

IM3080 Design and Innovation Project (AY20xx/xx Semester x)

Individual Report

Name: Yeo Chan Hoang Lance

Group No: 7

Project Title: Dueling

Contributions to the Project (1 page)

Group leader:

- Delegate work to team members to do
- Manage project timeline by setting deadlines, organising meetings
- Set project direction
- Assist group members when they encounter difficulties

Figma:

- Created the colour scheme used in the app
- Set the design language to be used in the app
- Set up asset and component library to be used in Figma
- Screens designed:
 - Challenge tab
 - Singleplayer quiz screens
 - Multiplayer quiz screens
 - Edit Profile screen
 - Friends screen
 - Add Friends screen
- Assisted in the design of:
 - Leaderboard tab
 - Log in screens
 - User Profile Screen

Codebase:

- Set up the base app
- Created common components:
 - Avatar
 - Player cards
 - Animated button
 - Quiz headers, buttons, footer, timer
 - Floating action button
- Implemented the following features/screens (including functionality):
 - App navigation structure including stack and tab navigators
 - User profile pages
 - Edit profile page excluding backend functions
 - Ability to challenge and detect challenges from other players
 - Challenge tab
 - Singleplayer excluding introductory questions
 - Multiplayer excluding creation and deletion of game lobby
 - Rematch after multiplayer game ends
- Merging and integration of code from different team members
- Heart regeneration information dialog

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: Good coding practices State the area: a, d, e, l

Throughout this project, I placed special emphasis on being able to employ good coding practices throughout the project's codebase. When attempting to implement a feature, I urged my team members to be mindful of the best practices when it comes to coding, instead of simply getting it to just work and ignore code quality. I feel like this has several positive effects. The first is that we can learn more. By learning how to write cleaner, more efficient code according to the industry's best practices, we are able to better understand the code we are writing and improve our knowledge. We also gain skills that will be helpful to us in the future. This also helps us as we are better able to read and understand each other's code, leading to a more maintainable codebase. Some examples include enforcing the use of TypeScript over JavaScript for our project. Despite there being more hurdles to coding due to the addition of types, TypeScript ultimately leads to easier debugging and better understanding and usage of code other members in the team has written. Furthermore, it is a skill many employers are looking for. Other examples of good coding practices I enforce are to try and make components that are used across different screens into common components for code reuse and better maintainability, making it easier to update the component if we need to.

Point 2: Managing a group State the area: i, j, k

One of the hardest parts of the project was managing the group. This issue was compounded by the fact that we had to change our idea for the app halfway through. This added time pressure where many parts of the development process were no longer clear and quite messy. An example of this is where we have to code out screens that have not been fully designed yet, or the features that we want to implement has not been concretely decided upon. My group members have vastly different skill sets and experience. Throughout development, I would often assign a piece of work to a group member only to find that he was encountering great difficulty as the assigned work was not to their strengths. This resulted in several delays which made development a lot more frantic. I have learnt that it is important to sit down with the group members and find out what each of their areas of expertise are, and play to their strengths by finding them work they would be able to excel in as compared to assigning them work they would struggle with. I would also need to realign my expectations and be more realistic with what my team members may be able to do within a given timeframe as many of us are still learning along the way and may not be as confident as some of the other members.