Module End Project

Library Management System

```
  1 •    CREATE DATABASE IF NOT EXISTS library;
  2 •    USE library;
  3 • ⊖  CREATE TABLE Branch (
  4          Branch_no INT PRIMARY KEY,
  5          Manager_Id INT,
  6          Branch_address VARCHAR(255),
  7          Contact_no VARCHAR(20)
  8       );
  9 • ⊖  CREATE TABLE Employee (
 10          Emp_Id INT PRIMARY KEY AUTO_INCREMENT,
 11          Emp_name VARCHAR(50),
 12          Position VARCHAR(50),
 13          Salary DECIMAL(10, 2),
 14          Branch_no INT,
 15          FOREIGN KEY (Branch_no) REFERENCES Branch(Branch_no)
 16       );
 17 • ⊖  CREATE TABLE Books (
```
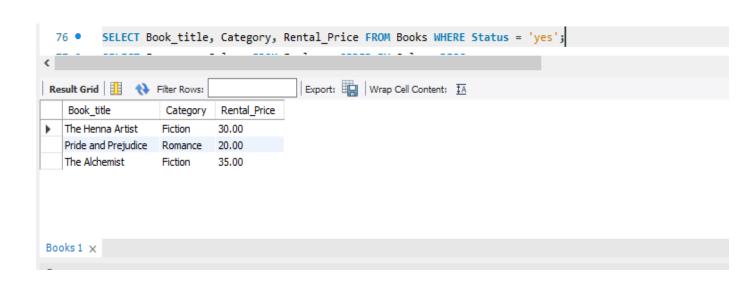
Output

Action Output ▾

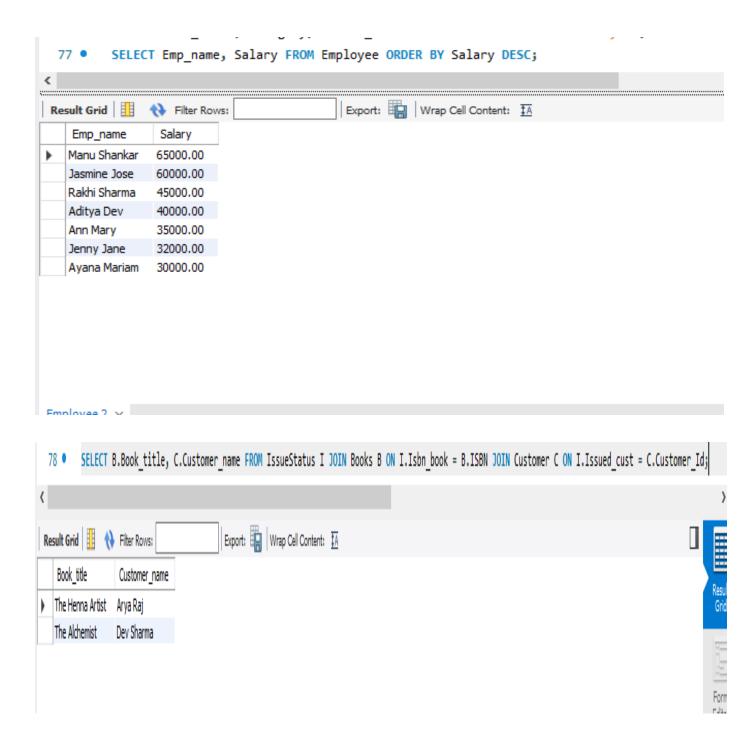| #	Time	Action	Message	Duration / Fetch
✓	1 15:17:05	CREATE DATABASE IF NOT EXISTS library	1 row(s) affected	0.094 sec
✓	2 15:17:05	USE library	0 row(s) affected	0.000 sec
✓	3 15:17:05	CREATE TABLE Branch (Branch_no INT PRIMARY KEY, Manager_Id INT, Branc...	0 row(s) affected	0.203 sec
✓	4 15:17:05	CREATE TABLE Employee (Emp_Id INT PRIMARY KEY AUTO_INCREMENT, Emp_...	0 row(s) affected	0.078 sec

```sql
17    CREATE TABLE Books (
18        ISBN VARCHAR(20) PRIMARY KEY,
19        Book_title VARCHAR(255),
20        Category VARCHAR(50),
21        Rental_Price DECIMAL(10, 2),
22        Status VARCHAR(3) CHECK (Status IN ('yes', 'no')),
23        Author VARCHAR(100),
24        Publisher VARCHAR(100)
25    );
26    CREATE TABLE Customer (
27        Customer_Id INT PRIMARY KEY AUTO_INCREMENT,
28        Customer_name VARCHAR(100),
29        Customer_address VARCHAR(255),
30        Reg_date DATE
31    );
32    CREATE TABLE IssueStatus (
33        Issue_Id INT PRIMARY KEY AUTO_INCREMENT
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓	2 15:17:05	USE library	0 row(s) affected	0.000 sec
✓	3 15:17:05	CREATE TABLE Branch (Branch_no INT PRIMARY KEY, Manager_Id INT, Bran...	0 row(s) affected	0.203 sec
✓	4 15:17:05	CREATE TABLE Employee (Emp_Id INT PRIMARY KEY AUTO_INCREMENT, Emp...	0 row(s) affected	0.078 sec
✓	5 15:19:26	CREATE TABLE Books (ISBN VARCHAR(20) PRIMARY KEY, Book_title VARCHA...	0 row(s) affected	0.062 sec
✓	6 15:19:26	CREATE TABLE Customer (Customer_Id INT PRIMARY KEY AUTO_INCREMENT, ...	0 row(s) affected	0.047 sec

```sql
32    CREATE TABLE IssueStatus (
33        Issue_Id INT PRIMARY KEY AUTO_INCREMENT,
34        Issued_cust INT,
35        Issued_book_name VARCHAR(255),
36        Issue_date DATE,
37        Isbn_book VARCHAR(20),
38        FOREIGN KEY (Issued_cust) REFERENCES Customer(Customer_Id),
39        FOREIGN KEY (Isbn_book) REFERENCES Books(ISBN)
40    );
41    CREATE TABLE ReturnStatus (
42        Return_Id INT PRIMARY KEY AUTO_INCREMENT,
43        Return_cust INT,
44        Return_book_name VARCHAR(255),
45        Return_date DATE,
46        Isbn_book2 VARCHAR(20),
47        FOREIGN KEY (Return_cust) REFERENCES Customer(Customer_Id),
48        FOREIGN KEY (Isbn_book2) REFERENCES Books(ISBN)
49    );
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓	5 15:19:26	CREATE TABLE Books (ISBN VARCHAR(20) PRIMARY KEY, Book_title VARCHA...	0 row(s) affected	0.062 sec
✓	6 15:19:26	CREATE TABLE Customer (Customer_Id INT PRIMARY KEY AUTO_INCREMENT, ...	0 row(s) affected	0.047 sec
✓	7 15:20:39	CREATE TABLE IssueStatus (Issue_Id INT PRIMARY KEY AUTO_INCREMENT, Is...	0 row(s) affected	0.063 sec
✓	8 15:20:39	CREATE TABLE ReturnStatus (Return_Id INT PRIMARY KEY AUTO_INCREMENT, ...	0 row(s) affected	0.047 sec

```sql
50 •    INSERT INTO Branch (Branch_no, Manager_Id, Branch_address, Contact_no) VALUES
51      (1, 101, 'Municipal Library , Kochi', '7566744343'),
52      (2, 102, 'Public Library,Kottayam', '7576465458');
53 •    INSERT INTO Employee (Emp_Id, Emp_name, Position, Salary, Branch_no) VALUES
54      (1, 'Jasmine Jose', 'Manager', 60000, 1),
55      (2, 'Rakhi Sharma', 'Librarian', 45000, 1),
56      (3, 'Ann Mary', 'Assistant', 35000, 1),
57      (4, 'Manu Shankar', 'Manager', 65000, 2),
58      (5, 'Aditya Dev', 'Librarian', 40000, 2),
59      (6, 'Ayana Mariam', 'Assistant', 30000, 2),
60      (7, 'Jenny Jane', 'Assistant', 32000, 2);
61 •    INSERT INTO Books (ISBN, Book_title, Category, Rental_Price, Status, Author, Publisher) VALUES
62      ('1484100', 'The Henna Artist', 'Fiction', 30, 'yes', 'Alka Joshi', 'Mira Books'),
63      ('4567897', 'The Great Gatsby', 'ROMANCE', 25, 'no', 'Author 2', 'Charles Scribner Sons'),
64      ('3456789', 'Pride and Prejudice', 'Romance', 20, 'yes', 'Jane Austen', 'T.Egerton'),
65      ('6543210', 'The Alchemist', 'Fiction', 35, 'yes', 'Paulo Coelho', 'HarperTorch'),
66      ('5432109', 'One Indian Girl', 'Fiction', 15, 'no', 'Chetan Bhagat', 'RUPA&Co');
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
9	16:09:45	CREATE TABLE ReturnStatus (Return_Id INT PRIMARY KEY AUTO_INCREMENT, ...	0 row(s) affected	0.047 sec
10	16:10:24	INSERT INTO Branch (Branch_no, Manager_Id, Branch_address, Contact_no) VALUES (...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.328 sec
11	16:10:33	INSERT INTO Employee (Emp_Id, Emp_name, Position, Salary, Branch_no) VALUES (1, '...	7 row(s) affected Records: 7 Duplicates: 0 Warnings: 0	0.219 sec
12	16:10:57	INSERT INTO Books (ISBN, Book_title, Category, Rental_Price, Status, Author, Publisher...	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.016 sec

```sql
67 •   INSERT INTO Customer (Customer_Id, Customer_name, Customer_address, Reg_date) VALUES
68     (1, 'Arya Raj', 'Jew Street,Kochi', '2021-12-15'),
69     (2, 'priya Raghav', 'Bazar Road,Kochi', '2022-01-10'),
70     (3, 'Dev Sharma', 'Garden Avenue,Ernakulam', '2023-06-20');
71 •   INSERT INTO IssueStatus (Issued_cust, Issued_book_name, Issue_date, Isbn_book) VALUES
72     (1, 'the Henna Artist', '2023-05-10', '1484100'),
73     (3, 'the Alchemist', '2023-06-15', '6543210');
74 •   INSERT INTO ReturnStatus (Return_cust, Return_book_name, Return_date, Isbn_book2) VALUES
75     (1, 'The Henna Artist', '2023-05-20', '1484100');
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 12	16:10:57	INSERT INTO Books (ISBN, Book_title, Category, Rental_Price, Status, Author, Publisher...	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.016 sec
✓ 13	16:12:10	INSERT INTO Customer (Customer_Id, Customer_name, Customer_address, Reg_date) V...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
✓ 14	16:12:10	INSERT INTO IssueStatus (Issued_cust, Issued_book_name, Issue_date, Isbn_book) VA...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.015 sec
✓ 15	16:12:10	INSERT INTO ReturnStatus (Return_cust, Return_book_name, Return_date, Isbn_book2...	1 row(s) affected	0.000 sec

```sql
76 •   SELECT Book_title, Category, Rental_Price FROM Books WHERE Status = 'yes';
```

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

Book_title	Category	Rental_Price
The Henna Artist	Fiction	30.00
Pride and Prejudice	Romance	20.00
The Alchemist	Fiction	35.00

Books 1 ✕

```sql
77 •     SELECT Emp_name, Salary FROM Employee ORDER BY Salary DESC;
```

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

Emp_name	Salary
Manu Shankar	65000.00
Jasmine Jose	60000.00
Rakhi Sharma	45000.00
Aditya Dev	40000.00
Ann Mary	35000.00
Jenny Jane	32000.00
Ayana Mariam	30000.00

Employee 2

```sql
78 •     SELECT B.Book_title, C.Customer_name FROM IssueStatus I JOIN Books B ON I.Isbn_book = B.ISBN JOIN Customer C ON I.Issued_cust = C.Customer_Id;
```

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

Book_title	Customer_name
The Henna Artist	Arya Raj
The Alchemist	Dev Sharma

```
79 •    SELECT Category, COUNT(*) AS Total_Count FROM Books GROUP BY Category;
```

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

Category	Total_Count
Fiction	3
Romance	2

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

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

Emp_name	Position
Jasmine Jose	Manager
Manu Shankar	Manager

```
77 ●    SELECT Emp_name, Salary FROM Employee ORDER BY Salary DESC;
```

Emp_name	Salary
▶ Manu Shankar	65000.00
Jasmine Jose	60000.00
Rakhi Sharma	45000.00
Aditya Dev	40000.00
Ann Mary	35000.00
Jenny Jane	32000.00
Ayana Mariam	30000.00

Result Grid | Filter Rows: | Export: | Wrap Cell Content: $\bar{I}A$

Employee 2 ▾

```
81 ●    SELECT C.Customer_name FROM Customer C LEFT JOIN IssueStatus I ON C.Customer_Id = I.Issued_cust WHERE C.Reg_date < '2022-01-01' AND I.Issue_Id IS NULL;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: $\bar{I}A$

Customer_name

Result Grid

Form Editor

Result 6 ✕   ❶ Read Only

Output

Action Output ▾

#	Time	Action	Message	Duration / Fetch
✓	13	16:12:10	INSERT INTO Customer (Customer_Id, Customer_name, Customer_address, Reg_date) VALUES (1, 'Arya ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
✓	14	16:12:10	INSERT INTO IssueStatus (Issued_cust, Issued_book_name, Issue_date, Isbn_book) VALUES (1, the He...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.015 sec
✓	15	16:12:10	INSERT INTO ReturnStatus (Return_cust, Return_book_name, Return_date, Isbn_book2) VALUES (1, 'T...	1 row(s) affected	0.000 sec
✓	16	16:13:42	SELECT Book_title, Category, Rental_Price FROM Books WHERE Status = 'yes' LIMIT 0, 1000	3 row(s) returned	0.031 sec / 0.000 sec
✓	17	16:14:35	SELECT Emp_name, Salary FROM Employee ORDER BY Salary DESC LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec
✓	18	16:15:39	SELECT B.Book_title, C.Customer_name FROM IssueStatus I JOIN Books B ON I.Isbn_book = B.ISBN JO...	2 row(s) returned	0.000 sec / 0.000 sec
✓	19	16:16:23	SELECT Category, COUNT(*) AS Total_Count FROM Books GROUP BY Category LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec
✓	20	16:16:56	SELECT Emp_name, Position FROM Employee WHERE Salary > 50000 LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec
✓	21	16:17:31	SELECT C.Customer_name FROM Customer C LEFT JOIN IssueStatus I ON C.Customer_Id = I.Issued_cus...	0 row(s) returned	0.000 sec / 0.000 sec

```sql
82 •    SELECT Branch_no, COUNT(*) AS Total_Employees FROM Employee GROUP BY Branch_no;
```

Branch_no	Total_Employees
1	3
2	4

```sql
83 •    SELECT C.Customer_name FROM IssueStatus I JOIN Customer C ON I.Issued_cust = C.Customer_Id WHERE I.Issue_date BETWEEN '2023-06-01' AND '2023-06-30';
```

Customer_name
Dev Sharma

```sql
84 •    SELECT Book_title FROM Books WHERE Category LIKE 'Fiction';
```

Book_title
The Henna Artist
One Indian Girl
The Alchemist

Books 12 ×

```sql
85 •      SELECT Branch_no, COUNT(*) AS Total_Employees FROM Employee GROUP BY Branch_no HAVING COUNT(*) > 5;
```

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

Branch_no	Total_Employees

Result 13 ✕

```sql
86 •      SELECT E.Emp_name, B.Branch_address FROM Employee E JOIN Branch B ON E.Emp_Id = B.Manager_Id;
87 •      SELECT Customer.Customer_name FROM IssueStatus JOIN Books ON IssueStatus.Isbn_book = Books.ISBN JOIN Customer ON IssueStatus.Issued_cust = Customer.Customer_Id
88        WHERE Books.Rental_Price > 25;
```

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

Customer_name
Arya Raj
Dev Sharma

Result Grid

Form Editor

Result 16 ✕

Output

Action Output ▾

#	Time	Action	Message	Duration / Fetch
✓	27 16:26:45	SELECT Book_title FROM Books WHERE Category LIKE 'Fiction' LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
✓	28 16:27:42	SELECT Branch_no, COUNT(*) AS Total_Employees FROM Employee GROUP BY Branch_no HAVING COU...	0 row(s) returned	0.000 sec / 0.000 sec
✗	29 16:44:19	SELECT E.Emp_name, B.Branch_address FROM Aditya Dev JOIN Branch B ON E.Emp_Id = B.Manager_Id LI...	Error Code: 1146. Table 'library.aditya' doesn't exist	0.125 sec
✓	30 16:47:48	SELECT E.Emp_name, B.Branch_address FROM Employee E JOIN Branch B ON E.Emp_Id = B.Manager_Id L...	0 row(s) returned	0.031 sec / 0.000 sec
✓	31 16:53:33	SELECT E.Emp_name, B.Branch_address FROM Employee E JOIN Branch B ON E.Emp_Id = B.Manager_Id L...	0 row(s) returned	0.000 sec / 0.000 sec
✓	32 16:54:10	SELECT Customer.Customer_name FROM IssueStatus JOIN Books ON IssueStatus.Isbn_book = Books.ISBN ...	2 row(s) returned	0.000 sec / 0.000 sec

Activate Windows
Go to Settings to activate Windows.