--\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- 2.1

-- Designs and builds a suitable set of fully normalised tables.

-- CREATE DATABASE SpartaAcademy;

-- USE SpartaAcademy;

-- DROP TABLE CourseScheduleAttendees;

-- DROP TABLE CourseScheduleTrainers;

-- DROP TABLE CourseSchedule;

-- DROP TABLE Employees;

-- DROP TABLE CourseCatalog;

-- DROP TABLE Rooms;

-- DROP TABLE Academies;

-- CREATE TABLE Academies (

-- AcademyID INT NOT NULL IDENTITY PRIMARY KEY,

-- AcademyName VARCHAR(20) NOT NULL

-- );

-- CREATE TABLE Rooms (

-- RoomID INT NOT NULL IDENTITY PRIMARY KEY,

-- AcademyID INT NOT NULL,

-- FOREIGN KEY(AcademyID) REFERENCES Academies(AcademyID),

-- RoomName VARCHAR(20) NOT NULL,

-- Description VARCHAR(255),

-- Capacity INT NOT NULL,

-- CHECK (Capacity <=25)

-- );

-- CREATE TABLE CourseCatalog (

-- CourseID INT NOT NULL IDENTITY PRIMARY KEY,

-- CourseName VARCHAR(20) NOT NULL,

-- Duration INT

-- );

-- CREATE TABLE Employees (

-- EmployeeID INT NOT NULL IDENTITY PRIMARY KEY,

-- FirstName VARCHAR(20) NOT NULL,

-- LastName VARCHAR(20) NOT NULL,

-- EmployeeType VARCHAR(1),

-- CHECK (EmployeeType = 'T' OR EmployeeType = 'S'),

-- StartDate DATE

-- );

-- CREATE TABLE CourseSchedule (

-- CourseScheduleID INT NOT NULL IDENTITY PRIMARY KEY,

-- AcademyID INT NOT NULL,

-- FOREIGN KEY(AcademyID) REFERENCES Academies(AcademyID),

-- RoomID INT NOT NULL,

-- FOREIGN KEY(RoomID) REFERENCES Rooms(RoomID),

-- CourseID INT NOT NULL,

-- FOREIGN KEY(CourseID) REFERENCES CourseCatalog(CourseID),

-- StartDate DATE,

-- EndDate DATE

-- );

-- CREATE TABLE CourseScheduleTrainers (

-- TrainerID INT NOT NULL,

-- FOREIGN KEY(TrainerID) REFERENCES Employees(EmployeeID),

-- CourseScheduleID INT ,

-- FOREIGN KEY(CourseScheduleID) REFERENCES CourseSchedule(CourseScheduleID),

-- TrainerType VARCHAR(1) NOT NULL,

-- CHECK (TrainerType = 'T' OR TrainerType = 'A'),

-- );

-- CREATE TABLE CourseScheduleAttendees (

-- AttendeeID INT NOT NULL,

-- FOREIGN KEY(AttendeeID) REFERENCES Employees(EmployeeID),

-- CourseScheduleID INT NOT NULL,

-- FOREIGN KEY(CourseScheduleID) REFERENCES CourseSchedule(CourseScheduleID),

-- Active INT

-- );

-- -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- -- 2.2

-- -- Create SQL files containing the SQL statements for the following: One that contains all statements required to create and re-create this database. DDL only.

-- INSERT INTO [Academies]

-- ([AcademyName])

-- VALUES

-- ('Richmond')

-- ;

-- INSERT INTO [Academies]

-- ([AcademyName])

-- VALUES

-- ('Birmingham')

-- ;

-- INSERT INTO [Academies]

-- ([AcademyName])

-- VALUES

-- ('Leeds')

-- ;

-- INSERT INTO [Rooms]

-- ([AcademyID]

-- ,[RoomName]

-- ,[Description]

-- ,[Capacity])

-- VALUES

-- (1

-- ,'Room 1'

-- ,'Next to the new Lo; sign'

-- ,12)

-- ;

-- INSERT INTO [Rooms]

-- ([AcademyID]

-- ,[RoomName]

-- ,[Description]

-- ,[Capacity])

-- VALUES

-- (1

-- ,'Room 2'

-- ,'Behind the new Sparta sign'

-- ,18)

-- ;

-- INSERT INTO [Rooms]

-- ([AcademyID]

-- ,[RoomName]

-- ,[Description]

-- ,[Capacity])

-- VALUES

-- (1

-- ,'Room 3'

-- ,'No air-con'

-- ,18)

-- ;

-- INSERT INTO [Rooms]

-- ([AcademyID]

-- ,[RoomName]

-- ,[Description]

-- ,[Capacity])

-- VALUES

-- (1

-- ,'Room 4'

-- ,'Has second door with number lock'

-- ,10)

-- ;

-- INSERT INTO [Rooms]

-- ([AcademyID]

-- ,[RoomName]

-- ,[Description]

-- ,[Capacity])

-- VALUES

-- (1

-- ,'Boardroom'

-- ,'Use as last resort'

-- ,14)

-- ;

-- INSERT INTO [CourseCatalog]

-- ([CourseName]

-- ,[Duration])

-- VALUES

-- ('BA-Test',

-- 7)

-- ;

-- INSERT INTO [CourseCatalog]

-- ([CourseName]

-- ,[Duration])

-- VALUES

-- ('Engineering',

-- 12)

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- ,[StartDate]

-- )

-- VALUES

--           ('Tim','Cawte','T','07/14/2017')

--               ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- ,[StartDate]

-- )

-- VALUES

--           ('Richard','Gurney','T','07/01/2017')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Adam','Smith','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('John','Williams','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Nick','Willis','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Jenny','Jones','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Katie','Prince','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Peter','Brown','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Mo','Khan','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Juan','Carlos','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Jan','Miller','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Kyle','Carpenter','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Alvarao','Carlos','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Margaret','Baker','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Oti','Mwase','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Joe','Mann','S')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Steve','Harris','S')

-- ;

-- INSERT INTO [dbo].[CourseSchedule]

-- ([AcademyID]

-- ,[RoomID]

-- ,[CourseID]

-- ,[StartDate]

-- ,[EndDate])

-- VALUES

-- (1

-- ,1

-- ,1

-- ,'01/15/2018'

-- ,'03/02/2018'

--       )

-- ;

-- INSERT INTO [dbo].[CourseSchedule]

-- ([AcademyID]

-- ,[RoomID]

-- ,[CourseID]

-- ,[StartDate]

-- ,[EndDate])

-- VALUES

-- (1

-- ,3

-- ,2

-- ,'01/22/2018'

-- ,'03/03/2018'

--       )

-- ;

-- INSERT INTO [dbo].[CourseSchedule]

-- ([AcademyID]

-- ,[RoomID]

-- ,[CourseID]

-- ,[StartDate]

-- ,[EndDate])

-- VALUES

-- (1

-- ,4

-- ,2

-- ,'01/22/2018'

-- ,'03/03/2018'

--       )

-- ;

-- INSERT INTO [CourseScheduleTrainers]

-- ([CourseScheduleID]

-- ,[TrainerID]

-- ,[TrainerType])

-- VALUES

-- (1

-- ,1

-- ,'T')

-- ;

-- INSERT INTO [CourseScheduleTrainers]

-- ([CourseScheduleID]

-- ,[TrainerID]

-- ,[TrainerType])

-- VALUES

-- (2

-- ,2

-- ,'T')

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (1

-- ,3

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (1

-- ,4

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (1

-- ,5

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (1

-- ,6

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (1

-- ,7

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (1

-- ,8

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (2

-- ,9

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (2

-- ,10

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (2

-- ,11

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (2

-- ,12

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (2

-- ,13

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (2

-- ,14

-- ,1)

-- ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (2

-- ,15

-- ,1)

-- ;

-- -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- -- 2.3

-- -- Adds more sample data to include all current trainers and at least one TA (Training Assistant) and Spartans on your current course.

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- ,[StartDate]

-- )

-- VALUES

--           ('Rob','Whitehouse','T','07/01/2016')

--  ;

-- INSERT INTO [CourseScheduleTrainers]

-- ([CourseScheduleID]

-- ,[TrainerID]

-- ,[TrainerType])

-- VALUES

-- (3

-- ,18

-- ,'T')

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- ,[StartDate]

-- )

-- VALUES

--           ('Giverny','Wilson-Martin','T','07/01/2016')

--  ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Zachary','Harrison','S')

--  ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (3

-- ,20

-- ,1)

-- ;

-- INSERT INTO [Employees]

-- ([FirstName]

-- ,[LastName]

-- ,[EmployeeType]

-- )

-- VALUES

--           ('Yinka','Merit','S')

--  ;

-- INSERT INTO [CourseScheduleAttendees]

-- ([CourseScheduleID]

-- ,[AttendeeID]

-- ,[Active])

-- VALUES

-- (3

-- ,21

-- ,1)

-- ;

-- -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- -- 3.1

-- -- Produce a report similar to the above table (see 2.1) from all 7 tables using one SQL statement (use FORMAT for the dates).

-- SELECT cc.CourseName AS "Course Name", FORMAT(cs.StartDate,'dd/MM/yyyy') AS "Start Date", FORMAT(cs.EndDate,'dd/MM/yyyy') AS "End Date", a.AcademyName AS "Academy Name", r.RoomName AS "Room Name", e2.FirstName + ' ' + e2.LastName AS "Trainer",e1.FirstName + ' ' + e1.LastName AS "Spartan" FROM CourseSchedule cs

-- INNER JOIN Rooms r ON cs.RoomID = r.RoomID

-- INNER JOIN Academies a ON cs.AcademyID = a.AcademyID

-- INNER JOIN CourseCatalog cc ON cs.CourseID = cc.CourseID

-- INNER JOIN CourseScheduleAttendees csa ON cs.CourseScheduleID = csa.CourseScheduleID

-- INNER JOIN CourseScheduleTrainers cst ON cs.CourseScheduleID = cst.CourseScheduleID

-- INNER JOIN Employees e1 ON csa.AttendeeID = e1.EmployeeID

-- INNER JOIN Employees e2 ON cst.TrainerID = e2.EmployeeID

-- -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- -- 3.2

-- -- Repeat 3.1 above but replace the Spartan Name column with Spartan Initials.

-- SELECT cc.CourseName AS "Course Name",FORMAT(cs.StartDate,'dd/MM/yyyy') AS "Start Date", FORMAT(cs.EndDate,'dd/MM/yyyy') AS "End Date", a.AcademyName AS "Academy Name", r.RoomName AS "Room Name", e2.FirstName + ' ' + e2.LastName AS "Trainer",LEFT(e1.FirstName,1) + '.' + LEFT(e1.LastName,1) AS "Spartan Initials" FROM CourseSchedule cs

-- INNER JOIN Rooms r ON cs.RoomID = r.RoomID

-- INNER JOIN Academies a ON cs.AcademyID = a.AcademyID

-- INNER JOIN CourseCatalog cc ON cs.CourseID = cc.CourseID

-- INNER JOIN CourseScheduleAttendees csa ON cs.CourseScheduleID = csa.CourseScheduleID

-- INNER JOIN CourseScheduleTrainers cst ON cs.CourseScheduleID = cst.CourseScheduleID

-- INNER JOIN Employees e1 ON csa.AttendeeID = e1.EmployeeID

-- INNER JOIN Employees e2 ON cst.TrainerID = e2.EmployeeID

-- -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- -- 3.3

-- -- Adds a new column after End Date headed “Check Date” which uses the DATEADD function to add 8 weeks to the Start Date column for BA Test courses and 12 weeks for any others.

-- SELECT cc.CourseName AS "Course Name",FORMAT(cs.StartDate,'dd/MM/yyyy') AS "Start Date",

-- CASE WHEN cc.CourseName = 'BA-Test' THEN FORMAT(DATEADD(d,56,cs.StartDate),'dd/MM/yyyy')

-- ELSE FORMAT(DATEADD(d,84,cs.StartDate),'dd/MM/yyyy') END AS "Check Date",

-- FORMAT(cs.EndDate,'dd/MM/yyyy') AS "End Date",

-- a.AcademyName AS "Academy Name", r.RoomName AS "Room Name", e2.FirstName + ' ' + e2.LastName AS "Trainer",LEFT(e1.FirstName,1) + '.' + LEFT(e1.LastName,1) AS "Spartan Initials" FROM CourseSchedule cs

-- INNER JOIN Rooms r ON cs.RoomID = r.RoomID

-- INNER JOIN Academies a ON cs.AcademyID = a.AcademyID

-- INNER JOIN CourseCatalog cc ON cs.CourseID = cc.CourseID

-- INNER JOIN CourseScheduleAttendees csa ON cs.CourseScheduleID = csa.CourseScheduleID

-- INNER JOIN CourseScheduleTrainers cst ON cs.CourseScheduleID = cst.CourseScheduleID

-- INNER JOIN Employees e1 ON csa.AttendeeID = e1.EmployeeID

-- INNER JOIN Employees e2 ON cst.TrainerID = e2.EmployeeID