3.1 Arrays

This section will guide you to:

* Create a Windows Console project in Visual Studio to demonstrate the use of arrays
* Create a method, runApp(), that will use arrays to store students and marks

**Development Environment**

* Visual Studio 2019 Community Version

This guide has five subsections, namely:

* + 1. Creating a Windows Console project in Visual Studio to demonstrate the use of arrays
    2. Adding a method, runApp(), that will use arrays to store students and marks
    3. Building the project
    4. Publishing and running the project
    5. Pushing the code to your GitHub repositories

**Step 3.1.1:** Creating a Windows Console project in Visual Studio to demonstrate the use of arrays

* 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 **Phase1Section4.4** and click on **Create.**
* This will create the files for a Windows Console project.

**Step 3.1.2:** Adding a method, runApp(), that will use arrays to store students and marks

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

**using** System;

**namespace** Phase1Section4.\_4

{

**class** Program

{

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

{

runApp();

}

**public** **static** **void** runApp()

{

**string**[] students3A, students3B;

students3A = **new** **string**[10] { "Rahul", "Sheela", "Mukesh", "Afzal", "Ramesh", "Geeta", "Jason", "Robert", "Gopal", "Meera" };

students3B = **new** **string**[10] { "Pinky", "Rakesh", "Rafi", "Mumtaz", "Derek", "Sukhwinder", "Gopi", "Tulsi", "Chandrika", "Ann" };

**string**[] subjects = **new** **string**[6];

subjects[0] = "Physics";

subjects[1] = "Chemistry";

subjects[2] = "Biology";

subjects[3] = "Calculus";

subjects[4] = "Computer Science";

subjects[5] = "Algebra";

**int**[] marks = **new** **int**[6];

marks[0] = 67;

marks[1] = 90;

marks[2] = 80;

marks[3] = 55;

marks[4] = 71;

marks[5] = 92;

Console.WriteLine("Students of Class 3A:");

**foreach**(**string** s **in** students3A)

{

Console.Write(s + " ");

}

Console.WriteLine("");

Console.WriteLine("Students of Class 3B:");

**foreach** (**string** s **in** students3B)

{

Console.Write(s + " ");

}

Console.WriteLine("");

Console.WriteLine("Marks of Kamal:");

**int** total = 0;

**for**(**int** i = 0; i < 6; i++)

{

total += marks[i];

Console.WriteLine(subjects[i] + " = " + marks[i]);

}

Console.WriteLine("TOTAL = " + total + "/600 = " + (total\*100/600) + " percent") ;

}

}

}

**Step 3.1.3:** Building the project

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

**Step** **3.1.4:** Publishing and running the project

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

**Step 3.1.5:** 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