4.1 Structs 



This section will guide you to:

* Create a Windows Console project in Visual Studio to show the use of structs
* Create a method, doApp(), that will use a struct to store details of a student

**Development Environment**

* Visual Studio 2019 Community Version
* Windows 10

This guide has five subsections, namely:

* + 1. Creating a Windows Console project in Visual Studio to show the use of structs
    2. Adding a method, doApp(), in Program class that will use a struct to store details of a student
    3. Building the project
    4. Publishing and running the project
    5. Pushing the code to your GitHub repositories

**Step 4.1.1:** Creating a Windows Console project in Visual Studio to show the use of structs

* Open Visual Studio.
* From the top menu, select **File->New->Project.**
* In **Create A New Project** screen, select **Console app (.NET Core)** from the list of available project types and click on **Next.**
* Enter **Project Name** as **Phase1Section5.4** and click on **Create.**
* This will create the files for a Windows Console project.

**Step 4.1.2:** Adding a method, doApp(), in Program class that will use a struct to store details of a student

* Select **Program.cs** as the current Code tab.
* Enter the following code:

**using** System;

**namespace** Phase1Section5.\_4

{

**class** Program

{

**static** **void** Main(**string**[] args)

{

doApp();

}

**public** **static** **void** doApp()

{

Student[] students = **new** Student[3];

**for** (**int** i = 0; i < students.Length; i++) {

students[i].name = "Name " + i.ToString();

students[i].address = "Address of student ";

students[i].rollNumber = i;

students[i].className = " VA";

students[i].dateOfBirth = Convert.ToDateTime("1992-09-10 00:00:00");

}

**for** (**int** i = 0; i < students.Length; i++)

{

Console.Write(students[i].name + ",");

Console.Write(students[i].address + ",");

Console.Write(students[i].rollNumber + ",");

Console.Write(students[i].className + ",");

Console.Write(students[i].dateOfBirth);

Console.WriteLine("------------------------");

}

}

}

**struct** Student

{

**public** **string** name;

**public** **string** address;

**public** **int** rollNumber;

**public** **string** className;

**public** DateTime dateOfBirth;

}

}

**Step 4.1.3:** Building the project

* From the top menu, choose **Build->Build Solution.**
* If any compile errors are shown, fix them as required.

**Step 4.1.4:** Publishing and running the project

* From the top menu, select **Debug->Start Without Debugging.**
* This will execute the program in a console window..

**Step 4.1.5:** Pushing the code to your GitHub repositories

Open your command prompt and navigate to the folder where you have created your files.

cd <folder path>

Initialize your repository using the following command:

git init

Add all the files to your git repository using the following command:

git add .

Commit the changes using the following command:

git commit -m “Changes have been committed.”

Push the files to the folder you created initially using the following command:

git push -u origin master