CMSC 5233

Mobile Application Development

Final Report

Spring 2019

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**Original Objective**

To create an app that would allow a user to play three separate games. The would will act like an interface to access the games and manage settings. Each game would have a leaderboard that is appropriate to the style of game being played. Project was to utilize NativeScript and would be available as open source software on a public GitHub repository.

The project was planned to utilize glitch.me to host a web available leaderboard, to use angular as a platform, use modular and extensible design patterns, and to provide basic functionality right away before expanding features.

**Deviations**

Several of the deviations from the plan were due to a lack of resources. Without Diane and Paul to provide collaborative contributions and feedback to designs, the project was pigeon-holed by my own personal limitations. No art was created for the icon/home screen and neither of the additional games were implemented at all.

The scope of the project was also out of reach of a semester long design project. Angry cats was technically working in a browser but it didn’t utilize NativeScript architecture. Gladiator combat was barely feasible as a basic fighting interface, much less the game detailed in the requirements document.

**Project Difficulties**

1. Lack of coordination. I had a working knowledge of repositories and how to plan modules of work for a group, but the others didn’t seem to know how to keep their branches up to date or provide constructive feedback on pull requests.
2. I spent a good deal of time trying to explain how to do some of the work for the class based on what I had learned from PluralSight and web research. Since my team mates were struggling to keep their grade in check, I believe they had little time to commit to project work.
3. Lack of testing. Some issues that pop up during development are difficult to trace without decent tests. Angular supports testing, but I didn’t take the time to learn it or implement it. Early expedience caught me later on as more features intertwined.

**Lessons Learned**

1. An advanced framework will only help a project if team members dedicate time and effort to learning how to use it.
2. Time management is key to group work
3. Review of work in progress is critical if you need to pick up where someone else has left off quickly.
4. I wish that we had a better idea of what a properly scoped project would be walking into the course. It would have been less overwhelming to my team mates and would have helped me focus on what was important for demonstrating knowledge of the materials.

**What would be next?**

1. Implementing some sort of progression system into the game would go a long way toward making it more fun. Even with games with permanent death mechanics, there are often ways to make the experience just a little bit easier as you go to pull you deeper into the game.
2. Making an equipment table or setting up random modifiers might make the combat a bit more dynamic. It would also make the player’s gladiator more survivable, increasing possible scores.
3. Having some equipment be “heritage” for future runs might help keep the player from feeling like their efforts are just reset if they lose a fight.
4. Visual indicators for when an enemy attacks could help the player understand the impacts of agility and/or strength during a fight.
5. A shop would give the player another reason to rest up between fights and would give long-term success more merit.
6. Adding a map/movement would not be a major undertaking with the modular design of the system.

**Open Source Locations**

<https://github.com/ChopShoey/MAD-Project-2019>

<https://glitch.com/edit/#!/game-collection-leaderboard> (Database and its seed script are hidden from public view)