

## Assignment 1 – Command Line Arguments

### Description:

This assignment is to write a C program that accepts arguments via the command line and then displays each of those arguments to the terminal along with how many arguments there are.

### Approach / What I Did:

I had spent the summer learning basic C syntax, and so that preliminary concern was resolved. I then investigated how to pass arguments into the *main* function, something I didn't cover over the summer. Once I learned that *main* can take two parameters *argc* and *argv*, I traversed the *argv* argument vector with a for-loop and printed the arguments in the required format.

Bless the *argc* parameter which stores the size of the argument vector *argv*. This would've been an entirely different assignment if I had to dynamically find the length of the *argv*.

I thought about possibly edge cases and could only come up with when there were 1 or multiple arguments. Wrote up a simple if-else statement so that it'd print the first line with proper grammar.

### Issues and Resolutions:

#### Passing Arguments into *main()* function

I didn't know how to pass arguments into the *main()* function in C. Turns out it can take two parameters *argc* and *argv* which are the count of the arguments and a vector of the arguments respectively. Source: [https://en.cppreference.com/w/c/language/main\\_function](https://en.cppreference.com/w/c/language/main_function)

**Analysis:** (If required for the assignment)

### Screen shot of compilation:

```
csc415-assignment-1-leavism on  main [!] via C v11.4.0-gcc
 make
gcc -c -o dang_giahuy_HW1_main.o dang_giahuy_HW1_main.c -g -I.
gcc -o dang_giahuy_HW1_main dang_giahuy_HW1_main.o -g -I.

csc415-assignment-1-leavism on  main [!?] via C v11.4.0-gcc

```

Screen shot(s) of the execution of the program:

```
csc415-assignment-1-leavism on  main [!?] via C v11.4.0-gcc
> make run
./dang_giahuy_HW1_main Hello World
There were 3 arguments on the command line.
Argument 00:    ./dang_giahuy_HW1_main
Argument 01:    Hello
Argument 02:    World

csc415-assignment-1-leavism on  main [!?] via C v11.4.0-gcc
>
```

```
csc415-assignment-1-leavism on  main [!] via C v11.4.0-gcc
> make run RUNOPTIONS="Code never lies, comments sometimes do"
gcc -c -o dang_giahuy_HW1_main.o dang_giahuy_HW1_main.c -g -I.
gcc -o dang_giahuy_HW1_main dang_giahuy_HW1_main.o -g -I.
./dang_giahuy_HW1_main Code never lies, comments sometimes do
There were 7 arguments on the command line.
Argument 00:    ./dang_giahuy_HW1_main
Argument 01:    Code
Argument 02:    never
Argument 03:    lies,
Argument 04:    comments
Argument 05:    sometimes
Argument 06:    do
```

```
csc415-assignment-1-leavism on  main [!?] via C v11.4.0-gcc
> █
```

```
csc415-assignment-1-leavism on  main [!?] via C v11.4.0-gcc
> make run RUNOPTIONS=""
./dang_giahuy_HW1_main
There was 1 argument on the command line.
Argument 00:    ./dang_giahuy_HW1_main
```

```
csc415-assignment-1-leavism on  main [!?] via C v11.4.0-gcc
> █
```