

MYSQL Comprehensive Assessment

Topic : Library Management System

You are 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.

Tables :

1. Branch

```
5  
6 • create table Branch(  
7     Branch_no int primary key,  
8     Manager_Id int,  
9     Branch_address varchar(30),  
10    Contact_no int);  
11 • select *from Branch;  
12
```

Branch_no	Manager_Id	Branch_address	Contact_no
1	1001	Ernamkulam	965687423
2	1002	Chennai	985698623
3	1014	Panaji	961245873
4	2056	Bangalore	856498743
5	121323	Trissur	86065423
6	32145	Munnar	974562423
7	10012	Delhi	96385214
8	20012	Mysore	812936569
NULL	NULL	NULL	NULL

2. Employee

```
52 • select *from Employee;  
53  
54
```

Emp_Id	Emp_name	Position	Salary	branch_no
1	Ram	Store Keeper	25000	NULL
2	Siji	Accountant	30000	NULL
3	Reena	HR	35000	NULL
4	Mohan	HR	50000	NULL
5	Arjun	Manager	55000	NULL
6	Silva	Supervisor	60000	NULL
NULL	NULL	NULL	NULL	NULL

3. Books

63 • `select * from Books;`

64

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

	ISBN	Book_title	Category	Rental_Price	Status	Author	Publisher
▶	1	The Alchemist	Fiction	50	No	Paulo Coelho	HarperTorch
	2	The Kite Runner	Fiction	35	Yes	Khaled Hosseini	Riverhead Books
	3	Dune	Science Fiction	25	Yes	Frank Herbert	Roger Zelazny
	4	Hyperion	Science Fiction	20	NO	Dan Simmons	Hyperion Press
	5	Wings of Fire	Autobiography	35	YES	APJ Abdul Kalam	Universities Press
	6	I Am Malala	Autobiography	30	YES	Malala Yousafzai	Weidenfeld & Nicolson
	7	Normal People	Novel	20	NO	Sally Rooney	Faber & Faber
	8	Outline	Novel	25	YES	Rachel Cusk	Farrar
	9	Dear Life	Short Story	20	NO	Alice Munro	McClelland and Stewart

Books 43 x

4. Customer

114 • `select * from Customer;`

115

116 • `create table IssueStatus(`

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

	Customer_Id	Customer_name	Customer_address	Reg_date
▶	1	Zoya	Rose Villa p25	2021-08-29
	2	Nila	Highlite A15	2024-02-02
	3	Druv	Sarangi	2024-02-02
	4	Sarojini	Vihaar	2021-01-01
	5	Linta	Bethlahem	2024-03-03
	6	Anand	Thejus Nivas	2024-03-05
	7	Leela	Shobha PB2	2021-12-02
	8	Fellah	Al Rigga 12	2021-05-02
	9	Karan	Summer Villa	2024-04-05

5. IssueStatus

125 • `select * from IssueStatus;`

126

Result Grid | Filter Rows: | Edit: | Export

	Issue_Id	Issued_cust	Issued_book_name	Issue_date	Isbn_book
▶	101	15	Dear Life	2022-01-01	1014
	102	12	Wings of Fire	2023-02-01	1015
	103	7	Dune	2021-12-20	1009
	104	10	Outline	2023-01-15	1020
	105	8	I Am Malala	2021-05-02	1025
	106	7	The Kite Runner	2021-12-02	1101
	107	5	Hyperion	2023-06-02	1101
•	NULL	NULL	NULL	NULL	NULL

6. ReturnStatus

```
153 • select * from ReturnStatus;
154
```

	Return_Id	Return_cust	Return_book_name	Return_date	Isbn_book2
▶	1	20	The Kite Runner	2023-04-15	1101
	2	15	Dear Life	2023-01-15	1014
	3	9	I Am Malala	2023-04-05	1025
	4	10	Outline	2023-01-30	1020
•	NULL	NULL	NULL	NULL	NULL

Queries

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

```
166 -- 1. Retrieve the book title, category, and rental price of all available books.
167 • SELECT Book_title, Category, Rental_Price FROM books WHERE Status = 'Yes';
168
```

	Book_title	Category	Rental_Price
▶	The Kite Runner	Fiction	35
	Dune	Science Fiction	25
	Wings of Fire	Autobiography	35
	I Am Malala	Autobiography	30
	Outline	Novel	25
	History of Modern India	History	25

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

```
169 -- 2. List the employee names and their respective salaries in descending order of salary.
170 • select Emp_name , Salary from Employee order by Salary desc;
171
```

	Emp_name	Salary
▶	Silva	60000
	Arjun	55000
	Mohan	50000
	Reena	35000
	Siji	30000
	Ram	25000

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

```

172      -- 3. Retrieve the book titles and the corresponding customers who have issued those books.
173 •    select IssueStatus.Issued_book_name ,Customer.Customer_name from IssueStatus inner join Customer
174      on IssueStatus.Issued_cust = Customer.Customer_Id;
175

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Issued_book_name	Customer_name			
Dune	Leela			
Outline	Anil			
I Am Malala	Fellah			
The Kite Runner	Leela			
Hyperion	Linta			

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

```

177      -- 4. Display the total count of books in each category.
178 •    select Category, count(ISBN) as Total_Books from Books group by Category;
179

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Category	Total_Books			
Fiction	2			
Science Fiction	2			
Autobiography	2			
Novel	2			
Short Story	2			
History	2			

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

```

180      -- 5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.
181 •    select Emp_name, Position from Employee where Salary > 50000;
182

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Emp_name	Position			
Arjun	Manager			
Silva	Supervisor			

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

```

183      -- 6. List the customer names who registered before 2022-01-01 and have not issued any books yet.
184 •    select Customer_name from Customer where Reg_date < '2022-01-01' AND Customer_Id NOT IN
185      (select Issued_cust from IssueStatus);
186

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Customer_name				
Zoya				
Sarojini				

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

```

187      -- 7. Display the branch numbers and the total count of employees in each branch.
188      • alter table Employee add column branch_no int ;
189      • alter table Employee add FOREIGN KEY (branch_no)
190      REFERENCES Branch(Branch_no);
191      • UPDATE Employee SET branch_no =110 WHERE Emp_Id =100;
192      • UPDATE Employee SET branch_no =111 WHERE Emp_Id =101;
193      • UPDATE Employee SET branch_no =112 WHERE Emp_Id =103;
194      • UPDATE Employee SET branch_no =113 WHERE Emp_Id =104;
195      • UPDATE Employee SET branch_no =114 WHERE Emp_Id =105;
196      • UPDATE Employee SET branch_no =115 WHERE Emp_Id =106;
197      • select * from Employee;
198      • select branch_no, count(Emp_Id) from Employee group by branch_no;

```

Emp_Id	Emp_name	Position	Salary	branch_no
1	Ram	Store Keeper	25000	NULL
2	Siji	Accountant	30000	NULL
3	Reena	HR	35000	NULL
4	Mohan	HR	50000	NULL
5	Arjun	Manager	55000	NULL
6	Silva	Supervisor	60000	NULL

```

198 • select Branch_no, count(Emp_Id) from Employee group by Branch_no;
199
200

```

Branch_no	count(Emp_Id)
NULL	6

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

```

201      -- 8. Display the names of customers who have issued books in the month of June 2023.
202
203      • select Customer.Customer_name from Customer inner join IssueStatus on
204      Customer.Customer_Id = Issuestatus.Issued_cust WHERE Issuestatus.Issue_date >= '2023-06-01' AND
205      Issuestatus.Issue_date <= '2023-06-30';
206

```

Customer_name
Linta

9. Retrieve book_title from book table containing history.

```

207      -- 9. Retrieve book_title from book table containing history.
208      • select Book_title as 'History_books' from Books where Category = 'History';
209

```

History_books
History of Modern India
Guns, Germs, and Steel

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

```
210 -- 10. Retrieve the branch numbers along with the count of employees for branches having more than 5 employees
211 • SELECT branch_no, COUNT(Emp_Id) Employees FROM employee GROUP BY branch_no HAVING COUNT(Emp_Id) > 5;
212
```

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

branch_no	Employees
NULL	6

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

```
214 -- 11. Retrieve the names of employees who manage branches and their respective branch addresses.
215 • select Employee.Emp_name , Branch.Branch_address from Employee inner join Branch on
216 Employee.Emp_Id = Branch.Branch_no;
217
```

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

Emp_name	Branch_address
Ram	Ernamkulam
Siji	Chennai
Reena	Panaji
Mohan	Bangalore
Arjun	Trissur
Silva	Munnar

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

```
-- 12. Display the names of customers who have issued books with a rental price higher than Rs. 25.
• select Book_title, Rental_Price from Books WHERE Rental_Price < 25;
```

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

Book_title	Rental_Price
Hyperion	20
Normal People	20
Dear Life	20