Chapter 1

Welcome

Basic process

- Write code using a text editor
- Compile from the command line
- Run the executable

You should save all of the code you write in two places:

- on your machine here in the lab (in your directory)
- somewhere in the cloud (google drive, dropbox, github, etc)

1.1   Navigating the Linux box

Basic "Terminal" commands

```
ls
mkdir <new directory name>
rmdir <directory to be deleted>
cd <directory>
cd ..
pwd
cp <old> <new>
mv <old> <new>
```

The current directory is ./

Make a directory where you will put your files. Write down your computer number!

1.2   Your first program

From within your directory, open a file `hello.c` with text editor Atom:

```
atom hello.c
```

Type in the following code:

```
/*
my first program!
*/

#include <stdio.h>
#include <math.h>
#include <stdlib.h>

int main()
{
  printf("Hello World! \n"); //  \n causes a new line
}
```

Save and return to terminal. Compile with the command:

```
gcc hello.c
```

Look at list of files in your directory. There is a file called ¡a.out¿. Run this file with the command

```
./a.out
```

Run executable again. Change the code, compile again, run again.

Compile with

```
gcc -o hello hello.c
```

Look at list of files in directory. There is now a file called `hello`. Fun this file with the command

```
./hello
```

1.3   Aside

The "-o" indicated we have used an optional part of the compiling command. Most commands have many options.

You can the manual for a command by entering

```
    man <command>
```

Type q to quit the manual. Try this by entering

```
    man ls
```

What should this command do?

```
ls -1 -t
```

1.4   Homework: `welcome.c`

Write a program called `welcome.c` that prints the following:

```
Welcome to CS 171!
I hope you have a wonderful semester.
```

Upload your program to the following link:

https://www.dropbox.com/request/5pFxmSDSzJxju415skO3