Ryan DeJesus

06/19/2022

CS-499

In 2019, I had been at my first IT job for just under a year and decided, in order to further my career, I had to go back to school and get my bachelor’s degree in software engineering. After three years of hard work and learning I developed a skilled understanding of programming and the coding languages that make our modern workplaces function. As I worked through my courses at SNHU I developed a more complete understanding of the roles coding and automation play in the day-to-day tasks not only in my personal life but in my job as well. I was able to introduce automation code into programs I ran at work so not only were manual tasks now completed on time but with 100% accuracy every time free myself and others up to complete other tasks that needed our attention. Working on this portfolio for my capstone has allowed me to showcase the skills and knowledge I have developed throughout my career in a concrete and professional format.

For example, I Employed strategies for building collaborative environments that enable diverse audiences to support organizational decision making in the field of computer science by completing the following enhancements in my inventory management application I debugged and completed all code, so the application functioned as it was designed for each user who accessed it. I designed, developed, and delivered professional-quality oral, written, and visual communications that are coherent, technically sound, and appropriately adapted to specific audiences and contexts. This was accomplished by completing the following enhancements in both my inventory and animal shelter projects. I added clear and concise header notations to all code files so any programmer could access the files and easily understand what the files do and their purpose. I designed and evaluated computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution, while managing the trade-offs involved in design choices by completing the following enhancements in the inventory application. Introducing a notification alert for not only when stock reached below a set level but also when stock reached above a set threshold, this will prevent users from over ordering if multiple users are accessing the database and ordering stock a full stock notification will be sent out.

I demonstrated an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals by completing the following enhancements in my animal shelter database webpage. I expanded the CRUD functionality of the database informing the user is any of the CRUD functions could not be completed and why using expanded if else statements. I developed a security mindset that anticipates adversarial exploits in software architecture and designs to expose potential vulnerabilities, mitigate design flaws, and ensure privacy and enhanced security of data and resources by completing the following enhancements in both my inventory and animal shelter project I simplified overly complex if else statements and removed unused or redundant attributes.

My portfolio is compromised of the following two artifacts, the first is a mobile application that is designed to allow retail stores to create a secure database with a unique username and password. Once the database is created, they can add, remove, modify, and track all items in the database as well as allow for SMS notifications when inventory is low and full to allow for more control over inventory management. The second project is a webpage designed for an animal shelter that allows users to access and manipulate the database for all animals in the shelter. This webpage allows the users to search, add to, remove, and modify animals in the database as well as shows the database information in a graph as well as a geo-map to make the data easier to digest for the users. Both artifacts show real world applications for complex code to help make the lives of their users easier, in both application large sets of data become much easier to manage and read with the automation and control introduced by the programs themselves.