

IM3080 Design and Innovation Project (AY2022/23 Semester 1)

Individual Report

Name: _Chua Jun Kiat, Alex_____

Group No: _____2_____

Project Title: ____kung food hippo_____

Contributions to the Project (1 page)

I drew the software engineering diagrams for the application design. Such as the entity relation diagrams for the database. Use case and sequence diagrams for the program flow. Architecture diagrams for interaction between backend and frontend.

I set up the webserver for the backend. Including configuring the web server gateway interface, Gunicorn,. Hosting the server on a cloud hosting platform, Digital Ocean,. Setting up the DNS records for the domain.

I also did a little bit of programming for writing the web server.

Reflection on Learning Outcome Attainment

Reflect on your experience during your project and the achievements you have relating to at least two of the points below:

- (a) Engineering knowledge
- (b) Problem Analysis
- (c) Investigation
- (d) Design/development of Solutions
- (e) Modern Tool Usage
- (f) The Engineer and Society
- (g) Environment and Sustainability
- (h) Ethics
- (i) Individual and Team Work
- (j) Communication
- (k) Project Management and Finance
- (l) Lifelong Learning

Point 1: Project Management and Finance_____

This project was done with agile styled development, an iterative approach that ensure consistent progress done ins small burst. By splitting the project into modular stories and objective, we were able to leverage on each individual members area of expertise. We were able to parallelize progress by planning a project timeline with minimal blocking tasks, a few tasks that would block the progress of member of the team not involved in said task could not be avoided, such as the writing the connection to the database for retrieving data or setting up the React native app development environment. For such tasks, we worked around the issue by identifying them early and allocating sufficient time and manpower to resolve the tasks with great haste. This approach to project management was able to minimize the amount of waiting around thus maximizing the overall productivity of the team. Much respect to the professionalism and planning of the rest of my team, as this level of organization would not have been possible without the forward-thinking planning of the group leader and project manager as well as the cooperation and contribution of every other member of the team. There is not much to talk about finance as we had no hardware acquisition, our team did manage to use several commercial APIs and tool but we where able to limit our use to avoid exorbitant charge as well as making good use of free trial credits

Point 2: Design/development of Solutions_____

Initially, we were doing not plan to add a web server portion to the project in the hope of limiting the scope of work. However, as we progress, we ran in to several issues with the architecture as intended. It was proposed that we implement a centralized web server. This ended up being extremely beneficial to the progress of the project as it allows for minimal replication of the back-end environment. As well as an incidental bonus of making our system design much closer to a solution that could be practically deployed in a real food delivery app. I was able to host the webserver on a domain name and set up the DNS address record. I am proficient with python so using flask as the library for the webserver was a natural choice. My familiarity as well as python lending itself well to rapid prototyping allowed me to quickly deploy the webserver after the impromptu pivot in design. Overall, I felt I did a fairly competent implementation of a web server that integrated cleanly with the rest of the application