Matthew Carrillo

CS 499 Computer Science Capstone

2/2/2025

**Milestone 3 Narrative**

The artifact is a full stack program that was created between October and December of 2024 for the CS 465 course. It was designed to be a travel package shopping service that has a general user front end for selecting and purchasing travel packages and a back end for administrators to login and manage data and profiles. Throughout this course I will continue to focus on the back end portion of the program.

I selected this artifact because it shows my understanding of how hashing algorithms take a given input and encrypt it for storage in a database. It also helped me understand how the data structure must be set up to handle that information. I think that the encryption process helps me understand how the database connection should work when it is completed later on. The artifact was improved by this inclusion in that it did not have any encryption methods prior, rendering it severely lacking in security.

I think that I had met the outcomes outlined in module one for this enhancement. I had needed to evaluate the problem and design a solution that is appropriate and in line with algorithmic principles, while keeping the benefits and draw backs in mind. The algorithm works and does encrypt using both md5 and base64 before storing in the database, and I plan to have it then decrypt the base64 when the information is passed back to the API.

I had some challenges with updating both the travlr back end and the auth files so that it was all cohesive. I found it hard to keep track of which process was doing what and which files they were kept in at times. I also had an initial problem understanding the concepts presented by hashing algorithms. I did eventually understand it and was able to implement it into the login and register processes.