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CS 161 – Reflection

Important Lessons:

Some of the more important things about programming this quarter were debugging and design. Brainstorming and having a good plan before you even write a line of code is very important. Having a functional design of your program will make it much easier to implement effective and bug free code if you have an idea of what the end result is going to do. Debugging tools are also very important, both run-time debugging such as using std::cout to debug messages and setting breakpoints. Also, saving the state of functions in static variables can be useful to determine how a program or function ended up in a particular state. Often, the behavior exhibited from a program is the result of some other part of the program mis-behaving.

Confusing Topics:

I have a pretty good grasp on the material covered this quarter. I am not very familiar with using the C++ std library, so some of the methods took some research. One example is iterating through a std::vector, or removing an element by reference, not by index. Reading the documentation for namespace std was helpful in this case though.

Learning Online:

I am very comfortable with online classes, my first bachelors of science was an online program. I attempted a master's of science at Purdue, but the course work was too theoretical for me and I had a hard time with it. This program seems very well suited for my goals and current knowledge/experience.

Improvement:

The assignments were very clearly written to describe what the end result should be, and the constraints on the program. I have a programming background already, so for this course I cannot really recommend any improvements. I skimmed over the Piazza class forum to try and help other students out. Most people had issues with pointers, and implementing logic statements in an efficient manner to make clean code.

Career ideas:

Currently I work at HP as a firmware engineer. I've done a few projects in the past with ATMEL microcontrollers for sampling of salt water aquariums (using various probes and ADC). The data was transmitted over Bluetooth low energy to a raspberry pi which saved the data in a SQL server hosted online. Now I work on embedded firmware for inkjet printers. This class was a good refresher on some of the more object orientated styles of thinking when coding, which is good for me, because most of our work is in C.

Looking forward to next quarter and CS-162!