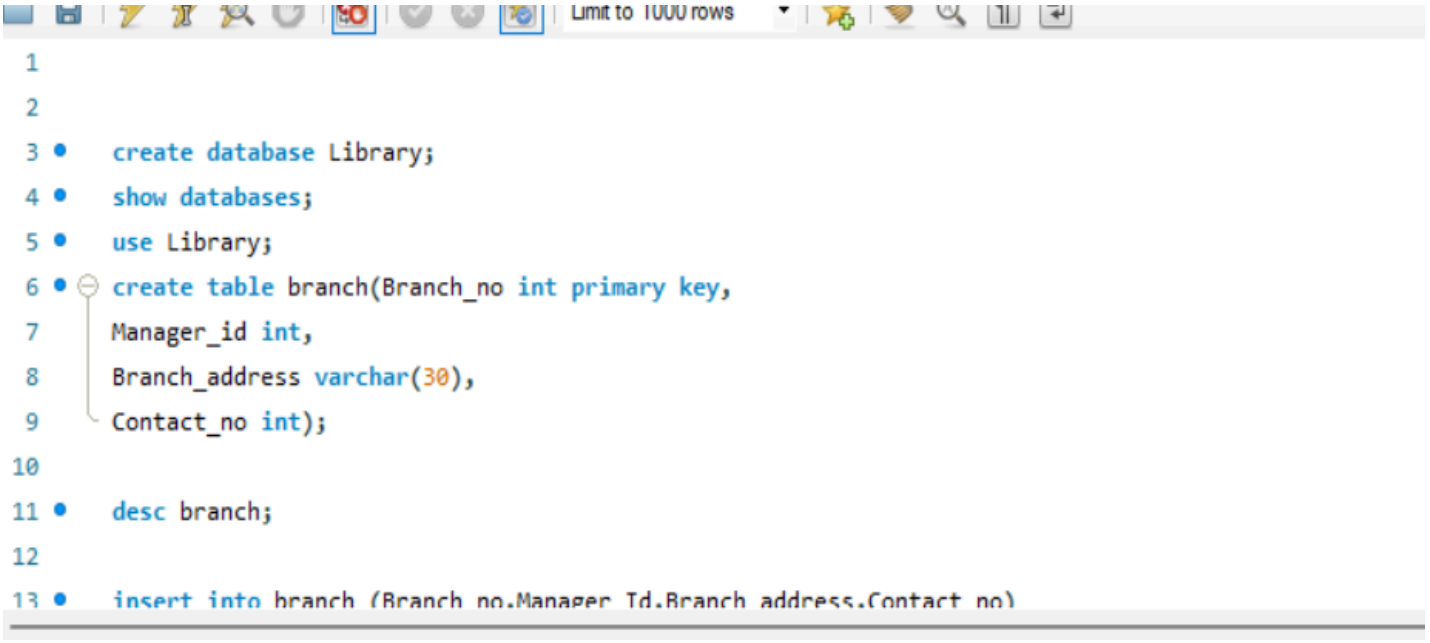
1.CREATE A DATABASE NAMED LIBRARY AND FOLLOWING TABLES IN THE DATABASE;



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 _address

Contact _no

```
4  show databases;
5  use Library;
6  create table branch(Branch_no int primary key,
7  Manager_id int,
8  Branch_address varchar(30),
9  Contact_no int);
10
11 desc branch;
12
13 insert into branch (Branch_no,Manager_Id,Branch_address,Contact_no)
14 values
15 (1, 101, '123 Main St',123456),
16 (2, 102, '456 Elm St', 987656),
```

Branch_no	Manager_id	Branch_address	Contact_no
1	101	123 Main St	123456
2	102	456 Elm St	987656
3	103	789 Oak St	555127
4	104	101 Pine St	999555
NULL	NULL	NULL	NULL

Action Output

#	Time	Action	Message
2	10:01:20	show databases	8 row(s) returned
3	10:01:23	use Library	0 row(s) affected
4	10:01:27	create table branch(Branch_no int primary key, Manager_id int, Branch_address varchar(30), Contact_no int)	0 row(s) affected
5	10:01:30	desc branch	4 row(s) returned
6	10:05:03	insert into branch (Branch_no,Manager_Id,Branch_address,Contact_no) values (1, 101, '123 Main St',123456), (...	4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0
7	10:05:51	select *from branch LIMIT 0, 1000	4 row(s) returned

```
13 insert into branch (Branch_no,Manager_Id,Branch_address,Contact_no)
14 values
15 (1, 101, '123 Main St',123456),
16 (2, 102, '456 Elm St', 987656),
17 (3, 103, '789 Oak St', 555127),
18 (4, 104, '101 Pine St',999555);
19   select*from branch;
20    insert into branch (Branch_no,Manager_Id, Branch_address, Contact_no)
21    values
22    (5,105,'600 Maple St',999666);
23 select*from branch;
24
```

Branch_no	Manager_id	Branch_address	Contact_no
1	101	123 Main St	123456
2	102	456 Elm St	987656
3	103	789 Oak St	555127
4	104	101 Pine St	999555
5	105	600 Maple St	999666
NULL	NULL	NULL	NULL

2.Employee

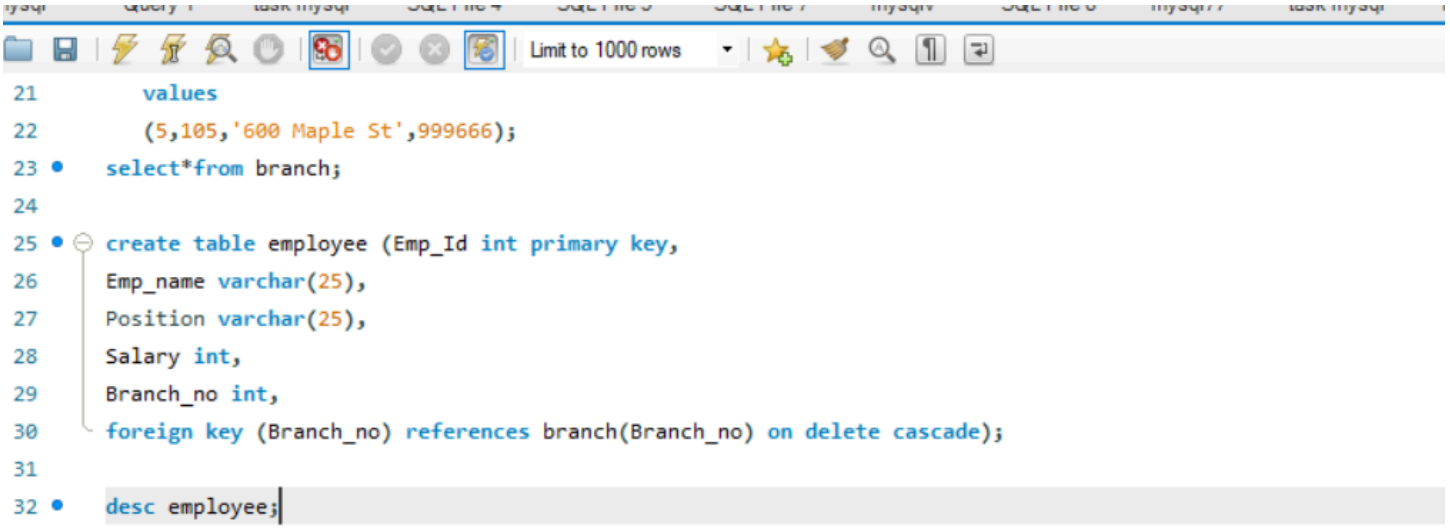
*Emp_Id_Set as PRIMARY KEY

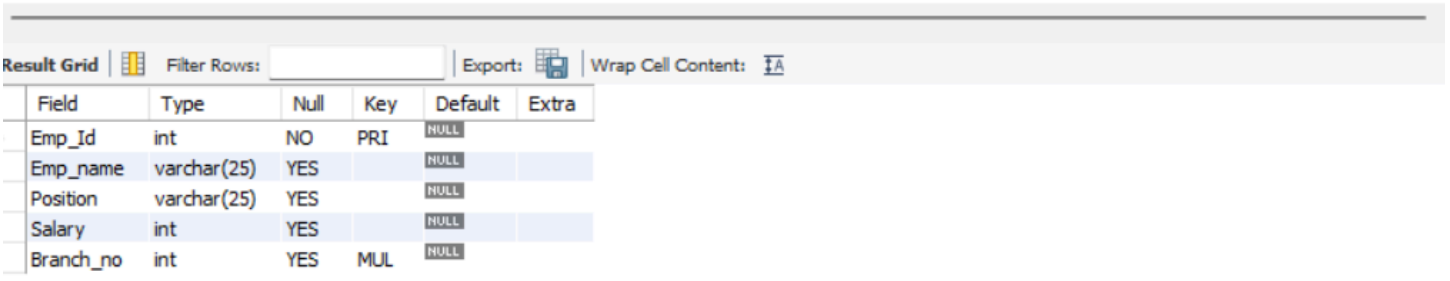
*Emp_name

*Position

*Salary

*Branch_no_Set as FOREIGN KEY and it refer Branch_no in Branch table





Field	Type	Null	Key	Default	Extra
Emp_Id	int	NO	PRI	NULL	
Emp_name	varchar(25)	YES		NULL	
Position	varchar(25)	YES		NULL	
Salary	int	YES		NULL	
Branch_no	int	YES	MUL	NULL	

```
29    Branch_no int,
30    foreign key (Branch_no) references branch(Branch_no) on delete cascade);
31
32    desc employee;
33    insert into employee (Emp_Id,Emp_name,Position,Salary,Branch_no)
34    values
35    (1, 'Rahul K K','Manager',60000,1),
36    (2, 'Mohan A A','Assistant Manager', 50000,1),
37    (3, 'Aliya Bhatt','Clerk', 40000,2),
38    (4, 'Giriesh K U','Clerk', 38000,2),
39    (5, 'Adhithya V B','Clerk', 38000,2);
40    select*from employee;
41
```

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

Emp_Id	Emp_name	Position	Salary	Branch_no
1	Rahul K K	Manager	60000	1
2	Mohan A A	Assistant Manager	50000	1
3	Aliya Bhatt	Clerk	40000	2
4	Giriesh K U	Clerk	38000	2
5	Adhithya V B	Clerk	38000	2
NULL	NULL	NULL	NULL	NULL

Adhithya V B

employee 16

3.Books

*ISBN_Set as PRIMARY KEY

*Book_title

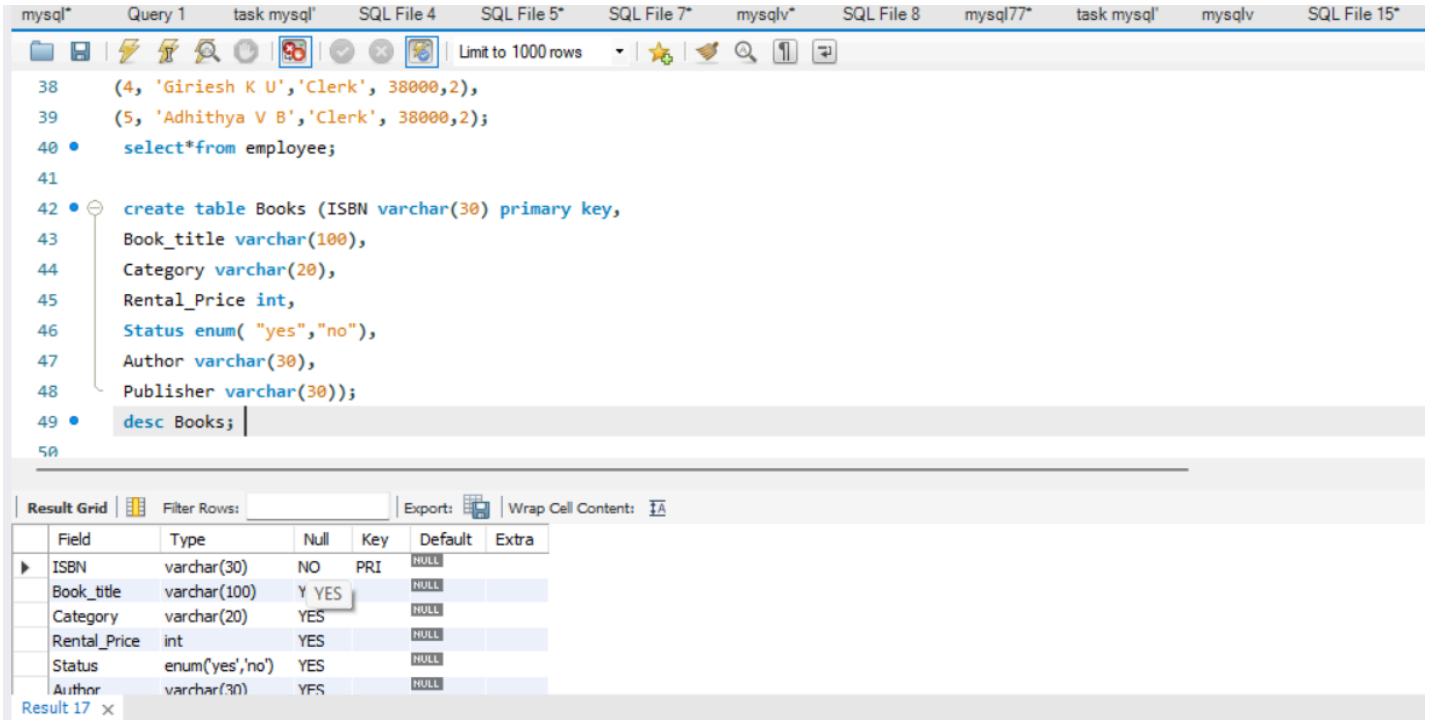
*Category

*Rental_Price

*Status

*Author

*Publisher



```
47    Author varchar(30),
48    Publisher varchar(30));
49    desc Books;
50    insert into Books (ISBN,Book_title,Category,Rental_price,Status,Author,Publisher)
51    values
52    ('9780451524935','1984', 'History',10,'yes','George Orwell','Signet Classic'),
53    ('9780061120084','To Kill a Mockingbird', 'Fiction', 12, 'yes', 'Harper Lee','DC Books'),
54    ('9780140283334', 'The  Catcher in the Rye','Novel', 11, 'yes', 'J.D Salinger','Back Bay Books'),
55    ('9780439023528', 'The Hunger Games','Young Adult', 14, 'yes', 'Suzanne Collins','Scholastic Press'),
56    ('9780307743657', 'The Girl with the Dragon Tattoo', 'Mystery', 13,  'no', 'Stieg Larsson', 'Vintage Crime/Black Lizard');
57     select* from Books;
58
```

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

ISBN	Book_title	Category	Rental_Price	Status	Author	Publisher
9780061120084	To Kill a Mockingbird	Fiction	12	yes	Harper Lee	DC Books
9780140283334	The Catcher in the Rye	Novel	11	yes	J.D Salinger	Back Bay Books
9780307743657	The Girl with the Dragon Tattoo	Mystery	13	no	Stieg Larsson	Vintage Crime/Black Lizard
9780439023528	The Hunger Games	Young Adult	14	yes	Suzanne Collins	Scholastic Press
9780451524935	1984	History	10	yes	George Orwell	Signet Classic
NULL	NULL	NULL	NULL	NULL	NULL	NULL

ooks 19 ×

4.Customer

*Customer_Id-Set as PRIMARY KEY

Customer_name

Customer_address

Reg_date

```
('9780061120084','To Kill a Mockingbird', 'Fiction', 12, 'yes', 'Harper Lee','DC Books'),
('9780140283334', 'The  Catcher in the Rye','Novel', 11, 'yes', 'J.D Salinger','Back Bay Books'),
('9780439023528', 'The Hunger Games','Young Adult', 14, 'yes', 'Suzanne Collins','Scholastic Press'),
('9780307743657', 'The Girl with the Dragon Tattoo', 'Mystery', 13,  'no', 'Stieg Larsson', 'Vintage Crime/Black Lizard');
 select* from Books;

create table Customer ( Customer_Id int primary key,
Customer_name varchar(30),
Customer_address varchar(100),
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(30)	YES		NULL	
Customer_address	varchar(100)	YES		NULL	
Reg_date	date	YES		NULL	

```
Customer_address varchar(100),
Reg_date date);

 desc Customer;
 INSERT INTO Customer (Customer_Id,Customer_name,Customer_address,Reg_date)
 VALUES
 (1,'Michael Johnson', '123 Main St', '2023-01-10'),
 (2, 'Emily Davis', '456 Elm St', '2022-12-05'),
 (3, 'William Martinez', '789 Oak St','2021-03-20'),
 (4, 'Sophia Anderson', '101 Pine St','2021-03-20'),
 (5, 'James Willson', '202 Cedar St','2022-11-30');
  select* from Customer;
```

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

Customer_Id	Customer_name	Customer_address	Reg_date
1	Michael Johnson	123 Main St	2023-01-10
2	Emily Davis	456 Elm St	2022-12-05
3	William Martinez	789 Oak St	2021-03-20
4	Sophia Anderson	101 Pine St	2021-03-20
5	James Willson	202 Cedar St	2022-11-30
NULL	NULL	NULL	NULL

Customer 21

5.IssueStatus

issue_Id-Set as primary key

Issued_cust-Set as FOREIGN KEY

Issued_book_name

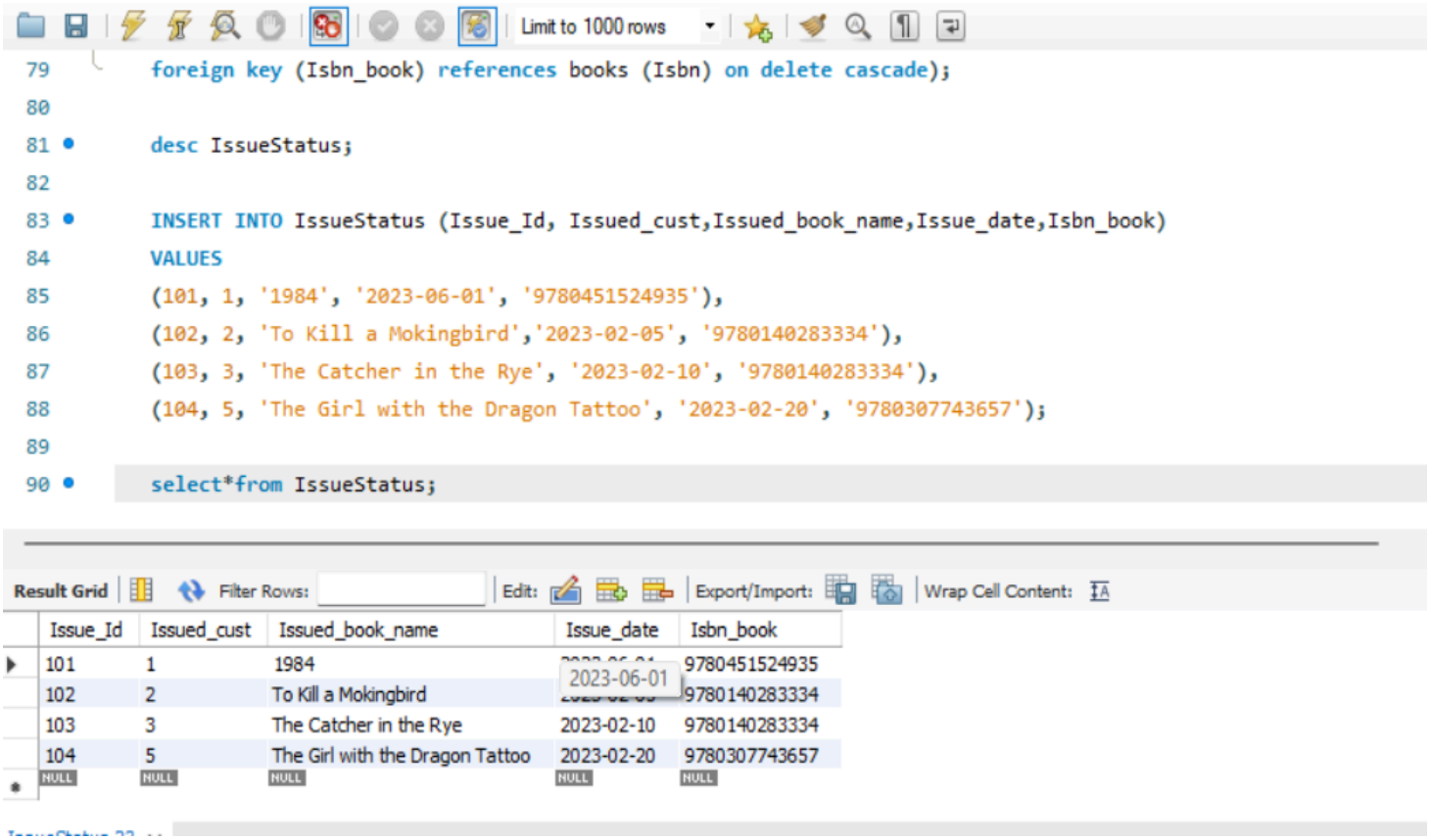
Issue_date

isbn_book_Set as FOREIGN KEY

```
70      (4, 'Sophia Anderson', '101 Pine St','2021-03-20'),
71      (5, 'James Willson', '202 Cedar St','2022-11-30');
72      select* from Customer;
73      create table IssueStatus(Issue_Id int primary key,
74      Issued_cust int,
75      foreign key (Issued_cust) references customer(customer_id) on delete cascade,
76      Issued_book_name varchar(100),
77      Issue_date date,
78      Isbn_book varchar(30),
79      foreign key (Isbn_book) references books (Isbn) on delete cascade);
80
81      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(100)	YES		NULL	
Issue_date	date	YES		NULL	
Isbn_book	varchar(30)	YES	MUL	NULL	



```
79      foreign key (Isbn_book) references books (Isbn) on delete cascade);
80
81      desc IssueStatus;
82
83      INSERT INTO IssueStatus (Issue_Id, Issued_cust,Issued_book_name,Issue_date,Isbn_book)
84      VALUES
85      (101, 1, '1984', '2023-06-01', '9780451524935'),
86      (102, 2, 'To Kill a Mokingbird','2023-02-05', '9780140283334'),
87      (103, 3, 'The Catcher in the Rye', '2023-02-10', '9780140283334'),
88      (104, 5, 'The Girl with the Dragon Tattoo', '2023-02-20', '9780307743657');
89
90      select*from IssueStatus;
```

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

Issue_Id	Issued_cust	Issued_book_name	Issue_date	Isbn_book
101	1	1984	2023-06-01	9780451524935
102	2	To Kill a Mokingbird		9780140283334
103	3	The Catcher in the Rye	2023-02-10	9780140283334
104	5	The Girl with the Dragon Tattoo	2023-02-20	9780307743657
NULL	NULL	NULL	NULL	NULL

6.ReturnStatus

Return_Id_Set as PRIMARY KEY,

Return_cust

Return_book_name

Return_date

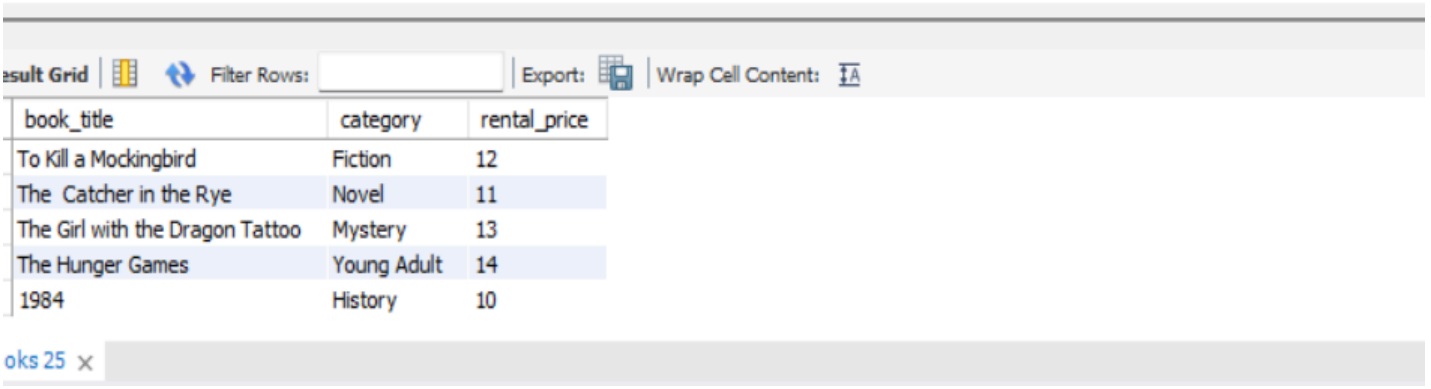
```
86      (102, 2, 'To Kill a Mokingbird','2023-02-05', '9780140283334'),
87      (103, 3, 'The Catcher in the Rye', '2023-02-10', '9780140283334'),
88      (104, 5, 'The Girl with the Dragon Tattoo', '2023-02-20', '9780307743657');
89
90      select*from IssueStatus;
91
92      create table ReturnStatus (Return_Id int primary key,
93      Return_cust varchar(30),
94      Return_book_name varchar(100),
95      Return_date date);
96
97      desc ReturnStatus;
```

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

Field	Type	Null	Key	Default	Extra
Return_Id	int	NO	PRI	NULL	
Return_cust	varchar(30)	YES		NULL	
Return_book_name	varchar(100)	YES		NULL	
Return_date	date	YES		NULL	

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

```
99
00 •    select book_title,category,rental_price from books;
```



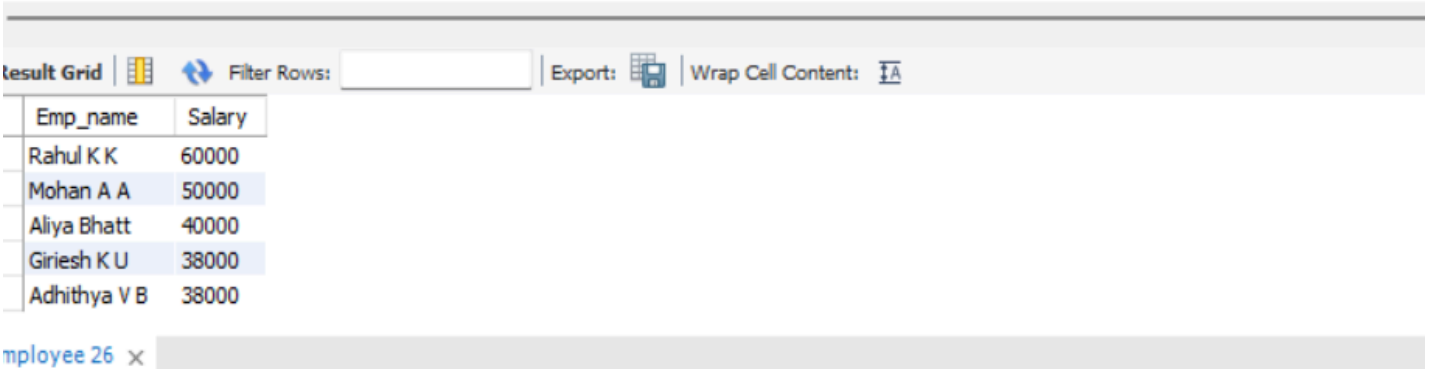
esult Grid | Filter Rows: | Export: | Wrap Cell Content:

book_title	category	rental_price
To Kill a Mockingbird	Fiction	12
The Catcher in the Rye	Novel	11
The Girl with the Dragon Tattoo	Mystery	13
The Hunger Games	Young Adult	14
1984	History	10

oks 25 ×

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

```
101
102
103 •    select Emp_name,Salary from employee order by salary desc;
```



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

Emp_name	Salary
Rahul K K	60000
Mohan A A	50000
Aliya Bhatt	40000
Giriesh K U	38000
Adhithya V B	38000

mployee 26 ×

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

```
101
102 •      select i.Issued_book_name,c.Customer_name from IssueStatus i join Books b on i.Isbn_book = b.ISBN
103        join Customer c on i.Issued_cust = c.Customer_Id;
104
```

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

Issued_book_name	Customer_name
1984	Michael Johnson
To Kill a Mokingbird	Emily Davis
The Catcher in the Rye	William Martinez
The Girl with the Dragon Tattoo	James Willson

Result 27 ×

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

```
.07
.08 •      select category,count(*) from books group by category;
```

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

category	count(*)
Fiction	1
Novel	1
Mystery	1
Young Adult	1
History	1

esult 28 ×

5.Retrieve the employee names and their positions for the employees whose salaries are above Rs.50000.

```
109
110 •     select emp_name,position from employee where salary>50000;
```

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

emp_name	position
Rahul K K	Manager

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

```
112
113 •     select c.Customer_name,c.Reg_date from Customer c left join IssueStatus i on c.Customer_Id = i.Issued_cust
114       where c.Reg_date < '2022-01-01' and i. Issued_cust is null;
```

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

Customer_name	Reg_date
Sophia Anderson	2021-03-20

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

```
124 •     INSERT INTO Books (ISBN, Book_title, Category, Rental_Price,Status,Author,Publisher)
125       VALUES('9781594205096', 'Sapiens: A Brief History of Humankind', 'History',15,'yes','Yuval Noah Harari', 'Penguin Press');
126
```

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

Branch_no	count(e.emp_id)
1	2
2	3
3	0
4	0
5	0

8.Displays the names of customers who issued books in the month of june 2023.

```
select c.customer_name,i.issue_date from customer c left join issuestatus i on c.customer_id  = i.issued_cust
where month(i.issue_date) = 6;
```

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

customer_name	issue_date
Michael Johnson	2023-06-01

9.Retrieve book_title from book table containing history,

```
select* from Books;
```

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

ISBN	Book_title	Category	Rental_Price	Status	Author	Publisher
9780061120084	To Kill a Mockingbird	Fiction	12	yes	Harper Lee	DC Books
9780140283334	The Catcher in the Rye	Novel	11	yes	J.D Salinger	Back Bay Books
9780307743657	The Girl with the Dragon Tattoo	Mystery	13	no	Stieg Larsson	Vintage Crime/Black Liz
9780439023528	The Hunger Games	Young Adult	14	yes	Suzanne Collins	Scholastic Press
9780451524935	1984	History	10	yes	George Orwell	Signet Classic
9781594205096	Sapiens: A Brief History of Humankind	History	15	yes	Yuval Noah Harari	Penguin Press

Books 34

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

```
select* from employee;
```

Filter Rows: | Edit: | Export/Import:

Emp_Id	Emp_name	Position	Salary	Branch_no
1	Rahul K K	Manager	60000	1
2	Mohan A A	Assistant Manager	50000	1
3	Aliya Bhatt	Clerk	40000	2
4	Giriesh K U	Clerk	38000	2
5	Adhithya V B	Clerk	38000	2
6	Eva Garcia	Manager	64000	3
7	Frank White	Assistant Manager	51000	3
8	Johnson P K	Clerk	42000	3
9	Mathayi S N	Clerk	38000	3
10	Anish K K	Clerk	7600	3

Aiswarya. R

THANK YOU