

Library Management System

I am 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.

```
1 • create database library;
2 • use library;
3 • create table branch (
4     branch_no int primary key,
5     manager_id int,
6     branch_address varchar(255),
7     contact_no varchar(20) );
8
9
10 • create table employee (
11     emp_id int primary key,
12     emp_name varchar(100),
13     position varchar(100),
14     salary decimal(10,2),
15     branch_no int,
16     foreign key (branch_no) references branch(branch_no)
17 );

20 • create table issuestatus (
21     issue_id int primary key,
22     issued_cust_id int,
23     issued_book_name varchar(255),
24     issue_date date,
25     isbn_book int,
26     foreign key(issued_cust_id) references customer(customer_id),
27     foreign key(isbn_book) references books(isbn)
28 );
29
30
31 • create table returnstatus(
32     return_id int primary key,
33     return_cust int,
34     return_book_name varchar(255),
35     return_date date,
36     isbn_book2 int,
37     foreign key(return_cust)references customer(customer_id),
38     foreign key (isbn_book2) references books(isbn)
39 );
```

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

```
42 • select book_title,category,rental_price
43 from books
44 where status='YES';
```

Result Grid			Filter Rows: <input type="text"/>	Export:	Wrap Cell Content:
book_title	category	rental_price			

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

```
46 • select emp_name,salry
47 from employee
48 order by salry desc;
```

Result Grid			Filter Rows: <input type="text"/>	Export:	Wrap Cell Content:
emp_name	salry				

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

```
50 • select books.book_title,customer.customer_name
51 from issuestatus
52 join books on issuestatus.isbn_book=books.isbn
53 join customer on issuestatus.issued_cust_id=customer.customer_id;
54
```

Result Grid			Filter Rows: <input type="text"/>	Export:	Wrap Cell Content:
book_title	customer_name				

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

```
55 • select category, count(*) as total_books
56 from books
57 group by category;
```

Result Grid			Filter Rows: <input type="text"/>	Export:	Wrap Cell Content:
category	total_books				

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

```
59 • select emp_name, position
60 from employee
61 where salary >50000;
```

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

emp_name	position
----------	----------

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

```
64 • select customer_name
65 from customer
66 where reg_date < '2022-01-01'
67 and customer_id not in (select issued_cust_id from issuestatus);
```

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

customer_name

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

```
70 • select branch_no , count(*) as total_employees
71 from employee
72 group by branch_no;
```

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

branch_no	total_employees
-----------	-----------------

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

```
74 • SELECT Customer.Customer_name
75 FROM IssueStatus
76 JOIN Customer ON IssueStatus.Issued_cust_id = Customer.Customer_Id
77 WHERE issue_date BETWEEN '2023-06-01' AND '2023-06-30';
```

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

Customer_name

9. Retrieve book_title from book table containing history.

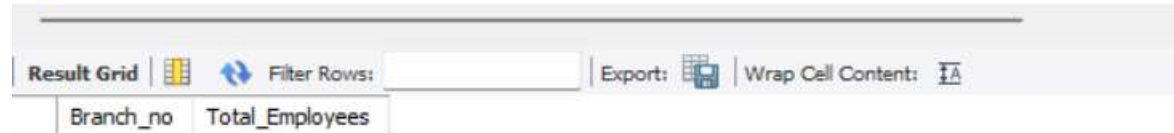
```
79 • select book_title
80 from books
81 where book_title like '%history%';
82
```



The screenshot shows a SQL query interface. The query is: `select book_title from books where book_title like '%history%';`. Below the query, there is a toolbar with options: "Result Grid", "Filter Rows:", "Export:", and "Wrap Cell Content:". The "Result Grid" tab is active, showing a table with one column: "book_title".

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

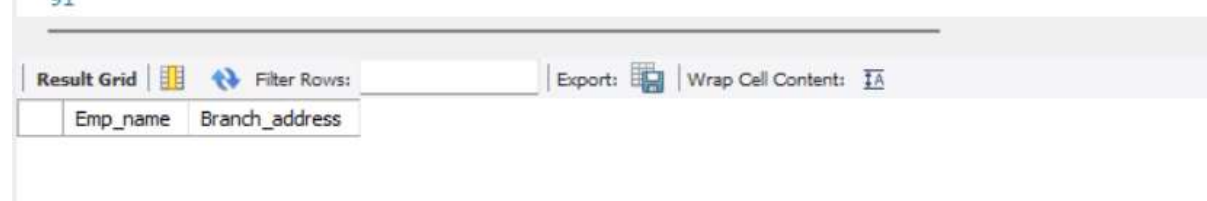
```
83 • SELECT Branch_no, COUNT(*) AS Total_Employees
84 FROM Employee
85 GROUP BY Branch_no
86 HAVING COUNT(*) > 5;
87
```



The screenshot shows a SQL query interface. The query is: `SELECT Branch_no, COUNT(*) AS Total_Employees FROM Employee GROUP BY Branch_no HAVING COUNT(*) > 5;`. Below the query, there is a toolbar with options: "Result Grid", "Filter Rows:", "Export:", and "Wrap Cell Content:". The "Result Grid" tab is active, showing a table with two columns: "Branch_no" and "Total_Employees".

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

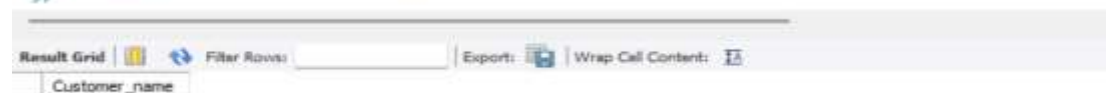
```
88 • SELECT Emp_name, Branch.Branch_address
89 FROM Employee
90 JOIN Branch ON Employee.Emp_Id = Branch.Manager_Id;
91
```



The screenshot shows a SQL query interface. The query is: `SELECT Emp_name, Branch.Branch_address FROM Employee JOIN Branch ON Employee.Emp_Id = Branch.Manager_Id;`. Below the query, there is a toolbar with options: "Result Grid", "Filter Rows:", "Export:", and "Wrap Cell Content:". The "Result Grid" tab is active, showing a table with two columns: "Emp_name" and "Branch_address".

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

```
92 • SELECT DISTINCT Customer.Customer_name
93 FROM IssueStatus
94 JOIN Books ON IssueStatus.Isbn_book = Books.ISBN
95 JOIN Customer ON IssueStatus.Issued_cust_id = Customer.Customer_Id
96 WHERE Books.Rental_Price > 25;
97
```



The screenshot shows a SQL query interface. The query is: `SELECT DISTINCT Customer.Customer_name FROM IssueStatus JOIN Books ON IssueStatus.Isbn_book = Books.ISBN JOIN Customer ON IssueStatus.Issued_cust_id = Customer.Customer_Id WHERE Books.Rental_Price > 25;`. Below the query, there is a toolbar with options: "Result Grid", "Filter Rows:", "Export:", and "Wrap Cell Content:". The "Result Grid" tab is active, showing a table with one column: "Customer_name".