PEA Git Submission
420-G20
Sabrina Tochkov

General Program Learning Outcomes

During my first year in the Computer Science program, I've learned to communicate effectively with team members and clients, more specifically with my classmates, professors and people who would use the projects I worked on.

During our weekly labs in the Web Programming and Programming courses, I've had the opportunity to collaborate with other students and help them debug their code. They seem to ask for my help quite often, which was a surprise. With no previous experience in Computer Science, I didn't expect that I'd be able to help others identify issues with their programs. I've learned that I love doing so, and I've learned a lot from guiding my classmates through solutions for their projects. These experiences assisting others in the labs have also given me the opportunity to improve the way I teach math as a tutor.

I was also taught in those courses how to consider the user when working on a project and how to analyze their needs to implement a good plan. For every assignment in Programming I and II, I was tasked with creating test cases and a class diagram based on the program specifications. I also learned that regularly asking for feedback is crucial for creating an accessible and efficient program. When I was creating a Sudoku game using Java[1], I asked someone to test the game out for themselves. I did this to find new issues that I hadn't considered before and to seek suggestions on what would make the game better in terms of User Experience (UX). Communicating with that person is the reason why my program ended up being easy to use, bug-free, with clearly outlined 3x3 squares, and other features that improved the overall UX.

I see many more opportunities to communicate in a team in the 2nd and 3rd years of the Computer Science program, especially with the final project of the program. I'm looking forward to the co-op terms, so that I can implement these communications skills not only at school, but in the workplace as well.

[1] https://github.com/HeritageCollegeClassroom/2022-program-exit-assessment-sabrinatoch/tree/master/1stYear/Sudoku_Game

First-Year Learning Outcomes

Within the first year of the Computer Science program, I developed foundational software development skills, which include solving problems using programming languages and performing the tasks required of a technical support analyst.

Throughout the Programming I and II courses, I learned Object-Oriented Programming (OOP) with Java to solve problems and develop programs like a Contact List Form[2]. In this project, I created a standard form that receives a person's contact information, ensures the data entered is valid and writes the information to files. Through that project, I had the opportunity to implement OOP principles like Inheritance, Abstraction and Polymorphism, which has trained me to think more abstractly about the problems I face.

Another aspect of the Programming courses that I loved was spending time protecting my programs from crashes by testing frequently and using error-handling techniques. The professor always warned the students that he would do everything he can to break their programs. So, for every assignment, we needed to build a program robust enough to withstand him.

Thanks to the technical courses (Hardware & Operating Systems and Networks) I was able to understand what it takes to fulfill the role of an IT support analyst and land a job as one for the summer! I started the program with nearly no IT experience and finished the year with a clear understanding of how to take apart and build a PC on my own, how to use Windows and Linux and their tools to troubleshoot connectivity issues, and much more that I never thought I could do.

During my 1st year, the program gave me a newfound enthusiasm for problem-solving, troubleshooting and debugging using the technologies available to me. These courses have motivated me to practice these skills independently by solving LeetCode3 problems and completing an online automation course. That way, I can continue to add more tools to my IT toolbox.

[2] https://github.com/HeritageCollegeClassroom/2022-program-exit-assessment-sabrinatoch/tree/master/1stYear/ContactList_Form