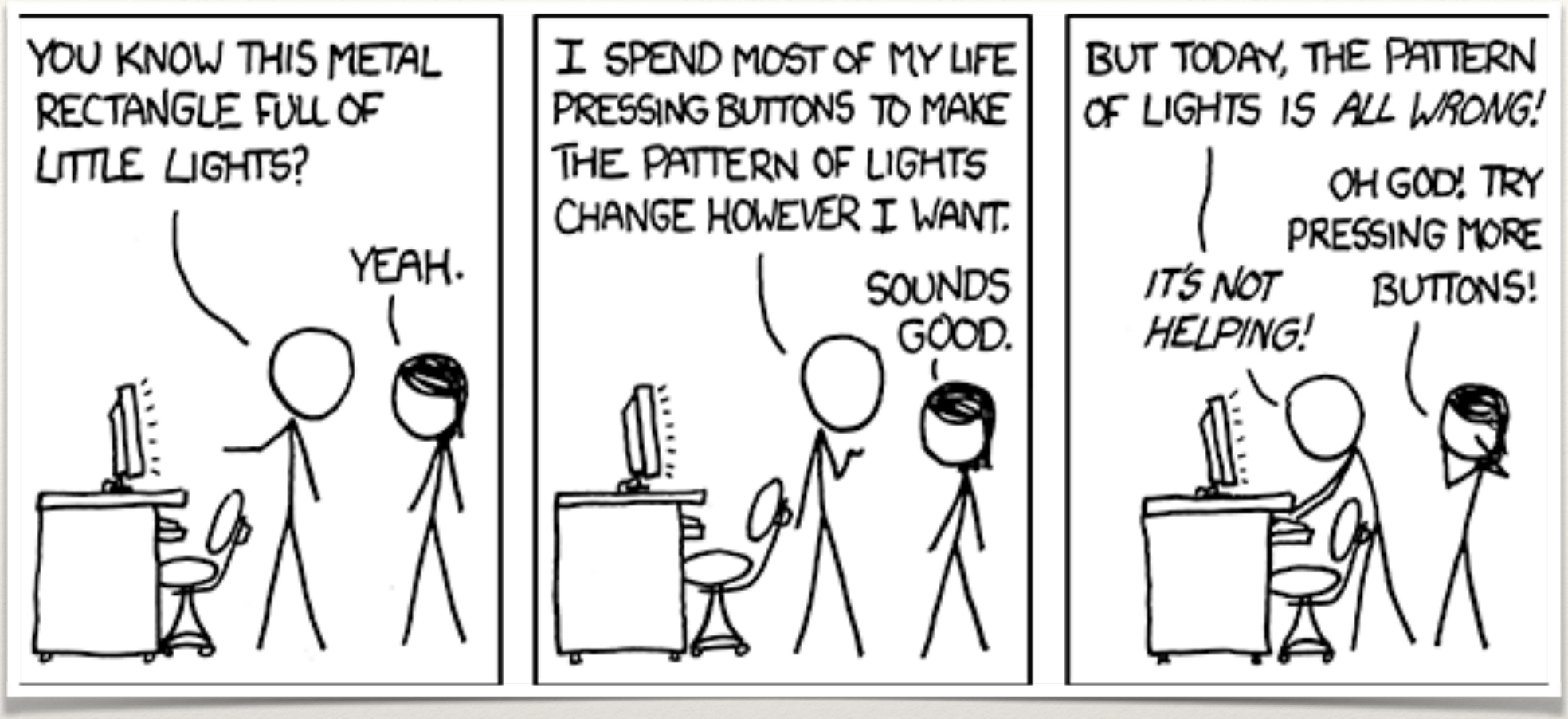
Let's get ready to program…

Introduction to CIS*2500

Intermediate Programming

http://xkcd.com/722/



Welcome to the club…

What is a Programmer?

Programming Environment
Evaluation
First Lab Assignment

Goals of this Course

- Only one…to make you an amazing C programmer…to awaken the love of all things programming…everything else takes care of itself…
- So be prepared to do as much coding as humanly possible!

http://ictframe.com/learn-to-programming/

Course Topics

- Working with memory
- Dynamic memory allocation
- Arrays, strings
- Files
- Data structures and Algorithms
- Function Pointers
- Software design and testing

Course References and Materials

Textbook

- The C Programming Language, 2nd Edition, Brian W. Kernighan and Dennis M. Ritchie, Prentice Hall Software Series, 1988.

Lecture Materials and Online References

- CourseLink

Evaluation

Examinations (40%)

- 2 Quizzes (mini-midterms) [5% each]
- Final [30%]

Assignments (60%)

- 4 Lab Assignments (Weeks 2, 4, 6, 9) [5% each]
- 4 Larger Assignments (Weeks 3, 5, 8, 11) [10% each]

Tools of the Trade

- So that you can learn to master some of the more interesting aspects of C programming, you are going to have to create your programming environment.
- To do this you will need five things:
  - VirtualBox
  - SOCS Virtual Machine (Debian Linux)
  - gcc, make and git

VirtualBox

- VirtualBox is a cross-platform virtualization application that allows you to run multiple operating systems on your (Windows, Mac, Linux, Solaris) machine at the same time.
- If you have a laptop or desktop you should download and run VirtualBox.
- Downloading VirtualBox
  - https://www.virtualbox.org/wiki/Downloads

VirtualBox

- After you have VirtualBox running, you will need to download the SOCS Virtual Machine - this is the development environment for all course assignments. If your code does not compile and run on this system then it will not receive a grade.
- Downloading the SOCS VM
  - https://wiki.socs.uoguelph.ca/students/socsvm

Warning: This download may take a very long time!

The Lab Environment

- Your labs are either in Reynolds 002 (in the basement) The machines there do not run VirtualBox
- Click on the NoMachine app and sign in. It will be the same as if you were running in VirtualBox
- You will also be able to use a SOCS Linux server. From the command line terminal, enter the following ssh command (and then supply your password)

prompt: ssh yourusername@linux.socs.uoguelph.ca

Next Steps

- Review / read the first three (3) chapters of the textbook.
- Setup your personal programming environment.
- Start working on Lab Assignment 1 - it is due in Week 2's lab.

Lab Assignment #1

Description

- Your program will allow the user to type in several lines of a poem. The user will signal the end of their input by typing a single dot (“.”) on a newline. After the end of the input stage, the program will tell the user (on stdout) how many lines and words are in the poem and how many words are on each line of the poem.

Lab Assignment #1

Sample Input and Output

$ ./poetry

Enter the poem:

Now is the winter of our discontent

Made glorious summer by this

Sun of York

.

15 words on 3 lines

7 5 3