

Problem Solving & Programming 1

(SOFT6018) - Lab Week 5

This lab should be done using **Eclipse**. It is installed on all the machines in the labs.

Write a program which uses the country array from [last week's lab](#) and does the following

Your program should have two classes **MainProgram** and **CountryOperations**

CountryOperations should have three methods which do the following

- A **public** method called **calculateAverageCountryLength** which calculates the average country name length and take the **countryArray** as a parameter and returns an int.
- A **public** method called **getNumberOfCountriesBeginngWithLetter** which counts the number of countries beginning with a letter or letters. It should take a **String** and the **countryArray** as a parameters and return an **int**
- A **public** method called **printMenu** which prints the menu to user and takes no parameter and returns nothing.

getNumberOfCountriesBeginngWithLetter should output a sentence like **"The number of countries beginning with Sp is 5"**

MainProgram should contain the **countryArray** and a main method (like last week)

It should do the following :

- Display a menu to the user asking if they want to :
- 1. **Calculate the average country length**
 2. **Find the number of countries beginning with a letter sequence.**
 3. **Exit.**
- A **Scanner** should be used to capture the users input when choosing an option and **also** when they are asked for a letter sequence in **Option 2**
- A while loop should keep running allowing them to keep choosing 1 or 2 as they wish. Once they enter 3 the program should exit.
- It should create an instance of **CountryOperations** in **main** and call its methods as appropriate.
- If the user enters an invalid option (i.e. Not 1,2 or 3) they should get this message "You have entered an invalid option."