

**Name:** Abdallah Saber

**ID:** 23012064

## 1. Create Tables

```
CREATE TABLE Books (  
    BookID INT PRIMARY KEY,  
    Title VARCHAR(100),  
    Author VARCHAR(100),  
    Genre VARCHAR(50)  
);  
  
CREATE TABLE Members (  
    MemberID INT PRIMARY KEY,  
    FirstName VARCHAR(50),  
    LastName VARCHAR(50),  
    MembershipDate DATE  
);  
  
CREATE TABLE Loans (  
    LoanID INT PRIMARY KEY,  
    MemberID INT,  
    BookID INT,  
    LoanDate DATE,  
    DueDate DATE,  
  
    # Add foreign key constraints  
    FOREIGN KEY (MemberID) REFERENCES Members(MemberID),  
    FOREIGN KEY (BookID) REFERENCES Books(BookID)  
);
```

## 2. Insert Sample Data

```
INSERT INTO Books (BookID, Title, Author, Genre)
VALUES
    (1, 'The Lord of the Rings', 'J.R.R. Tolkien', 'Fantasy'),
    (2, 'How to Finish The Assignment', 'Abdallah Saber', 'Self-Help'),
    (3, 'The Way To FCDS', 'Abdallah Saber', 'Educational');

INSERT INTO Members (MemberID, FirstName, LastName, MembershipDate)
VALUES
    (101, 'Alice', 'Bob', '2023-10-01'),
    (102, 'Bob', 'Alice', '2023-10-01');

INSERT INTO Loans (LoanID, MemberID, BookID, LoanDate, DueDate)
VALUES
    (1001, 101, 1, '2023-11-05', '2023-11-12'),
    (1002, 102, 2, '2023-11-05', '2023-11-12');
```

## 3. Modify Data

```
UPDATE Books
SET Genre = 'Science Fiction'
OUTPUT DELETED.Genre, INSERTED.Genre
WHERE BookID = 1;
```

## 4. Delete Data

```
DELETE FROM Members
OUTPUT DELETED.MemberID, DELETED.FirstName, DELETED.LastName
WHERE MemberID = 101;

DELETE FROM Books
WHERE BookID = 3;
```

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SQL SERVER

CONNECTIONS

sql server

Databases

System Databases

Library

Tables

dbo.Books

dbo.Loans

dbo.Members

Dropped Ledger Tables

Views

Synonyms

Programmability

External Resources

Service Broker

QUERY HISTORY

No Queries Available

23012064\_db3\_lab.md

-- Create Database Untitled-1 3

```
44  (MemberID, Firstname, Lastname, MembershipDate)
45  VALUES
46  (101, 'Alice', 'Bob', '2023-10-01'),
47  (102, 'Bob', 'Alice', '2023-10-01');
48
49  INSERT INTO Loans
50  (LoanID, MemberID, BookID, LoanDate, DueDate)
51  VALUES
52  (1001, 101, 1, '2023-11-05', '2023-11-12'),
53  (1002, 102, 2, '2023-11-05', '2023-11-12');
54
55  ---Modify Data
56  UPDATE Books
57  SET Genre = 'Science Fiction'
58  OUTPUT DELETED.Genre, INSERTED.Genre
59  WHERE BookID = 1;
60
61  ---Delete Data
62  DELETE FROM Members
63  OUTPUT DELETED.MemberID, DELETED.FirstName, DELETED.LastName
64  WHERE MemberID = 101;
65
66  DELETE FROM Books
67  WHERE BookID = 3;
68
```

PROBLEMS 3

QUERY RESULT

OUTPUT

TERMINAL

DEBUG CONSOLE

PORTS

Results

Messages

	Genre	Genre
1	Fantasy	Science Fiction

<> Launchpad 3 0 0 8.43% 2.18 GHz 100% 9.58/15.52 GB 182 Words SQLCMD: Off 1 row affected 00:00:00.111 1 Spell localhost: Library: abdo