

COMPUTATIONAL MATHEMATICS

TOPIC ZERO: SETUP C COMPILER

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ABSTRACT. Some resources may be found at my website <http://plbailey79.github.io/portal>.

We wish to set up a C compiler. We need a command line, an editor, and a compiler.

1. WINDOWS INSTRUCTIONS

1.1. **Editor.** Use Google to find, download, and install **Notepad++**. Make sure you have an icon to invoke **Notepad++** on your desktop.

1.2. **Compiler.** Go to the website and navigate to Current Classes/Computation Math. Download Tcc. Copy the entire Tcc directory (inside the zip file), and place it under **C:/Program Files**.

1.3. **Command Line.** To construct a primitive command line processor:

- Right-click on the desktop. Pick New Shortcut. Type "cmd" at the location prompt. Finish.
- Rename the new icon to "DOS Prompt".

To construct the command line window for editing/compiling:

- Click on the cmd.exe. Create a new folder for our class:
 - > cd \ Move to the root directory
 - > md World Create a directory called "C:\World".
 - > cd World Move into the World directory.
 - > md Tcc Create a directory called "C:\World\Tcc".
- Go to the website, navigate to our class, and download the **CPrompt.bat** program. Place it into the **C:/World** directory.
- Create an icon on your desktop which invokes the **CPrompt.bat** program. This is your command line for C programming.

2. MACINTOSH INSTRUCTIONS

These are some notes I made when I attempted to do this.

0) Understand the file system.

.	Current Working Directory
..	Up
/	Root Directory (Top of tree)
~	Home Directory (User's Home)

1) Get a decent text editor. We will use TextWrangler.
Install this from the AppStore (ugg finger down throat).

2) Fix the terminal prompt. Using TextWrangler, create a file named ".bash_profile" in your user account. This file contain one line of code:

```
export PS1="$"
```

Now your prompt with be a dollar sign.
If instead your profile contains

```
export="W $"
```

you will see the currently working directory.
(I suggest you not do this, is takes too much space.)

3) Learn how to save a file where you want. Bizarrely, this requires you to type Command+Shift+G in the Save As window. One would think this would be an option with a button, or even the default, in this save as window but no -- they want you to save it where they want. Who knows why? (They think you are stupid?)

4) Make a place to put your source files. On the command line, type the following:

\$ cd /	This takes you to the root.
\$ ls	This lists the files in the root directory.
\$ mkdir world	This creates the directory /world.

If you get a "permission denied" error, try

\$ sudo mkdir world	
\$ ls	Check that it worked.

It will ask for your password. Enter it. If you had to do this, you will want to crank up permissions in the new directory.

\$ sudo chmod 777 world	Assign Permissions
\$ cd world	Go into the world directory
\$ mkdir CC	Make a directory to store C projects
\$ cd CC	Go into the /world/CC directory

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