

1. Create a database named Aptech. The database should have a primary file, a secondary file and a log file

```
CREATE DATABASE Aptech
ON PRIMARY
(
    NAME = aptech,
    FILENAME = "C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\DATA\aptech.mdf",
    SIZE = 10,
    MAXSIZE = 50,
    FILEGROWTH = 20MB
),
( NAME = "primarydat2",
  FILENAME = "C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\DATA\primarydat2.ndf",
  SIZE = 10,
  MAXSIZE = 20,
  FILEGROWTH = 15%
)
LOG ON
(
    NAME = Aptech_log,
    FILENAME = "C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\DATA\aptech_log.log"
)
```

2. After creating the Aptech database, create 3 tables in that with constraints:

Classes

Column Name	Data Type	Constraints
ClassName	NCHAR(6)	PK
Teacher	NVARCHAR(20)	NOT NULL
TimeSlot	NVARCHAR(40)	
Class	INT	>0 and <4
Lab	INT	>0 and <4

Students

Column Name	Data Type	Constraints
RollNumber	NCHAR(7)	PK
ClassName	NCHAR(6)	FK
StudentName	NVARCHAR(25)	NOT NULL
Address	NVARCHAR(50)	NOT NULL
DOB	DATETIME	Students must have age >15
Sex	BIT	Default = 1
Hobbies	XML	

Marks

Column Name	DataType	Constraints
MarkID	INT	PK, IDENTITY
RollNumber	NCHAR(7)	FK
Subject	NVARCHAR(10)	Must be one of these values: 'CF','SQL','Java','C#'
Mark	DECIMAL	>=0; <=25

Type the flowing code to create the 3 previous tables

```
CREATE TABLE Classes
(
    ClassName NCHAR(6) primary key,
    Teacher NVARCHAR(20),
    TimeSlot NVARCHAR(15),
    Class INT check(Class >0 AND Class <4),
    Lab INT check(lab >0 AND Lab <4),
)

CREATE TABLE Students
(
    RollNumber NCHAR(7) PRIMARY KEY,
    ClassName NCHAR(6) REFERENCES Classes(ClassName),
    StudentName NVARCHAR(25) NOT NULL,
    Address NVARCHAR(50) NOT NULL,
    DOB DATETIME CHECK(YEAR(DOB) < YEAR(GETDATE()) - 15),
    Sex BIT DEFAULT 1,
    Hobbies xml
)

CREATE TABLE Marks
(
    MarkID INT IDENTITY(1,1) PRIMARY KEY,
    RollNumber NCHAR(7) REFERENCES Students(RollNumber),
    Subject NVARCHAR(10) CHECK (Subject in ('CF', 'SQL', 'Java', 'C#')),
    Mark DECIMAL CHECK( Mark>=0 and Mark <=25)
)
```

3. Add a constraint named ClassNameCheck to the Classes table. The constraint must meet the following conditions:

- ClassName must have 6 characters
- The first character of ClassName must be C or T
- The 2th and 3th character must be in range [00->99]
- The 4th and 5th must be in range [00,01->12]
- The last character must match in one of the following values G, I, L, M

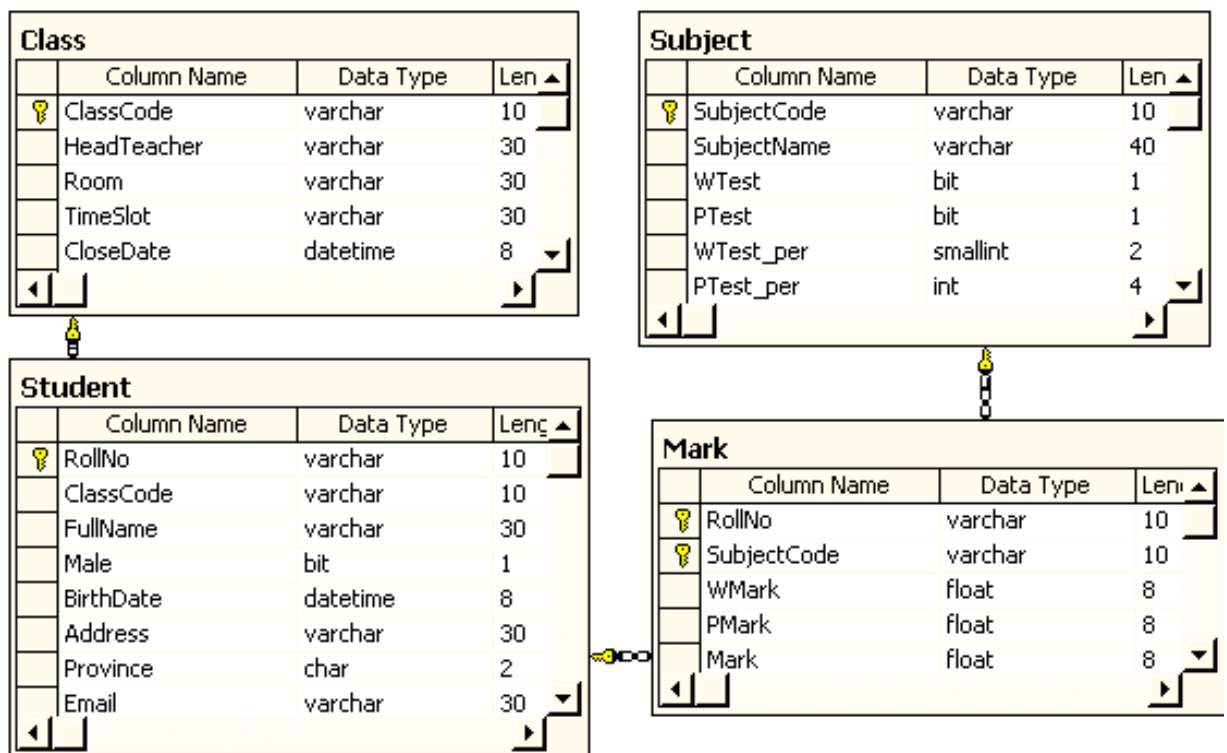
An example of a correct ClassName: C0708G

To implement `ClassNameCheck`'s constraints type the flowing code

```
ALTER TABLE CLASSES ADD CONSTRAINT ClassNameCheck
CHECK(
    ClassName LIKE '[CT]%[GILM]' AND
    CAST(SUBSTRING(ClassName, 2, 2) AS INT) <100 AND
    CAST(SUBSTRING(ClassName, 4, 2) AS INT) <13 AND
    LEN(ClassName) = 6
)
```

Do It Yourself

1.1. Recreate the Aptech database to have the flowing schema:



1.2. Do the workshop 1, 2 in the CD.

1.3. Do the assignment 1 in the CD.