Topic : Library Management System

Create a database named library and following TABLES in the database:

1. Branch
2. Employee
3. Books
4. Customer
5. IssueStatus
5. ReturnStatus

```
2
3 •   create database library;
4
```

Output

Action Output ▾

#	Time	Action	Message
✅	1 21:22:05	create database library	1 row(s) affected

Attributes for the tables:

1. Branch

Branch_no - Set as PRIMARY KEY
Manager_Id
Branch_address
Contact_no

```
 7 •    use library;

 8

 9 • ⊖  create table braanch(branch_no int primary key,
10        manager_id int,
11        branch_address varchar(25),
12        contact_no int);

13

14 •    select * from braanch;

15
```

Result Grid | ⊞ | ⟲ Filter Rows: | | Edit: 🖉 ➕ ➖ | Export/Import: 🖫 🖫 | Wrap Cell Content: 🅣🄰

	branch_no	manager_id	branch_address	contact_no
*	NULL	NULL	NULL	NULL

```
15

16 •    insert into braanch(branch_no,manager_id,branch_address,contact_no)
17      values(1,111,'ckm',987654),
18            (2,222,'abbc',765432),
19            (3,333,"ekm",543210),
20            (4,444,'bccd',123456),
21            (5,555,'trvnrm',235467),
22            (6,666,'kmmk',345678);

23

24 •    select * from braanch;

25
```

Result Grid | ⊞ | ⟲ Filter Rows: | | Edit: 🖉 ➕ ➖ | Export/Import: 🖫 🖫 | Wrap Cell Content: 🅣🄰

	branch_no	manager_id	branch_address	contact_no
▶	1	111	ckm	987654
	2	222	abbc	765432
	3	333	ekm	543210
	4	444	bccd	123456
	5	555	trvnrm	235467
	6	666	kmmk	345678
*	NULL	NULL	NULL	NULL

braanch 3 ✕

Output

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

```
25
26 ● ⊖ create table employee(emp_id int primary key,
27      emp_name varchar(25),
28      position varchar(25),
29      salary int,
30      branch_no int,
31    ⌐ foreign key(branch_no) references braanch(branch_no)on delete cascade);
32
33 ●   select * from employee;
34
35
```

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

	emp_id	emp_name	position	salary	branch_no
●	NULL	NULL	NULL	NULL	NULL

```
34
35 •    insert into employee(emp_id,emp_name,position,salary,branch_no)
36      values(1211,'Michael','clerk',80000,1),
37              ('1212','Thasleema','manager',80000,2),
38              ('1213','Riyas','secretary',50000,3),
39              ('1214','Faheem','Engineer',60000,1),
40              ('1215','Farhan','analyst',70000,4),
41              ('1216','Sagar','accountant',40000,1);
42
43 •    select * from employee;
44
```

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

emp_id	emp_name	position	salary	branch_no
1211	Michael	clerk	80000	1
1212	Thasleema	manager	80000	2
1213	Riyas	secretary	50000	3
1214	Faheem	Engineer	60000	1
1215	Farhan	analyst	70000	4
1216	Sagar	accountant	40000	1
NULL	NULL	NULL	NULL	NULL

employee 2 ×

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

```
45 •  ⊖  create table books(ISBN varchar(30) primary key,
46        book_title varchar(45),
47        category varchar(25),
48        rental_price int,
49        status enum("yes","no"),
50        author varchar(25),
51        publisher varchar(30));
52
53 •      select * from books;
54
```

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

ISBN	book_title	category	rental_price	status	author	publisher
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
54
55 •      insert into books(ISBN,book_title,category,rental_price,status,author,publisher)
56        values('8975412092','into the wild','travelogue',20,'yes','john krakauer','Anchor'),
57            ('7896045678','kappirikaluse nattil','travelogue',14,'yes','s.k.pottakkad','dc books'),
58            ('345678986','girl in room 105','novel',23,'no','chethan bagat','westland books'),
59            ('812643936X','Arachaar','fiction',19,'yes','k.r.meera','dc books'),
60            ('8171301266','khasakkinte ithihasam','fiction',18,'yes','o.v.vijayan','dc books'),
61            ('4678432113','Adujeevitham','fiction',17,'yes','Benyamin','green books');
62
63 •      select * from books;
64
```

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

ISBN	book_title	category	rental_price	status	author	publisher
345678986	girl in room 105	novel	23	no	chethan bagat	westland books
4678432113	Adujeevitham	fiction	17	yes	Benyamin	green books
7896045678	kappirikaluse nattil	travelogue	14	yes	s.k.pottakkad	dc books
812643936X	Arachaar	fiction	19	yes	k.r.meera	dc books
8171301266	khasakkinte ithihasam	fiction	18	yes	o.v.vijayan	dc books
8975412092	into the wild	travelogue	20	yes	john krakauer	Anchor
NULL	NULL	NULL	NULL	NULL	NULL	NULL

books 4 ×

Output

4. Customer

Customer_Id - Set as PRIMARY KEY
Customer_name
Customer_address
Reg_date

```
64
65 • ⊖  create table customer(customer_id int primary key,
66         customer_name varchar(25),
67         customer_address varchar(100),
68         reg_date date);
69
70 •     select * from customer;
71
```

customer_id	customer_name	customer_address	reg_date
NULL	NULL	NULL	NULL

```
71
72 •    insert into customer(customer_id,customer_name,customer_address,reg_date)
73      values(1,'Emmi','ckm','2020-02-09'),
74             (2,'jacson','abbc','2021-01-02'),
75             (3,'Fheem',"ekm",'2023-05-04'),
76             (4,'Ayham','bccd','2020-11-11'),
77             (5,'muhammed','trvnrm','2021-06-04'),
78             (6,'Riyaz','kmmk','2023-12-02');
79
80 •    select * from customer;
81
```

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

customer_id	customer_name	customer_address	reg_date
1	Emmi	ckm	2020-02-09
2	jacson	abbc	2021-01-02
3	Fheem	ekm	2023-05-04
4	Ayham	bccd	2020-11-11
5	muhammed	trvnrm	2021-06-04
6	Riyaz	kmmk	2023-12-02
NULL	NULL	NULL	NULL

customer 1 ✕

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
81
82 • ⊖  create table issuestatus(issue_id int primary key,
83        issued_cust int,
84        foreign key (issued_cust) references customer(customer_id) on delete cascade,
85        issued_book_name varchar(30),
86        issued_date date,
87        ISBN_book varchar(30),
88        foreign key(ISBN_book) references books(ISBN) on delete cascade);
89
90 •    select * from issuestatus;
91
```

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

issue_id	issued_cust	issued_book_name	issued_date	ISBN_book
NULL	NULL	NULL	NULL	NULL

```sql
91
92 •    insert into issuestatus(issue_id,issued_cust,issued_book_name,issued_date,isbn_book)
93       values(100,1,'kappirikaluse nattil','2021-09-08','7896045678'),
94            (101,2,'Adujeevitham','2021-11-12','4678432113'),
95            (102,3,'khasakkinte ithihasam','2022-03-07','8171301266'),
96            (103,4,'Arachaar','2021-06-05','812643936X'),
97            (104,5,'girl in room 105','2023-04-01','345678986');
98
99 •    select * from issuestatus;
```

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

issue_id	issued_cust	issued_book_name	issued_date	ISBN_book
100	1	kappirikaluse nattil	2021-09-08	7896045678
101	2	Adujeevitham	2021-11-12	4678432113
102	3	khasakkinte ithihasam	2022-03-07	8171301266
103	4	Arachaar	2021-06-05	812643936X
104	5	girl in room 105	2023-04-01	345678986
NULL	NULL	NULL	NULL	NULL

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

```sql
100
101  create table returstatus(return_id int primary key,
102      return_cust varchar(30),
103      return_book_name varchar(45),
104      return_date date,
105      isbn_book2 varchar(20),
106      foreign key(isbn_book2) references books(isbn) on delete cascade);
107
108  insert into returstatus
109  values(1000,'Fawaz','khasakkinte ithihasam','2023-08-11','8171301266'),
110         (1001,'Ayham','girl in room 105','2023-01-01','345678986'),
111         (1002,'Aswin','Adujeevitham','2023-02-02','4678432113'),
112         (1003,'John','into the wild','2022-12-12','8975412092');
113
114  select * from returstatus;
115
```

return_id	return_cust	return_book_name	return_date	isbn_book2
1000	Fawaz	khasakkinte ithihasam	2023-08-11	8171301266
1001	Ayham	girl in room 105	2023-01-01	345678986
1002	Aswin	Adujeevitham	2023-02-02	4678432113
1003	John	into the wild	2022-12-12	8975412092
NULL	NULL	NULL	NULL	NULL

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

```
115
116 •    select book_title,category,rental_price from books where status='yes';
117
118
```

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

book_title	category	rental_price
Adujeevitham	fiction	17
kappirikaluse nattil	travelogue	14
Arachaar	fiction	19
khasakkinte ithihasam	fiction	18
into the wild	travelogue	20

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

```
118
119 •    select emp_name,salary from employee order by salary desc;
120
121
```

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

emp_name	salary
Michael	80000
Thasleema	80000
Farhan	70000
Faheem	60000
Riyas	50000
Sagar	40000

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

```
120
121
122 •   select i.issued_book_name,c.customer_name from issuestatus i join customer c
123     on i.issued_cust=c.customer_id;
124
```

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

| issued_book_name	customer_name
kappirikaluse nattil	Emmi
Adujeevitham	jacson
khasakkinte ithihasam	Fheem
Arachaar	Ayham
girl in room 105	muhammed

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

```
121
122 •   select category,count(category) as count from books
123     group by category;
124
125
```

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

category	count
novel	1
fiction	3
travelogue	2

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

```
125
126 •    select emp_name,position from employee where salary > 50000;
127
```

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

emp_name	position
▶ Michael	clerk
Thasleema	manager
Faheem	Engineer
Farhan	analyst

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

```
132
133
134 •    select c.customer_name,c.reg_date from customer c left join issuestatus
135      i on c.customer_id=i.issued_cust where c.reg_date<'2022-01-01' and
136      i.issued_cust is null;
137
```

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

customer_name	reg_date

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

```
137
138
139 •    select branch_no,count(emp_id) as total_employees from employee group by
140      branch_no;
141
```

Result Grid | ⊞ | ↕ Filter Rows: [____] | Export: 🖼 | Wrap Cell Content: 𝘈

branch_no	total_employees
▶ 1	3
2	1
3	1
4	1

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

```
141
142
143 •    select c.customer_name,i.issued_date from customer c left join issuestatus i on
144      c.customer_id=i.issued_cust where year(i.issued_date)=2023 AND month(i.issued_date)=6;
145
```

Result Grid | ⊞ | ↕ Filter Rows: [____] | Export: 🖼 | Wrap Cell Content: 𝘈

customer_name	issued_date

9. Retrieve book_title from book table containing history.

```
146
147 •    select book_title from books where category='fiction';
148
```

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

book_title
▶ Adujeevitham
Arachaar
khasakkinte ithihasam

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

```
148
149
150 •    select b.branch_no,count(e.emp_id) as total_employees from
151      braanch b left join  employee e on b.branch_no=e.branch_no group by
152      b.branch_no having count(e.emp_id)>2;
153
```

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

branch_no	total_employees
▶ 1	3