Ella Qazi

May 16th, 2025

<div align="center">First-Year PEA Self-Reflection: General Program Learning Outcomes</div>

Throughout my first year in the Heritage Computer Science program, I have learned many skills that will aid me in my future endeavors in the field. I have made quite a lot of progress towards completing the General Program Learning Outcomes, especially during the completion of the assignments that were given to my classmates and me. These assignments include the final assignments for both Web Programming courses, the Math for Computer Science PEA assignment, and the Business in the Workplace resume assignment.

While the majority of the assignments that I have done required me to demonstrate problem solving and analysis techniques, two key examples come to mind when thinking about this skill: the Web Programming I assignment, "Design and implementation of static website", and the Web Programming II assignment, "Design and implementation of dynamic website". While working on both of these assignments, I ran into quite a few errors that needed to be corrected, especially regarding media queries, as well as general CSS and JavaScript errors caused by my unfamiliarity with the languages. Correcting these errors taught me a lot about solving problems with my own code, and reflecting on said problems as to not repeat them in the future. Analyzing and debugging the code was the key to success with these two assignments.

Another example is the Math for Computer Science assignment, "Problem solving reflection". This assignment revolved around analyzing and solving a mathematical problem, as well as explaining the steps taken to do so. This helped a lot with learning how to communicate effectively with team members and clients. The experience from this assignment was useful because the spoken instructions had to be clear enough for the audience to understand. In the workplace, there will be times when clients need explanations, but do not know much about computer science. This is a time where easily comprehensible instructions and descriptions will be crucial post-graduation.

Finally, the resume assignment for Business in the Workplace was a great introduction to ethical and professional conduct. The sole purpose of this assignment was not just the creation of a resume, but also a demonstration of general workplace culture. The interview portion of the assignment was incredibly helpful to learning about the levels of professionalism and politeness that are needed for a successful career in the near future.

In conclusion, the many assignments that I have completed during my first year in the Heritage Computer Science program have helped me to acquire the knowledge to fulfill many of the General Program Learning Outcomes. Examples include the Web Programming I and II final assignments helping me demonstrate problem solving and analysis technique, the Math for Computer Science Problem Solving Reflection helping me learn to communicate effectively with team members and clients, and finally the Business in the Workplace resume and interview

assignments helping me demonstrate ethical and professional conduct. I look forward to using the skills that I have learned in the coming years both in school and in a job.

First-Year PEA Self-Reflection: First-Year Learning Outcomes

My first year in this program was helpful to me in many ways. The first-year learning outcomes are just a few examples of the knowledge that I have acquired during these past two semesters. The results of my work towards completing the first-year learning outcomes are best showcased in the following assignments: Design and Implementation of an Object-Oriented GUI Program, Design and Implementation of a Dynamic Website, and the Problem-Solving Reflection

First, A skill that I find very useful in my life is the ability to solve simple problems using a programming language. My final Programming II project demonstrates this well, as it involved using Java to create a program that has real-life use cases. This learning outcome will be very helpful to me in the future, as I would like to do software development as a career someday. The Programming I and II courses have set me up with some of the fundamentals that I will need to achieve my goals.

Second, Web Programming II's design and implementation of a dynamic website assignment was an important assignment for me. I used many features of both CSS and JavaScript that I was unfamiliar with, such as animation, to create a website that I found appealing. These are the reasons as to why I think that this assignment demonstrates well my ability to solve problems using introductory Web Technologies.

Finally, the Problem-Solving Reflection assignment for the Math for Computer Science course provides a good example of my understanding of some of the mathematical concepts learned during the course. Problem solving is a large aspect of the assignment as it involved showcasing your solution to a problem regarding a specific mathematical concept. This assignment required me to use some skills that I was somewhat unfamiliar with beforehand. I gained much more confidence in my problem-solving skills through the completion of this assignment.

In conclusion, the first-year assignments provided great opportunities for me to complete the first-year learning outcomes. Some highlights include the Object-Oriented GUI Program assignment, which demonstrates my ability to solve simple problems using a programming language, the Dynamic Website assignment, which showcases my skills with solving problems using introductory web technologies, and the Problem-Solving Reflection assignment, which displays my knowledge of mathematical concepts, as well as my problem-solving skills. I eagerly wait for the next school year where I can build upon these fundamentals and gain a deeper understanding of Computer Science as a whole.