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CS 499 Computer Science Capstone

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**Milestone 2 Narrative**

The artifact is a full stack program that was originally a traveling service, with a general user front end for selecting and purchasing travel packages and a back end for administrators to login and manage internal data. This capstone project as a whole will focus on the back end portion as the site structure, security, and data structure/ database portions need improvement. It was created between October and December of 2024 for the CS 465 course.

I selected this artifact because it shows my understanding of how websites work with user interaction in general. It also shows an ability to logically design a piece of software with user needs in mind, with an organized structure. The original project used an inefficient and outdated API, so with this new version, it will also show an understanding of how web API’s have changed and improved.

I think that I had met the outcomes outlined in module one for this enhancement. I needed to design and implement a new structure to the project in order to improve the value of the project by making it technically sound and making it easier to work on and test other portions of the project.

The first initial challenge I faced was that I had not programmed in java in a substantial amount of time, so I have had to relearn parts of the language. I was also challenged with the implementation of this new API, since I had not worked with it prior to this project. However, I learned a lot about how much the structure of an API can change the interaction of other parts in the program. The original API used was not user friendly and clunky to implement on the back end, causing a lack of efficiency and a difficulty with inputs and outputs. The new API doesn’t have these issues as it performs well and had no issue displaying and maintaining both input and output, which should be the bare minimum for an API’s structure.