

SCS2209 Database II

Labsheet 01

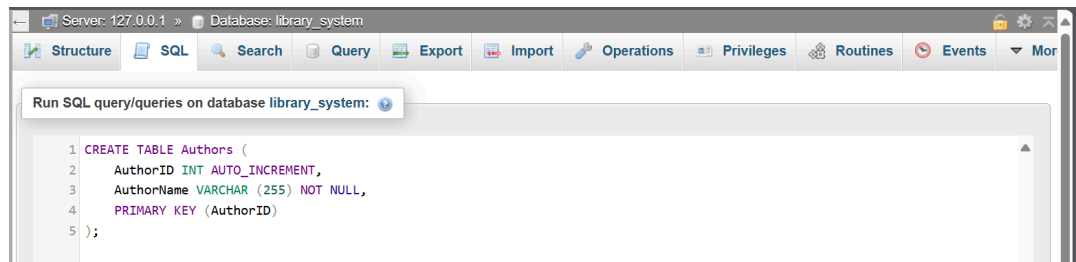
Name : K D I Okadini

Index No : 22001433

Question 01

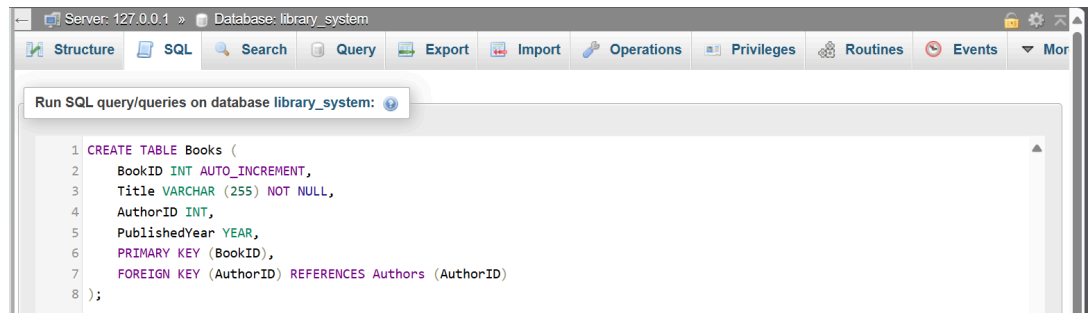
1.

a. Authors table



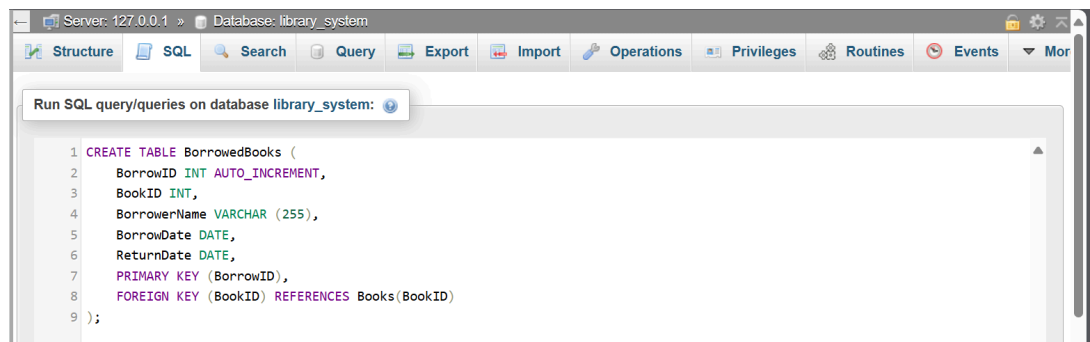
```
1 CREATE TABLE Authors (  
2   AuthorID INT AUTO_INCREMENT,  
3   AuthorName VARCHAR (255) NOT NULL,  
4   PRIMARY KEY (AuthorID)  
5 );
```

b. Books table



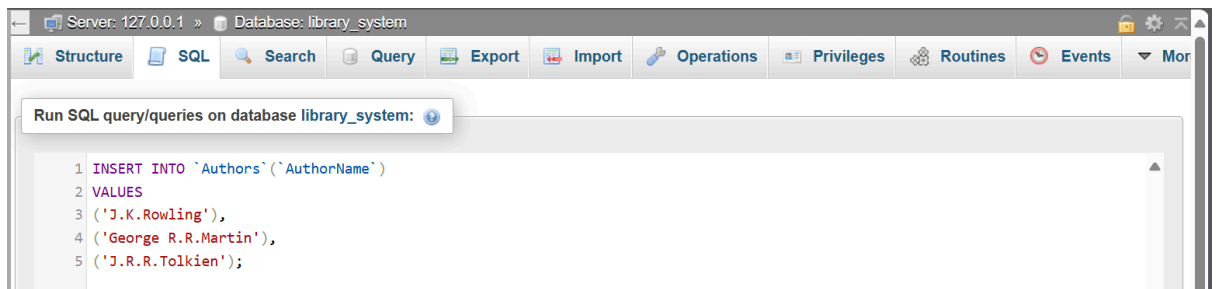
```
1 CREATE TABLE Books (  
2   BookID INT AUTO_INCREMENT,  
3   Title VARCHAR (255) NOT NULL,  
4   AuthorID INT,  
5   PublishedYear YEAR,  
6   PRIMARY KEY (BookID),  
7   FOREIGN KEY (AuthorID) REFERENCES Authors (AuthorID)  
8 );
```

c. BorrowedBooks table



```
1 CREATE TABLE BorrowedBooks (  
2   BorrowID INT AUTO_INCREMENT,  
3   BookID INT,  
4   BorrowerName VARCHAR (255),  
5   BorrowDate DATE,  
6   ReturnDate DATE,  
7   PRIMARY KEY (BorrowID),  
8   FOREIGN KEY (BookID) REFERENCES Books (BookID)  
9 );
```

2.



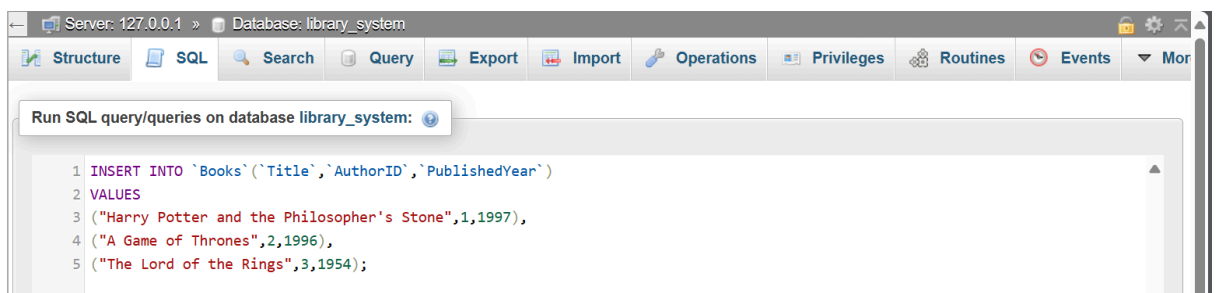
Server: 127.0.0.1 » Database: library_system

Structure SQL Search Query Export Import Operations Privileges Routines Events More

Run SQL query/queries on database library_system:

```
1 INSERT INTO `Authors`(`AuthorName`)
2 VALUES
3 ('J.K.Rowling'),
4 ('George R.R.Martin'),
5 ('J.R.R.Tolkien');
```

3.



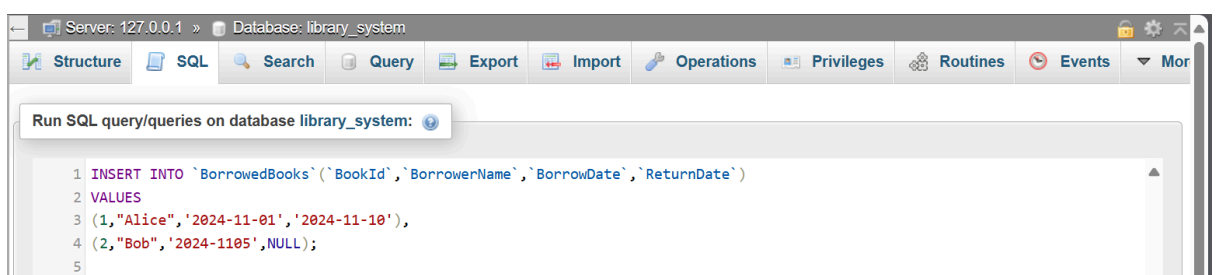
Server: 127.0.0.1 » Database: library_system

Structure SQL Search Query Export Import Operations Privileges Routines Events More

Run SQL query/queries on database library_system:

```
1 INSERT INTO `Books`(`Title`,`AuthorID`,`PublishedYear`)
2 VALUES
3 ("Harry Potter and the Philosopher's Stone",1,1997),
4 ("A Game of Thrones",2,1996),
5 ("The Lord of the Rings",3,1954);
```

4.



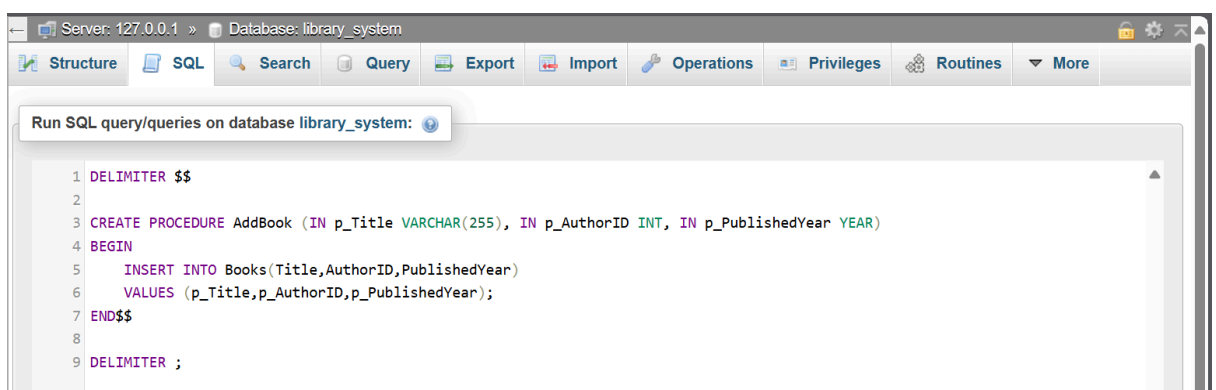
Server: 127.0.0.1 » Database: library_system

Structure SQL Search Query Export Import Operations Privileges Routines Events More

Run SQL query/queries on database library_system:

```
1 INSERT INTO `BorrowedBooks`(`BookID`,`BorrowerName`,`BorrowDate`,`ReturnDate`)
2 VALUES
3 (1,"Alice",'2024-11-01','2024-11-10'),
4 (2,"Bob",'2024-11-05',NULL);
5
```

5.

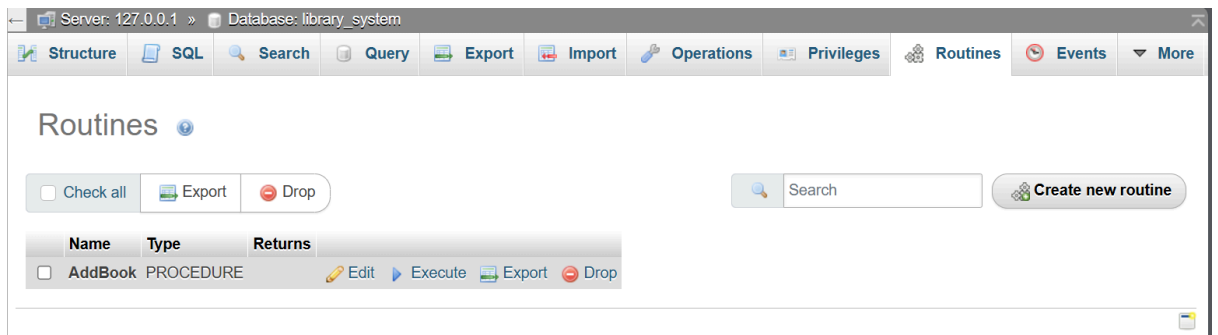


Server: 127.0.0.1 » Database: library_system

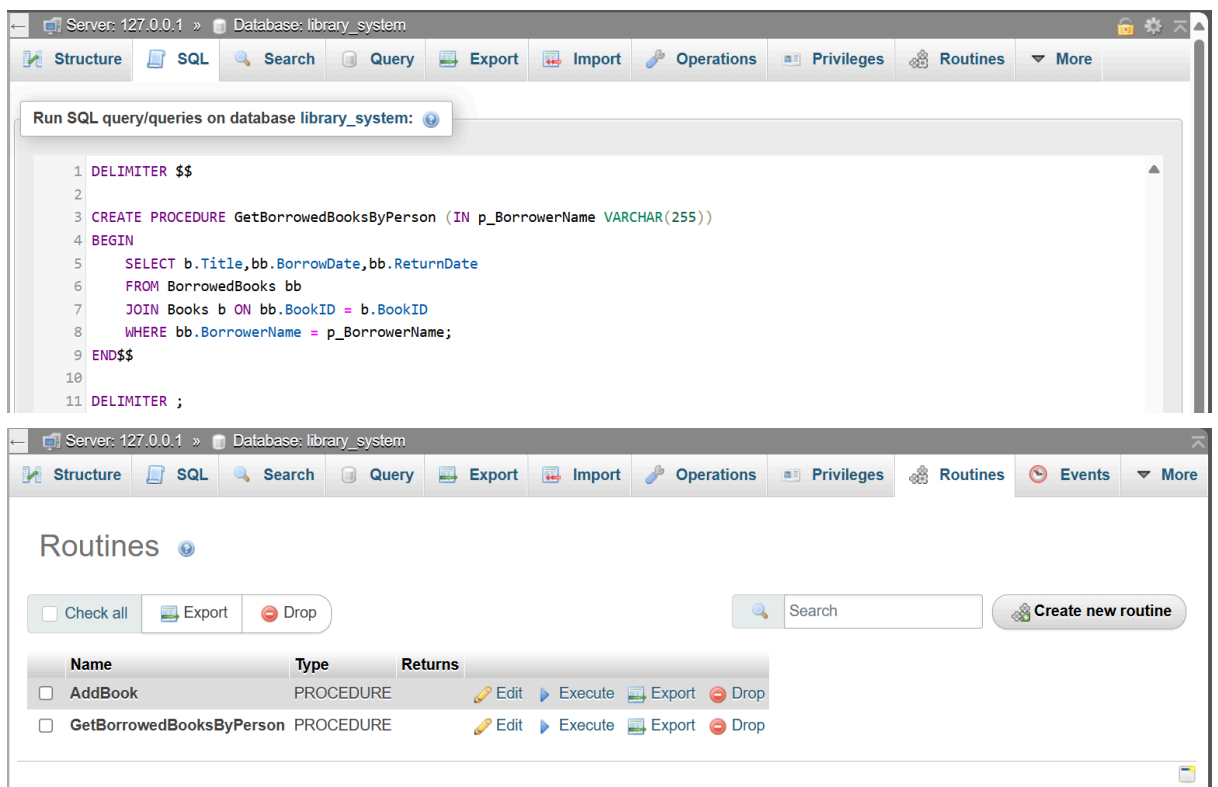
Structure SQL Search Query Export Import Operations Privileges Routines More

Run SQL query/queries on database library_system:

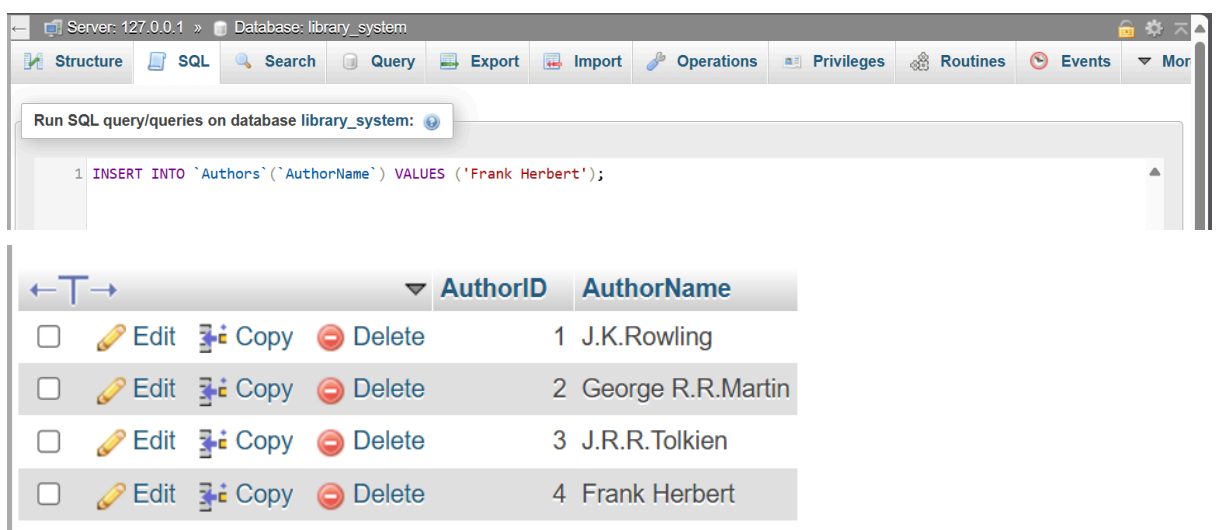
```
1 DELIMITER $$
2
3 CREATE PROCEDURE AddBook (IN p_Title VARCHAR(255), IN p_AuthorID INT, IN p_PublishedYear YEAR)
4 BEGIN
5     INSERT INTO Books(Title,AuthorID,PublishedYear)
6     VALUES (p_Title,p_AuthorID,p_PublishedYear);
7 END$$
8
9 DELIMITER ;
```

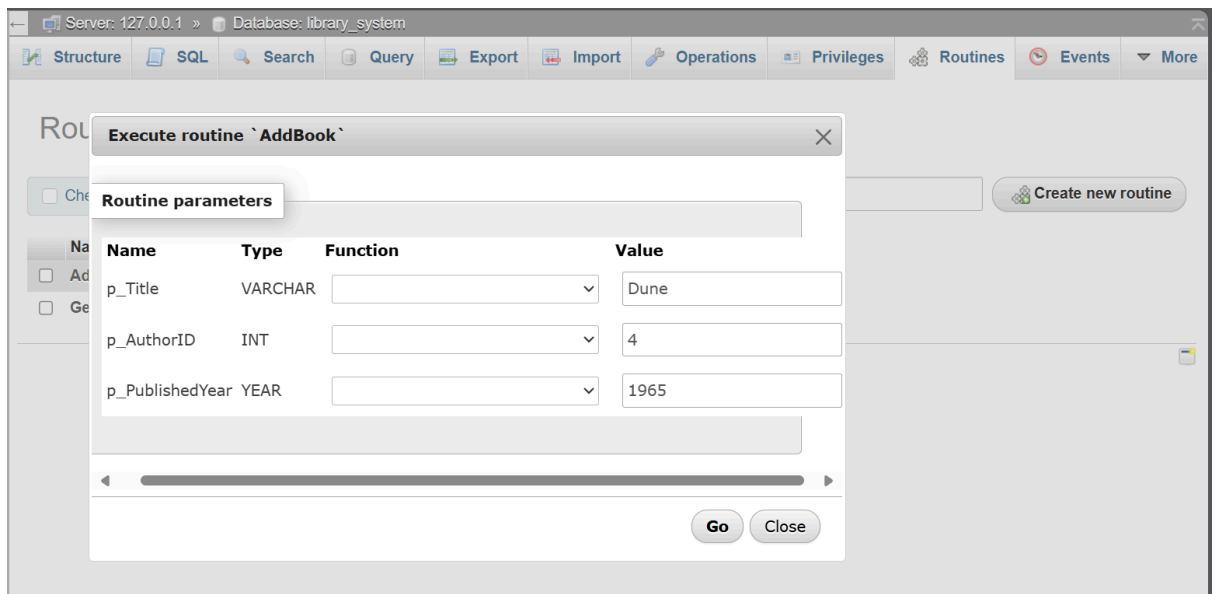


6.



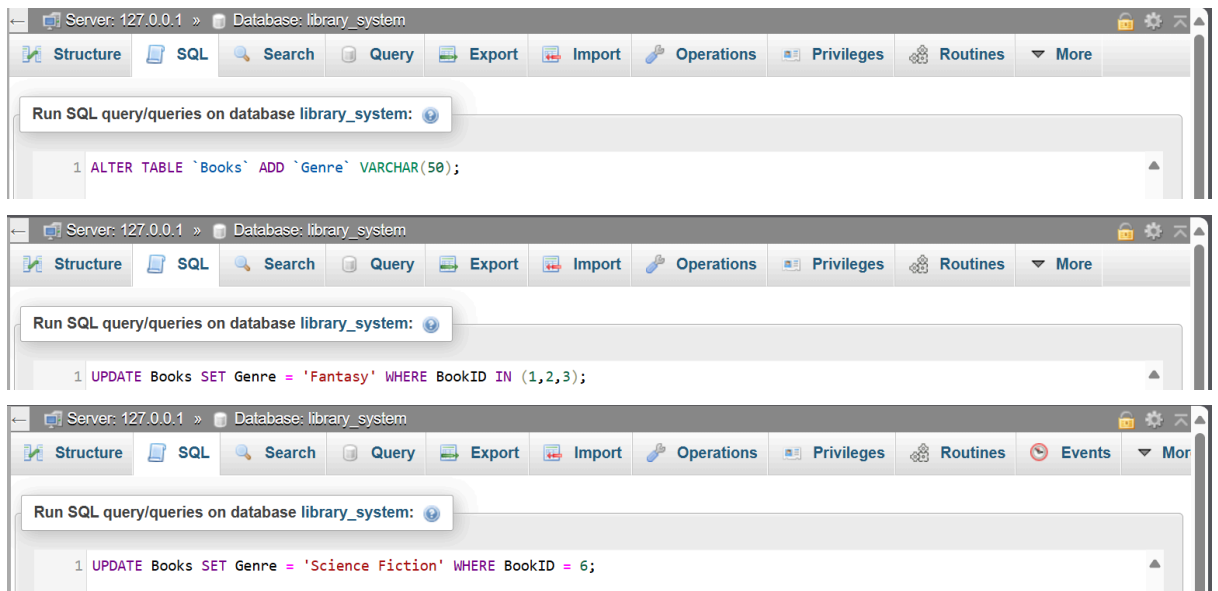
7.





	BookID	Title	AuthorID	PublishedYear
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	Harry Potter and the Philosopher's Stone	1	1997
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	A Game of Thrones	2	1996
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	The Lord of the Rings	3	1954
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	6	Dune	4	1965

8.



Server: 127.0.0.1 » Database: library_system

StructureSQLSearchQueryExportImportOperationsPrivilegesRoutinesMore

Run SQL query/queries on database library_system:

```
1 DELIMITER $$
2
3 CREATE PROCEDURE GetBooksByGenre (IN p_Genre VARCHAR(50))
4 BEGIN
5     SELECT Title, AuthorName, PublishedYear
6     FROM Books b
7     JOIN Authors a on b.AuthorID = a.AuthorID
8     WHERE b.Genre = p_Genre;
9 END$$
10
11 DELIMITER ;
```

Server: 127.0.0.1 » Database: library_system

StructureSQLSearchQueryExportImportOperationsPrivilegesRoutinesEventsMore

Routines

☐ Check all

Export

Drop

Search

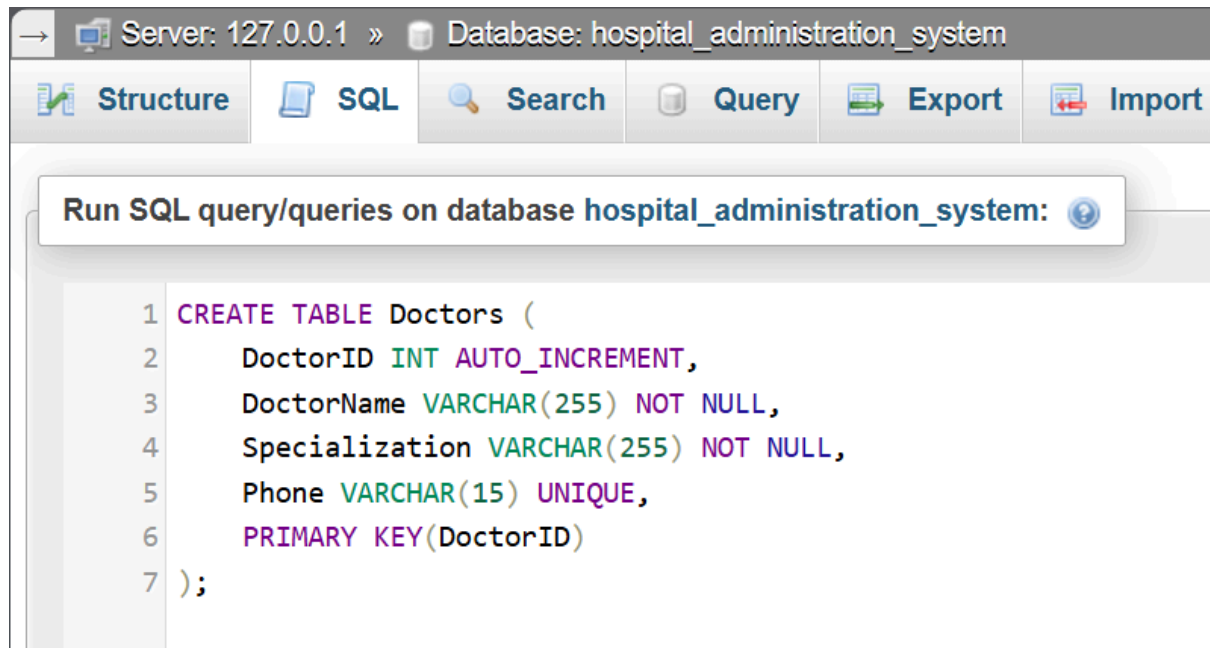
Create new routine

Name	Type	Returns	
<input type="checkbox"/> AddBook	PROCEDURE		Edit Execute Export Drop
<input type="checkbox"/> GetBooksByGenre	PROCEDURE		Edit Execute Export Drop
<input type="checkbox"/> GetBorrowedBooksByPerson	PROCEDURE		Edit Execute Export Drop

Question 02

1.

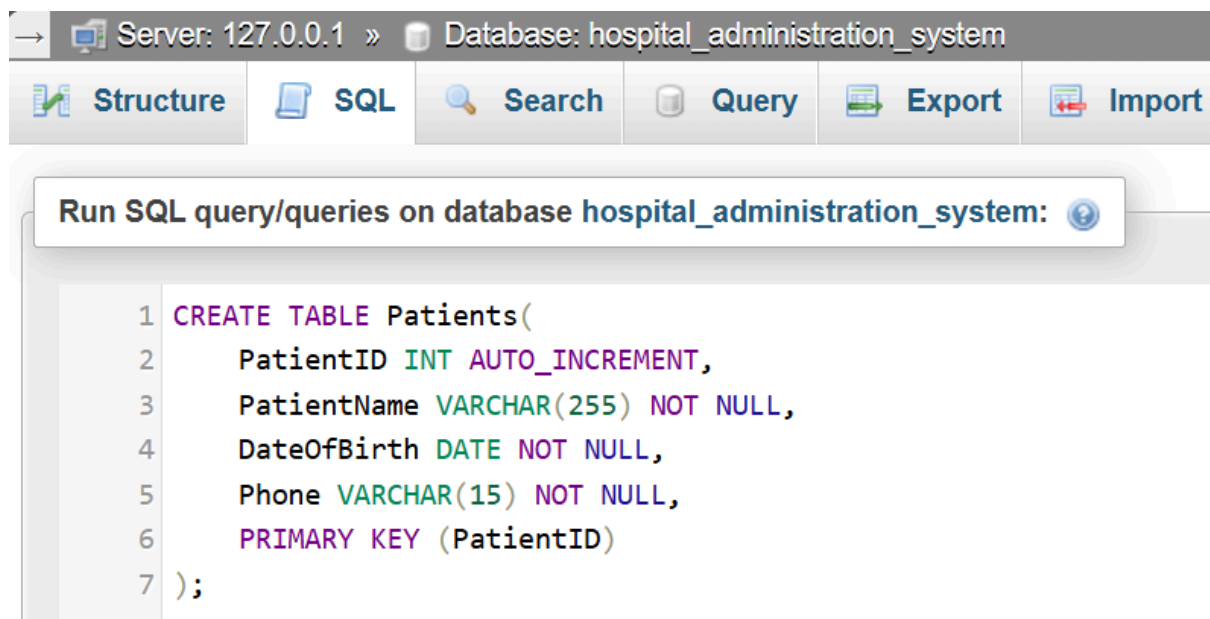
a. Doctors Table



The screenshot shows a database management tool interface. At the top, there is a header bar with a server icon, the text "Server: 127.0.0.1", a double arrow icon, a database icon, and the text "Database: hospital_administration_system". Below the header bar is a toolbar with six buttons: "Structure" (with a table icon), "SQL" (with a document icon), "Search" (with a magnifying glass icon), "Query" (with a document icon), "Export" (with a download icon), and "Import" (with an upload icon). Below the toolbar is a text box that says "Run SQL query/queries on database hospital_administration_system:". Below the text box is a code editor with the following SQL query:

```
1 CREATE TABLE Doctors (  
2     DoctorID INT AUTO_INCREMENT,  
3     DoctorName VARCHAR(255) NOT NULL,  
4     Specialization VARCHAR(255) NOT NULL,  
5     Phone VARCHAR(15) UNIQUE,  
6     PRIMARY KEY(DoctorID)  
7 );
```

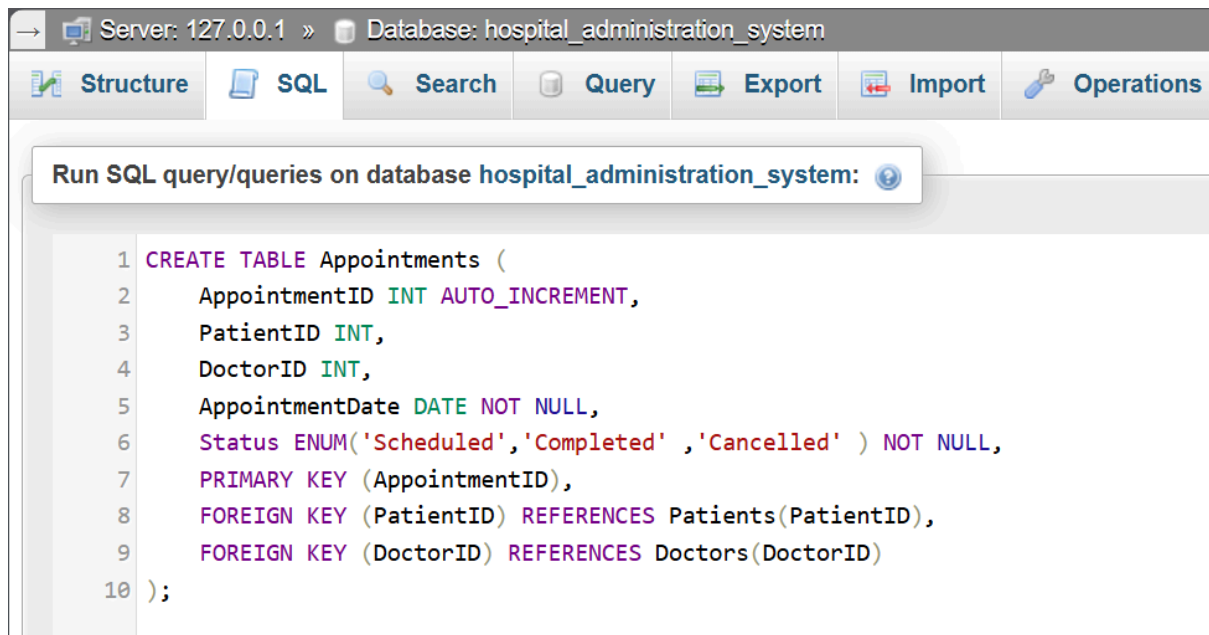
b. Patients Table



The screenshot shows a database management tool interface. At the top, there is a header bar with a server icon, the text "Server: 127.0.0.1", a double arrow icon, a database icon, and the text "Database: hospital_administration_system". Below the header bar is a toolbar with six buttons: "Structure" (with a table icon), "SQL" (with a document icon), "Search" (with a magnifying glass icon), "Query" (with a document icon), "Export" (with a download icon), and "Import" (with an upload icon). Below the toolbar is a text box that says "Run SQL query/queries on database hospital_administration_system:". Below the text box is a code editor with the following SQL query:

```
1 CREATE TABLE Patients(  
2     PatientID INT AUTO_INCREMENT,  
3     PatientName VARCHAR(255) NOT NULL,  
4     DateOfBirth DATE NOT NULL,  
5     Phone VARCHAR(15) NOT NULL,  
6     PRIMARY KEY (PatientID)  
7 );
```

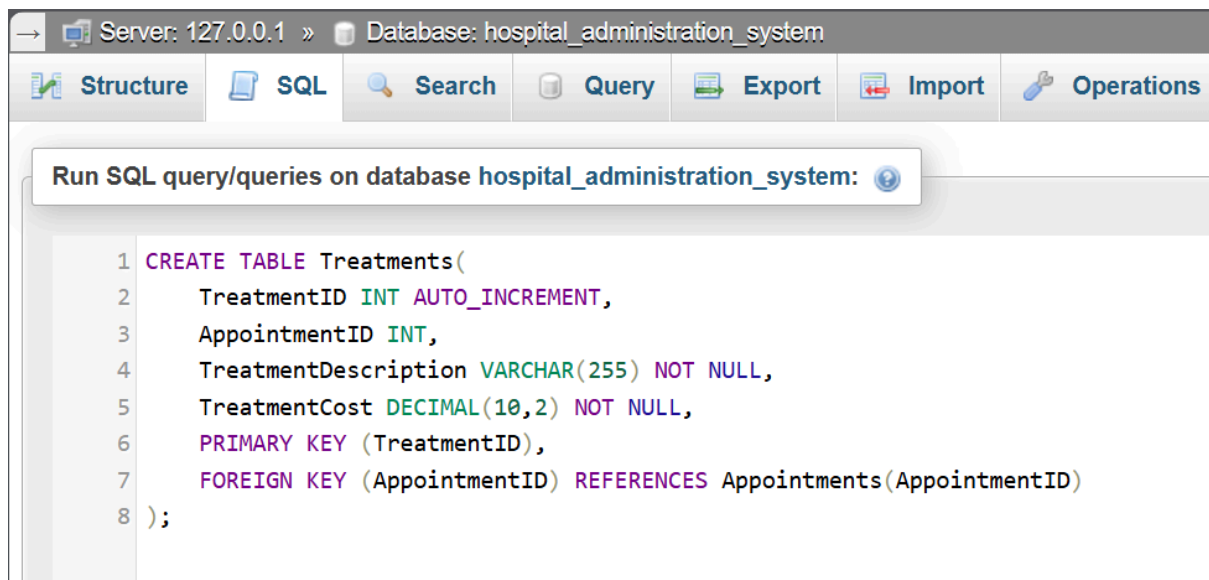
c. Appointments Table



The screenshot shows a database management tool interface. At the top, there is a header bar with a server icon, the text "Server: 127.0.0.1", a database icon, and the text "Database: hospital_administration_system". Below the header bar is a menu bar with icons and labels for "Structure", "SQL", "Search", "Query", "Export", "Import", and "Operations". Below the menu bar is a toolbar with a button labeled "Run SQL query/queries on database hospital_administration_system:". Below the toolbar is a text area containing the following SQL code:

```
1 CREATE TABLE Appointments (  
2     AppointmentID INT AUTO_INCREMENT,  
3     PatientID INT,  
4     DoctorID INT,  
5     AppointmentDate DATE NOT NULL,  
6     Status ENUM('Scheduled','Completed','Cancelled') NOT NULL,  
7     PRIMARY KEY (AppointmentID),  
8     FOREIGN KEY (PatientID) REFERENCES Patients(PatientID),  
9     FOREIGN KEY (DoctorID) REFERENCES Doctors(DoctorID)  
10 );
```

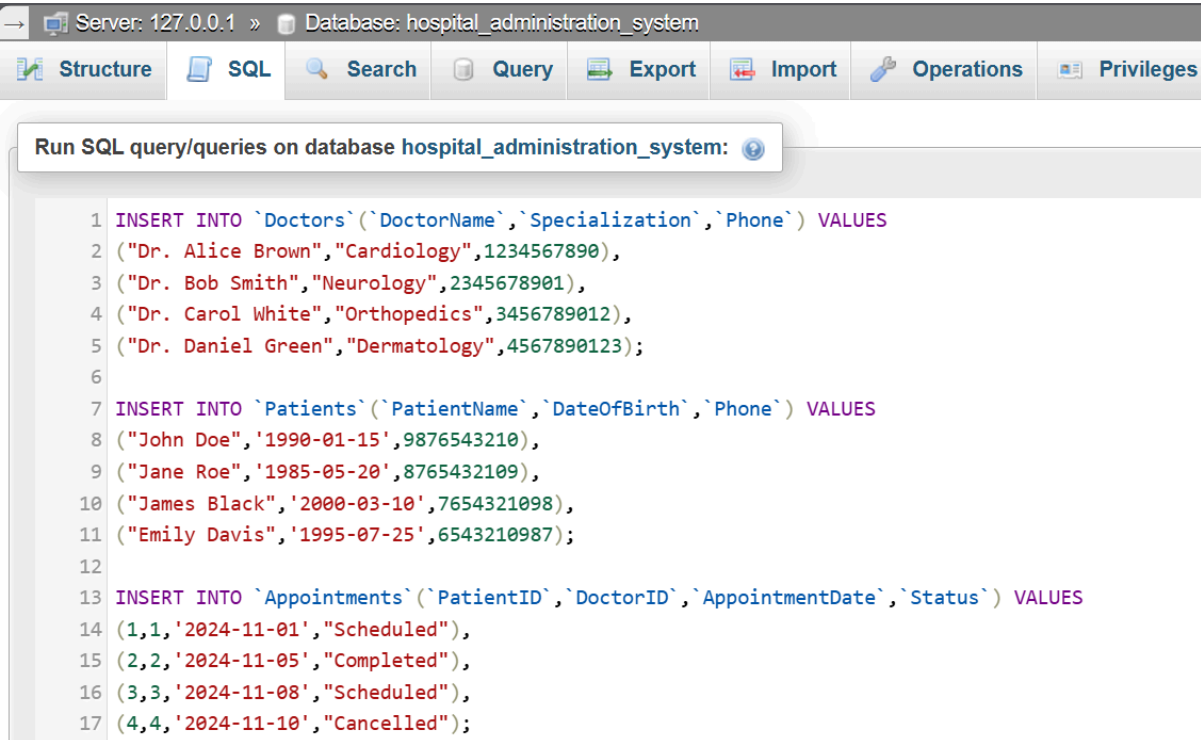
d. Treatments Table



The screenshot shows a database management tool interface. At the top, there is a header bar with a server icon, the text "Server: 127.0.0.1", a database icon, and the text "Database: hospital_administration_system". Below the header bar is a menu bar with icons and labels for "Structure", "SQL", "Search", "Query", "Export", "Import", and "Operations". Below the menu bar is a toolbar with a button labeled "Run SQL query/queries on database hospital_administration_system:". Below the toolbar is a text area containing the following SQL code:

```
1 CREATE TABLE Treatments(  
2     TreatmentID INT AUTO_INCREMENT,  
3     AppointmentID INT,  
4     TreatmentDescription VARCHAR(255) NOT NULL,  
5     TreatmentCost DECIMAL(10,2) NOT NULL,  
6     PRIMARY KEY (TreatmentID),  
7     FOREIGN KEY (AppointmentID) REFERENCES Appointments(AppointmentID)  
8 );
```

2.



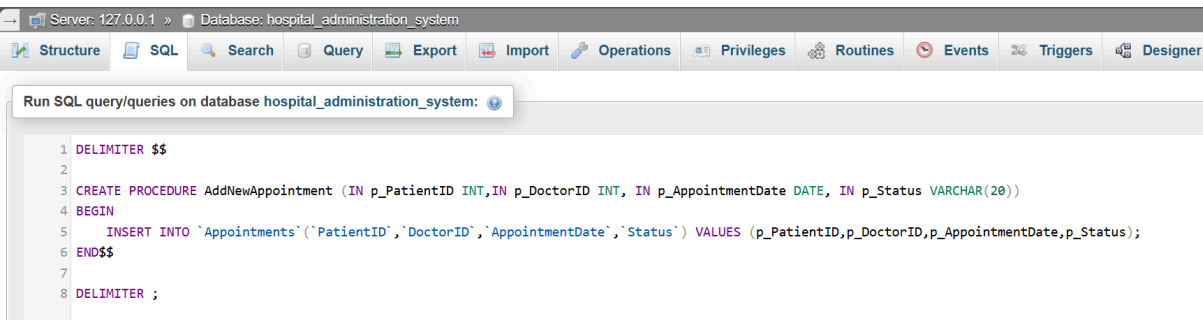
Server: 127.0.0.1 » Database: hospital_administration_system

Structure SQL Search Query Export Import Operations Privileges

Run SQL query/queries on database hospital_administration_system:

```
1 INSERT INTO `Doctors`(`DoctorName`,`Specialization`,`Phone`) VALUES
2 ("Dr. Alice Brown","Cardiology",1234567890),
3 ("Dr. Bob Smith","Neurology",2345678901),
4 ("Dr. Carol White","Orthopedics",3456789012),
5 ("Dr. Daniel Green","Dermatology",4567890123);
6
7 INSERT INTO `Patients`(`PatientName`,`DateOfBirth`,`Phone`) VALUES
8 ("John Doe","1990-01-15",9876543210),
9 ("Jane Roe","1985-05-20",8765432109),
10 ("James Black","2000-03-10",7654321098),
11 ("Emily Davis","1995-07-25",6543210987);
12
13 INSERT INTO `Appointments`(`PatientID`,`DoctorID`,`AppointmentDate`,`Status`) VALUES
14 (1,1,'2024-11-01',"Scheduled"),
15 (2,2,'2024-11-05',"Completed"),
16 (3,3,'2024-11-08',"Scheduled"),
17 (4,4,'2024-11-10',"Cancelled");
```

3.

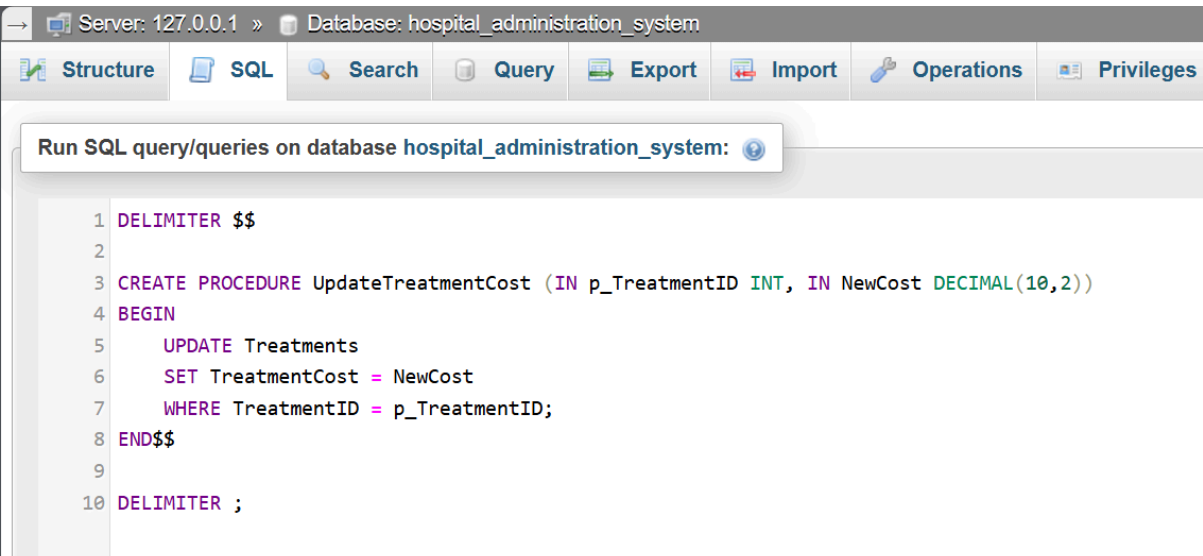


Server: 127.0.0.1 » Database: hospital_administration_system

Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers Designer

Run SQL query/queries on database hospital_administration_system:

```
1 DELIMITER $$
2
3 CREATE PROCEDURE AddNewAppointment (IN p_PatientID INT,IN p_DoctorID INT, IN p_AppointmentDate DATE, IN p_Status VARCHAR(20))
4 BEGIN
5     INSERT INTO `Appointments`(`PatientID`,`DoctorID`,`AppointmentDate`,`Status`) VALUES (p_PatientID,p_DoctorID,p_AppointmentDate,p_Status);
6 END$$
7
8 DELIMITER ;
```



Server: 127.0.0.1 » Database: hospital_administration_system

Structure SQL Search Query Export Import Operations Privileges

Run SQL query/queries on database hospital_administration_system:

```
1 DELIMITER $$
2
3 CREATE PROCEDURE UpdateTreatmentCost (IN p_TreatmentID INT, IN NewCost DECIMAL(10,2))
4 BEGIN
5     UPDATE Treatments
6     SET TreatmentCost = NewCost
7     WHERE TreatmentID = p_TreatmentID;
8 END$$
9
10 DELIMITER ;
```


Server: 127.0.0.1 » Database: hospital_administration_system

Structure SQL Search Query Export Import Operations Privileges Routines

Run SQL query/queries on database hospital_administration_system: ?

```
1 DELIMITER $$
2
3 CREATE PROCEDURE GetPatientHistory (IN p_PatientID INT)
4 BEGIN
5     SELECT p.PatientName,d.DoctorName,a.AppointmentDate,t.TreatmentDescription,t.TreatmentCost
6     FROM Patients p
7     INNER JOIN Appointments a ON p.PatientID = a.PatientID
8     INNER JOIN Doctors d ON a.DoctorID = d.DoctorID
9     LEFT JOIN Treatments t ON a.AppointmentID = t.AppointmentID
10    WHERE p.PatientID = p_PatientID
11    ORDER BY a.AppointmentDate;
12 END$$
13
14 DELIMITER ;
```

Server: 127.0.0.1 » Database: hospital_administration_system

Structure SQL Search Query Export Import Operations

Run SQL query/queries on database hospital_administration_system: ?

```
1 DELIMITER $$
2
3 CREATE PROCEDURE GenerateRevenueReport ()
4 BEGIN
5     SELECT d.DoctorName,SUM(t.TreatmentCost) AS TotalRevenue
6     FROM Doctors d
7     INNER JOIN Appointments a ON d.DoctorID = a.DoctorID
8     INNER JOIN Treatments t ON a.AppointmentID = t.AppointmentID
9     GROUP BY d.DoctorName
10    ORDER BY TotalRevenue DESC;
11 END$$
12
13 DELIMITER ;
```