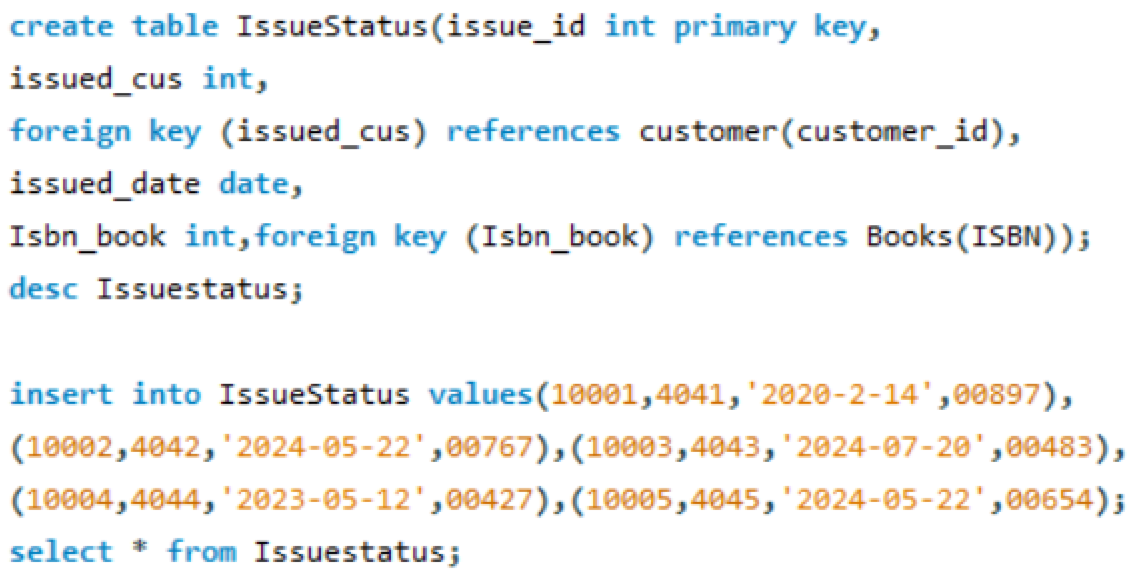
```
create table customer(customer_id int primary key,
customer_name varchar(25),
customer_address varchar(30),
Reg_date date);
desc customer;

insert into customer values(4041,'Jimmy','st street','2020-06-11'),
(4042,'Shan','Jr street','2021-3-21'),(4043,'Ishika','Church street','2023-09-14'),
(4044,'Ally','Tw street','2019-04-19'),(4045,'Varun','Mg street','2012-10-24');
select * from customer;
```



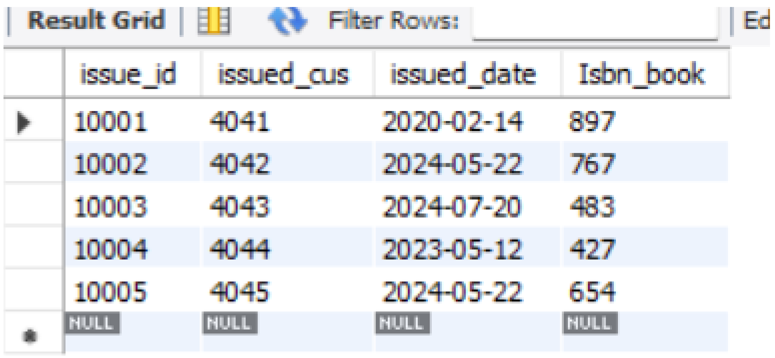
customer_id	customer_name	customer_address	Reg_date
4041	Jimmy	st street	2020-06-11
4042	Shan	Jr street	2021-03-21
4043	Ishika	Church street	2023-09-14
4044	Ally	Tw street	2019-04-19
4045	Varun	Mg street	2012-10-24
NULL	NULL	NULL	NULL

Issue Status Table



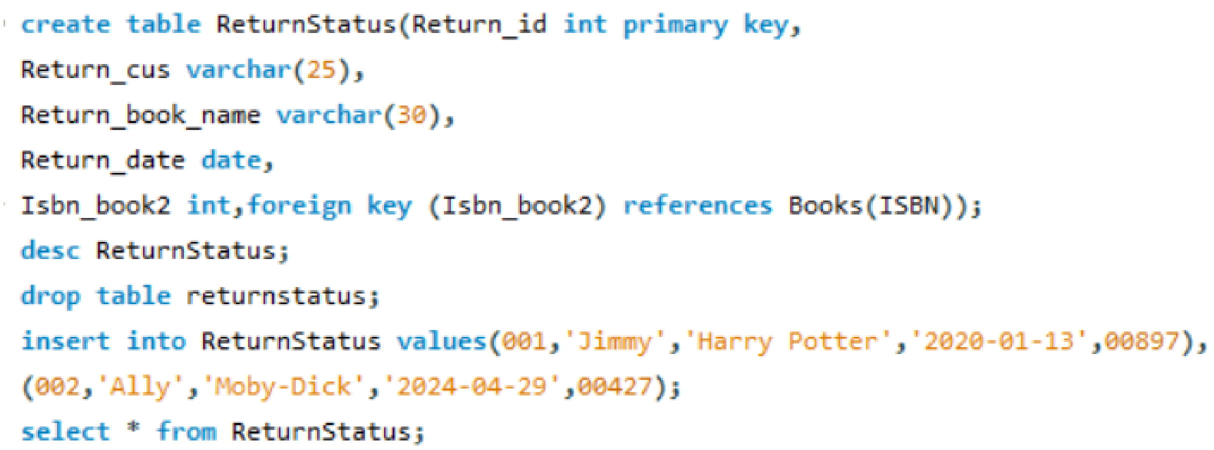
```
create table IssueStatus(issue_id int primary key,
issued_cus int,
foreign key (issued_cus) references customer(customer_id),
issued_date date,
Isbn_book int,foreign key (Isbn_book) references Books(ISBN));
desc Issuestatus;

insert into IssueStatus values(10001,4041,'2020-2-14',00897),
(10002,4042,'2024-05-22',00767),(10003,4043,'2024-07-20',00483),
(10004,4044,'2023-05-12',00427),(10005,4045,'2024-05-22',00654);
select * from Issuestatus;
```

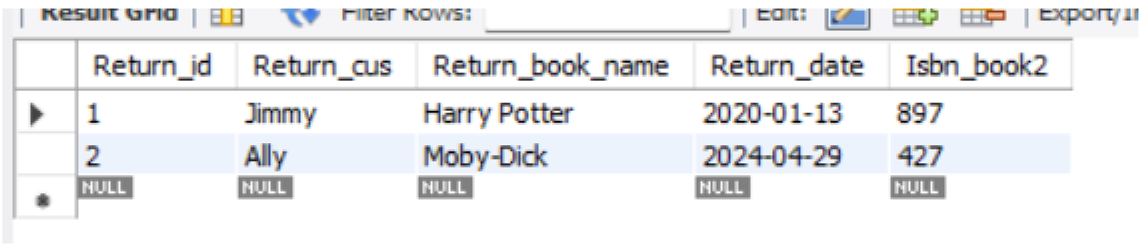


	issue_id	issued_cus	issued_date	Isbn_book
▶	10001	4041	2020-02-14	897
	10002	4042	2024-05-22	767
	10003	4043	2024-07-20	483
	10004	4044	2023-05-12	427
	10005	4045	2024-05-22	654
✱	NULL	NULL	NULL	NULL

Return Status Table

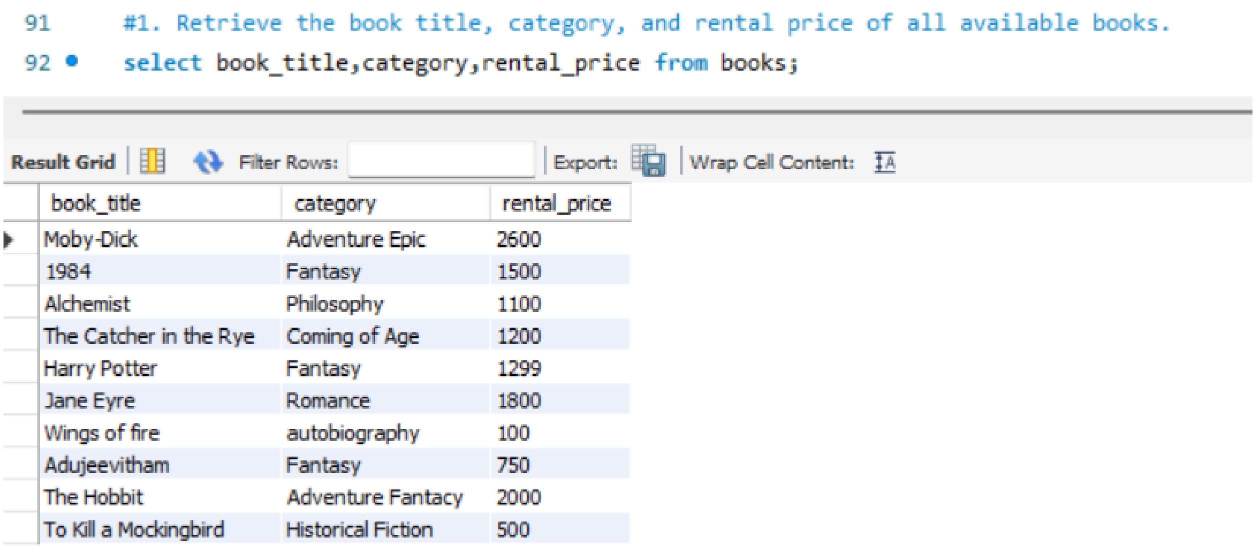


```
create table ReturnStatus(Return_id int primary key,
Return_cus varchar(25),
Return_book_name varchar(30),
Return_date date,
Isbn_book2 int,foreign key (Isbn_book2) references Books(ISBN));
desc ReturnStatus;
drop table returnstatus;
insert into ReturnStatus values(001,'Jimmy','Harry Potter','2020-01-13',00897),
(002,'Ally','Moby-Dick','2024-04-29',00427);
select * from ReturnStatus;
```



Return_id	Return_cus	Return_book_name	Return_date	Isbn_book2
1	Jimmy	Harry Potter	2020-01-13	897
2	Ally	Moby-Dick	2024-04-29	427
NULL	NULL	NULL	NULL	NULL

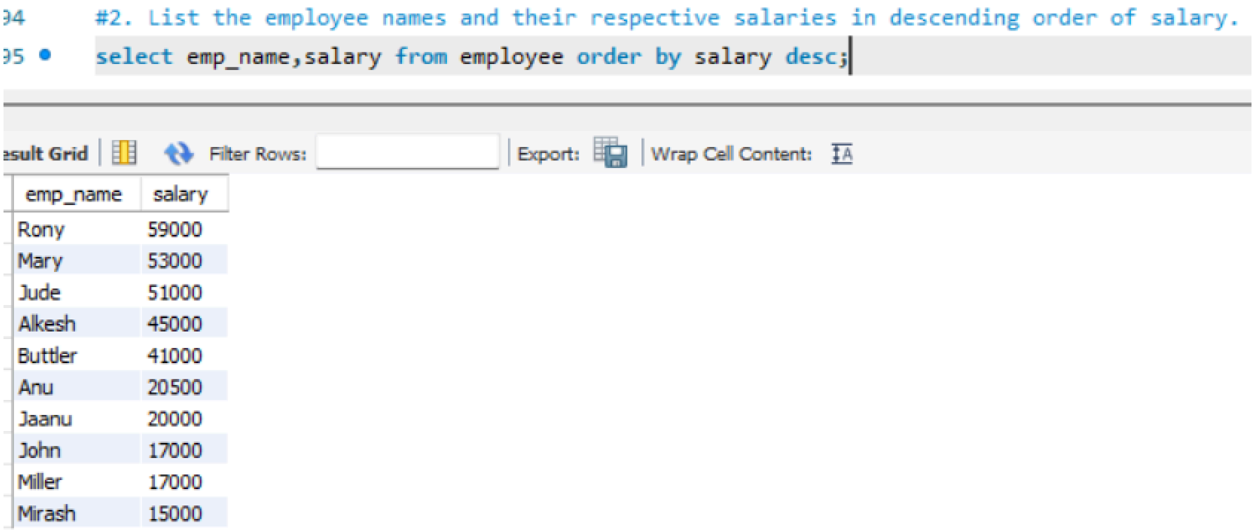
1. Retrieve the book title, category, and rental price of all available books.



```
#1. Retrieve the book title, category, and rental price of all available books.
select book_title,category,rental_price from books;
```

book_title	category	rental_price
Moby-Dick	Adventure Epic	2600
1984	Fantasy	1500
Alchemist	Philosophy	1100
The Catcher in the Rye	Coming of Age	1200
Harry Potter	Fantasy	1299
Jane Eyre	Romance	1800
Wings of fire	autobiography	100
Adujeevitham	Fantasy	750
The Hobbit	Adventure Fantacy	2000
To Kill a Mockingbird	Historical Fiction	500

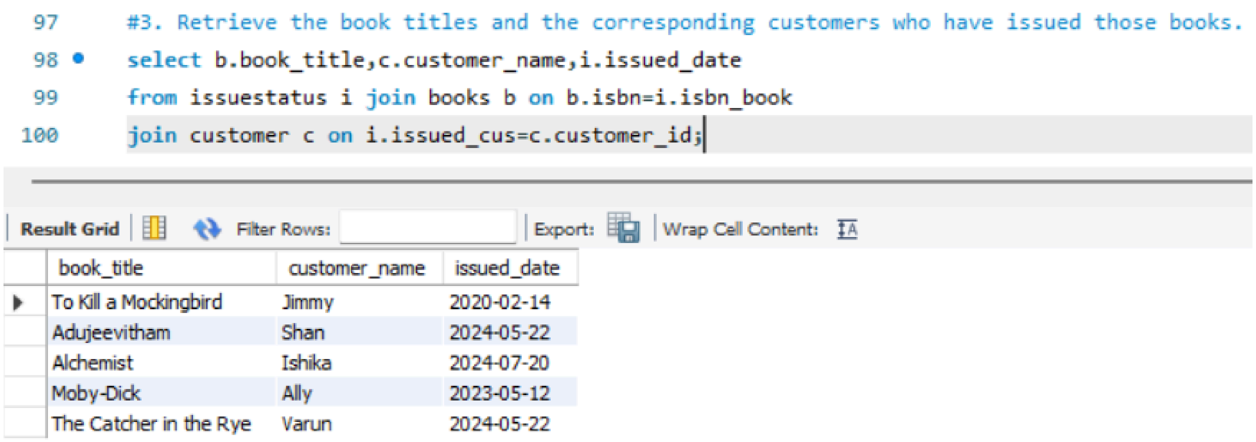
2. List the employee names and their respective salaries in descending order of salary.



```
#2. List the employee names and their respective salaries in descending order of salary.
select emp_name,salary from employee order by salary desc;
```

emp_name	salary
Rony	59000
Mary	53000
Jude	51000
Alkesh	45000
Buttler	41000
Anu	20500
Jaanu	20000
John	17000
Miller	17000
Mirash	15000

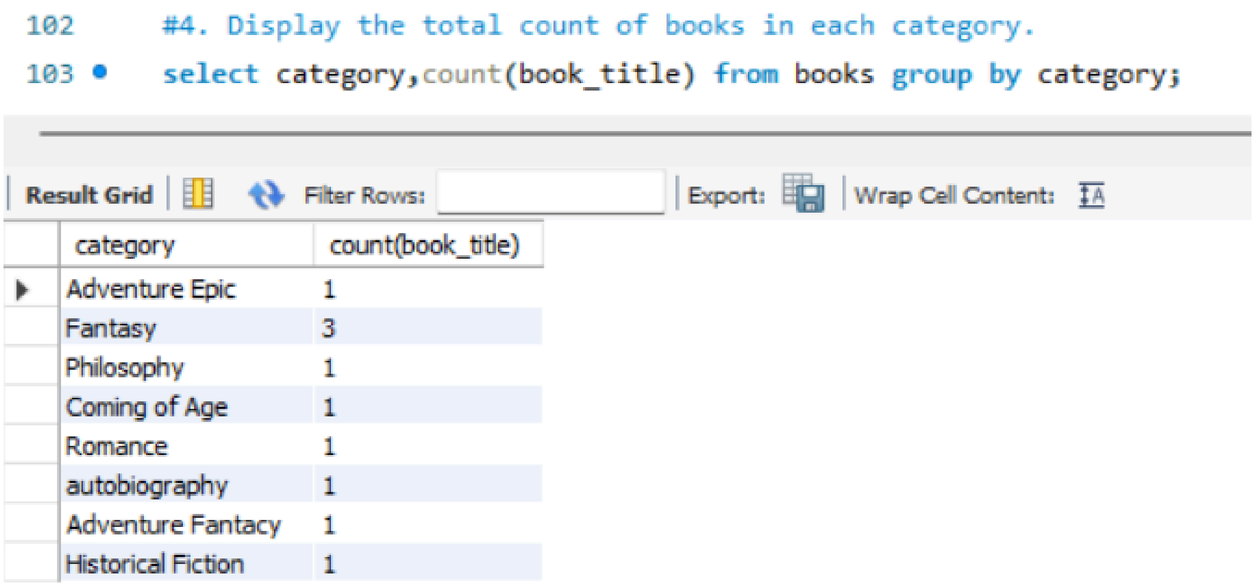
3. Retrieve the book titles and the corresponding customers who have issued those books.



```
#3. Retrieve the book titles and the corresponding customers who have issued those books.
select b.book_title,c.customer_name,i.issued_date
from issuestatus i join books b on b.isbn=i.isbn_book
join customer c on i.issued_cus=c.customer_id;
```

book_title	customer_name	issued_date
To Kill a Mockingbird	Jimmy	2020-02-14
Adujeevitham	Shan	2024-05-22
Alchemist	Ishika	2024-07-20
Moby-Dick	Ally	2023-05-12
The Catcher in the Rye	Varun	2024-05-22

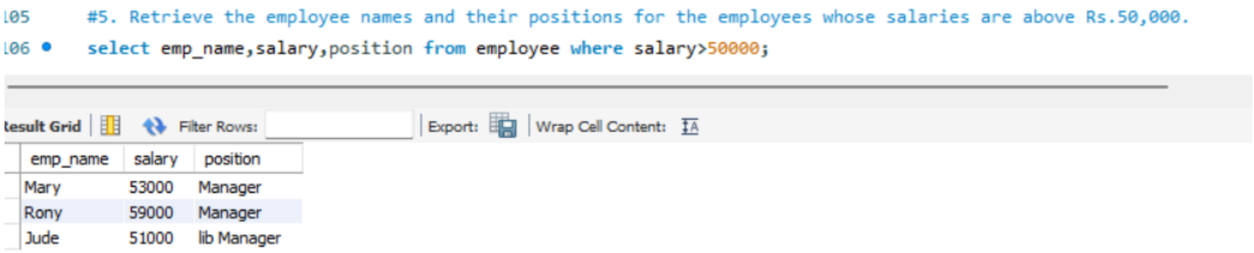
4. Display the total count of books in each category.



```
#4. Display the total count of books in each category.
select category,count(book_title) from books group by category;
```

category	count(book_title)
Adventure Epic	1
Fantasy	3
Philosophy	1
Coming of Age	1
Romance	1
autobiography	1
Adventure Fantacy	1
Historical Fiction	1

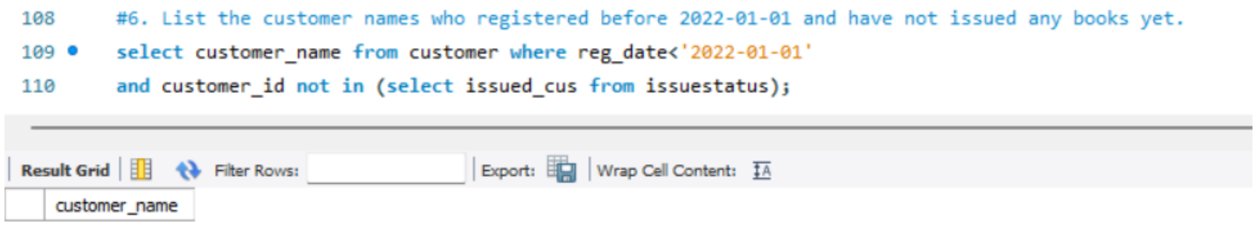
5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.



```
#5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.
select emp_name,salary,position from employee where salary>50000;
```

emp_name	salary	position
Mary	53000	Manager
Rony	59000	Manager
Jude	51000	lib Manager

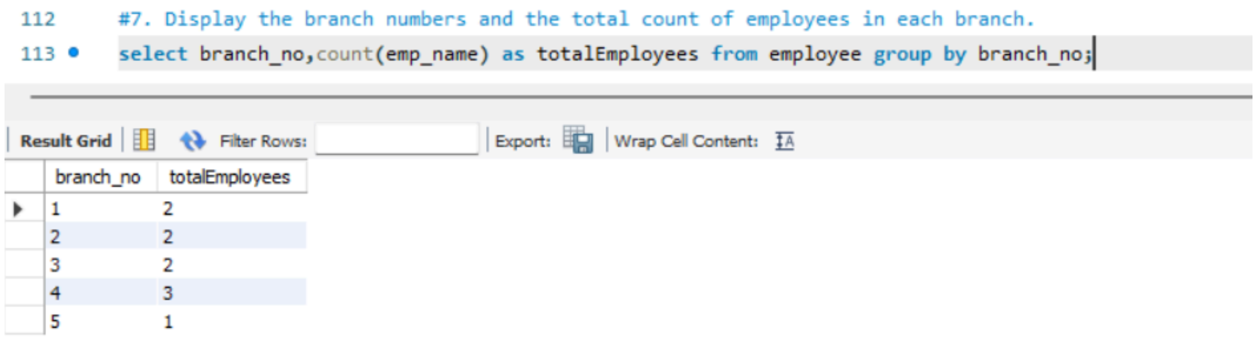
6. List the customer names who registered before 2022-01-01 and have not issued any books yet.



```
#6. List the customer names who registered before 2022-01-01 and have not issued any books yet.
select customer_name from customer where reg_date<'2022-01-01'
and customer_id not in (select issued_cus from issuestatus);
```

customer_name

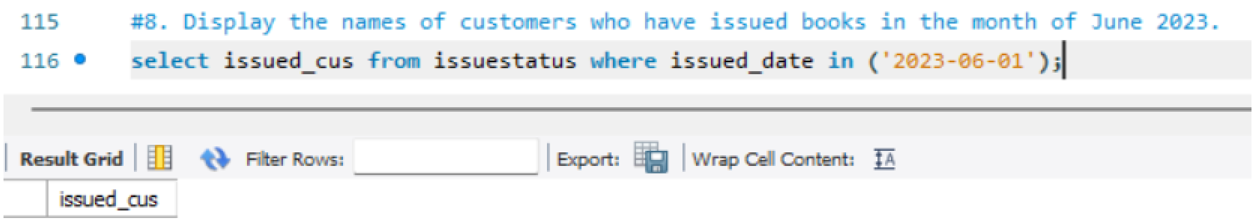
7. Display the branch numbers and the total count of employees in each branch.



```
#7. Display the branch numbers and the total count of employees in each branch.
select branch_no,count(emp_name) as totalEmployees from employee group by branch_no;
```

branch_no	totalEmployees
1	2
2	2
3	2
4	3
5	1

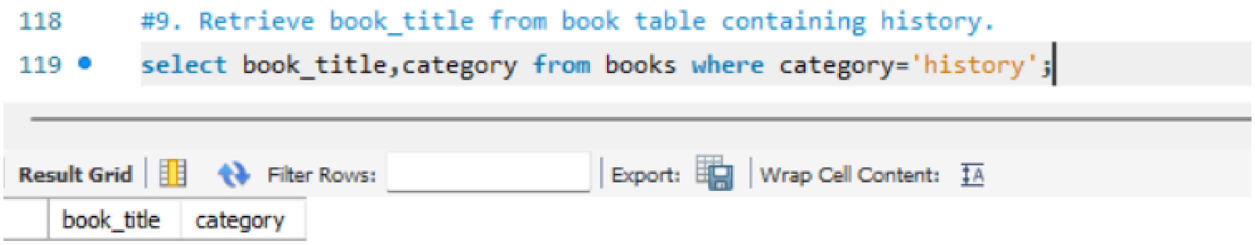
8. Display the names of customers who have issued books in the month of June 2023.



```sql
#8. Display the names of customers who have issued books in the month of June 2023.
select issued_cus from issuestatus where issued_date in ('2023-06-01');
```

issued_cus

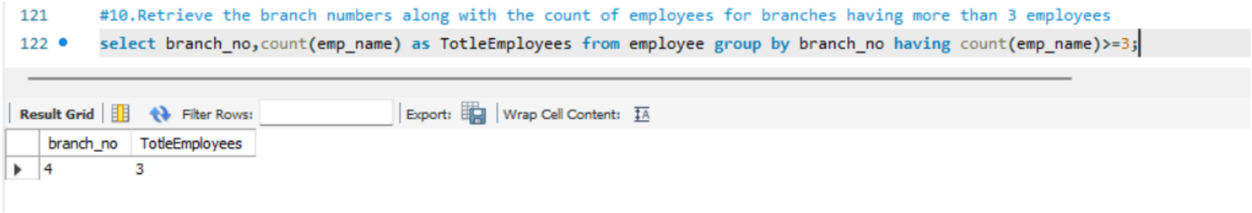
9. Retrieve book_title from books table containing history.



```sql
#9. Retrieve book_title from book table containing history.
select book_title,category from books where category='history';
```

book_title	category

10.Retrieve the branch numbers along with the count of employees for branches having more than 3 employees.



```sql
#10.Retrieve the branch numbers along with the count of employees for branches having more than 3 employees
select branch_no,count(emp_name) as TotleEmployees from employee group by branch_no having count(emp_name)>=3;
```

branch_no	TotleEmployees
4	3