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CS – 499

July 26th, 2024

**Milestone Two Assessment**

**Briefly describe the artifact. What is it? When was it created?**

The artifact that I chose to meet this category is a Java program that has multiple travel destinations. Each destination has a picture with a description. It was created in March 2023, when I was enrolled in the CS – 250 Software Development Lifecycle course, and I thought that this would be a good project to port to a new language.

**Justify the inclusion of the artifact in your ePortfolio. Why did you select this item? What specific components of the artifact showcase your skills and abilities in software development? How was the artifact improved?**

The reason why I chose this artifact is because it was going to be a challenge for me. Meaning that I have not written a Python project in months, so I thought it would be a great refresher for the language overall. It is also a learning curve because I have never used the Tkinter library in Python to implement pictures with individual descriptions to a Python project.

Within the enhanced artifact there are components that showcase my skills as a developer. One skill that it showcases is an understanding of the Python language overall because I was able to take an artifact that was written originally in Java language and port it to Python. Another skill shown is that I am able to create a subplot of pictures along with individual descriptions for each image. With the implementation of this design, I was able to change the background of the output window to display a lighter shade of gray and align the description of each destination with the image it corresponds to.

This artifact was improved by way of changing the overall background color of the destinations along with their descriptions. This change makes the description more readable. Another improvement that I have implemented was adding more travel destinations as well as the best time to visit each destination. Lastly, the background color of the image and corresponding description changes when the user clicks on either the image or the description.

**Did you meet the course objectives you planned to meet with this enhancement in Module One? Do you have any updates to your outcome-coverage plans?**

I have met some of the course outcomes that were planned in Module One with this enhancement. A course outcome I align with is number two, which is designing and developing professional-quality written communications that are coherent and technically sound with inline comments throughout the Python project. Another course outcome that I align with from this enhancement is outcome number three, which is achieving computing solutions that solve a problem using principles and computer science practices that are appropriate for the language. Therefore, I have met the planned course outcomes with this enhancement. I was successfully able to port this project into Python language and meet the two planned course outcomes that were discussed in the Module One Enhancement Plan. As of writing this I currently do not have any updates to my outcome-coverage plans.

**Reflect on the process of enhancing and modifying the artifact. What did you learn as you were creating it and improving it? What challenges did you face?**

One thing I have learned from the enhancement of this artifact was how to work with the Python language again. It was a great refresher, and it has made me feel confident as a developer. I honestly thought that I forgot everything about the language, but it turns out, I was incorrect about my assumptions. I was introduced to a new Python library while working on the enhancements of this category, which was the Tkinter library. With this library I learned how to create canvas structures and grids to display the pictures with the appropriate corresponding description labels. Another thing I learned was how to create functionality within Python which enables the user to click on the image or description of the image, and when they do so the background changes color to indicate that the row is selected.

I did face challenges with this milestone, one being that I had to learn a whole new library to enable me to complete this application enhancement appropriately. Another challenge that I faced with this milestone is that I have been receiving a warning of unexpected arguments on two lines that I am having trouble figuring out. In my research, I have found that a possible solution would be to interchange “background” to “bg” and “event” to “widget” but when I have implemented these changes as suggested, I am still receiving the same warning. Therefore, I am led to believe that this warning is not critical to the overall applications functionality.

Another challenge I faced was implementing the scroll wheel functionality, but after researching this option I decided to enhance the artifact another way to make it easier for the users to scroll through the output window. Meaning that they can scroll through the page with their mouse, rather than having to hover above the actual scroll bar within the left side of the window.