MYSQL PROJECT

Create a database named library and following TABLES in the database:
1. Branch
2. Employee
3. Books
4. Customer
5. IssueStatus
5. ReturnStatus

```
57 •  create database library;
58
```

Output

Action Output

#	Time	Action	Message
1	20:35:22	create database library	1 row(s) affected

1. Branch
Branch_no - Set as PRIMARY KEY
Manager_Id
Branch_address
Contact_no

```
66
67 •  create table  branch(Branch_no int primary key,
68    Manager_Id int,
69    Branch_address varchar(30),
70    Contact_no int);
71
72    select * from branch;
```

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

Branch_no	Manager_Id	Branch_address	Contact_no
NULL	NULL	NULL	NULL

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```
74 •  insert into branch (Branch_no, Manager_Id, Branch_address, Contact_no)
75    values
76    (1, 101, '123 Main St', 12345),
77    (2, 102, '456 Elm St', 98765),
78    (3, 103, '789 Oak St', 55512),
79    (4, 104, '101 Pine St', 77798),
80    (5, 105, '202 Cedar St', 99955);
```

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

Branch_no	Manager_Id	Branch_address	Contact_no
1	101	123 Main St	12345
2	102	456 Elm St	98765
3	103	789 Oak St	55512
4	104	101 Pine St	77798
5	105	202 Cedar St	99955
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

```
80
81 •  create table employee(Emp_Id int primary key,
82    Emp_name varchar(25),
83    Position varchar(25),
84    Salary int,
85    Branch_no int,
86    foreign key ( Branch_no ) references branch( Branch_no ) on delete cascade);
87
88 •  select * from employee;
89
```

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

Emp_Id	Emp_name	Position	Salary	Branch_no
NULL	NULL	NULL	NULL	NULL

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```
97
98 •   insert into employee (Emp_Id, Emp_name, Position, Salary, Branch_no)
99    values
100   (1, 'John Doe', 'Manager', 60000, 1),
101   (2, 'Jane Smith', 'Assistant Manager', 50000, 1),
102   (3, 'Alice Johnson', 'Clerk', 40000, 2),
103   (4, 'Bob Brown', 'Clerk', 38000, 2),
104   (5, 'Charlie Wilson', 'Clerk', 38000, 2);
105
```

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

Emp_Id	Emp_name	Position	Salary	Branch_no
1	John Doe	Manager	60000	1
2	Jane Smith	Assistant Manager	50000	1
3	Alice Johnson	Clerk	40000	2
4	Bob Brown	Clerk	38000	2
5	Charlie Wilson	Clerk	38000	2
NULL	NULL	NULL	NULL	NULL

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

```
99 •  create table Books ( ISBN varchar(30) primary key,
100   Book_title varchar(100),
101   Category varchar(20),
102   Rental_Price int,
103   Status enum( "yes","no"),
104   Author varchar(30),
105   Publisher varchar(30));
106
107 •  select * from books;
108
```

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

ISBN	Book_title	Category	Rental_Price	Status	Author	Publisher
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
154 •  insert into Books (ISBN, Book_title, Category, Rental_Price, Status, Author, Publisher)
155    values
156    ('9780451524935', '1984', 'Fiction', 10, 'yes', 'George Orwell', 'Signet Classic'),
157    ('9780061120084', 'To Kill a Mockingbird', 'Fiction', 12, 'yes', 'Harper Lee', 'DC Books'),
158    ('9780140283334', 'The Catcher in the Rye', 'Fiction', 11, 'yes', 'J.D. Salinger', 'Back Bay Books'),
159    ('9780439023528', 'The Hunger Games', 'Young Adult', 14, 'yes', 'Suzanne Collins', 'Scholastic Press'),
160    ('9780307743657', 'The Girl with the Dragon Tattoo', 'Mystery', 13, 'no', 'Stieg Larsson', 'Vintage Crime/Black Lizard');
161
162 •  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	Fiction	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	Fiction	10	yes	George Orwell	Signet Classic
NULL	NULL	NULL	NULL	NULL	NULL	NULL

4. Customer
Customer_Id - Set as PRIMARY KEY
Customer_name
Customer_address
Reg_date

```
114
115 •  create table Customer ( Customer_Id int primary key,
116    Customer_name varchar(30),
117    Customer_address varchar(100),
118    Reg_date date);
119
120 •  select * from customer;
```

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

Customer_Id	Customer_name	Customer_address	Reg_date
NULL	NULL	NULL	NULL

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```sql
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', '2023-02-15'),
(4, 'Sophia Anderson', '101 Pine St', '2021-03-20'),
(5, 'James Wilson', '202 Cedar St', '2022-11-30');
```

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	2023-02-15
4	Sophia Anderson	101 Pine St	2021-03-20
5	James Wilson	202 Cedar St	2022-11-30
NULL	NULL	NULL	NULL

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

```sql
create table IssueStatus(Issue_Id int primary key,
Issued_cust int,
foreign key (Issued_cust) references customer (customer_id)  on delete cascade,
Issued_book_name varchar(100),
Issue_date date,
Isbn_book varchar(30),
foreign key (Isbn_book) references books (Isbn)  on delete cascade);

select * from IssueStatus;
```

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

Issue_Id	Issued_cust	Issued_book_name	Issue_date	Isbn_book
NULL	NULL	NULL	NULL	NULL

```sql
INSERT INTO IssueStatus (Issue_Id, Issued_cust, Issued_book_name, Issue_date, Isbn_book)
VALUES
    (101, 1, '1984', '2023-06-01', '9780451524935'),
    (102, 2, 'To Kill a Mockingbird', '2023-02-05', '9780061120084'),
    (103, 3, 'The Catcher in the Rye', '2023-02-10', '9780140283334'),
    (104, 5, 'The Girl with the Dragon Tattoo', '2023-02-20', '9780307743657');
```

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 Mockingbird	2023-02-05	9780061120084
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

```sql
create table ReturnStatus (Return_Id int primary key,
Return_cust varchar(30),
Return_book_name  varchar(100),
Return_date date);

select * from ReturnStatus;
```

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

Return_Id	Return_cust	Return_book_name	Return_date
NULL	NULL	NULL	NULL

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

```
196
197 •   select book_title, category,rental_price from books;
198
```

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

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

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

```
200
201 •   select Emp_name,salary from employee order by salary desc;
```

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

Emp_name	salary
John Doe	60000
Jane Smith	50000
Alice Johnson	40000
Bob Brown	38000
Charlie Wilson	38000

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

```
204
205 •   select i.Issued_book_name, c.Customer_name from IssueStatus i join Books b on i.Isbn_book = b.ISBN
206     join Customer c on i.Issued_cust = c.Customer_Id;
207
208
```

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

Issued_book_name	Customer_name
1984	Michael Johnson
To Kill a Mockingbird	Emily Davis
The Catcher in the Rye	William Martinez
The Hunger Games	Sophia Anderson
The Girl with the Dragon Tattoo	James Wilson

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

```
208     -- 4. Display the total count of books in each category.
209
210 •   select category,count(*) from books group by category;
```

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

category	count(*)
Fiction	3
Mystery	1
Young Adult	1

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

```
212     -- 5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.
213
214 •   select emp_name,position from employee where salary > 50000;
```

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

emp_name	position
John Doe	Manager

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

```
216
217 •   select c.Customer_name, c.Reg_date from Customer c left join IssueStatus i on c.Customer_Id = i.Issued_cust
218     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

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

```
222
223 • select b.Branch_no, count(e.emp_id) from branch b  left join employee e on b.branch_no = e.branch_no group by branch_no;
```

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

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

Result 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.

```
229
230 • INSERT INTO Books (ISBN, Book_title, Category, Rental_Price, Status, Author, Publisher)
231   VALUES ('9781594205096', 'Sapiens: A Brief History of Humankind', 'History', 15, 'yes', 'Yuval Noah Harari', 'Penguin Press');
232
233 • 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	Fiction	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	Fiction	10	yes	George Orwell	Signet Classic
9781594205096	Sapiens: A Brief History of Humankind	History	15	yes	Yuval Noah Harari	Penguin Press
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
236
237 • select book_title from books where category = "history";
```

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

book_title
Sapiens: A Brief History of Humankind

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

```
240
241 •  INSERT INTO employee (Emp_Id, Emp_name, Position, Salary, Branch_no)
242    VALUES
243    (6, 'Eva Garcia', 'Manager', 62000, 3),
244    (7, 'Frank White', 'Assistant Manager', 51000, 3),
245    (8, 'Grace Martinez', 'Clerk', 42000, 3),
246    (9, 'Henry Thompson', 'Clerk', 40000, 3),
247    (10, 'Isabel Rodriguez', 'Clerk', 38000, 3),
248    (11, 'Jack Davis', 'Clerk', 38000, 3);
249
250 •  select * from employee;
251
```

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

Emp_Id	Emp_name	Position	Salary	Branch_no
1	John Doe	Manager	60000	1
2	Jane Smith	Assistant Manager	50000	1
3	Alice Johnson	Clerk	40000	2
4	Bob Brown	Clerk	38000	2
5	Charlie Wilson	Clerk	38000	2
6	Eva Garcia	Manager	62000	3
7	Frank White	Assistant Manager	51000	3
8	Grace Martinez	Clerk	42000	3
9	Henry Thompson	Clerk	40000	3
10	Isabel Rodriguez	Clerk	38000	3
11	Jack Davis	Clerk	38000	3
NULL	NULL	NULL	NULL	NULL

```
252 •  select b.branch_no,count(e.emp_id) from branch b left join employee e on b.branch_no = e.branch_no
253    group by b.branch_no having count(e.emp_id)>5;
254
```

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

branch_no	count(e.emp_id)
3	6

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Batch : D18