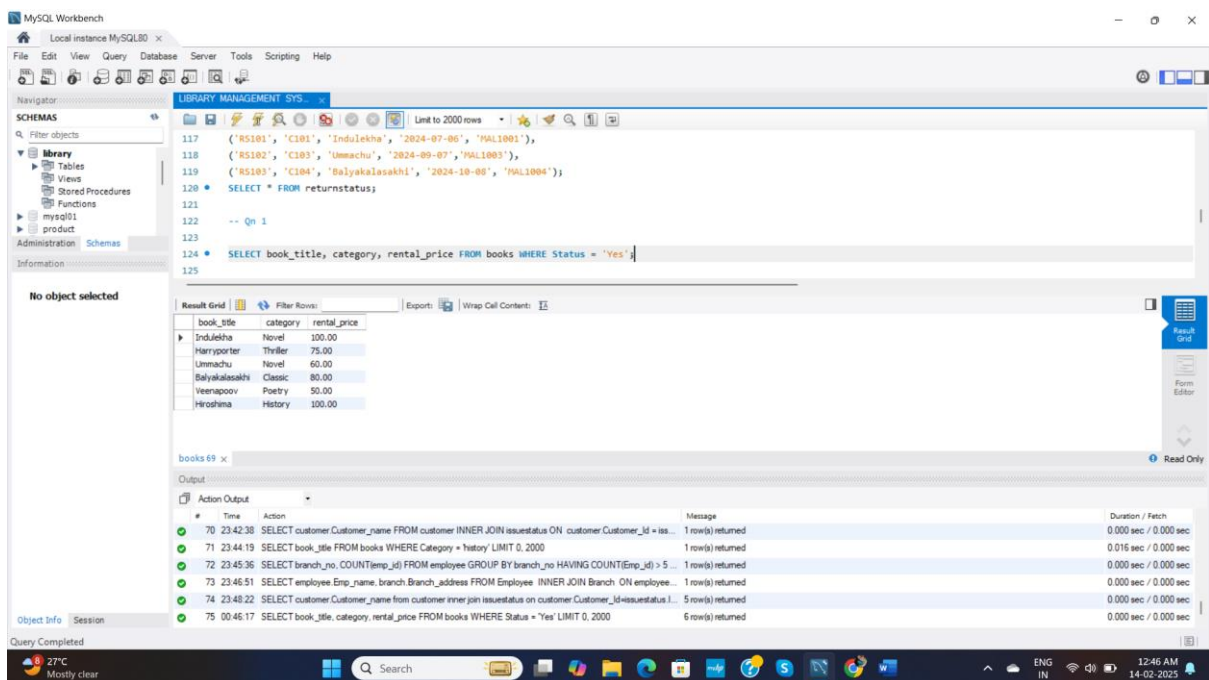


SQL PROJECT

LIBRARY MANAGEMENT

SYSTEM

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



The screenshot displays the MySQL Workbench interface. The SQL Editor contains the following query:

```
117 ('S101', 'C101', 'Indulekha', '2024-07-06', 'PAL1001'),
118 ('S102', 'C103', 'Ummachu', '2024-09-07', 'PAL1003'),
119 ('S103', 'C104', 'Balyakalasakhi', '2024-10-08', 'PAL1004'));
120 * SELECT * FROM returnstatus;
121
122 -- Qn 1
123
124 * SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes';
125
```

The Result Grid shows the following data:

book_title	category	rental_price
Indulekha	Novel	100.00
Haripriya	Thriller	75.00
Ummachu	Novel	60.00
Balyakalasakhi	Classic	80.00
Venapoo	Poetry	50.00
Hiroshima	History	100.00

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

#	Time	Action	Message	Duration / Fetch
70	23:42:38	SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON customer.Customer_id = iss...	1 row(s) returned	0.000 sec / 0.000 sec
71	23:44:19	SELECT book_title FROM books WHERE Category = 'history' LIMIT 0, 2000	1 row(s) returned	0.016 sec / 0.000 sec
72	23:45:36	SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no HAVING COUNT(emp_id) > 5	1 row(s) returned	0.000 sec / 0.000 sec
73	23:46:51	SELECT employee.Emp_name, branch.Branch_address FROM Employee INNER JOIN Branch ON employee...	1 row(s) returned	0.000 sec / 0.000 sec
74	23:48:22	SELECT customer.Customer_name from customer inner join issuestatus on customer.Customer_id=issuestatus.i...	5 row(s) returned	0.000 sec / 0.000 sec
75	00:46:17	SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes' LIMIT 0, 2000	6 row(s) returned	0.000 sec / 0.000 sec

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

The screenshot displays the MySQL Workbench interface. The 'Query' tab is active, showing a SQL query: `SELECT emp_name, salary FROM employee ORDER BY Salary DESC;`. The 'Result Grid' shows the output of this query, listing employee names and their salaries in descending order. The 'Output' tab at the bottom shows the execution log, indicating that the query was completed successfully.

emp_name	salary
Sivan	60000.00
Malavika	55000.00
Vidya	52000.00
Dharsana	50000.00
Jithender	45000.00
Manju	43000.00
Manju	42000.00
Devayani	40000.00

Query Completed

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

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' panel with a tree view containing 'library', 'mysql01', and 'product'. The 'library' schema is selected. The main editor window shows a SQL query in the 'LIBRARY MANAGEMENT SYS' tab. The query is as follows:

```
126 -- Qn 2
127
128 • SELECT emp_name, salary FROM employee ORDER BY Salary DESC;
129
130 -- Qn 3
131
132 • SELECT issuestatus.Issued_book_name, customer.Customer_name FROM issuestatus INNER JOIN
133 customer ON issuestatus.Issued_cust = customer.Customer_Id;
134
```

Below the query editor, the 'Result Grid' shows the results of the query. The columns are 'Issued_book_name' and 'Customer_name'. The data is as follows:

Issued_book_name	Customer_name
Indulekha	Aswathy
Harryporter	Shibu
Ummachu	JITHU
Balayakalakshi	ANIL
Veenapoor	AMELI

The bottom panel shows the 'Output' tab with a table of query execution details:

#	Time	Action	Message	Duration / Fetch
72	23:45:36	SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no HAVING COUNT(emp_id) > 5	1 row(s) returned	0.000 sec / 0.000 sec
73	23:46:51	SELECT employee.Emp_name, branch.Branch_address FROM Employee INNER JOIN Branch ON employee...	1 row(s) returned	0.000 sec / 0.000 sec
74	23:48:22	SELECT customer.Customer_name from customer inner join issuestatus on customer.Customer_Id=issuestatus.I...	5 row(s) returned	0.000 sec / 0.000 sec
75	00:46:17	SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes' LIMIT 0, 2000	6 row(s) returned	0.000 sec / 0.000 sec
76	00:48:24	SELECT emp_name, salary FROM employee ORDER BY Salary DESC LIMIT 0, 2000	8 row(s) returned	0.016 sec / 0.000 sec
77	00:51:41	SELECT issuestatus.Issued_book_name, customer.Customer_name FROM issuestatus INNER JOIN customer ...	5 row(s) returned	0.000 sec / 0.000 sec

The bottom status bar shows 'Query Completed' and the system clock is 12:51 AM on 14-02-2025.

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

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' panel with a tree view containing 'library', 'mysql01', and 'product'. The 'library' schema is selected. The main editor window shows a SQL query in the 'LIBRARY MANAGEMENT SYS.' tab. The query is as follows:

```
130 -- Qn 3
131
132 * SELECT issuestatus.Issued_book_name, customer.Customer_name FROM issuestatus INNER JOIN
133 customer ON issuestatus.Issued_cust = customer.Customer_Id;
134
135 -- Qn 4
136
137 * SELECT Category, COUNT(Book_title) FROM books GROUP BY Category;
138
```

Below the query editor, the 'Result Grid' shows the results of the query. The table has two columns: 'Category' and 'COUNT(Book_title)'. The data is as follows:

Category	COUNT(Book_title)
Novel	2
Thriller	1
Classic	1
Poetry	1
History	1

The bottom panel shows the 'Output' tab with a log of database actions. The log includes the following entries:

#	Time	Action	Message	Duration / Fetch
73	23:46:51	SELECT employee Emp_name, branch Branch_address FROM Employee INNER JOIN Branch ON employee...	1 row(s) returned	0.000 sec / 0.000 sec
74	23:48:22	SELECT customer.Customer_name from customer inner join issuestatus on customer.Customer_Id=issuestatus.I...	5 row(s) returned	0.000 sec / 0.000 sec
75	00:46:17	SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes' LIMIT 0, 2000	6 row(s) returned	0.000 sec / 0.000 sec
76	00:48:24	SELECT emp_name, salary FROM employee ORDER BY Salary DESC LIMIT 0, 2000	8 row(s) returned	0.016 sec / 0.000 sec
77	00:51:41	SELECT issuestatus.Issued_book_name, customer.Customer_name FROM issuestatus INNER JOIN customer ...	5 row(s) returned	0.000 sec / 0.000 sec
78	00:55:35	SELECT Category, COUNT(Book_title) FROM books GROUP BY Category LIMIT 0, 2000	5 row(s) returned	0.000 sec / 0.000 sec

The status bar at the bottom indicates 'Query Completed' and shows the system clock as 12:55 AM on 14-02-2025.

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 'SCHEMAS' pane on the left shows the 'library' database selected. The 'Query' pane in the center contains the following SQL query:

```
134  
135 -- Qn 4  
136  
137 SELECT Category, COUNT(Book_title) FROM books GROUP BY Category;  
138  
139 -- Qn 5  
140  
141 SELECT emp_name, position FROM employee WHERE Salary > 50000;  
142
```

The 'Result Grid' pane shows the results of the query. It contains a table with two columns: 'emp_name' and 'position'. The data is as follows:

emp_name	position
Sivan	Manager
Malavika	Librarian
Vidya	Cashier

The 'Output' pane at the bottom shows the execution log, including the query and its results. The log shows that the query was executed successfully and returned 3 rows.

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' tab is active, displaying a SQL query. The 'Navigator' pane on the left shows the 'SCHEMAS' section with 'library' selected. The 'Result Grid' pane shows the results of the query, which is a list of customer names. The 'Output' pane at the bottom shows the execution log.

Query:

```
139 -- Qn 5
140
141 SELECT emp_name, position FROM employee WHERE Salary > 50000;
142
143 -- Qn 6
144
145 SELECT customer_name FROM customer WHERE Reg_date < '2022-01-01' AND Customer_Id NOT IN
146 (SELECT issued_cust FROM issuestatus);
147
```

Result Grid:

customer_name
Ramu

Output:

#	Time	Action	Message	Duration / Fetch
75	00:46:17	SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes' LIMIT 0, 2000	6 row(s) returned	0.000 sec / 0.000 sec
76	00:48:24	SELECT emp_name, salary FROM employee ORDER BY Salary DESC LIMIT 0, 2000	8 row(s) returned	0.016 sec / 0.000 sec
77	00:51:41	SELECT issuestatus.issued_book_name, customer_name FROM issuestatus INNER JOIN customer	5 row(s) returned	0.000 sec / 0.000 sec
78	00:55:35	SELECT Category, COUNT(Book_title) FROM books GROUP BY Category LIMIT 0, 2000	5 row(s) returned	0.000 sec / 0.000 sec
79	00:56:42	SELECT emp_name, position FROM employee WHERE Salary > 50000 LIMIT 0, 2000	3 row(s) returned	0.000 sec / 0.000 sec
80	00:58:20	SELECT customer_name FROM customer WHERE Reg_date < '2022-01-01' AND Customer_Id NOT IN (SEL...	1 row(s) returned	0.016 sec / 0.000 sec

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 statements:

```
156 • UPDATE employee SET branch_no = 'B101' WHERE emp_id = 'E102';
157 • UPDATE employee SET branch_no = 'B101' WHERE emp_id = 'E103';
158 • UPDATE employee SET branch_no = 'B101' WHERE emp_id = 'E104';
159 • UPDATE employee SET branch_no = 'B102' WHERE emp_id = 'E105';
160 • UPDATE employee SET branch_no = 'B102' WHERE emp_id = 'E106';
161 • UPDATE employee SET branch_no = 'B101' WHERE emp_id = 'E106';
162
163 • SELECT Branch_no, COUNT(emp_id) FROM employee GROUP BY Branch_no;
164
```

The result grid shows the output of the last query:

Branch_no	COUNT(emp_id)
B101	7
B102	1

The bottom panel shows the Action Output with a list of executed queries and their durations.

#	Time	Action	Message	Duration / Fetch
76	00:48:24	SELECT emp_name, salary FROM employee ORDER BY Salary DESC LIMIT 0, 2000	8 row(s) returned	0.016 sec / 0.000 sec
77	00:51:41	SELECT issuestatus, issued_book_name, customer Customer_name FROM issuestatus INNER JOIN customer	5 row(s) returned	0.000 sec / 0.000 sec
78	00:55:35	SELECT Category, COUNT(Book_title) FROM books GROUP BY Category LIMIT 0, 2000	5 row(s) returned	0.000 sec / 0.000 sec
79	00:56:42	SELECT emp_name, position FROM employee WHERE Salary > 50000 LIMIT 0, 2000	3 row(s) returned	0.000 sec / 0.000 sec
80	00:58:20	SELECT customer_name FROM customer WHERE Reg_date < '2022-01-01' AND Customer_M NOT IN SEL	1 row(s) returned	0.016 sec / 0.000 sec
81	00:59:53	SELECT Branch_no, COUNT(emp_id) FROM employee GROUP BY Branch_no LIMIT 0, 2000	2 row(s) returned	0.000 sec / 0.000 sec

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

The screenshot displays the MySQL Workbench interface. The 'SCHEMAS' pane on the left shows the 'library' database selected. The 'Query Editor' pane contains the following SQL query:

```
162
163 • SELECT Branch_no, COUNT(emp_id) FROM employee GROUP BY Branch_no;
164
165 -- Qn 8
166
167 • SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON
168   customer.Customer_Id = issuestatus.Issued_cust WHERE issuestatus.Issue_date >= '2023-06-01' AND
169   issuestatus.Issue_date <= '2023-06-30';
170
```

The 'Result Grid' pane shows the results of the query. The first query (line 163) has returned 5 rows. The second query (line 167) has returned 1 row, with the customer name 'AMBILI' displayed.

The 'Output' pane shows the execution log with the following entries:

#	Time	Action	Message	Duration / Fetch
77	00:51:41	SELECT issuestatus.Issued_book_name, customer.Customer_name FROM issuestatus INNER JOIN customer	5 row(s) returned	0.000 sec / 0.000 sec
78	00:55:35	SELECT Category, COUNT(Book_title) FROM books GROUP BY Category LIMIT 0, 2000	5 row(s) returned	0.000 sec / 0.000 sec
79	00:56:42	SELECT emp_name, position FROM employee WHERE Salary > 50000 LIMIT 0, 2000	3 row(s) returned	0.000 sec / 0.000 sec
80	00:58:20	SELECT customer_name FROM customer WHERE Reg_date < '2022-01-01' AND Customer_Id NOT IN (SEL...	1 row(s) returned	0.016 sec / 0.000 sec
81	00:59:53	SELECT Branch_no, COUNT(emp_id) FROM employee GROUP BY Branch_no LIMIT 0, 2000	2 row(s) returned	0.000 sec / 0.000 sec
82	01:00:56	SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON customer.Customer_Id = iss...	1 row(s) returned	0.000 sec / 0.000 sec

The status bar at the bottom indicates 'Query Completed' and the system time is 01:00 AM on 14-02-2025.

9. Retrieve book_title from book table containing history.

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

```
166
167 • SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON
168 customer.Customer_id = issuestatus.Issued_cust WHERE issuestatus.Issue_date >= '2023-06-01' AND
169 issuestatus.Issue_date <= '2023-06-30';
170
171 -- Qn 9
172
173 • SELECT book_title FROM books WHERE Category = 'history';
174
```

The left sidebar shows the Schemas pane with the 'library' database selected. The 'books' table is highlighted in the 'Tables' list. The bottom pane shows the 'Action Output' tab with a list of executed queries and their results.

#	Time	Action	Message	Duration / Fetch
78	00:55:35	SELECT Category, COUNT(Book_title) FROM books GROUP BY Category LIMIT 0, 2000	5 row(s) returned	0.000 sec / 0.000 sec
79	00:56:42	SELECT emp_name, position FROM employee WHERE Salary > 50000 LIMIT 0, 2000	3 row(s) returned	0.000 sec / 0.000 sec
80	00:58:20	SELECT customer_name FROM customer WHERE Reg_date < '2022-01-01' AND Customer_id NOT IN (SEL...	1 row(s) returned	0.016 sec / 0.000 sec
81	00:59:53	SELECT Branch_no, COUNT(emp_id) FROM employee GROUP BY Branch_no LIMIT 0, 2000	2 row(s) returned	0.000 sec / 0.000 sec
82	01:00:56	SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON customer.Customer_id = iss...	1 row(s) returned	0.000 sec / 0.000 sec
83	01:02:03	SELECT book_title FROM books WHERE Category = 'history' LIMIT 0, 2000	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.

The screenshot displays the MySQL Workbench interface. The 'Query' tab is active, showing a SQL query that retrieves branch numbers and employee counts for branches with more than 5 employees. The query is as follows:

```
-- Qn 9
SELECT book_title FROM books WHERE Category = 'history';
-- Qn 10
SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no HAVING COUNT(Emp_id) > 5;
```

The 'Result Grid' shows the output of the query, which is a single row with the following data:

branch_no	COUNT(emp_id)
8101	7

The 'Action Output' tab at the bottom shows the execution details of the query, including the time taken and the number of rows returned.

#	Time	Action	Message	Duration / Fetch
79	00:56:42	SELECT emp_name, position FROM employee WHERE Salary > 50000 LIMIT 0, 2000	3 row(s) returned	0.000 sec / 0.000 sec
80	00:58:20	SELECT customer_name FROM customer WHERE Reg_date < 2022-01-01 AND Customer_Id NOT IN (SEL...	1 row(s) returned	0.016 sec / 0.000 sec
81	00:59:53	SELECT Branch_no, COUNT(emp_id) FROM employee GROUP BY Branch_no LIMIT 0, 2000	2 row(s) returned	0.000 sec / 0.000 sec
82	01:00:56	SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON customer.Customer_Id = iss...	1 row(s) returned	0.000 sec / 0.000 sec
83	01:02:03	SELECT book_title FROM books WHERE Category = 'history' LIMIT 0, 2000	1 row(s) returned	0.000 sec / 0.000 sec
84	01:03:16	SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no HAVING COUNT(Emp_id) > 5 ...	1 row(s) returned	0.000 sec / 0.000 sec

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

The screenshot displays the MySQL Workbench interface. The 'Query' tab is active, showing a SQL query that retrieves the names of employees who manage branches and their respective branch addresses. The query is as follows:

```
177 SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no HAVING COUNT(emp_id) > 5;
178
179 -- Qn 11
180
181 SELECT employee.emp_name, branch.branch_address
182 FROM Employee
183 INNER JOIN Branch ON employee.branch_no= branch.branch_no
184 WHERE employee.Position = 'Manager';
185
```

The 'Result Grid' shows the following data:

Emp_name	Branch_address
Sivan	L2 Kollam

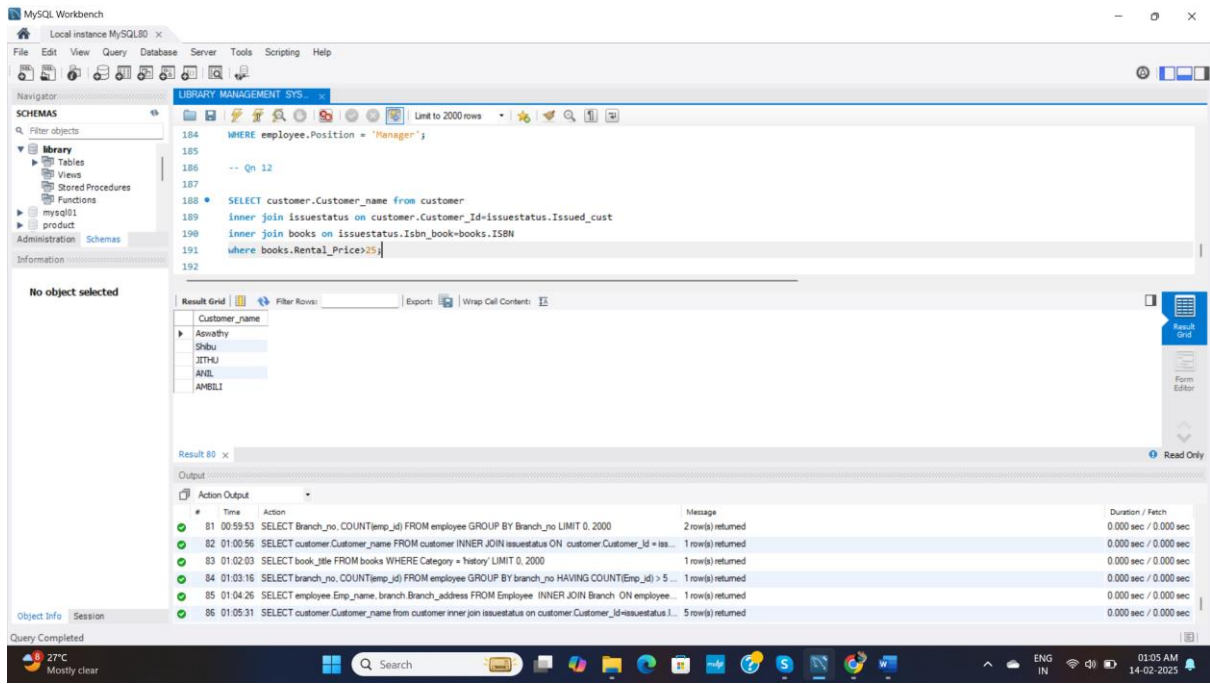
The 'Output' tab shows the execution log, including the query and its results. The log indicates that the query was executed successfully and returned 1 row(s).

Query Completed

27°C Mostly clear

01:04 AM 14-02-2025

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



The screenshot displays the MySQL Workbench interface. The left sidebar shows the 'SCHEMAS' panel with 'LIBRARY MANAGEMENT SYS' selected. The main editor window contains the following SQL query:

```
184 WHERE employee.Position = 'Manager';
185
186 -- Qn 12
187
188 SELECT customer.Customer_name from customer
189 inner join issuestatus on customer.Customer_id=issuestatus.Issued_cust
190 inner join books on issuestatus.Isbn_book=books.ISBN
191 where books.Rental_Price>25;
192
```

Below the query editor, the 'Result Grid' shows the output of the query. The results are as follows:

Customer_name
Aashu
Shibu
JITHU
ANIL
AMBILI

The bottom panel shows the 'Action Output' tab, which displays a log of database actions and their execution times. The log includes the following entries:

#	Time	Action	Message	Duration / Fetch
81	00:59:53	SELECT Branch_no, COUNT(emp_id) FROM employee GROUP BY Branch_no LIMIT 0, 2000	2 row(s) returned	0.000 sec / 0.000 sec
82	01:00:56	SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON customer.Customer_id = iss...	1 row(s) returned	0.000 sec / 0.000 sec
83	01:02:03	SELECT book_title FROM books WHERE Category = 'History' LIMIT 0, 2000	1 row(s) returned	0.000 sec / 0.000 sec
84	01:03:16	SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no HAVING COUNT(emp_id) > 5 ...	1 row(s) returned	0.000 sec / 0.000 sec
85	01:04:26	SELECT employee Emp_name, branch Branch_address FROM Employee INNER JOIN Branch ON employee ...	1 row(s) returned	0.000 sec / 0.000 sec
86	01:05:31	SELECT customer.Customer_name from customer inner join issuestatus on customer.Customer_id=issuestatus.I...	5 row(s) returned	0.000 sec / 0.000 sec