

## Tables

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following script:

```
91 • describe IssueStatus;
92 • INSERT INTO ReturnStatus (Return_Id, Return_cust, Return_book_name, Return_date, Isbn_book2)
93 VALUES
94 (401, 201, 'The Great Gatsby', '2023-07-15', '978-3-16-148410-0'),
95 (402, 202, 'A Brief History of Time', '2023-06-30', '978-1-86197-876-9');
96 • describe ReturnStatus;
```

The 'Result Grid' shows the schema for the 'ReturnStatus' table:

Field	Type	Null	Key	Default	Extra
Return_id	int	NO	PRI		INDEX
Return_cust	int	YES	MUL		INDEX
Return_Book_name	varchar(255)	YES			INDEX
Return_date	date	YES			INDEX
Isbn_book2	varchar(20)	YES	MUL		INDEX

The 'Output' pane shows the execution results:

#	Time	Action	Message	Duration / Fetch
115	16:58:57	INSERT INTO Customer (Customer_Id, Customer_name, Customer_address, Reg_date) VAL...	Error Code: 1062. Duplicate entry '201' for key 'customer.PRIMARY'	0.000 sec
116	16:58:57	describe customer	4 row(s) returned	0.000 sec / 0.000 sec
117	16:58:57	INSERT INTO IssueStatus (Issue_Id, Issued_cust, Issued_book_name, Issue_date, Isbn_bo...	Error Code: 1062. Duplicate entry '301' for key 'IssueStatus.PRIMARY'	0.000 sec
118	16:58:57	describe IssueStatus	5 row(s) returned	0.000 sec / 0.000 sec
119	16:58:57	INSERT INTO ReturnStatus (Return_Id, Return_cust, Return_book_name, Return_date, Isb...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.016 sec
120	16:58:57	describe ReturnStatus	5 row(s) returned	0.000 sec / 0.000 sec

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

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
94 (401, 201, 'The Great Gatsby', '2023-07-15', '978-3-16-148410-0'),
95 (402, 202, 'A Brief History of Time', '2023-06-30', '978-1-86197-876-9');
96 • describe ReturnStatus;
97 • SELECT Book_title, Category, Rental_Price
98 FROM Books
99 WHERE Status = 'yes';
100
```

The 'Result Grid' shows the results of the query:

Book_title	Category	Rental_Price
1984	Dystopian	35
A Brief History of Time	Science	40
The Great Gatsby	Fiction	30

The 'Output' pane shows the execution results:

#	Time	Action	Message	Duration / Fetch
137	17:02:25	describe customer	4 row(s) returned	0.000 sec / 0.000 sec
138	17:02:25	INSERT INTO IssueStatus (Issue_Id, Issued_cust, Issued_book_name, Issue_date, Isbn_bo...	Error Code: 1062. Duplicate entry '301' for key 'IssueStatus.PRIMARY'	0.000 sec
139	17:02:25	describe IssueStatus	5 row(s) returned	0.000 sec / 0.000 sec
140	17:02:25	INSERT INTO ReturnStatus (Return_Id, Return_cust, Return_book_name, Return_date, Isb...	Error Code: 1062. Duplicate entry '401' for key 'ReturnStatus.PRIMARY'	0.000 sec
141	17:02:25	describe ReturnStatus	5 row(s) returned	0.000 sec / 0.000 sec
142	17:02:25	SELECT Book_title, Category, Rental_Price FROM Books WHERE Status = 'yes' LIMIT 0, 10	3 row(s) returned	0.000 sec / 0.000 sec

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

MySQL Workbench

Local instance MySQL80 x

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No object selected

```

98 FROM Books
99 WHERE Status = 'yes';
100
101 SELECT Emp_name, Salary
102 FROM Employee
103 ORDER BY Salary DESC;

```

Result Grid

Emp_name	Salary
Jane Smith	62000.00
John Doe	60000.00
Emily Davis	59000.00
Michael Brown	40000.00
Robert Wilson	37000.00
Alice Johnson	35000.00

Output

Action Output

#	Time	Action	Message	Duration / Fetch
160	17:08:04	INSERT INTO IssueStatus (Issue_Id, Issued_cust, Issued_book_name, Issue_date, isbn_bo...	Error Code: 1062. Duplicate entry '301' for key 'issuestatus PRIMARY'	0.000 sec
161	17:08:04	describe IssueStatus	5 row(s) returned	0.016 sec / 0.000 sec
162	17:08:04	INSERT INTO ReturnStatus (Return_Id, Return_cust, Return_book_name, Return_date, lab...	Error Code: 1062. Duplicate entry '401' for key 'returnstatus PRIMARY'	0.000 sec
163	17:08:04	describe ReturnStatus	5 row(s) returned	0.000 sec / 0.000 sec
164	17:08:04	SELECT Book_title, Category, Rental_Price FROM Books WHERE Status = 'yes' LIMIT 0, 10	3 row(s) returned	0.000 sec / 0.000 sec
165	17:08:04	SELECT Emp_name, Salary FROM Employee ORDER BY Salary DESC LIMIT 0, 10	6 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

103°F Sunny 5:08 PM 24-Aug-24

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

MySQL Workbench

Local instance MySQL80 x

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No object selected

```

103 ORDER BY Salary DESC;
104
105 SELECT Books.Book_title, Customer.Customer_name
106 FROM IssueStatus
107 JOIN Books ON IssueStatus.Isnb_book = Books.ISBN
108 JOIN Customer ON IssueStatus.Issued_cust = Customer.Customer_Id;

```

Result Grid

Book_title	Customer_name
The Great Gatsby	William Johnson
A Brief History of Time	Sophia Brown
1984	Olivia Wilson

Output

Action Output

#	Time	Action	Message	Duration / Fetch
184	17:13:15	describe IssueStatus	5 row(s) returned	0.016 sec / 0.000 sec
185	17:13:15	INSERT INTO ReturnStatus (Return_Id, Return_cust, Return_book_name, Return_date, lab...	Error Code: 1062. Duplicate entry '401' for key 'returnstatus PRIMARY'	0.000 sec
186	17:13:15	describe ReturnStatus	5 row(s) returned	0.000 sec / 0.000 sec
187	17:13:15	SELECT Book_title, Category, Rental_Price FROM Books WHERE Status = 'yes' LIMIT 0, 10	3 row(s) returned	0.000 sec / 0.000 sec
188	17:13:15	SELECT Emp_name, Salary FROM Employee ORDER BY Salary DESC LIMIT 0, 10	6 row(s) returned	0.000 sec / 0.000 sec
189	17:13:15	SELECT Books.Book_title, Customer.Customer_name FROM IssueStatus JOIN Books ON I...	3 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Hot weather 5:13 PM 24-Aug-24

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

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
SELECT Books.Book_title, Customer.Customer_name
FROM IssueStatus
JOIN Books ON IssueStatus.Isbn_book = Books.ISBN
JOIN Customer ON IssueStatus.Issued_cust = Customer.Customer_Id;

SELECT Category, COUNT(*) AS Total_Books
```

The results grid shows the following data:

Category	Total_Books
Science	2
Dystopian	1
Fiction	2

The output pane shows the execution log with the following messages:

- 209 17:16:24 INSERT INTO ReturnStatus (Return\_Id, Return\_cust, Return\_book\_name, Return\_date, Isb...
- 210 17:16:24 describe ReturnStatus
- 211 17:16:25 SELECT Book\_title, Category, Rental\_Price FROM Books WHERE Status = 'yes' LIMIT 0, 10
- 212 17:16:25 SELECT Emp\_name, Salary FROM Employee ORDER BY Salary DESC LIMIT 0, 10
- 213 17:16:25 SELECT Books.Book\_title, Customer.Customer\_name FROM IssueStatus JOIN Books ON I...
- 214 17:16:25 SELECT Category, COUNT(\*) AS Total\_Books FROM Books GROUP BY Category LIMIT 0...

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

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
GROUP BY Category;

SELECT Emp_name, Position
FROM Employee
WHERE Salary > 50000;
```

The results grid shows the following data:

Emp_name	Position
John Doe	Manager
Jane Smith	Manager
Emily Davis	Manager

The output pane shows the execution log with the following messages:

- 235 17:21:02 describe ReturnStatus
- 236 17:21:02 SELECT Book\_title, Category, Rental\_Price FROM Books WHERE Status = 'yes' LIMIT 0, 10
- 237 17:21:02 SELECT Emp\_name, Salary FROM Employee ORDER BY Salary DESC LIMIT 0, 10
- 238 17:21:02 SELECT Books.Book\_title, Customer.Customer\_name FROM IssueStatus JOIN Books ON I...
- 239 17:21:02 SELECT Category, COUNT(\*) AS Total\_Books FROM Books GROUP BY Category LIMIT 0...
- 240 17:21:02 SELECT Emp\_name, Position FROM Employee WHERE Salary > 50000 LIMIT 0, 10



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

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL query:

```

116 WHERE Reg_date < '2022-01-01';
117
118 SELECT Customer.Customer_name
119 FROM Customer
120 LEFT JOIN IssueStatus ON Customer.Customer_Id = IssueStatus.IssueId_cust
121 WHERE Reg_date < '2022-01-01' AND IssueStatus.Issue_Id IS NULL;
122

```

The result grid shows one row:

Customer_name
James Miller

The output pane shows the execution log with the following messages:

```

262 17:22:35 SELECT Book_title, Category, Rental_Price FROM Books WHERE Status = 'yes' LIMIT 0, 10 3 row(s) returned
263 17:22:35 SELECT Emp_name, Salary FROM Employee ORDER BY Salary DESC LIMIT 0, 10 6 row(s) returned
264 17:22:35 SELECT Books.Book_title, Customer.Customer_name FROM IssueStatus JOIN Books ON I... 3 row(s) returned
265 17:22:35 SELECT Category, COUNT(*) AS Total_Books FROM Books GROUP BY Category LIMIT 0... 3 row(s) returned
266 17:22:35 SELECT Emp_name, Position FROM Employee WHERE Salary > 50000 LIMIT 0, 10 3 row(s) returned
267 17:22:35 SELECT Customer.Customer_name FROM Customer LEFT JOIN IssueStatus ON Customer... 1 row(s) returned

```

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

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL query:

```

121 WHERE Reg_date < '2022-01-01' AND IssueStatus.Issue_Id IS NULL;
122
123 SELECT Branch_no, COUNT(*) AS Total_Employees
124 FROM Employee
125 GROUP BY Branch_no;
126

```

The result grid shows three rows:

Branch_no	Total_Employees
1	2
2	2
3	2

The output pane shows the execution log with the following messages:

```

290 17:25:46 SELECT Emp_name, Salary FROM Employee ORDER BY Salary DESC LIMIT 0, 10 6 row(s) returned
291 17:25:46 SELECT Books.Book_title, Customer.Customer_name FROM IssueStatus JOIN Books ON I... 3 row(s) returned
292 17:25:46 SELECT Category, COUNT(*) AS Total_Books FROM Books GROUP BY Category LIMIT 0... 3 row(s) returned
293 17:25:46 SELECT Emp_name, Position FROM Employee WHERE Salary > 50000 LIMIT 0, 10 3 row(s) returned
294 17:25:46 SELECT Customer.Customer_name FROM Customer LEFT JOIN IssueStatus ON Customer... 1 row(s) returned
295 17:25:46 SELECT Branch_no, COUNT(*) AS Total_Employees FROM Employee GROUP BY Branch... 3 row(s) returned

```

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

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
125 GROUP BY Branch_no;
126
127 SELECT DISTINCT Customer.Customer_name
128 FROM IssueStatus
129 JOIN Customer ON IssueStatus.Issued_cust = Customer.Customer_Id
130 WHERE Issue_date BETWEEN '2023-06-01' AND '2023-06-30';
```

The Results tab shows a single row of data:

Customer_name
Sophia Brown

The Output tab shows the execution log with the following entries:

#	Time	Action	Message	Duration / Fetch
319	17:27:38	SELECT Books.Book_title, Customer.Customer_name FROM IssueStatus JOIN Books ON I...	3 row(s) returned	0.000 sec / 0.000 sec
320	17:27:38	SELECT Category, COUNT(*) AS Total_Books FROM Books GROUP BY Category LIMIT 0...	3 row(s) returned	0.000 sec / 0.000 sec
321	17:27:38	SELECT Emp_name, Position FROM Employee WHERE Salary > 50000 LIMIT 0, 10	3 row(s) returned	0.000 sec / 0.000 sec
322	17:27:38	SELECT Customer.Customer_name FROM Customer LEFT JOIN IssueStatus ON Customer...	1 row(s) returned	0.000 sec / 0.000 sec
323	17:27:38	SELECT Branch_no, COUNT(*) AS Total_Employees FROM Employee GROUP BY Branch...	3 row(s) returned	0.000 sec / 0.000 sec
324	17:27:38	SELECT DISTINCT Customer.Customer_name FROM IssueStatus JOIN Customer ON Issu...	1 row(s) returned	0.000 sec / 0.000 sec

9. Retrieve book\_title from book table containing history.

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
137 SET SQL_SAFE_UPDATES = 1;
138
139 SELECT Book_title
140 FROM Books
141 WHERE Category LIKE '%history%';
142
```

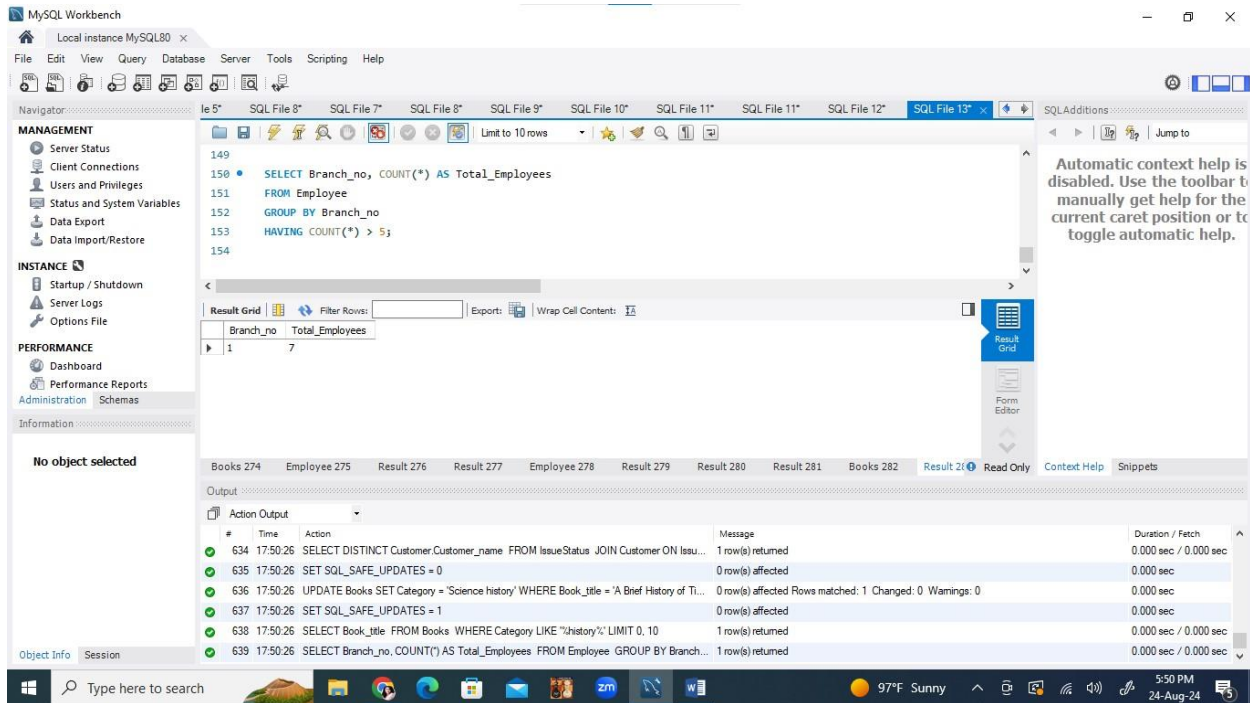
The Results tab shows a single row of data:

Book_title
A Brief History of Time

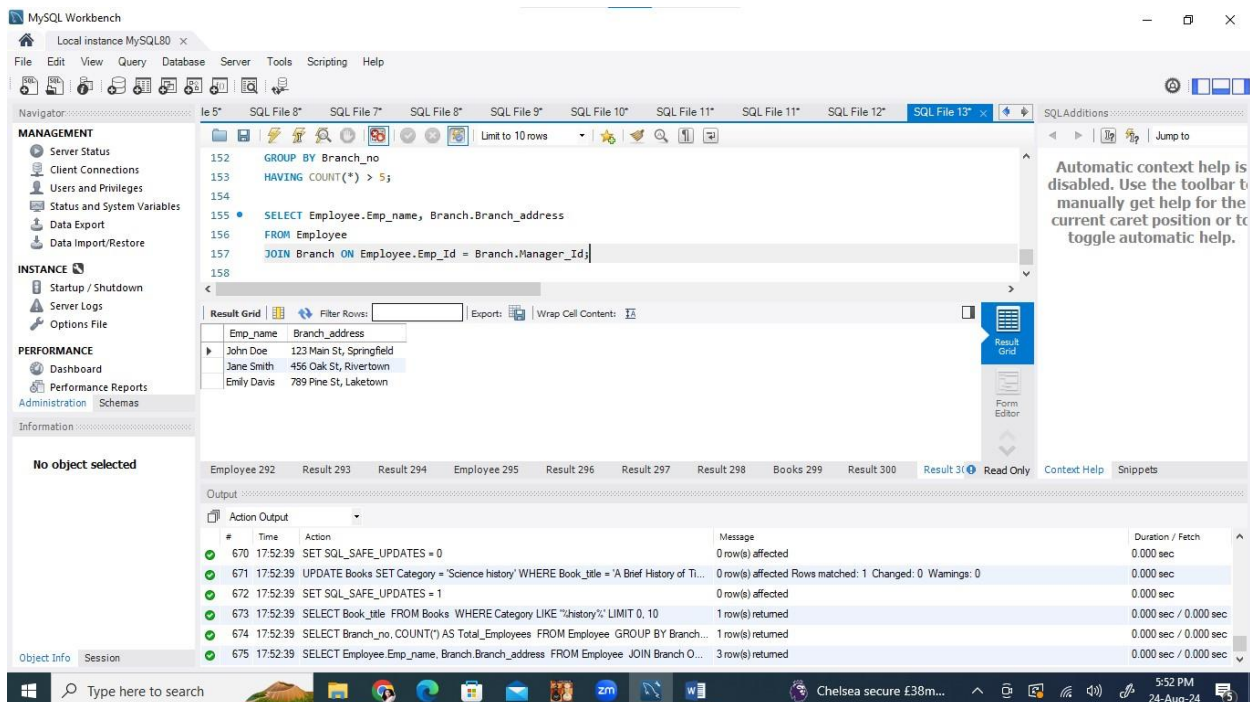
The Output tab shows the execution log with the following entries:

#	Time	Action	Message	Duration / Fetch
565	17:44:33	SELECT Branch_no, COUNT(*) AS Total_Employees FROM Employee GROUP BY Branch...	3 row(s) returned	0.000 sec / 0.000 sec
566	17:44:33	SELECT DISTINCT Customer.Customer_name FROM IssueStatus JOIN Customer ON Issu...	1 row(s) returned	0.000 sec / 0.000 sec
567	17:44:33	SET SQL_SAFE_UPDATES = 0	0 row(s) affected	0.000 sec
568	17:44:33	UPDATE Books SET Category = 'Science history' WHERE Book_title = 'A Brief History of Ti...	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec
569	17:44:33	SET SQL_SAFE_UPDATES = 1	0 row(s) affected	0.000 sec
570	17:44:33	SELECT Book_title FROM Books WHERE Category LIKE '%history%' LIMIT 0, 10	1 row(s) returned	0.000 sec / 0.000 sec

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



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



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

MySQL Workbench

Local instance MySQL80 x

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Information

No object selected

SQL File 13\*

```
158
159 SELECT DISTINCT Customer.Customer_name
160 FROM IssueStatus
161 JOIN Books ON IssueStatus.Isbn_book = Books.ISBN
162 JOIN Customer ON IssueStatus.Issued_cust = Customer.Customer_Id
163 WHERE Books.Rental_Price > 25;
164
```

Result Grid

Customer_name
Olivia Wilson
Sophia Brown
William Johnson

Output

Action Output

#	Time	Action	Message	Duration / Fetch
707	17:53:55	UPDATE Books SET Category = 'Science history' WHERE Book_title = 'A Brief History of TL...	0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0	0.000 sec
708	17:53:55	SET SQL_SAFE_UPDATES = 1	0 row(s) affected	0.000 sec
709	17:53:55	SELECT Book_title FROM Books WHERE Category LIKE "%history%"; LIMIT 0, 10	1 row(s) returned	0.000 sec / 0.000 sec
710	17:53:55	SELECT Branch_no, COUNT(*) AS Total_Employees FROM Employee GROUP BY Branch...	1 row(s) returned	0.000 sec / 0.000 sec
711	17:53:55	SELECT Employee.Emp_name, Branch.Branch_address FROM Employee JOIN Branch O...	3 row(s) returned	0.000 sec / 0.000 sec
712	17:53:55	SELECT DISTINCT Customer.Customer_name FROM IssueStatus JOIN Books ON IssueS...	3 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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