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End of Course Reflection
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What stood out to me as the most important things I learned this quarter were classes, arrays, and pointers. After reading the chapter on classes I couldn't stop thinking about all the possible uses for them. I started applying it to my everyday interaction with technology, software, and particularly videogames where it seemed very obvious to me. The amount of depth that can be partitioned and controlled within a class was very exciting. So to speak, it was the first step towards deeper water. For arrays, I found them to be really practical. I began thinking about how each dimension could be used. My first degree was in geology, and I immediately tried to think of how a program, using arrays, could be used to simulate melting and cooling environment models or for creating a strata diagram based on seismic speed values through the earth's crust. It seems as though the possibilities are endless and the ability to utilize higher dimension arrays could be used to create some interesting programs. Lastly, pointers stood out to me as very important. I believe they are still my weakest subject learned, but I've been studying up in the hopes of having a firmer grasp. Pointers stand out to me as important, because of their ability to modify values rather than using a copy of a value and their ability to allocate dynamic memory. After learning about dynamic memory, a lot of things seemed to click. I attempted to use it in assignment 9, but was unfortunately not successful and settled with a regular array. However, its application, although mostly untouched by us, seems so relevant to any computer program that I can't wait to start implementing it in my own programs and in future assignments.

In terms of my weakest subject, I found that I understood pointers, but I wasn't exactly sure when I should use them. For example, while reading from the textbook and going through the class lectures and notes, I was able to understand pointers just fine. Once it came to the application, I found myself lost on how to implement them. To compensate for this weakness, I've been watching a different online tutorial each night. Getting an in-depth explanation from different people and different perspectives on the subject has given me an even better understanding than what I had before, but I can tell that to truly solidify them in my head, practice will be the best method as well as experience.

I found that I do okay with online courses. I knew coming in that there would be a lot of self-learning, but I did a lot of that in my original undergrad as well. I found that CS161 was constructed very well and had the right amount of reading and assignments to balance out theory versus application. I didn't feel there were any gaps that couldn't be answered in piazza, so my overall experience was very good. Big thanks to all the TA's and Professors in piazza helping students. Prof. Alcon helped me on more than one occasion when I got stuck on my assignments. In an online class, that activity on piazza by the TA's and Prof. Alcon was invaluable and shouldn't be understated.

To generalize my experience, I took 161 and 225 this term while working 50 hours and commuting 10 hours a week and I found myself pretty overwhelmed. Staying up late wasn't an

option since I'm up around 5:30AM every day for work, so I really had to plan my weeks/months out in advance in order to have time for all the assignments. I kept a tight schedule and sacrificed pretty much all my social life, but I'm really proud of how well I've done and how much I've learned. I probably put in about 80-90 hours of work a week overall, so I am dropping down to just one class next quarter for my own sake. Even so, I'm still excited to take on the next term, even if 162 is as difficult as I've read. I've planned to reread and read ahead in the textbook as well as create some small projects that should help me prepare for 162. Overall, I'm confident that I'll succeed in future courses after taking 161. I've developed a strong work ethic and organized a very good weekly schedule for getting my work done and plan on implementing it again for the rest of my time at Oregon State.

I've found that this course helped tremendously in giving me the initial knowledge to understand the structure of how most programs work. I've always been a bit of a tech nerd and have spent a lot of time on the computer, so having a more in-depth perspective and understanding of the technology I've been using all my life has been such a fulfilling experience. Learning about coding and computer science has helped me realize the depth and required technical ability that goes into the software we use every day. I look forward to using the skills I'm acquiring now to be able to join a team and help design software as well as my own personal projects. As for career ideas, I would love to combine computer science with my geology degree and design geoscience related software.

Overall, I really enjoyed taking CS161. I knew I would learn a lot going in and I can't believe how far I've progressed. The course was designed really well and I can't wait to take on 162 and get ever closer to being a full-fledged software engineer.