

CS1050 – Prelab 7

Spring 2022

Concepts to Practice

- Passing arrays to functions

Description

For the prelab assignment, you need to implement a program that reads a one-dimensional array from a user via a function. 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 7.
2. Call a function that asks the user how many integers they wish to enter.
3. Call a function that gets that number of integers from the user.
4. Print out all of the values that the user entered, by calling a function.

Functions You Must Write

You may write any functions you wish to implement this program, but there but you may not call `scanf()` from your `main()`. Also, the array of integers must be declared in `main()`. Finally, all of the functions you write (except `main()`) must have a void return type.

Hint

Here are prototypes for the functions I wrote in addition to `main()`:

```
int GetCount();
void GetIntegerArray(int outputIntArray[], int count);
void PrintArray(int a[], int size);
```

Sample Output1

```
jimr@JimRXPS13:~/CS1050/SP2022/labs/lab7$ compile prelab7.c
jimr@JimRXPS13:~/CS1050/SP2022/labs/lab7$ ./a.out
```

```
*****
* Welcome to Prelab 7 *
*****
```

```
How many integers would you like to enter?
10
```

```
Enter integer #1: 1
Enter integer #2: 2
Enter integer #3: 3
Enter integer #4: 4
Enter integer #5: 5
Enter integer #6: 6
Enter integer #7: 7
Enter integer #8: 8
Enter integer #9: 9
Enter integer #10: 10
```

```
*****
```

```
You entered an array with 10 elements:
```

```
array[0]=1
array[1]=2
array[2]=3
array[3]=4
array[4]=5
array[5]=6
array[6]=7
array[7]=8
array[8]=9
array[9]=10
```

Sample Output2

```
jimr@JimRXPS13:~/CS1050/SP2022/labs/lab7$ ./a.out
```

```
*****
* Welcome to Prelab 7 *
*****
```

```
How many integers would you like to enter?
3
```

```
Enter integer #1: 27
Enter integer #2: -177
Enter integer #3: 500
```

```
*****
```

```
You entered an array with 3 elements:
```

```
array[0]=27
array[1]=-177
array[2]=500
```