CS1050 – Prelab 6

Fall 2019

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. You may not call scanf() from your main() function. You may not use global variables.

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 from the user.
3. Call a function to get a float from the user.
4. Call a function to get a string from the user.
5. Call a function to get an array from the user.
6. 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, a function to get a float, a function to get a string, and a function to get an array. You will need to come up with your own function prototypes and implementations. However, all of your functions (except main()) must have return type void.

Example main()

Your main() function can look like this, but may vary a lot depending on how you prototype your functions. Here is mine:

```
int main(void)
{
	int i;
	float f;
	char s[11];
	int a[11];

	printf("\n**********************\n");
	printf("* Welcome to Prelab 6 *\n");
	printf("**********************\n\n");

	PromptAndGetInteger("Please enter an integer and hit enter: ",&i);
	PromptAndGetFloat("Please enter a float and hit enter: ",&f);
	PromptAndGetString("Please enter a string with no spaces and hit enter: ",s);
	PromptAndGetArray("Please enter up to 10 positive integers, entering -1 to end: ",a);

	printf("\n**********************\n");
	printf("You entered %d,%f,%s\n",i,f,s);
	PrintArray(a);
}
```

Sample Output

```
jimr@JimRHadesCanyon:~/CS1050/FS2019/lab6$ compile prelab6.c
jimr@JimRHadesCanyon:~/CS1050/FS2019/lab6$ ./a.out

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

Please enter an integer and hit enter: 23
Please enter a float and hit enter: 72.123
Please enter a string with no spaces and hit enter: JimRies
Please enter up to 10 positive integers, entering -1 to end:
        Array location 0: 25
        Array location 1: 14
        Array location 2: 7
        Array location 3: 6
        Array location 4: 23
        Array location 5: -71
        Array location 6: 0
        Array location 7: -1

**********************
You entered 23,72.123001,JimRies
Entry 0 = 25
Entry 1 = 14
Entry 2 = 7
Entry 3 = 6
Entry 4 = 23
Entry 5 = -71
Entry 6 = 0
```