Introduction to Programming 1 – Worksheet 11

Part 1 – Variables

These questions will require the use of functions as well as global variables

Question 1

Write a program named Q1.c. This program should contain a global variable that is an array for storing 20 int values. The number of values in the array should be stored as a constant. Add a function, named **readValues** that reads theses values from the user and stores them in the array. Call this function in the main function.

Because the array is a global variable, you do not need to have any parameters or return any value.

Question 2

Write a function in Q1.c named **printValues**. This function should print each of the values to the screen separated by a single space (print a new line character after all the numbers are printed). Call this function from the main function.

Question 3

Write a function in Q1.c named **maxValue**. This should search through the array for the biggest value and print it to the screen. Call this function from the main function.

Question 4

Write a function in Q1.c named **minValue**. This should search through the array for the smallest value and print it to the screen. Call this function from the main function.

Question 5

Write a function in Q1.c named **averageValue**. This should calculate the average value in the array and print it to the screen. Call this function from the main function.

Question 6

Write a program named Q6.c. This program should contain a global variable that is an array for storing 1000 int values. This program is going to read these values from a file that contains a maximum of 1000 values. This means we also need a global int variable to remember how many values we read from the file.
Add a function, named **readValues** that reads theses values from the user and stores them in the array. Call this function in the main function.

Question 7

Write a function in Q6.c named **printValues**. This function should print each of the values to the screen separated by a single space (print a new line character after all the numbers are printed). Call this function from the main function.

Remember that we should only print the numbers read from the file and not all of the numbers in the array.

Question 8

Write a function in Q6.c named `maxValue`. This should search through the array for the biggest value and print it to the screen. Call this function from the main function.

Question 9

Write a function in Q6.c named `minValue`. This should search through the array for the smallest value and print it to the screen. Call this function from the main function.

Question 10

Write a function in Q6.c named `averageValue`. This should calculate the average value in the array and print it to the screen. Call this function from the main function.