

## Senior Design Individual Capstone Assessment- Chloe Belletti

Our Senior Design Project is about enhancing a pre-existing tool called 'Hackademia' under the advisement of Professor Giovanni Abulaitah. This is a comprehensive project that will allow us to utilize a broad range of skills. The enhancements require us to code in both the front-end and back-end. Our main goal is to add functionality for the web application to accept input C code and output the corresponding Assembly code. Additionally, we plan to visualize the stack of the Assembly code output and expand the UI to allow the user to 'step through' the code. A secondary focus of our project, time permitting, is to add a login feature to the site to allow users to store and save code.

I am excited to work on this project, because I feel like my academic career has prepared me with the skills I need to complete it. My Intro to Computer Systems (CS2011) class taught us how to code in Assembly and how the stack works, which is crucial knowledge to have for this project. My Computer Networks (CS4065) class taught me about server/client relationships, which is important to know for server-side coding. Additionally, my User Interface (CS5167) class is teaching me how to code for the front end, which is something that I have little experience in. This class will prepare me for the front-end coding to be done in the second semester of this project.

My co-op experiences have greatly prepared me for this project as well. I did 5 co-op semesters with Siemens. At Siemens I learned how to be a good teammate. I think effective communication and teamwork are critical for a team to be successful. Being a co-op helped me refine my time management skills, which is another important skill to have for a large project like this. Working for a large company taught me to use proper coding standards and how to

properly push and commit repository changes. My work experiences have taught me the importance of documentation. Without proper documentation, odds are no one is going to understand what you were trying to do- including yourself. All in all, I think my class room knowledge and work experience have given me the tools to be successful in this project.

I am excited for this project because it allows us to showcase a wide range of skills. We will be working in several different languages and relying on information we have learned from many different classes. I like the idea that this site could be used as an academic tool in the future. With this project, my teammates and I have defined our roles according to our interests instead of necessarily our strengths. For example, I would say that I am more experienced coding for the back end than the front end even though I have always been interested in front end design. In this project, my role is to mainly work on the front end.

My approach for this project is going to be research heavy, initially. I think it is best to get a full understanding of the problem and the tools I will be using before trying to come up with a solution. I am going to be responsible for redesigning the UI and implementing the animations for the C to Assembly section of the page. I will self-evaluate my contributions by the amount of time I spend on the project and making sure that I am meeting my goals. I know I will be done, when my team is in consensus that we have done a good job. I believe communication with my teammates will be crucial in self-evaluating as well.