CS1050 – Prelab 6
Spring 2020

Concepts to Practice
- Pointers
- Simulated "pass by reference" via pointers
- Strings
- Relationship of pointers to arrays

Description
For the prelab assignment, you need to implement a program that issues prompts and takes in data from the user inside various functions. There are special rules in this assignment to make sure you pass variables back and forth between your functions and the main() function:

- You may not call scanf() from your main() function.
- You may not use global variables.
- The variables you print out at the end must all be declared in your main() function.
- All of your functions must have a void return type, except as described below.

The main() function in your program should:

1. Print a message welcoming the user to Prelab 6.
2. Call a function to get an integer and a floating point variable from the user.
3. Call a function to get a string from the user.
4. Call a function to get an integer array from the user.
5. Print out all of the values that the user entered.

Functions You Must Write
You may write any functions you wish to implement this program, but there must be a function to get an integer and a float, a function to get a string, and a function to get an array. To get the array, you must write a function with the following prototype:

```
int GetIntegerArray(int * outputIntArray, int maxsize);
```

The GetIntegerArray() function should return the actual number of array elements entered. Its parameters are the location in memory where it should begin filling in the array elements (outputIntArray), and the maximum number of elements (maxsize) that you can enter (so you won't run off the end of the array).

```
jimr@JimRHadesCanyon:~/CS1050/SP2020/labs/lab6$ compile prelab6.c
jimr@JimRHadesCanyon:~/CS1050/SP2020/labs/lab6$ ./a.out

***********************
* Welcome to Prelab 6 *
***********************

Please enter an integer followed by a space followed by a float and then hit enter:
951 -317.678
Please enter a string without spaces and then hit enter: JimRiesIsCool
How many integers would you like to input? 5
        Enter integer #1: -18
        Enter integer #2: 23
        Enter integer #3: 457
        Enter integer #4: 32768
        Enter integer #5: 0

***********************
You entered 951,-317.678009,JimRiesIsCool
Array elements:
        array[0]=-18
        array[1]=23
        array[2]=457
        array[3]=32768
        array[4]=0
```