

## SQL Query:

```
1 CREATE DATABASE library;
2
3 Use library;
4
5 Create Table Branch (
6     Branch_no INT PRIMARY KEY,
7     Manager_id INT,
8     Branch_address VARCHAR (200),
9     Contact_no BIGINT
10 );
11
12 INSERT INTO Branch (Branch_no, Manager_id, Branch_address, Contact_no) VALUES
13 (1, 101, '123 Main St, Cityville', 1234567890),
14 (2, 102, '456 Elm St, Townsville', 2345678901),
15 (3, 103, '789 Oak St, Villagetown', 3456789012),
16 (4, 104, '101 Pine St, Hamlet', 4567890123),
17 (5, 105, '202 Maple St, Borough', 5678901234),
18 (6, 106, '303 Cedar St, Metropolis', 6789012345),
19 (7, 107, '404 Birch St, Cityplace', 7890123456),
20 (8, 108, '505 Spruce St, Countryland', 8901234567),
21 (9, 109, '606 Willow St, Suburbia', 9012345678),
22 (10, 110, '707 Ash St, Regionville', 1023456789);
23
24
25 Create Table Employee(
26     Emp_id INT PRIMARY KEY ,
27     Emp_name VARCHAR (50),
28     Position VARCHAR (50),
29     Salary DECIMAL(10, 2),
30     Branch_no INT,
31     FOREIGN KEY (Branch_no) REFERENCES Branch(Branch_no)
32 );
33
34 INSERT INTO Employee (Emp_id, Emp_name, Position, Salary, Branch_no) VALUES
35 (1, 'Alice Smith', 'Manager', 75000.00, 1),
36 (2, 'Bob Johnson', 'Sales Associate', 50000.00, 1),
37 (3, 'Charlie Brown', 'Cashier', 35000.00, 2),
38 (4, 'Diana Prince', 'Assistant Manager', 60000.00, 1),
39 (5, 'Edward Norton', 'Sales Associate', 52000.00, 3),
40 (6, 'Fiona Green', 'HR Specialist', 55000.00, 4),
41 (7, 'George White', 'Technician', 48000.00, 1),
42 (8, 'Hannah Baker', 'Sales Manager', 72000.00, 6),
43 (9, 'Ian Curtis', 'IT Support', 47000.00, 1),
44 (10, 'Jane Doe', 'Marketing Coordinator', 59000.00, 1);
45
46 update employee set position = 'Sales Associate' where emp_id in (4,7);
47 update employee set branch_no =1 where emp_id in (4,7,9,10);
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47
48 ● ○ Create Table Books (
49     ISBN VARCHAR (100) PRIMARY KEY,
50     Book_title VARCHAR (100),
51     Category VARCHAR (100),
52     Rental_Price DECIMAL(10,2),
53     Status ENUM('yes', 'no'),
54     Author VARCHAR (100),
55     Publisher VARCHAR (100)
56 );
57
58 ● INSERT INTO Books (ISBN, Book_title, Category, Rental_Price, Status, Author, Publisher) VALUES
59     ('978-3-16-148410-0', 'The Great Adventure', 'Fiction', 10.99, 'yes', 'John Doe', 'Fiction House'),
60     ('978-1-23-456789-7', 'Learning SQL', 'Education', 15.50, 'no', 'Jane Smith', 'Tech Publishers'),
61     ('978-0-12-345678-9', 'Mystery of the Unknown', 'Mystery', 12.75, 'yes', 'Alice Johnson', 'Mystery Press'),
62     ('978-1-23-456780-0', 'Cooking 101', 'Cookbook', 8.99, 'no', 'Chef Gordon', 'Culinary World'),
63     ('978-0-12-987654-3', 'Science Made Simple', 'Science', 14.00, 'yes', 'Dr. Emily Brown', 'Science Press'),
64     ('978-3-16-148411-7', 'History in Focus', 'History', 9.50, 'no', 'Mark Twain', 'History Publishers'),
65     ('978-0-12-345679-6', 'The Art of Coding', 'Technology', 10.99, 'yes', 'Dev Master', 'Tech Insights'),
66     ('978-1-23-456781-7', 'Travelling the World', 'Travel', 11.25, 'no', 'Manderlust', 'Travel Books'),
67     ('978-0-12-345680-2', 'Fantasy Realms', 'Fantasy', 13.50, 'yes', 'J.K. Rowling', 'Fantasy Press'),
68     ('978-1-23-456782-4', 'Health and Wellness', 'Health', 10.00, 'no', 'Dr. Sarah Lee', 'Wellness Publishers');
69
70
71 ● ○ Create Table Customer (
72     Customer_Id INT PRIMARY KEY,
73     Customer_name VARCHAR (100),
74     Customer_address VARCHAR (200),
75     Reg_date DATE
76 );
77
78 ● INSERT INTO Customer (Customer_Id, Customer_name, Customer_address, Reg_date) VALUES
79     (1, 'Alice Thompson', '123 Main St, Cityville', '2023-01-15'),
80     (2, 'Bob Williams', '456 Elm St, Townsville', '2023-02-20'),
81     (3, 'Charlie Brown', '789 Oak St, Villagetown', '2023-03-10'),
82     (4, 'Diana Prince', '101 Pine St, Hamlet', '2023-04-05'),
83     (5, 'Edward Green', '202 Maple St, Borough', '2023-05-25'),
84     (6, 'Fiona Carter', '303 Cedar St, Metropolis', '2023-06-30'),
85     (7, 'George White', '404 Birch St, Cityplace', '2023-07-15'),
86     (8, 'Hannah Baker', '505 Spruce St, Countryland', '2023-08-28'),
87     (9, 'Ian Curtis', '606 Willow St, Suburbia', '2023-09-10'),
88     (10, 'Jane Doe', '707 Ash St, Regionville', '2023-10-01');
89
90 ● update customer set reg_date = '2021-02-02' where customer_id in (4,6,9);
91 ● ○ Create Table IssueStatus (
92     Issue_Id INT PRIMARY KEY ,
93     Issued_cust INT,
94     Issued_book_name VARCHAR (200),
95     Issue_date DATE,
96     Isbn_book VARCHAR (200),
97     FOREIGN KEY (Issued_cust) REFERENCES CUSTOMER (customer_id),
98     FOREIGN KEY (Isbn_book) REFERENCES BOOKS (isbn)
99 );

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100 ● INSERT INTO IssueStatus (Issue_Id, Issued_cust, Issued_book_name, Issue_date, Isbn_book) VALUES
101     (1, 1, 'The Great Adventure', '2024-01-10', '978-3-16-148410-0'),
102     (2, 2, 'Learning SQL', '2024-01-12', '978-1-23-456789-7'),
103     (3, 3, 'Mystery of the Unknown', '2023-06-01', '978-0-12-345678-9'),
104     (4, 4, 'Cooking 101', '2024-01-18', '978-1-23-456780-0'),
105     (5, 5, 'Science Made Simple', '2024-01-20', '978-0-12-987654-3'),
106     (6, 6, 'History in Focus', '2024-01-22', '978-3-16-148411-7'),
107     (7, 7, 'The Art of Coding', '2023-06-01', '978-0-12-345679-6'),
108     (8, 8, 'Traveling the World', '2024-01-28', '978-1-23-456781-7'),
109     (9, 9, 'Fantasy Realms', '2024-02-02', '978-0-12-345680-2'),
110     (10, 10, 'Health and Wellness', '2024-02-05', '978-1-23-456782-4');
111
112 ● Create Table ReturnStatus(
113     Return_Id INT PRIMARY KEY,
114     Return_cust INT,
115     Return_book_name VARCHAR(100),
116     Return_date DATE,
117     ISBN_book2 VARCHAR(20),
118     FOREIGN KEY (Return_cust) REFERENCES Customer(Customer_Id),
119     FOREIGN KEY (ISBN_book2) REFERENCES Books(ISBN)
120 );
121
122 ● INSERT INTO ReturnStatus (Return_Id, Return_cust, Return_book_name, Return_date, ISBN_book2) VALUES
123     (1, 1, 'The Great Adventure', '2024-02-15', '978-3-16-148410-0'),
124     (2, 2, 'Learning SQL', '2024-02-17', '978-1-23-456789-7'),
125     (3, 3, 'Mystery of the Unknown', '2024-02-20', '978-0-12-345678-9'),
126     (4, 4, 'Cooking 101', '2024-02-22', '978-1-23-456780-0'),
127     (5, 5, 'Science Made Simple', '2024-02-25', '978-0-12-987654-3'),
128     (6, 6, 'History in Focus', '2024-02-27', '978-3-16-148411-7'),
129     (7, 7, 'The Art of Coding', '2024-03-01', '978-0-12-345679-6'),
130     (8, 8, 'Traveling the World', '2024-03-03', '978-1-23-456781-7'),
131     (9, 9, 'Fantasy Realms', '2024-03-05', '978-0-12-345680-2'),
132     (10, 10, 'Health and Wellness', '2024-03-07', '978-1-23-456782-4');
133
134 # 1. Retrieve the book title, category, and rental price of all available books.
135
136 ● Select Book_title,category,Rental_price from Books where Status = 'YES';
137
138 # 2. List the employee names and their respective salaries in descending order of salary.
139
140 ● Select Emp_name,Salary FROM Employee ORDER BY Salary DESC;
141
142 # 3. Retrieve the book titles and the corresponding customers who have issued those books.
143
144 ● SELECT b.Book_title, c.Customer_name
145     FROM IssueStatus i
146     JOIN Books b ON i.ISBN_book = b.ISBN
147     JOIN Customer c ON i.Issued_cust = c.Customer_Id;
148
149 ...

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148
149 # 4. Display the total count of books in each category.
150
151 ● Select category, COUNT(*) AS TOTAL_BOOKS FROM BOOKS GROUP BY Category;
152
153 # 5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.
154
155 ● SELECT Emp_name, Position FROM Employee WHERE Salary > 50000;
156
157 # 6. List the customer names who registered before 2022-01-01 and have not issued any books yet
158
159 ● SELECT c.Customer_name
160 FROM Customer c
161 WHERE c.Reg_date < '2022-01-01' AND c.Issued_cust = 0;
162
163
164 # 7. Display the branch numbers and the total count of employees in each branch.
165
166 ● SELECT Branch_no, COUNT(*) AS Total_Employees
167 FROM Employee
168 GROUP BY Branch_no;
169
170 # 8. Display the names of customers who have issued books in the month of June 2023.
171
172 ● SELECT DISTINCT c.Customer_name
173 FROM IssueStatus i
174 JOIN Customer c ON i.Issued_cust = c.Customer_Id
175 WHERE i.Issue_date BETWEEN '2023-06-01' AND '2023-06-30';
176
177 --
178
179 # 9. Retrieve book_title from book table containing history.
180
181 ● SELECT Book_title
182 FROM Books
183 WHERE Book_title LIKE '%History%';
184
185 # 10. Retrieve the branch numbers along with the count of employees for branches having more than 5 employees
186
187 ● SELECT Branch_no, COUNT(*) AS Total_Employees
188 FROM Employee
189 GROUP BY Branch_no
190 HAVING COUNT(*) > 5;
191
192 # 11. Retrieve the names of employees who manage branches and their respective branch addresses.
193
194 ● SELECT e.Emp_name, b.Branch_address
195 FROM Employee e
196 JOIN Branch b ON e.Branch_no = b.Branch_no
197 WHERE e.Position = 'Manager';
198
199 # 12. Display the names of customers who have issued books with a rental price higher than Rs. 25.
200
201 ● SELECT DISTINCT c.Customer_name
202 FROM IssueStatus i
203 JOIN Books b ON i.ISBN_book = b.ISBN
204 JOIN Customer c ON i.Issued_cust = c.Customer_Id
205 WHERE b.Rental_Price > 25;
206

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