

Portfolio overview.

Why do I deserve a HD

I have shown good program design. Specifically, in the text and GUI music players. As well as in my HD custom project (DR19). Each of these programs are easily maintainable. Individual functions can be altered/upgraded and this will have minimal impact on the effectiveness of the rest. This is partly due to the modular way the programs were written. For example, DR 19 was built up a single aspect at a time. With each new function representing a new section of code. Whilst changes in each functions will alter the behavior of the game. Very few changes will result in unrelated aspects breaking. I believe my custom project. Being a Gosu tutorial also shows I have developed in depth knowledge around the unit outlines concepts. I believe these four projects in combination with the rest of my portfolio submission. When factoring in the knowledge I have gained. Go well above the required standard for this unit. Each aspect of my submission, whilst contributing differently. All go to support the Assessment criteria for this unit.

Up until this point I have had no experience with programming and believe I have progressed substantially from that point.

Reflection

Understanding Ruby concept

I have developed a solid understanding for many ruby concepts, through the completion of the tutorial tasks as well as GUI player and DR19. I have also developed a solid foundation for program design and development.

The idea of coupling and cohesion have also played a role in the way I have developed my programs. With these two ideas being imperative in relation to the way data is passed between functions in both the text and gui music player.

What was difficult

Managing work expectations as well as university requirements was extremally difficult. As I work in pathology work demands were increased substantially. This required constant adaption as the unpredictability made it difficult to plan ahead and even more difficult to find time.

The remote learning situation was also extremely difficult to deal with. I had very few people to talk to about these ideas which made it extremely difficult to progress. I learn best with a team around me that I can engage with and that was almost nonexistent.

In relations to the tutorial tasks. The Maze as well as the GUI player took considerable days to accomplish. The maze was particularly difficult as it related a lot of the more advanced concepts we had covered into a single program. The GUI player was difficult as it required the integration of all techniques learnt throughout the semester. Whilst individual tasks were completed, getting them to work effectively together was very challenging.

Finding reading material and good detailed documentation on Ruby and GOSU was very difficult. The library only had a very limited number of books to borrow. I was unable to obtain them to purchase (nothing online) and the online tutorials were close to nonexistent except for a few very outdated

ones or some very basic ones. This made working out the solutions and building on knowledge very difficult and time consuming as a lot of it was done through educated trial and error.

During the development of DR19. Syringe physics presented quite a few challenges. As a key was pressed. The image appeared at the required position however did not decouple from the initial command and form its own physical object. This meant when the syringe was fired it would redraw itself at the player position when the button was retriggered. This meant only a single projectile could be fired at a single time.

The original plan for DR19 was to have live twitter tweets from Donald trump act as trigger in the game. Whilst I never got to experiment with the Twitter API the procurement stage was interesting. I had to make a request and have an interview with twitter. The process was extremally time consuming and eye opening. In hindsight it may have been a poor use of time. However it is something I will look into once that time becomes available again because the idea of bringing live real world events as they happen into a game like this is intriguing.

What helped?

Whilst GUI music player was challenging to complete. The individual ideas it drew on, those being a combination of the semesters work. Really helped me place all of the techniques and ideas we learnt together. This really helped me put together DR19. The way in which these techniques interrelated were not clear to begin with. Once I started to break away from the tutorial questions and attempt to place them all together myself this relationship became clear. When looking for a solution to a problem it was often difficult to decipher the example given. This included the lecture content. However as time progressed it became easier to understand. The conversation on ED was also very helpful. If I was stuck somewhere there was more then likely another student that had already posted the question.

The topics I most enjoyed.

The design and development of DR19. I got very attached to the project and got a little carried away with the ability to communicate important messages and ideas throughout the programming. At first DR19 was created as a political protest. However very quickly progressed into an engaging. Interactive educational tool to help share CoV-19 safety tips.

This form of media is extremely wide reaching. The idea of impacting people in a positive way though this art is very exciting.

I found a lot of the topics/tutorial questions that covered the more visual aspect of programming to be very enjoyable as well. The GOSU library only further reinforced this. It was fairly easy for someone that was new to programming to pick up and presented me with a lot of powerful visual and audible tools to experiment with.

Things I will work on

Being able to efficiently and effectively work with new API's and languages.

At first and even still now only to a lesser degree. My ability to work with a new idea was very inefficient. When GOSU was first introduced it took me quite a while to get my head around it. Even after the make it move task I was not 100% around the concepts behind it. I think I need to improve this ability as adaptability seems to be key within this course as well as industry.

I am also very passionate about this fields ability to bring about social change and positively influence society. I have already put together a small team of friends. From artists to people that know a lot more then me in relation to programming to try and build something we can share with everyone.

I am particularly interested in C# as well and have been told that it is key in OOP. I plan to have a solid understanding before I enter second semester. I am hoping this will make dealing with uni workload vs work responsibilities a little easier.

This unit has also given me tools I can apply to my previous degree. That being a bachelor in science with a major in biotechnology and chemistry. I was experimenting with interactive GUI calculators for high performance liquid chromatography, gas chromatography and calculations required in the molecular lab and microbiology lab at work. I'm eager to spend some real time on these ideas and see if I can come up with something that is functional.

Looking back.

If I was to take this unit again. I would ensure it was face to face. As the lack of conversation and community has been the hardest aspect of this semester.

I would also take a little bit of time before semester started to work through some Ruby and to find some resources to help me learn. I would also start my final project a lot earlier. Whilst I'm very proud of my accomplishment I am a little disappointed at the final state and wish I had time to add/polish more. No doubt I will continue to add and experiment with ideas within the custom project over semester break as it has been very enjoyable/satisfying to work on.