

Module 5: Enhancement 3 Narrative

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

The artifact is a game I made in a week long game jam. It's a turn-based combat game where a player has to try combinations of ingredients to fight off 5 enemies. The game scored second place in the game jam and was created and submitted the week of April 29th 2024.

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?

This game was a project that tested my ability to create a prototype given a short window of time. I was working part-time during the development time and was still able to produce a working prototype of my idea. This item shows off various unity skills like UI and animation. I used data structure practices I was introduced to in my computer science education to handle the data movement of the ingredients the player has access to. As for this enhancement I added a login and register system that uses an API to communicate with a database that can store player data and retrieve to at anytime.

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?

Yes I did meet my planned course objectives. My primary focus was on the use of databases and security practices. The password the player can give to the server is encrypted with SHA-256 encryption algorithm and any sensitive information, such as the database's password is stored server side. Originally I wanted to go further with this idea and store and retrieve scores the player has reached but due to a change in the database used I was unable to finish those features in time.

Originally, I was going to use PostgreSQL for the database system but was unable to find a application that would properly give me a view of the database, it's tables and contents. After this realization I move to MySQL with MAMP and found success there. With their admin tools I could debug and test my API much faster and easier than with postgre SQL.

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?

The biggest challenge I faced was dealing with debug the database. My PHP files have error code in them to help my track areas of issue but I found that while helpful they sometimes mislead me. I would get an error regarding my query to find if a username already exists. This error would lead me to look at my query and test stuff in the server side. After hours of banging my head, it turns out the issue was the client-side unity. I had a name mismatch when I was building the web form that unity sends to the server. This has taught me to expand where I put my error catchers at to cut down on debugging time.