Micheal Zambos

CMPT 390

Portfolio Explantaions

**Hangman**

This assignment was done for the CMPT 306 Data Structures and Algorithms class. It takes a random word from a text document, and has the player make guesses with individual letters until they either hit a certain number of guesses, losing, or correctly guessing every letter in the word. The game should be pretty intuitive if you’ve ever played hangman.

The project itself is not particularly difficult, of course, but I included it as first on my list because it’s a good example of how much work I’ve done in a given amount of time, and how much I’ve progressed as a programmer, as well as serving as a good example of my capabilities in object-oriented programming. This project involved learning and understanding python for the first time, and I distinctly recall being able to pull my experience from working in Java to working with python for more-or-less the first time, showcasing my ability to pick up newer languages that are at least somewhat similar to older languages I’ve used.

**Chatroom**

This project was completed for the CMPT 352 Networking class. The chatroom was my first introduction to using JSON objects, as well as a good example of my knowledge of networking and the relationship between the architecture, and the computer itself. The program has both a client and a server, which each send and receive JSON objects called ‘dealios’. The client will ask the user to input an IP address and a username, and then will connect that user to a running server.

**Sleeping TA**

This project solves the ‘sleeping TA’ problem from the CMPT 351 OS class, running multiple ‘student’ threads that get ‘help’ from the TA. I included this project, as it relates to my understanding of Operating Systems, as well as threading, specifically in the fields of Semaphores and Pthreads, when discussing C. The program was also done independently, showcasing how well I work alone.

**Web Server**

This project was also completed in CMPT 352, and it creates a web-server on the user’s machine, allowing the user to view images and files in a specific folder on the LocalHost, as outline in the ReadMe. I chose to include this project because of it being an example of my capabilities working alone, as I finished the project with little outside help, as well as a demonstration of my capabilities regarding networking, which I became significantly better at as the year went on. Lastly, it also serves as an example of my familiarity with software design, as the project was by no means easy to complete, but I managed to discover and fix problems that I had been stuck on, and worked on testing and completion for a not-insignificant period of time.

**Software Engineering Final Project**

This project was completed for the 322 Software Engineering class and it was far-and-away one of the more complex I’ve done for a class. It’s a series math games for students to use, designed to educate students on mathematical concepts. There are three games, and the program itself uses a database to pull its score information from, allowing the user, as well as teachers and administrators, to view student progress on multiple computers. This relates to my understanding of software development, as the whole of the project was written in Java, and using MySQL as the database. It also relates to my skills working in a team, as the whole project was divided between 4 people, where I did all of the testing as well as certain changes to the project itself. Finally, it also demonstrates problem solving skills: as the lead tester on the project, I had to fix bugs and errors when I found them, something that oftentimes required outside-the-box thinking.

**Senior Project**

I hope this doesn’t require and explanation, as I did most of that in my final report. I included it because the submission page required I needed to.