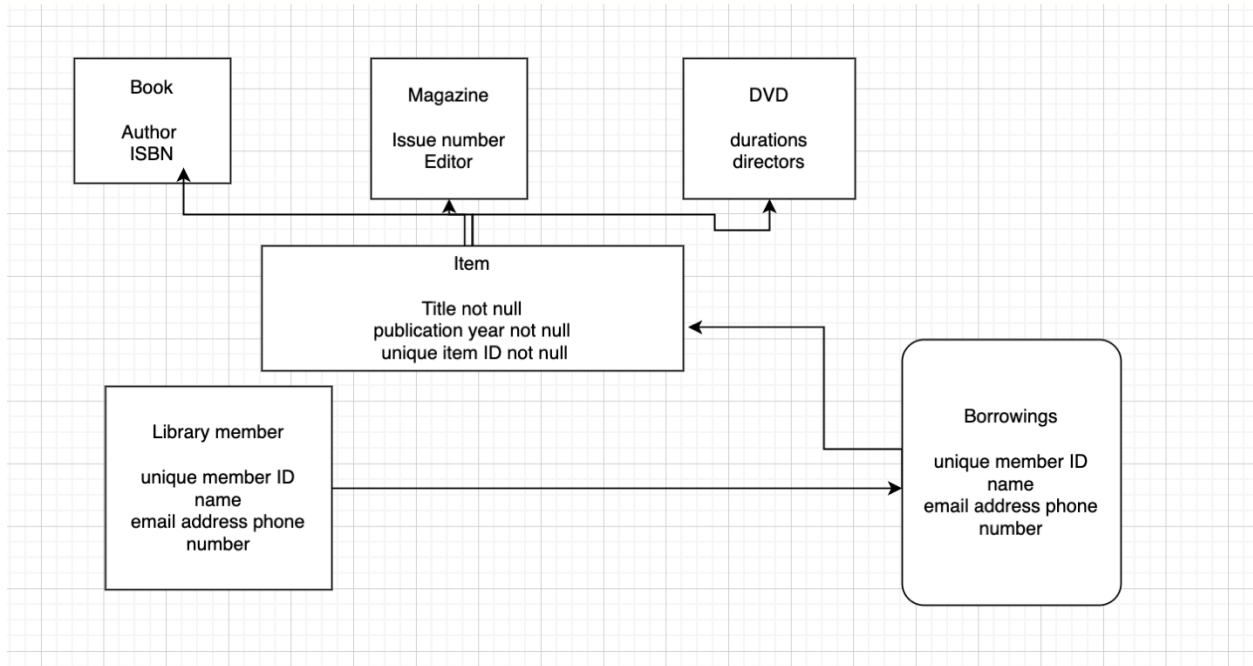


Assignment 06



Item		
Item ID PK Unique, not null	Title not null	Publication year not null

Magazine		
Item ID FK not null	Issue Number	Editor

Book		
Item ID FK not null	Author	ISBN

DVD		
Item ID FK not null	Durations	Director

Members			
MemberID PK not null	Name not null	Email Address not null	PhoneNumber not null

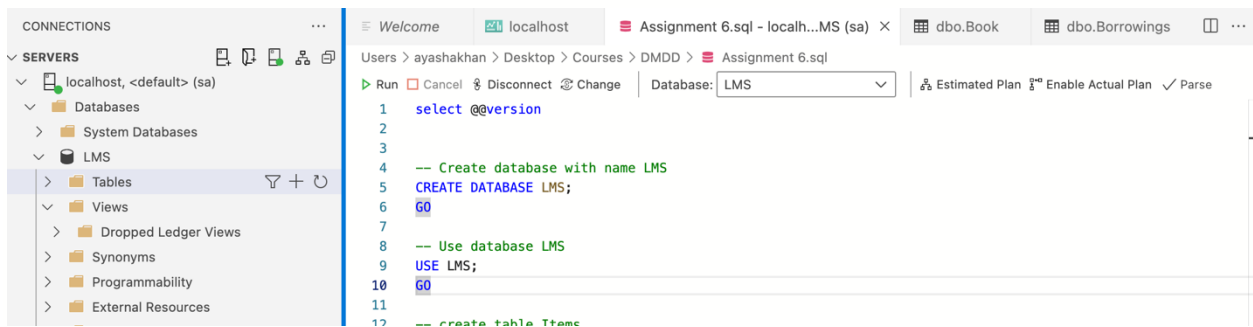
Borrowings			
MemberID FK not null	Item ID FK not null	Borrowing date	Return date

```
-- Create database with name LMS
CREATE DATABASE LMS;
GO
```

-- Use database LMS

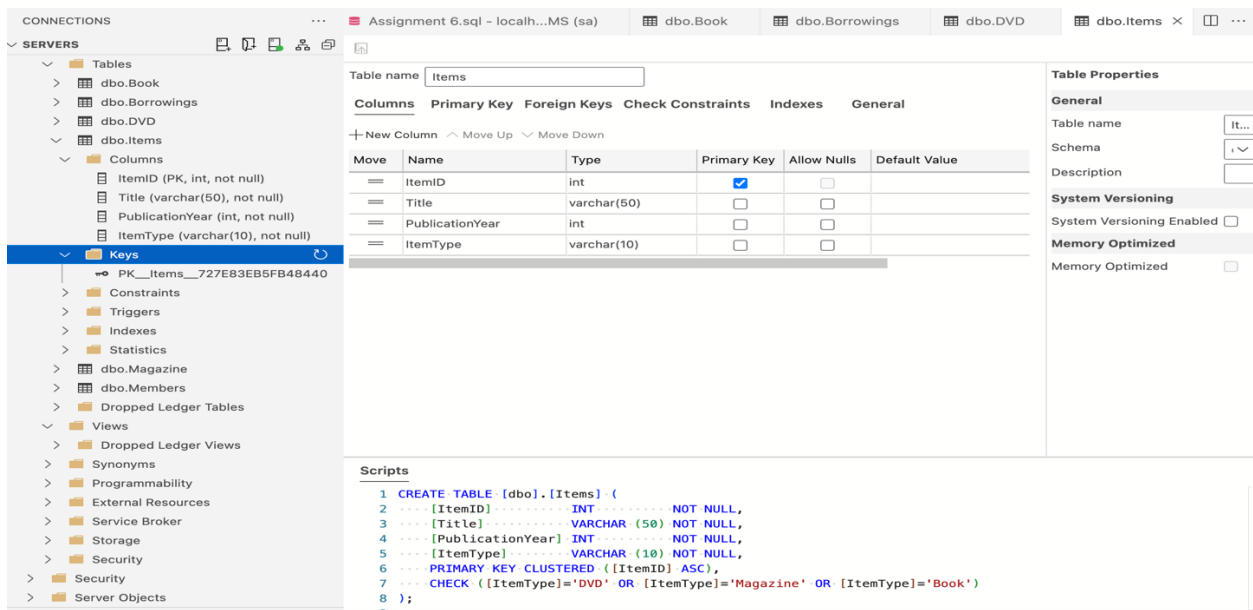
USE LMS;

GO



-- create table Items

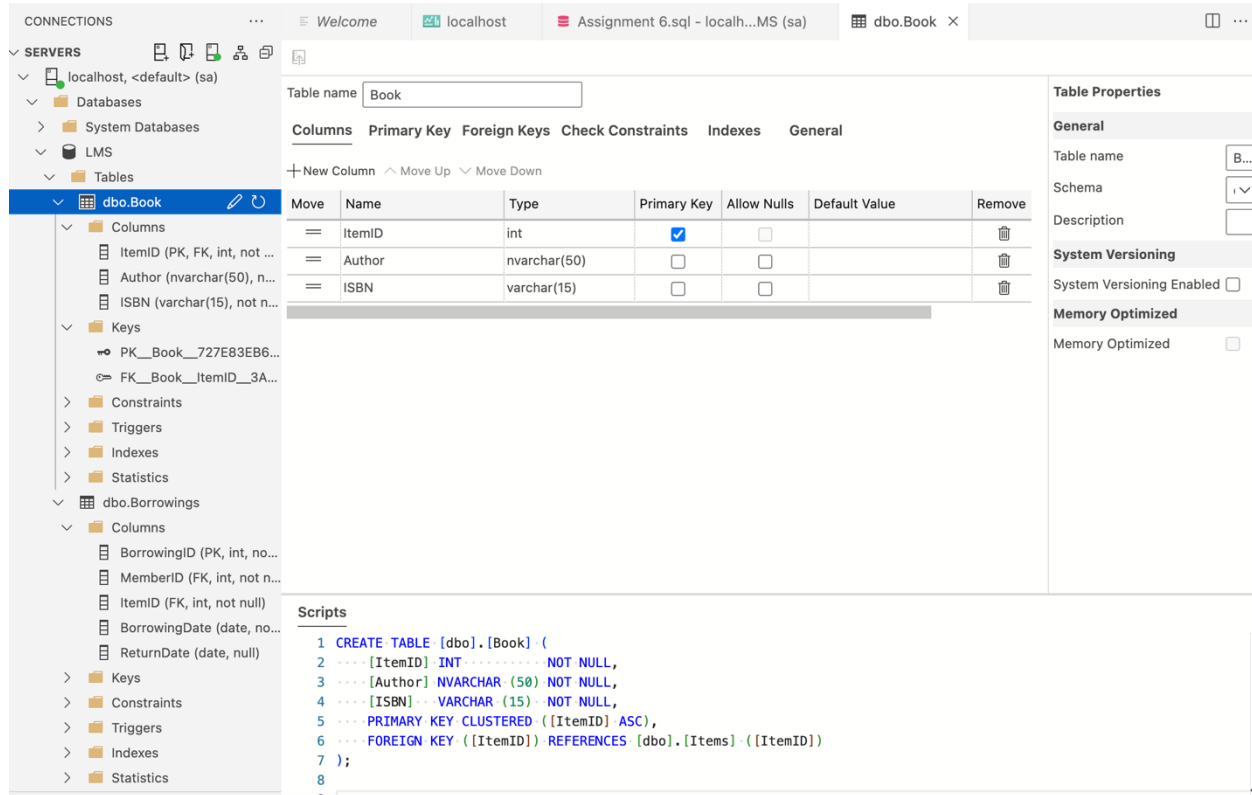
```
CREATE TABLE Items (  
    ItemID INT PRIMARY KEY,  
    Title VARCHAR(50) NOT NULL,  
    PublicationYear INT NOT NULL,  
    ItemType VARCHAR(10) NOT NULL CHECK (ItemType IN('Book', 'Magazine', 'DVD'))  
);  
GO
```



-- create table book which is one-to-one mapped with Items table

```
CREATE TABLE Book (  
    ItemID INT PRIMARY KEY,  
    Author NVARCHAR(50) NOT NULL,  
    ISBN VARCHAR(15) NOT NULL,  
    FOREIGN KEY (ItemID) REFERENCES Items(ItemID)  
);
```

GO

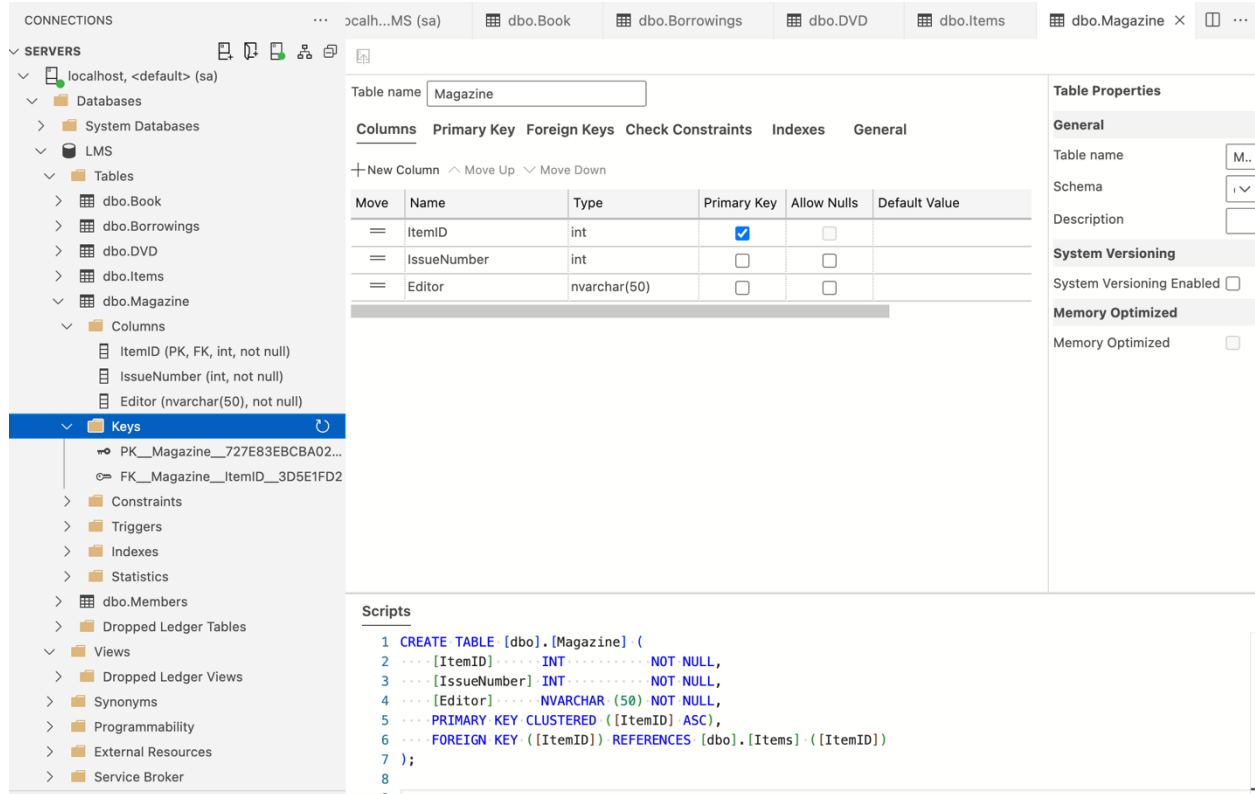


-- create table Magazine which is one-to-one mapped with Items table

```
CREATE TABLE Magazine (
    ItemID INT PRIMARY KEY,
    IssueNumber INT NOT NULL,
    Editor NVARCHAR(50) NOT NULL,
    FOREIGN KEY (ItemID) REFERENCES Items(ItemID)
```

```
);
```

GO



-- create table DVD which is one-to-one mapped with Items table

```

CREATE TABLE DVD (
    ItemID INT PRIMARY KEY,
    Duration INT NOT NULL,
    Director NVARCHAR(50) NOT NULL,
    FOREIGN KEY (ItemID) REFERENCES Items(ItemID)
);
GO

```

CONNECTIONS ... me localhost Assignment 6.sql - localh...MS (sa) dbo.Book dbo.Borrowings dbo.DVD x ...

SERVERS

- localhost, <default> (sa)
 - Databases
 - System Databases
 - LMS
 - Tables
 - dbo.Book
 - dbo.Borrowings
 - dbo.DVD
 - Columns
 - ItemID (PK, FK, int, not null)
 - Duration (int, not null)
 - Director (nvarchar(50), ...)
 - Keys
 - PK_DVD__727E83EBA...
 - FK_DVD__ItemID__403...
 - Constraints
 - Triggers
 - Indexes
 - Statistics
 - dbo.Items
 - dbo.Magazine
 - dbo.Members
 - Dropped Ledger Tables
 - Views
 - Dropped Ledger Views
 - Synonyms
 - Programmability
 - External Resources
 - Service Broker

Table name: DVD

Columns Primary Key Foreign Keys Check Constraints Indexes General

+ New Column ^ Move Up v Move Down

Move	Name	Type	Primary Key	Allow Nulls	Default Value	Remove
=	ItemID	int	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
=	Duration	int	<input type="checkbox"/>	<input type="checkbox"/>		
=	Director	nvarchar(50)	<input type="checkbox"/>	<input type="checkbox"/>		

Table Properties

General

Table name: D...

Schema: i v

Description:

System Versioning

System Versioning Enabled: ☐

Memory Optimized

Memory Optimized: ☐

Scripts

```

1 CREATE TABLE [dbo].[DVD] (
2     [ItemID] INT NOT NULL,
3     [Duration] INT NOT NULL,
4     [Director] NVARCHAR (50) NOT NULL,
5     PRIMARY KEY CLUSTERED ([ItemID] ASC),
6     FOREIGN KEY ([ItemID]) REFERENCES [dbo].[Items] ([ItemID])
7 );
8
9

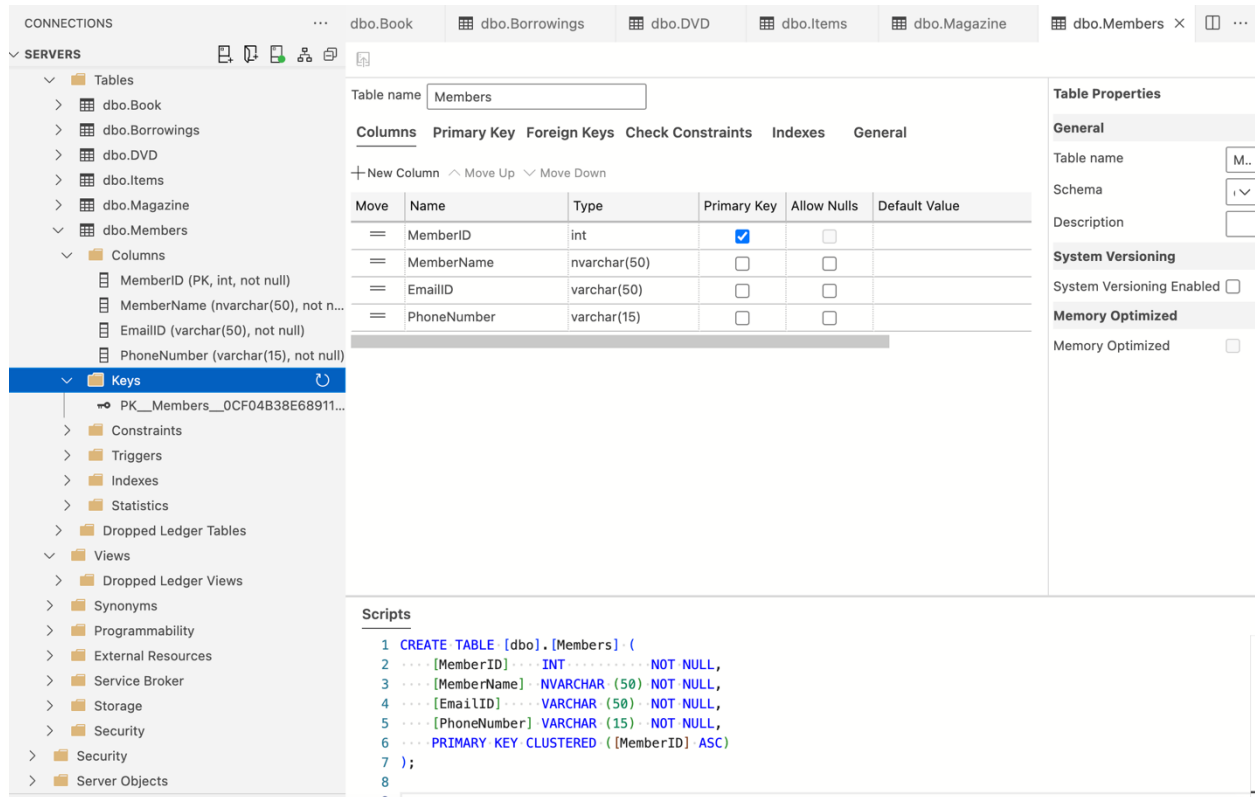
```

-- create table members

```

CREATE TABLE Members (
    MemberID INT PRIMARY KEY,
    MemberName NVARCHAR(50) NOT NULL,
    EmailID VARCHAR(50) NOT NULL,
    PhoneNumber VARCHAR(15) NOT NULL
);
GO

```



```

-- create table borrowings, which store which item is borrowed on which date,
CREATE TABLE Borrowings (
    BorrowingID INT PRIMARY KEY,
    MemberID INT NOT NULL,
    ItemID INT NOT NULL,
    BorrowingDate DATE NOT NULL,
    ReturnDate DATE,
    FOREIGN KEY (MemberID) REFERENCES Members(MemberID),
    FOREIGN KEY (ItemID) REFERENCES Items(ItemID)
);
GO

```

CONNECTIONS

SERVERS

localhost, <default> (sa)

Databases

System Databases

LMS

Tables

dbo.Book

dbo.Borrowings

Columns

BorrowingID (PK, int, not null)

MemberID (FK, int, not null)

ItemID (FK, int, not null)

BorrowingDate (date, not null)

ReturnDate (date, null)

Keys

PK_Borrowin__6CD93...

FK_Borrowing__ItemID...

FK_Borrowing__Memb...

Constraints

Triggers

Indexes

Statistics

dbo.DVD

dbo.Items

dbo.Magazine

dbo.Members

Dropped Ledger Tables

Views

Dropped Ledger Views

Synonyms

Table name

Borrowings

Columns

Primary Key

Foreign Keys

Check Constraints

Indexes

General

+ New Column

Move Up

Move Down

Move	Name	Type	Primary Key	Allow Nulls	Default Value	Remove
≡	BorrowingID	int	<input checked="" type="checkbox"/>	<input type="checkbox"/>		🗑
≡	MemberID	int	<input type="checkbox"/>	<input type="checkbox"/>		🗑
≡	ItemID	int	<input type="checkbox"/>	<input type="checkbox"/>		🗑
≡	BorrowingDate	date	<input type="checkbox"/>	<input type="checkbox"/>		🗑
≡	ReturnDate	date	<input type="checkbox"/>	<input checked="" type="checkbox"/>		🗑

Scripts

```
1 CREATE TABLE [dbo].[Borrowings] (  
2     [BorrowingID] INT NOT NULL,  
3     [MemberID] INT NOT NULL,  
4     [ItemID] INT NOT NULL,  
5     [BorrowingDate] DATE NOT NULL,  
6     [ReturnDate] DATE NULL,  
7     PRIMARY KEY CLUSTERED ([BorrowingID] ASC),  
8     FOREIGN KEY ([ItemID]) REFERENCES [dbo].[Items] ([ItemID]),  
9     FOREIGN KEY ([MemberID]) REFERENCES [dbo].[Members] ([MemberID])
```

Table Properties

General

Table name

B...

Schema

↓

Description

System Versioning

System Versioning Enabled

Memory Optimized

Memory Optimized