**3-2 Milestone Two: Enhancement One Narrative**

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The artifact I have selected is my final project from my IT 140 class, which I took near the beginning of my Computer Science degree several years ago. The purpose of this artifact is to function as a text-based game, such that the player navigates a map and collects items in the map. If the player has enough of the correct items at the end of the game, they can defeat the evil robot.

I selected this artifact for my ePortfolio for several reasons. My first reason was that, as this was one of my earliest computer science projects, I believed it gave me the ability to showcase my improvements in a more robust way. I knew very little about proper programming back when I first created this project. As I now know substantially more about programming, including proper programming conventions, tools for error handling, and various libraries, I knew I could improve this project substantially. For instance, on line 79 in the code, I use a try block with an except to handle opening an image. Try blocks were not something I knew much about in IT 140, and therefore, they were not implemented in the original code. Additionally, increasing the dictionary capabilities of the project to include additional items was a skill I did not know how to use at the time of the original project creation. I was able to add new items, such as hidden items and crafting items, into the dictionary of rooms in order to increase the complexity of the game. Furthermore, the logic to handle retrieving and interacting with these items was not something I would have fully understood back in the beginning. As such, by implementing this logic within the game loop, I showed how I understood more complex and robust logic for handling user input and dictionary information. I also have learned much about Python libraries over the course of my degree. As such, I was able to use a Python library to load the image for the map, should the user select easy as their difficulty setting. Putting all of these skills to use, I was able to improve my text-based game by making it more complex with more items, more detailed decision making with items having various points, and more user-friendly with a difficulty choice for the game.

I believe that I successfully met the course outcomes that I planned to meet with this enhancement. I specifically set out to meet the first course outcome, which states “Employ strategies for building collaborative environments that enable diverse audiences to support organization decision-making in the field of computer science.”. I believe I accomplished this course outcome by successfully making the text-based game more accessible to a wider audience. The way I accomplished this was by adding in player difficulty functionality within the code and adding additional ways for the game to be won or lost. Furthermore, I believe I even achieved additional success in another course outcome. I believe I met course outcome four, which states “Demonstrate 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.” I utilized additional tools such as libraries for loading images, try methods for enhanced error handling, and more detailed logic for getting various items. I even added an additional dictionary to handle assigning each item a point, which was then tallied up at the end of the game to determine game success. As such, I was able to use these different tools and skills to deliver a much more robust game that would meet industry-specific standards on text based games.

The process of enhancing and modifying the artifact was honestly a very enjoyable process, and I learned a lot while doing it. It was good to go back and revisit an early project to reflect on how much I have learned these past years and how far my skills have come. In this process, I learned more about how I could use a dictionary to handle assigning items points while not interfering with the original dictionary. I also learned about adding multiple item keys to a dictionary. While I already knew how to append and remove items from an inventory style storage method, I learned in this process how to handle items such that if a certain number of items existed within an inventory, a new item could be crafted. This was demonstrated through the craftingItems in the dictionary. I also knew already about loading images with Python. But this process showed me more about how I could choose to load an image or not based on user input. The challenges I faced mostly revolved around my own errors when typing or entering the enhancements. As I was enhancing an existing project I had completed years ago, sometimes I would type new information that would not properly align with the old information. This could manifest in improper indentations, not following or matching variable names, and so on. Facing these challenges reminded me of the importance of attention to detail when coding. As such, I now make these mistakes less and found myself making these mistakes less and less while working on the enhancement of this artifact.