

Linux Programs

From .txt to successful execution

A c program at its heart is just a text file that has been compiled to run on a specific combination of hardware. To compile a program we will use a built in Linux program called gcc. Gcc will only accept .c files so the first step is to change any .txt code files to .c files. We can easily do this with the Linux 'mv' command.

```
muyma@ubuntu: ~/Desktop/Hello examp
File Edit View Search Terminal Help
muyma@ubuntu:~/Desktop/Hello examp$ ls
hello.txt
muyma@ubuntu:~/Desktop/Hello examp$ mv hello.txt hello.c
muyma@ubuntu:~/Desktop/Hello examp$ ls
hello.c
muyma@ubuntu:~/Desktop/Hello examp$
```

Now that we have a .c file we can use the gcc command to compile our program. The '-o' command line option allows us to choose a name for our program. In this case I have named the program 'hello'.

```
muyma@ubuntu: ~/Desktop/Hello examp
File Edit View Search Terminal Help
muyma@ubuntu:~/Desktop/Hello examp$ ls
hello.c
muyma@ubuntu:~/Desktop/Hello examp$ gcc hello.c -o hello
muyma@ubuntu:~/Desktop/Hello examp$ ls
hello hello.c
muyma@ubuntu:~/Desktop/Hello examp$
```

Since there were no compilation errors we can now run the program via command line. To run the program we simply need to type the programs name in and press enter. On most Linux machines we will use './' at the start of our program name to tell Linux to search in the current file we are in for the program to run. By typing in './hello' my compiled program now runs and prints a greeting to the screen. This particular program accepts command line arguments. To input an argument you simply type it after the program name separated by a space. Now my program can say hello to me!

```
muyma@ubuntu: ~/Desktop/Hello examp
File Edit View Search Terminal Help
muyma@ubuntu:~/Desktop/Hello examp$ ./hello
!!!Hello World!!!
muyma@ubuntu:~/Desktop/Hello examp$ ./hello Anthony
!!!Hello Anthony!!!
muyma@ubuntu:~/Desktop/Hello examp$
```