

# Homework 1: Basic I/O Functions

Released Friday 8/26/16 - 5:00pm

**Due Friday 9/2/16 - 11:59pm**

## Goals:

- Learn how to use `printf` to print a string to the command line
- Learn proper type specifiers for format string
- Learn how to use `getchar` to scan a char value from the command line
- Learn how to use `scanf` to scan a string from the command line

## Description:

`printf.c`, `scanf.c`, and `getchar.c` all contain unfinished programs. You are to use the I/O functions from `<stdio.h>` to complete the programs as necessary. There are comments in each program to guide you on what is needed to complete the programs.

## Prerequisites:

- The I/O Functions Cheat Sheet

## Given:

- **Makefile** - compile the source file to executable files **printf**, **scanf** and **getchar**
- **\*.org** - all the **.org** files reference executable file showing how the program should work
- **printf.c** - print a list of variables of different types using **printf** function
- **scanf.c** - get user input from standard input using **scanf** function
- **getchar.c** - get a char value at a time from standard input using **getchar** function

**Note:** Remember to type “make” to compile all of the programs into executables “**printf**”, “**scanf**”, and “**getchar**”

### printf.c Demo

```
data 65 $ ./printf
I am about to print the values of variables
The value of num1 is 4 and the value of num2 is 67
The value of letter is y
The value of decimal is 56.720000
The value of word is CS240 is really fun
"This is a quote" and '\' is a slash
```

### scanf.c Demo

```
data 73 $ ./scanf
Enter your name: Matthew
Enter your age: 20
Enter your phone number: 7731234567

Your name is: Matthew
Your age is: 20
Your phone number is 7731234567
data 74 $ █
```

### getchar.c Demo

```
data 74 $ ./getchar
Enter a character:y
The character you entered was y
Enter a second character:x
The character you entered was x
data 75 $ █
```

### Submission:

These are the files that need to be in the Vocareum “work” directory for this assignment

- Makefile
- printf.c
- getchar.c
- scanf.c