LIBRARY MANAGEMENT SYSTEM

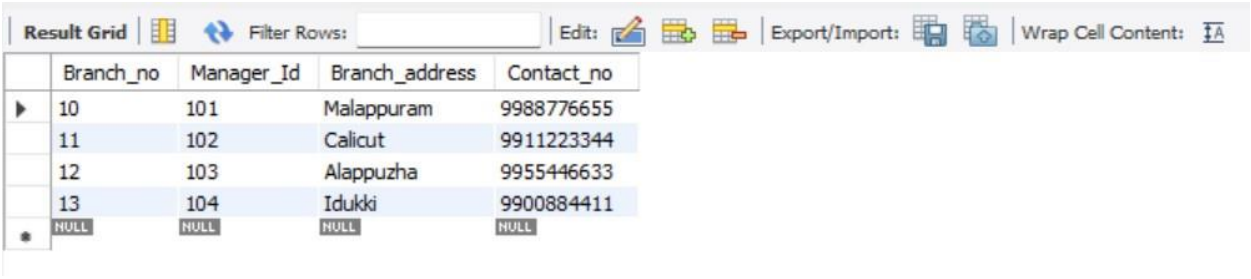
```
-- Create the database named library
CREATE DATABASE library;
USE library;


-- Create the Branch table
CREATE TABLE Branch (
   Branch_no INT PRIMARY KEY,
   Manager_Id INT,
   Branch_address VARCHAR(255),
   Contact_no VARCHAR(15)
);
DESC Branch;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
Branch_no	int	NO	PRI	NULL	
Manager_Id	int	YES		NULL	
Branch_address	varchar(255)	YES		NULL	
Contact_no	varchar(15)	YES		NULL	

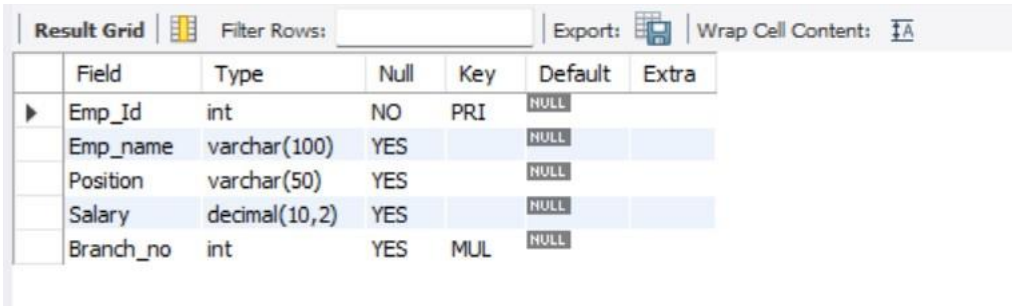
```
insert into Branch(Branch_no,Manager_Id,Branch_address,Contact_no) values
(10,101,'Malappuram',9988776655),
(11,102,'Calicut',9911223344),
(12,103,'Alappuzha',9955446633),
(13,104,'Idukki',9900884411);
SELECT * FROM Branch;
```



Branch_no	Manager_Id	Branch_address	Contact_no
10	101	Malappuram	9988776655
11	102	Calicut	9911223344
12	103	Alappuzha	9955446633
13	104	Idukki	9900884411
NULL	NULL	NULL	NULL

-- Create the Employee table

```
CREATE TABLE Employee (
   Emp_Id INT PRIMARY KEY,
   Emp_name VARCHAR(100),
   Position VARCHAR(50),
   Salary DECIMAL(10, 2),
   Branch_no INT,
   FOREIGN KEY (Branch_no) REFERENCES Branch(Branch_no)
);
DESC Employee;
```



Field	Type	Null	Key	Default	Extra
Emp_Id	int	NO	PRI	NULL	
Emp_name	varchar(100)	YES		NULL	
Position	varchar(50)	YES		NULL	
Salary	decimal(10,2)	YES		NULL	
Branch_no	int	YES	MUL	NULL	

```
insert into Employee values
(1001,'Aishwarya','Librarian',25000,10),
(1002,'Adil','Assistant_Librarian',45000,11),
(1003,'Ashley','Deputy_Librarian',40000,12),
(1004,'Benny','Technical_Assistant',40000,13),
```

(1005,'Shreya','Data_Librarian',60000,10),

(1006,'Malti','Archivist',75000,10),

(1007,'Annie','Assistant_Librarian',25000,10),

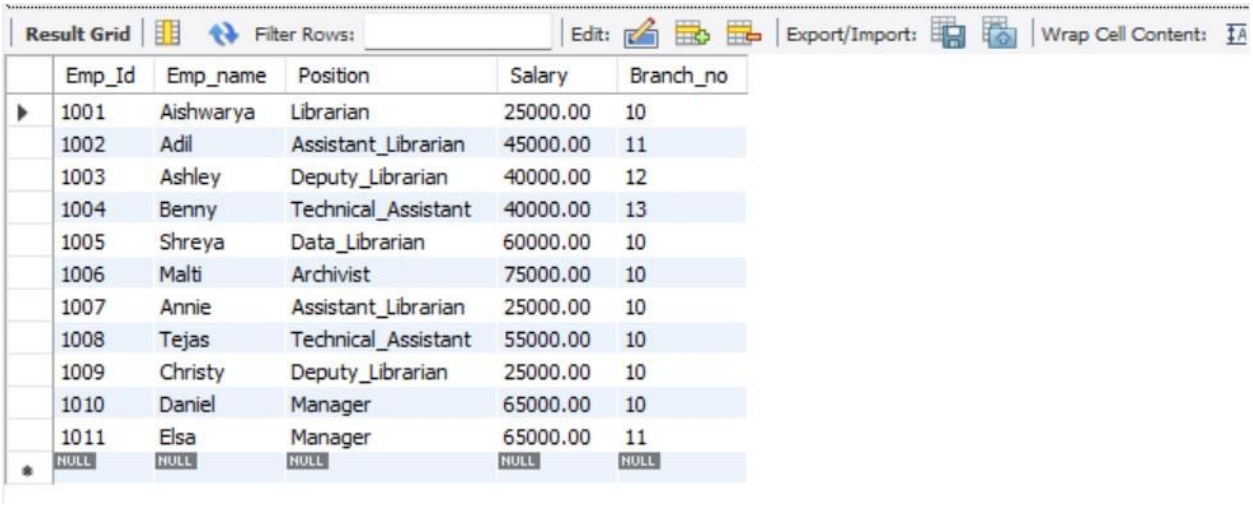
(1008,'Tejas','Technical_Assistant',55000,10),

(1009,'Christy','Deputy_Librarian',25000,10),

(1010,'Daniel','Manager',65000,10),

(1011,'Elsa','Manager',65000,11);

SELECT * FROM Employee;



Emp_Id	Emp_name	Position	Salary	Branch_no
1001	Aishwarya	Librarian	25000.00	10
1002	Adil	Assistant_Librarian	45000.00	11
1003	Ashley	Deputy_Librarian	40000.00	12
1004	Benny	Technical_Assistant	40000.00	13
1005	Shreya	Data_Librarian	60000.00	10
1006	Malti	Archivist	75000.00	10
1007	Annie	Assistant_Librarian	25000.00	10
1008	Tejas	Technical_Assistant	55000.00	10
1009	Christy	Deputy_Librarian	25000.00	10
1010	Daniel	Manager	65000.00	10
1011	Elsa	Manager	65000.00	11
NULL	NULL	NULL	NULL	NULL

-- Create the Books table

CREATE TABLE Books (

ISBN INT PRIMARY KEY,

Book_title VARCHAR(255),

Category VARCHAR(50),

Rental_Price DECIMAL(10, 2),

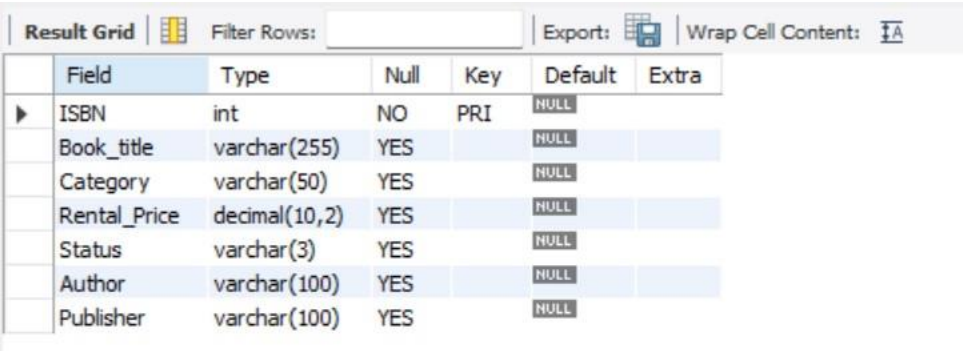
Status VARCHAR(3), -- "Yes" or "No"

Author VARCHAR(100),

Publisher VARCHAR(100)

);

DESC Books;



Field	Type	Null	Key	Default	Extra
ISBN	int	NO	PRI	NULL	
Book_title	varchar(255)	YES		NULL	
Category	varchar(50)	YES		NULL	
Rental_Price	decimal(10,2)	YES		NULL	
Status	varchar(3)	YES		NULL	
Author	varchar(100)	YES		NULL	
Publisher	varchar(100)	YES		NULL	

insert into books values

(2567, 'Pride and Prejudice', 'Fiction', 100.00, 'Yes', 'Jane Austen', 'Classic Publishers'),

(2996, 'The Kite Runner', 'Fiction', 40.00, 'Yes', 'Khaled Hosseini', 'Riverhead Books'),

(2937, 'It Ends with Us', 'Romance', 45.00, 'No', 'Colleen Hoover', 'Atria Books'),

(2738, 'Origin', 'Thriller', 50.00, 'Yes', 'Dan Brown', 'Doubleday'),

(2018, 'The Da Vinci Code', 'Thriller', 35.00, 'Yes', 'Dan Brown', 'Doubleday'),

(2333, 'War and Peace', 'Literature', 19.99, 'No', 'Leo Tolstoy', 'The Russian Messenger'),

(2755, 'A Brief History of Time', 'History', 20.00, 'Yes', 'Stephen Hawking', 'Bantam Books');

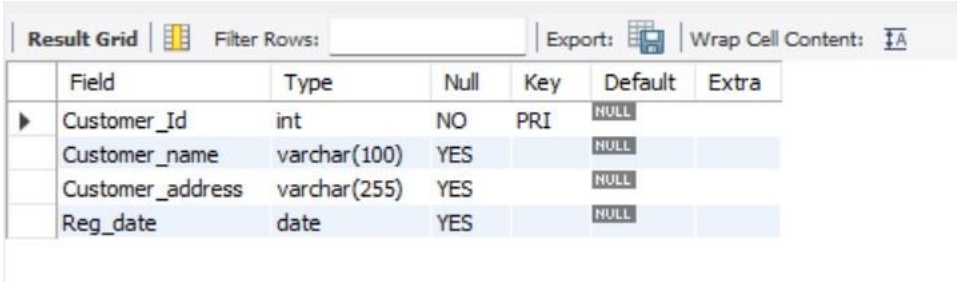
SELECT * FROM books;

ISBN	Book_title	Category	Rental_Price	Status	Author	Publisher
2018	The Da Vinci Code	Thriller	35.00	Yes	Dan Brown	Doubleday
2333	War and Peace	Literature	19.99	No	Leo Tolstoy	The Russian Messenger
2567	Pride and Prejudice	Fiction	100.00	Yes	Jane Austen	Classic Publishers
2738	Origin	Thriller	50.00	Yes	Dan Brown	Doubleday
2755	A Brief History of Time	History	20.00	Yes	Stephen Hawking	Bantam Books
2937	It Ends with Us	Romance	45.00	No	Colleen Hoover	Atria Books
2996	The Kite Runner	Fiction	40.00	Yes	Khaled Hosseini	Riverhead Books
NULL	NULL	NULL	NULL	NULL	NULL	NULL

-- Create the Customer table

CREATE TABLE Customer (

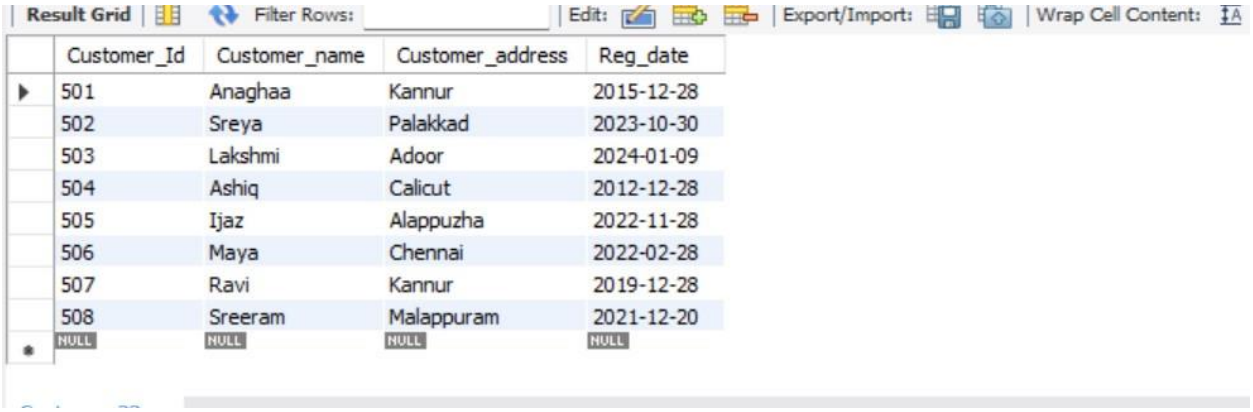
```
    Customer_Id INT PRIMARY KEY,
    Customer_name VARCHAR(100),
    Customer_address VARCHAR(255),
    Reg_date DATE
);
DESC Customer;
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
Customer_Id	int	NO	PRI	NULL	
Customer_name	varchar(100)	YES		NULL	
Customer_address	varchar(255)	YES		NULL	
Reg_date	date	YES		NULL	

```
insert into Customer values
(501,'Anaghaa','Kannur','2015-12-28'),
(502,'Sreya','Palakkad','2023-10-30'),
(503,'Lakshmi','Adoor','2024-01-09'),
(504,'Ashiq','Calicut','2012-12-28'),
(505,'Ijaz','Alappuzha','2022-11-28'),
(506,'Maya','Chennai','2022-02-28'),
(507,'Ravi','Kannur','2019-12-28'),
(508,'Sreeram','Malappuram','2021-12-20');
SELECT * FROM Customer;
```

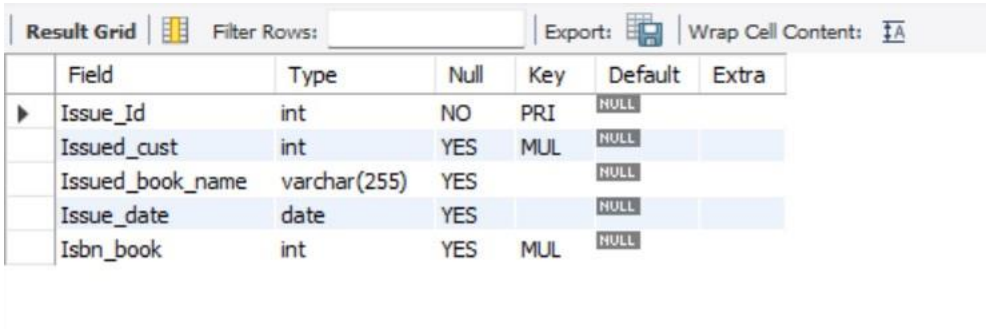


Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Customer_Id	Customer_name	Customer_address	Reg_date
501	Anaghaa	Kannur	2015-12-28
502	Sreya	Palakkad	2023-10-30
503	Lakshmi	Adoor	2024-01-09
504	Ashiq	Calicut	2012-12-28
505	Ijaz	Alappuzha	2022-11-28
506	Maya	Chennai	2022-02-28
507	Ravi	Kannur	2019-12-28
508	Sreeram	Malappuram	2021-12-20
NULL	NULL	NULL	NULL

-- Create the IssueStatus table

```
CREATE TABLE IssueStatus (
   Issue_Id INT PRIMARY KEY,
   Issued_cust INT,
   Issued_book_name VARCHAR(255),
   Issue_date DATE,
   Isbn_book INT,
   FOREIGN KEY (Issued_cust) REFERENCES Customer(Customer_Id),
   FOREIGN KEY (Isbn_book) REFERENCES Books(ISBN)
);
DESC IssueStatus;
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
Issue_Id	int	NO	PRI	NULL	
Issued_cust	int	YES	MUL	NULL	
Issued_book_name	varchar(255)	YES		NULL	
Issue_date	date	YES		NULL	
Isbn_book	int	YES	MUL	NULL	

```
insert into IssueStatus values
(5001,501,'Pride and Prejudice','2015-12-28',2567),
```

(5002,502,'Origin','2023-10-30',2738),

(5003,503,'The Kite Runner','2024-01-09',2996),

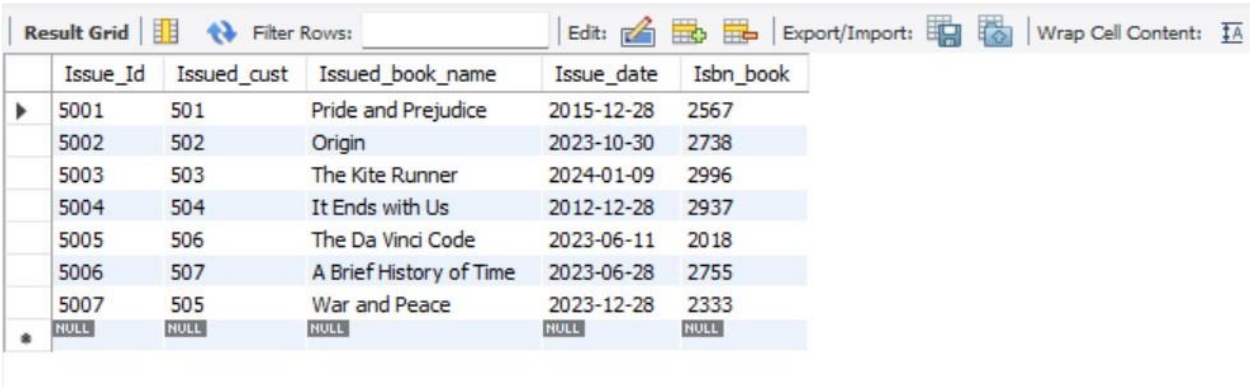
(5004,504,'It Ends with Us','2012-12-28',2937),

(5005,506,'The Da Vinci Code','2023-06-11',2018),

(5006,507,'A Brief History of Time','2023-06-28',2755),

(5007,505,'War and Peace','2023-12-28',2333);

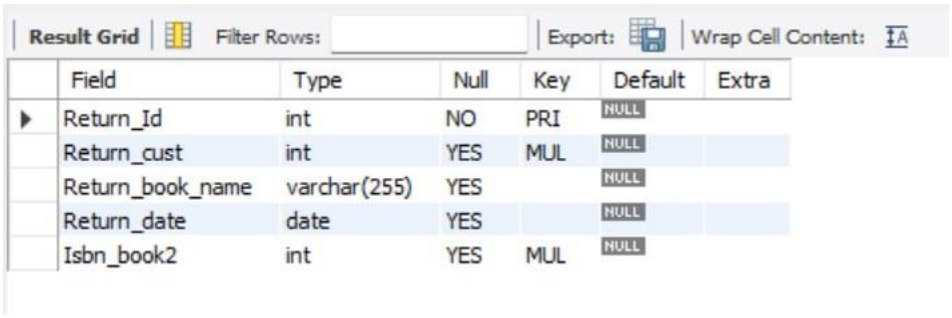
select*from IssueStatus;



Issue_Id	Issued_cust	Issued_book_name	Issue_date	Isbn_book
5001	501	Pride and Prejudice	2015-12-28	2567
5002	502	Origin	2023-10-30	2738
5003	503	The Kite Runner	2024-01-09	2996
5004	504	It Ends with Us	2012-12-28	2937
5005	506	The Da Vinci Code	2023-06-11	2018
5006	507	A Brief History of Time	2023-06-28	2755
5007	505	War and Peace	2023-12-28	2333
NULL	NULL	NULL	NULL	NULL

-- Create the ReturnStatus table

```
CREATE TABLE ReturnStatus (
   Return_Id INT PRIMARY KEY,
   Return_cust INT,
   Return_book_name VARCHAR(255),
   Return_date DATE,
   Isbn_book2 INT,
   FOREIGN KEY (Return_cust) REFERENCES Customer(Customer_Id),
   FOREIGN KEY (Isbn_book2) REFERENCES Books(ISBN)
);
DESC ReturnStatus;
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
Return_Id	int	NO	PRI	NULL	
Return_cust	int	YES	MUL	NULL	
Return_book_name	varchar(255)	YES		NULL	
Return_date	date	YES		NULL	
Isbn_book2	int	YES	MUL	NULL	

insert into ReturnStatus values

(6001,501,'Pride and Prejudice','2016-01-01',2567),

(6002,502,'The Kite Runner','2024-01-21',2996),

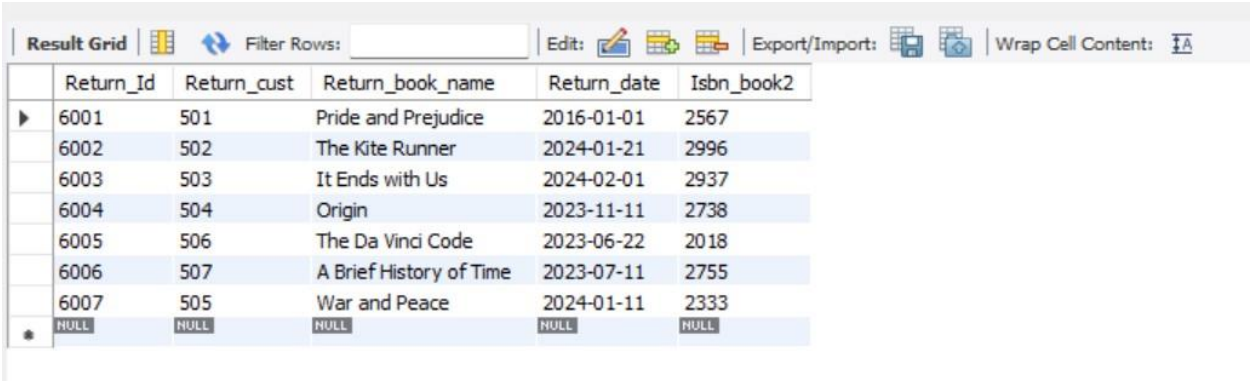
(6003,503,'It Ends with Us','2024-02-01',2937),

(6004,504,'Origin','2023-11-11',2738),

(6005,506,'The Da Vinci Code','2023-06-22',2018),

(6006,507,'A Brief History of Time','2023-07-11',2755),(6007,505,'War and Peace','2024-01-11',2333);

select*from ReturnStatus;



Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Return_Id	Return_cust	Return_book_name	Return_date	Isbn_book2
6001	501	Pride and Prejudice	2016-01-01	2567
6002	502	The Kite Runner	2024-01-21	2996
6003	503	It Ends with Us	2024-02-01	2937
6004	504	Origin	2023-11-11	2738
6005	506	The Da Vinci Code	2023-06-22	2018
6006	507	A Brief History of Time	2023-07-11	2755
6007	505	War and Peace	2024-01-11	2333
NULL	NULL	NULL	NULL	NULL

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

SELECT Book_title, Category, Rental_Price

FROM Books

WHERE Status = 'Yes';

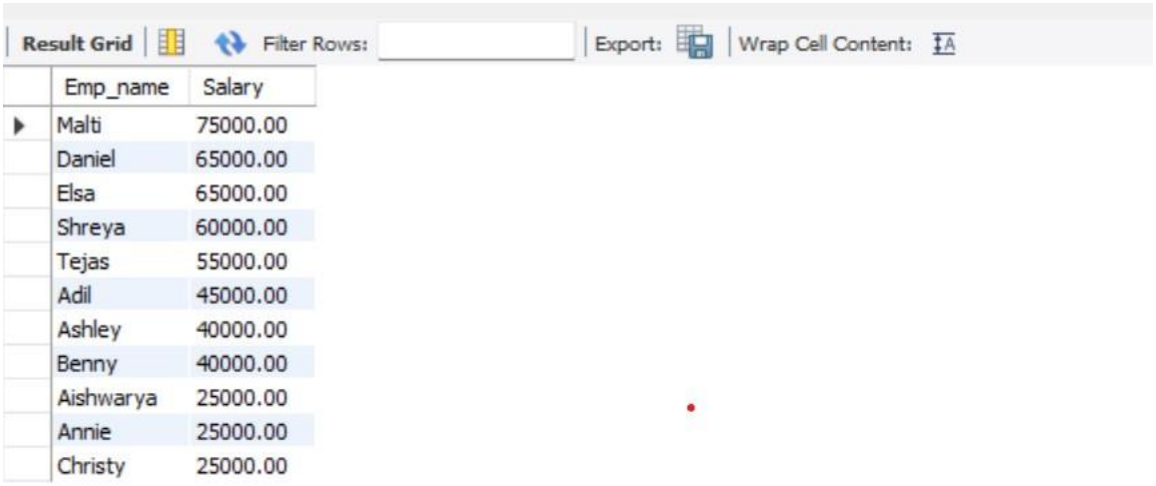
Book_title	Category	Rental_Price
The Da Vinci Code	Thriller	35.00
Pride and Prejudice	Fiction	100.00
Origin	Thriller	50.00
A Brief History of Time	History	20.00
The Kite Runner	Fiction	40.00

-- 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
Malti	75000.00
Daniel	65000.00
Elsa	65000.00
Shreya	60000.00
Tejas	55000.00
Adil	45000.00
Ashley	40000.00
Benny	40000.00
Aishwarya	25000.00
Annie	25000.00
Christy	25000.00

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

select I.Issued_book_name as 'book_name',C.customer_name

from issuestatus I

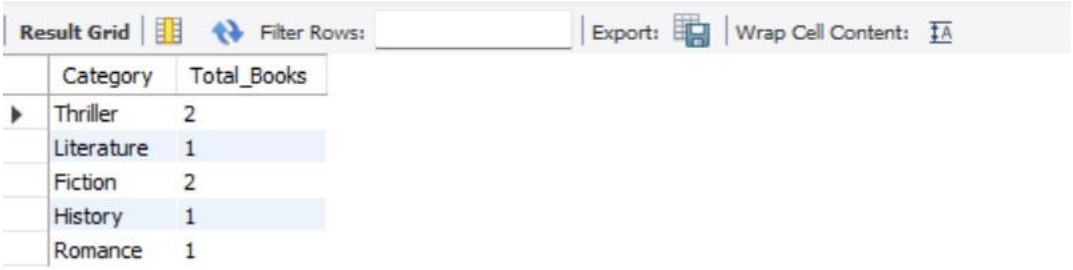
left join customer C on I.issued_cust=C.customer_id;

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

book_name	customer_name
Pride and Prejudice	Anaghaa
Origin	Sreya
The Kite Runner	Lakshmi
It Ends with Us	Ashiq
The Da Vinci Code	Maya
A Brief History of Time	Ravi
War and Peace	Ijaz

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

```
SELECT Category, COUNT(*) AS Total_Books
FROM Books
GROUP BY Category;
```

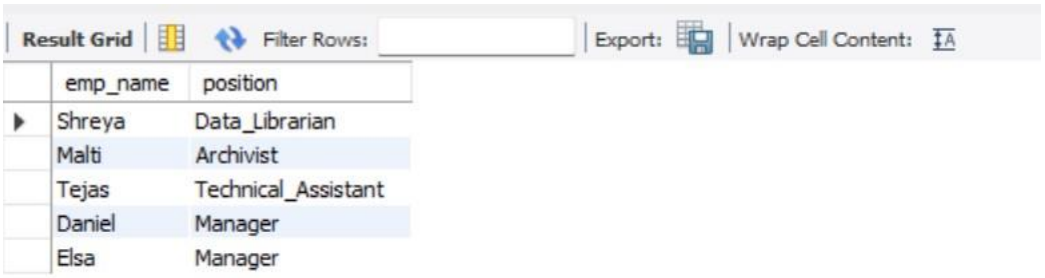


Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Category	Total_Books
Thriller	2
Literature	1
Fiction	2
History	1
Romance	1

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

```
select emp_name,position
from employee
where salary >50000;
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

emp_name	position
Shreya	Data_Librarian
Malti	Archivist
Tejas	Technical_Assistant
Daniel	Manager
Elsa	Manager

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

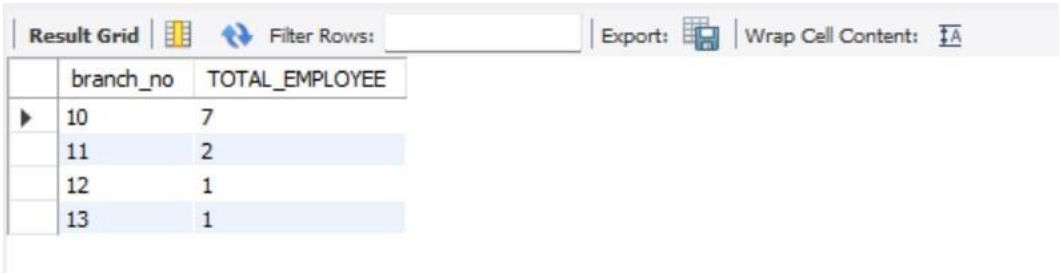
```
select Customer_name
from customer
where reg_date < '2022-01-01'
and customer_id not in (select issued_cust from issuestatus);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Customer_name
Sreeram

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

```
select B.branch_no,count(*) as 'TOTAL_EMPLOYEE'
from branch B
left join  employee E on B.branch_no=E.branch_no
group by B.branch_no;
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

branch_no	TOTAL_EMPLOYEE
10	7
11	2
12	1
13	1

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

```
select customer_name
from IssueStatus I
inner join customer C on I.Issued_cust =C.customer_id
where i.issue_date between '2023-06-01' and '2023-06-30';
```

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

```
select book_title
from books
where category='History';
```

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

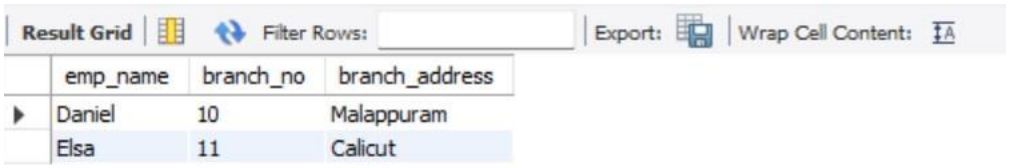
```
select B.branch_no,count(*) as 'COUNT_OF_EMPLOYEES'
from branch B
left join employee E
on B.branch_no = E.branch_no
group by B.branch_no
```

having count(*) > 5;

branch_no	COUNT_OF_EMPLOYEES
10	7

-- 11. Retrieve the names of employees who manage branches and their respective branch addresses.

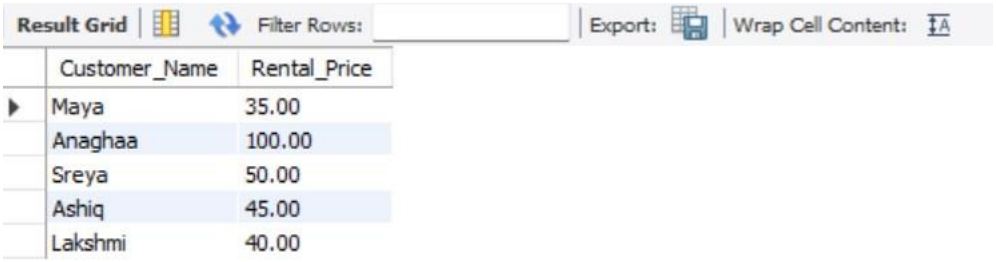
```
select E.emp_name, E.branch_no,B.branch_address
from employee E
inner join branch B on E.Branch_no =B.Branch_no
where  E.position ='manager';
```



emp_name	branch_no	branch_address
Daniel	10	Malappuram
Elsa	11	Calicut

-- 12. Display the names of customers who have issued books with a rental price higher than Rs. 25.

```
SELECT C.Customer_Name, B.Rental_Price
FROM Customer C
INNER JOIN IssueStatus I ON C.Customer_Id = I.Issued_Cust
INNER JOIN Books B ON I.Isbn_Book = B.ISBN
WHERE B.Rental_Price > 25;
```



Customer_Name	Rental_Price
Maya	35.00
Anaghaa	100.00
Sreya	50.00
Ashiq	45.00
Lakshmi	40.00