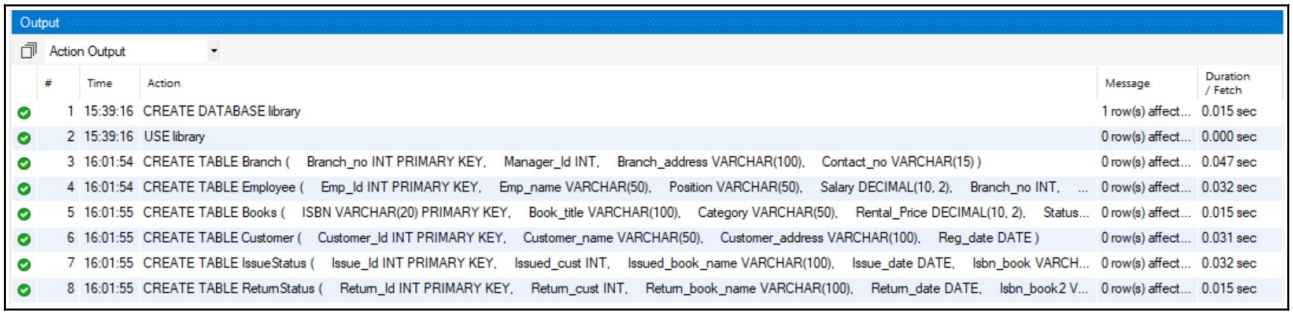
```sql
-- Database Creation
CREATE DATABASE library;
USE library;

-- Branch Table Creation
CREATE TABLE Branch (
  Branch_no INT PRIMARY KEY,
  Manager_Id INT,
  Branch_address VARCHAR(100),
  Contact_no VARCHAR(15)
);

-- Employee Table Creation
CREATE TABLE Employee (
  Emp_Id INT PRIMARY KEY,
  Emp_name VARCHAR(50),
  Position VARCHAR(50),
  Salary DECIMAL(10, 2),
  Branch_no INT,
  FOREIGN KEY (Branch_no) REFERENCES Branch(Branch_no)
);

-- Books Table Creation
CREATE TABLE Books (
  ISBN VARCHAR(20) PRIMARY KEY,
  Book_title VARCHAR(100),
  Category VARCHAR(50),
  Rental_Price DECIMAL(10, 2),
  Status VARCHAR(3) DEFAULT 'YES',
  Author VARCHAR(50),
  Publisher VARCHAR(50)
);

-- Customer Table Creation
CREATE TABLE Customer (
  Customer_Id INT PRIMARY KEY,
  Customer_name VARCHAR(50),
  Customer_address VARCHAR(100),
  Reg_date DATE
);

-- IssueStatus Table Creation
CREATE TABLE IssueStatus (
  Issue_Id INT PRIMARY KEY,
  Issued_cust INT,
  Issued_book_name VARCHAR(100),
  Issue_date DATE,
  Isbn_book VARCHAR(20),
  FOREIGN KEY (Issued_cust) REFERENCES Customer(Customer_Id),
  FOREIGN KEY (Isbn_book) REFERENCES Books(ISBN)
);
```

```sql
-- ReturnStatus Table Creation
CREATE TABLE ReturnStatus (
  Return_Id INT PRIMARY KEY,
  Return_cust INT,
  Return_book_name VARCHAR(100),
  Return_date DATE,
  Isbn_book2 VARCHAR(20),
  FOREIGN KEY (Isbn_book2) REFERENCES Books(ISBN)
);
```

Output Screenshot:



Output

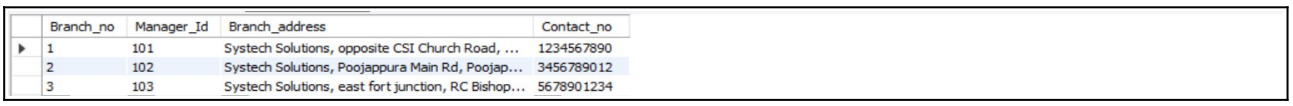
Action Output

#	Time	Action	Message	Duration / Fetch
1	15:39:16	CREATE DATABASE library	1 row(s) affect...	0.015 sec
2	15:39:16	USE library	0 row(s) affect...	0.000 sec
3	16:01:54	CREATE TABLE Branch (Branch_no INT PRIMARY KEY, Manager_Id INT, Branch_address VARCHAR(100), Contact_no VARCHAR(15))	0 row(s) affect...	0.047 sec
4	16:01:54	CREATE TABLE Employee (Emp_Id INT PRIMARY KEY, Emp_name VARCHAR(50), Position VARCHAR(50), Salary DECIMAL(10, 2), Branch_no INT, ...	0 row(s) affect...	0.032 sec
5	16:01:55	CREATE TABLE Books (ISBN VARCHAR(20) PRIMARY KEY, Book_title VARCHAR(100), Category VARCHAR(50), Rental_Price DECIMAL(10, 2), Status...	0 row(s) affect...	0.015 sec
6	16:01:55	CREATE TABLE Customer (Customer_Id INT PRIMARY KEY, Customer_name VARCHAR(50), Customer_address VARCHAR(100), Reg_date DATE)	0 row(s) affect...	0.031 sec
7	16:01:55	CREATE TABLE IssueStatus (Issue_Id INT PRIMARY KEY, Issued_cust INT, Issued_book_name VARCHAR(100), Issue_date DATE, Isbn_book VARCH...	0 row(s) affect...	0.032 sec
8	16:01:55	CREATE TABLE ReturnStatus (Return_Id INT PRIMARY KEY, Return_cust INT, Return_book_name VARCHAR(100), Return_date DATE, Isbn_book2 V...	0 row(s) affect...	0.015 sec

---

```sql
-- INSERTING VALUES TO TABLES
-- Inserting Values to Branch Table
INSERT INTO Branch ( Branch_no, Manager_Id , Branch_address, Contact_no) VALUES
(1,101,'Systech Solutions, opposite CSI Church Road, Mananchira, Kozhikode, Kerala
- 673001', '1234567890'),
(2,102,'Systech Solutions, Poojappura Main Rd, Poojapura, Thiruvananthapuram,
Kerala - 695012', '3456789012'),
(3,103,'Systech Solutions, east fort junction, RC Bishop House Rd, Thrissur, Kerala
- 680005', '5678901234');
SELECT * FROM branch
```

Output Screenshot:

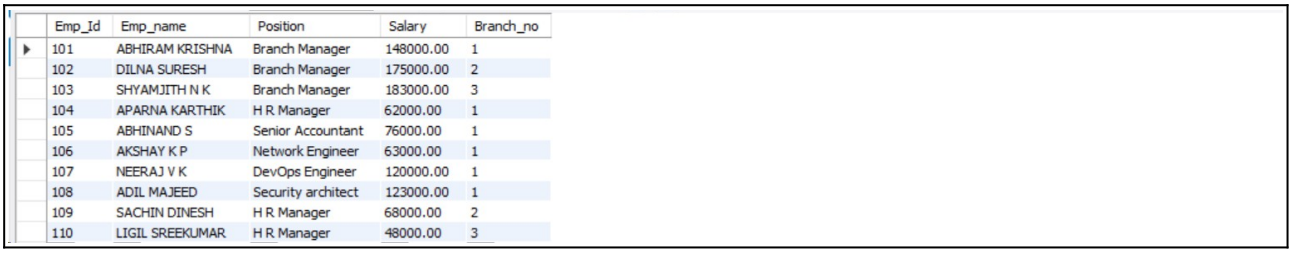


Branch_no	Manager_Id	Branch_address	Contact_no
1	101	Systech Solutions, opposite CSI Church Road, ...	1234567890
2	102	Systech Solutions, Poojappura Main Rd, Poojap...	3456789012
3	103	Systech Solutions, east fort junction, RC Bishop...	5678901234

```sql
-- Inserting Values to Employee Table
INSERT INTO Employee ( Emp_Id, Emp_name, Position , Salary, Branch_no) VALUES
(101, 'ABHIRAM KRISHNA', 'Branch Manager', 148000, 1),
(102, 'DILNA SURESH', 'Branch Manager', 175000, 2),
(103, 'SHYAMJITH N K', 'Branch Manager', 183000, 3),
(104, 'APARNA KARTHIK', 'H R Manager', 62000, 1),
(105, 'ABHINAND S', 'Senior Accountant', 76000, 1),
(106, 'AKSHAY K P', 'Network Engineer', 63000, 1),
(107, 'NEERAJ V K', 'DevOps Engineer', 120000, 1),
(108, 'ADIL MAJEED', 'Security architect', 123000, 1),
(109, 'SACHIN DINESH', 'H R Manager', 68000, 2),
```

```
(110, 'LIGIL SREEKUMAR', 'H R Manager', 48000, 3);
SELECT * FROM Employee;
```

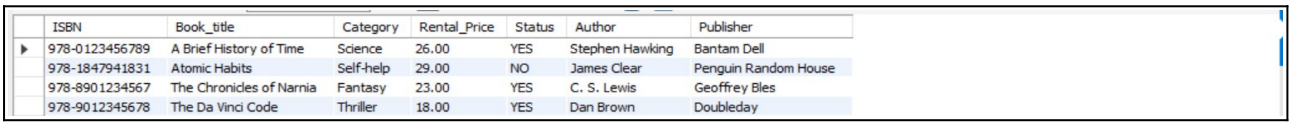
Output Screenshot:



Emp_Id	Emp_name	Position	Salary	Branch_no
101	ABHIRAM KRISHNA	Branch Manager	148000.00	1
102	DILNA SURESH	Branch Manager	175000.00	2
103	SHYAMJITH N K	Branch Manager	183000.00	3
104	APARNA KARTHIK	H R Manager	62000.00	1
105	ABHINAND S	Senior Accountant	76000.00	1
106	AKSHAY K P	Network Engineer	63000.00	1
107	NEERAJ V K	DevOps Engineer	120000.00	1
108	ADIL MAJEED	Security architect	123000.00	1
109	SACHIN DINESH	H R Manager	68000.00	2
110	LIGIL SREEKUMAR	H R Manager	48000.00	3

```
-- Inserting Values to Books Table
INSERT INTO Books ( ISBN, Book_title, Category, Rental_Price, Status, Author,
Publisher) VALUES
('978-1847941831', 'Atomic Habits', 'Self-help', 29.00, 'NO', 'James Clear',
'Penguin Random House'),
('978-8901234567', 'The Chronicles of Narnia', 'Fantasy', 23.00, 'YES', 'C. S.
Lewis', 'Geoffrey Bles'),
('978-9012345678', 'The Da Vinci Code', 'Thriller', 18.00, 'YES', 'Dan Brown',
'Doubleday'),
('978-0123456789', 'A Brief History of Time', 'Science', 26.00, 'YES', 'Stephen
Hawking', 'Bantam Dell');
SELECT * FROM Books;
```

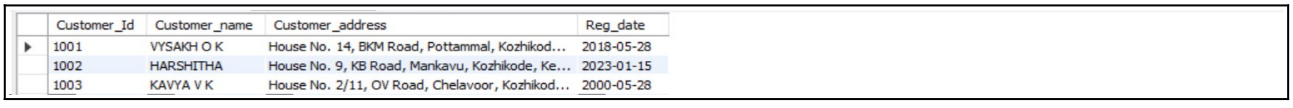
Output Screenshot:



ISBN	Book_title	Category	Rental_Price	Status	Author	Publisher
978-0123456789	A Brief History of Time	Science	26.00	YES	Stephen Hawking	Bantam Dell
978-1847941831	Atomic Habits	Self-help	29.00	NO	James Clear	Penguin Random House
978-8901234567	The Chronicles of Narnia	Fantasy	23.00	YES	C. S. Lewis	Geoffrey Bles
978-9012345678	The Da Vinci Code	Thriller	18.00	YES	Dan Brown	Doubleday

```
-- Inserting Values to Customer Table
INSERT INTO Customer ( Customer_Id, Customer_name, Customer_address, Reg_date)
VALUES
(1001, 'VYSAKH O K', 'House No. 14, BKM Road, Pottammal, Kozhikode, Kerala -
673001', '2018-05-28'),
(1002, 'HARSHITHA', 'House No. 9, KB Road, Mankavu, Kozhikode, Kerala - 673007',
'2023-01-15'),
(1001, 'KAVYA V K', 'House No. 2/11, OV Road, Chelavoor, Kozhikode, Kerala -
673571', '2000-05-28');
SELECT * FROM Customer;
```

Output Screenshot:



Customer_Id	Customer_name	Customer_address	Reg_date
1001	VYSAKH O K	House No. 14, BKM Road, Pottammal, Kozhikod...	2018-05-28
1002	HARSHITHA	House No. 9, KB Road, Mankavu, Kozhikode, Ke...	2023-01-15
1003	KAVYA V K	House No. 2/11, OV Road, Chelavoor, Kozhikod...	2000-05-28

```
-- Inserting Values to IssueStatus Table
INSERT INTO IssueStatus ( Issue_Id, Issued_cust, Issued_book_name, Issue_date,
Isbn_book) VALUES
(10001, 1001, 'Atomic Habits', '2023-05-11', '978-1847941831'),
(10002, 1003, 'The Da Vinci Code', '2024-01-23', '978-9012345678');
SELECT * FROM IssueStatus;
```

Output Screenshot:

Issue_Id	Issued_cust	Issued_book_name	Issue_date	Isbn_book
10001	1001	Atomic Habits	2023-05-11	978-1847941831
10002	1003	The Da Vinci Code	2024-01-23	978-9012345678

```
-- Inserting Values to ReturnStatus Table
INSERT INTO ReturnStatus ( Return_Id, Return_cust, Return_book_name, Return_date,
Isbn_book2) VALUES
(20001, 1002, 'The Da Vinci Code', '2024-05-02', '978-9012345678');
SELECT * FROM ReturnStatus;
```

Output Screenshot:

Return_Id	Return_cust	Return_book_name	Return_date	Isbn_book2
20001	1002	The Da Vinci Code	2024-05-02	978-9012345678

```
-- QUERIES

-- Q1. Retrieve the book title, category, and rental price of all available books.
SELECT Book_title, Category, Rental_Price FROM Books WHERE Status = 'YES';
```

Output Screenshot:

Book_title	Category	Rental_Price
A Brief History of Time	Science	26.00
The Chronicles of Narnia	Fantasy	23.00
The Da Vinci Code	Thriller	18.00

```
-- Q2. List the employee names and their respective salaries in descending order of
salary.
SELECT Emp_name, Salary FROM Employee ORDER BY Salary DESC;
```

Output Screenshot:

Emp_name	Salary
SHYAMJITH N K	183000.00
DILNA SURESH	175000.00
ABHIRAM KRISHNA	148000.00
ADIL MAJEED	123000.00
NEERAJ V K	120000.00
ABHINAND S	76000.00
SACHIN DINESH	68000.00
AKSHAY K P	63000.00
APARNA KARTHIK	62000.00
LIGIL SREEKUMAR	48000.00

```sql
-- Q3. Retrieve the book titles and the corresponding customers who have issued those books.
SELECT b.Book_title, c.Customer_name FROM Books b JOIN IssueStatus i ON b.ISBN = i.Isbn_book JOIN Customer c ON i.Issued_cust = c.Customer_Id;
```

Output Screenshot:

Book_title	Customer_name
Atomic Habits	VYSAKH O K
The Da Vinci Code	KAVYA V K

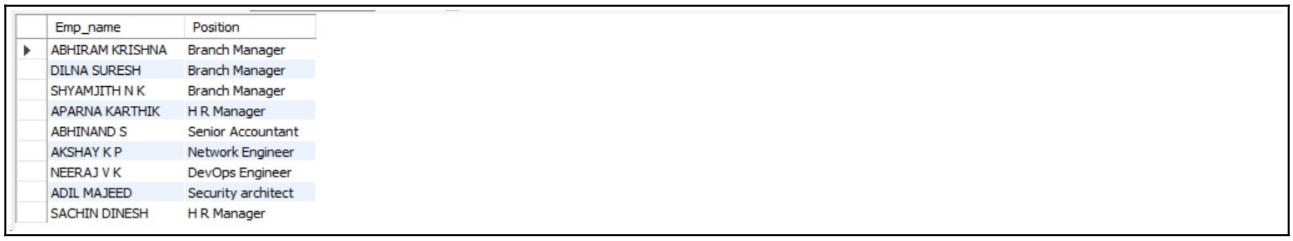
```sql
-- Q4. Display the total count of books in each category.
SELECT Category, COUNT(*) as 'Total Books' FROM Books GROUP BY Category;
```

Output Screenshot:

Category	Total Books
Science	1
Self-help	1
Fantasy	1
Thriller	1

```sql
-- Q5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.
SELECT Emp_name, Position FROM Employee WHERE Salary > 50000;
```

Output Screenshot:



Emp_name	Position
ABHIRAM KRISHNA	Branch Manager
DILNA SURESH	Branch Manager
SHYAMJITH N K	Branch Manager
APARNA KARTHIK	H R Manager
ABHINAND S	Senior Accountant
AKSHAY K P	Network Engineer
NEERAJ V K	DevOps Engineer
ADIL MAJEED	Security architect
SACHIN DINESH	H R Manager

```sql
-- Q6. List the customer names who registered before 2022-01-01 and have not issued any books yet.
SELECT Customer_name FROM Customer WHERE Reg_date < '2022-01-01' AND Customer_Id NOT IN (SELECT Issued_cust FROM IssueStatus);
```

Output Screenshot:

Customer_name

```sql
-- Q7. Display the branch numbers and the total count of employees in each branch.
SELECT Branch_no, COUNT(*) as 'Total Employees' FROM Employee GROUP BY Branch_no;
```

Output Screenshot:

Branch_no	Total Employees
1	6
2	2
3	2

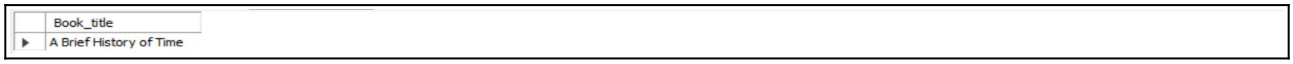
```sql
-- Q8. Display the names of customers who have issued books in the month of June 2023.
SELECT DISTINCT c.Customer_name FROM Customer c JOIN IssueStatus i ON c.Customer_Id = i.Issued_cust WHERE Issue_date LIKE '2023-06-%';
```

Output Screenshot:

Customer_name

```sql
-- Q9. Retrieve book_title from book table containing 'history'.
SELECT Book_title FROM Books WHERE Book_title LIKE '%history%';
```

Output Screenshot:



Book_title
A Brief History of Time

```sql
-- Q10.Retrieve the branch numbers along with the count of employees for branches having more than 5 employees.
SELECT Branch_no, COUNT(*) as 'Employee Count' FROM Employee GROUP BY Branch_no HAVING COUNT(*) > 5;
```

Output Screenshot:

Branch_no	Employee Count
1	6

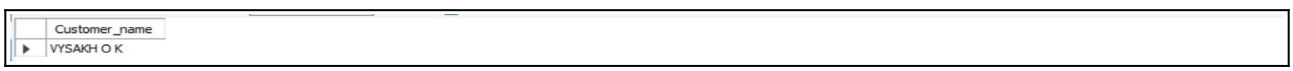
```sql
-- Q11. Retrieve the names of employees who manage branches and their respective branch addresses.
SELECT e.Emp_name, b.Branch_address FROM Employee e JOIN Branch b ON e.Emp_Id = b.Manager_Id;
```

Output Screenshot:

Emp_name	Branch_address
ABHIRAM KRISHNA	Systech Solutions, opposite CSI Church Road, Mananchira, Kozhikode, Kerala - 673001
DILNA SURESH	Systech Solutions, Poojappura Main Rd, Poojapura, Thiruvananthapuram, Kerala - 695012
SHYAMJITH N K	Systech Solutions, east fort junction, RC Bishop House Rd, Thrissur, Kerala - 680005

```sql
-- Q12.  Display the names of customers who have issued books with a rental price higher than Rs. 25.
SELECT DISTINCT c.Customer_name FROM Customer c JOIN IssueStatus i ON c.Customer_Id = i.Issued_cust JOIN Books b ON i.Isbn_book = b.ISBN WHERE b.Rental_Price > 25;
```

Output Screenshot:



Customer_name
VYSAKH O K