Reflection Report

Discussion of the progress of the project:

The progress of this project has been dependent on my level of knowledge and skills connected to each individual section and the project as a whole. I had enough competency to get the project up and running in accordance with all the given criteria, and it evolved, in part in accordance with the specifications of the assignment task, but also in accordance with my continuous development. The more the project progressed, the more both it and I evolved. It is fair to state that mistakes were made, some of them bigger than others, but this became a standard key development process; for both me and the final product.

In contrast to mistakes being made, there were milestones of success that helped drive and motivate. For example, this is the first time I have successfully managed to incorporate two separate applications where the front-end application fetches APIs from the back-end application; it is also the first time I have ever attempted to do so which made it extra rewarding to get it to work. In addition to accomplishing this, I have also used advanced functions and codes that I have not necessarily ever used before; something that is as daunting as it is rewarding once it works.

The general overall progress of the project can be likened to treading water in the ocean roughly ten miles away from shore. It is a long way from the shore. There are going to be large waves that carry you closer to the shore without you using too much effort; you are going to feel some momentum. Then there are going to be smaller waves and that is where you are going to have use your energy effectively. Lastly, the water is sometimes going to be still, very still, and this is where you are going to have to put in extra work to make any progress at all. This project has mirrored this metaphor of being out at sea treading water. There have been days where I have accomplished more in three hours than I have after working for a full day. If this process has taught me anything, then it is that these types of projects are going to evolve in accordance with the project management and skills of the team/individual producing them.

Speaking in terms of project management, the Jira Roadmap and backlog have been invaluable to the progress of this project. They have been effective in offering an overview of tasks completed, tasks which need to be added/removed, and the tasks still left to do. Plus, the system gives you a real feel of how much progress you are making. Given that there was only one person working on this project, it was, at times, frustrating to see how little my only participant was doing from time to time. However, I would like to see this program in action when an entire team is involved and there are several participants.

Challenges faced during development:

As previously mentioned, the first real challenge was figuring out how to make two separate applications work in unison. Where the front-end application needs to fetch APIs from the back-end; and how all the functions were going to correspond. I am still not one hundred percent convinced that I have done this correctly, but the client-side interface works.

The sheer number of endpoints required was at times a little overwhelming but started to make sense once all of the tables, and table relationships, were in place. Getting the correct table associations was one of the most challenging aspects of the project. In was not clear to me at fist how many associations were required to assure that the different calls and functions would work until quite late in the process. This led to having to delete the database a number of times because all attempts to edit the tables and their relationships otherwise failed.

Unit testing was very challenging, and I experienced having to build functions in the server and service files to get the unit test to work, but eventually made mock tests, something that had not occurred to me before it was a little too late in the process.

Having a full-time job and being married with two children has made time management a challenge. I have had to sacrifice a lot of time to get this project complete to the point where it is now. I lost a full week to illness (as seen on the Jira Roadmap) which led to me having to consolidate a lot of the tasks into a shorter amount of time. In addition, roughly four weeks into the project, my motivation hit an all-time low and I just did not write any code for days.

The last major challenge was simply not knowing how to write the code required in order to complete the project.

.env file example:

```
ADMIN_USERNAME = "ProjectAdmin"
ADMIN_PASSWORD = "0000"
DATABASE_NAME = "examprojectdb"
DIALECT = "mysql"
DIALECTMODEL="mysql2"
PORT = "3000"
HOST = "localhost"
TOKEN_SECRET =
012d76d39b511c13006b054517401806319b97d72ddeae40c6269e9d7872389f6a7f7b
dafb82bccb41d1dc4d9b07b26a6869bad8de0d64a5cdee15a09fb0b6bd
```