CprE 288 – Quick intro for compiling C in Linux

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Overview

- Finding a Linux environment
- Compile C code in Linux
- Linux Basics
Finding a Linux environment

Options for finding a Linux environment to use:

- A Coover computer lab with Linux machines (e.g. the TLA)
- Windows Remote Desktop: use it to login to most ISU Linux machines using your userID & password
  - Available Remote Linux machines: https://it.ece.iastate.edu/remote/
  - Note: If you are not on the campus network, then to remotely access machines using Remote Desktop you must use a VPN: https://www.it.iastate.edu/services/vpn
- Most Apple MACs have some type of Linux/Unix environment. If you can get it to work, than feel free to make use of it.
- Windows 10: Has its **Windows Subsystem for Linux (WSL)**.
  - If you would like to try to get this to work, then just search for “WSL Running Linux in Windows 10”. There should be a number of useful links.
Linux Basics

- On-line Linux tutorial:
  - [http://www.ee.surrey.ac.uk/Teaching/Unix/](http://www.ee.surrey.ac.uk/Teaching/Unix/)

- How do I know where I am
  - `pwd` (tells you your current location, use this command often)

- What is in my current location
  - `ls` (list all the files and directors at this location)

- Changing directories
  - `cd` directory_name
    - `cd ..` (takes you up one directory level)
    - `cd ~` (takes you to your home directory)

- Making a new directory
  - `mkdir` new_directory_name
Compile a C program in Linux

• Note 1: The following slides assume you are using an Iowa State University (ISU) Linux machine
• Note 2: If you are not using an ISU machine, then you may need to use a text editor different from “gedit”
Open a file

At the command line prompt type:

```
$ gedit file_name_to_create &
```

1) In this case I created a file called `hw3_1.c`
2) The “&” is important. Without it you lose the prompt
A gedit window should open. Notice the name of your file on the tab.
Add your C code

In this case I just copied from Word

Don’t forget to SAVE

Note: if you copy from Word the “ “ may not copy correctly. Just manually retype. See Next slide

http://class.ece.iastate.edu/cpre288
Add your C code

// Append str2 to str1
void my_strcat(char str1[], char str2[])
{
    //Your code goes here
}

// example of using my_strcat()
#include <stdio.h>

int main(void)
{
    char my_str1[50] = "hello";
    char my_str2[] = "world";
    my_strcat(my_str1, my_str2);
    printf("%s \n", my_str1);
}
Compile your code and execute it

Output of the program. Note: I have not put any code for my_strcat

Run the program that you just compiled called “test”

compile hw3_1.c and call the executable “test”