IM3080 Design and Innovation Project (AY2023/24 Semester 1)
Individual Report

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Group No: 4

Project Title: JamStream

Contributions to the Project (1 page)

In the design and planning stage, I contributed to the initial prototype design for our JamRooms feature, which was previously named "RadioRooms", in which I designed 6 mockup screens on Figma based on the layout of existing pages on the Spotify application, which we took reference from (Figure 1). This includes screens for an unused feature where user comments would show up in real-time on the music player.

After we finalized the components and prototype flow, I contributed in creating 5 mockup screens on Figma in relation to the JamRooms feature of our application, which consisted of a main menu, create room, chatroom, check queue (2 variations) and add songs page (Figure 2). This included basic interactions and navigation settings which allowed our prototype to work properly.

For the React Native implementation portion, I contributed in doing the frontend and backend for the creation of the Profile Details page, which involved pulling a username and profile image URL from the Spotify API or the local profile store to display on the page upon loading (Figure 3).

After that, I helped to implement the backend programming for the Create Room page, which involved the option to upload images from a user's gallery, and taking the user inputs for room theme, name, description, and privacy settings to be inserted into the Firebase database as a new room. I also implemented the backend programming for the Room Details page, which involved pulling data for room DJs and users and displaying them on the page alongside room name, image, and description. However, due to some errors, the final version of the application lacks some of the features we implemented here (Figure 4).

I contributed to the planning and storyboarding for the promotional video alongside Min and Isaac, and did the screen recording of the application to be shown, video editing and the addition of audio, sound effects and timed captions using CapCut. For the final group report, I wrote the review of technology section under application design for the platforms we used, such as Canva, React Native, Firebase and Spotify API.

Reflection on Learning Outcome Attainment

Reflect on your experience during your project and the achievements you have relating to <u>at least two</u> 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: Communication

As I found myself to lack experience in JavaScript and React Native programming relative to some of my groupmates, I found communication to be very important if I wanted to complete my assigned work properly. This included clarifying with groupmates about certain approaches to backend implementation which I had never attempted before and discussing with groupmates about one another's difficulties to come up with solutions collaboratively. I found communication to be very important on the project management end as well, as it allowed for greater collaboration and progress towards a shared goal, such as through helping a groupmate who faced difficulties with his frontend and backend implementation. Through this project, I understood the importance of and honed my skills in communication in a team project setting, which I feel will be an essential skill to have whenever joining a team in the workplace.

Point 2: Design/development of solutions

One of the main challenges I encountered during this project was most of the backend programming difficulties which I feel arose from my lack of experience when it came to JavaScript coding, such as the implementation of useStates and database integration. A task which seemed simple in concept sometimes took days for me to figure out a workable code that could complete said task, which I felt really helped me to explore beyond what I previously knew to come up with working solutions. I also found that discussing with groupmates about possible approaches really helped in breaking down problems into smaller and more manageable segments, which aided in bringing us closer to project completion. The continuous process of trying out solution after solution to a complicated problem to find a working one was important in providing me the knowledge on the rules and limitations of JavaScript and React Native programming, such as what approaches would work in what context, which I feel is a valuable skill to have if I decide to pursue programming roles in the future.
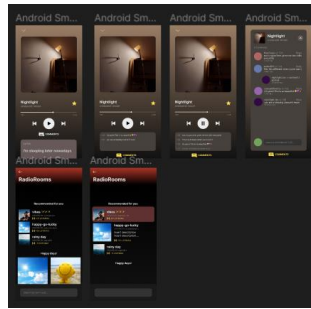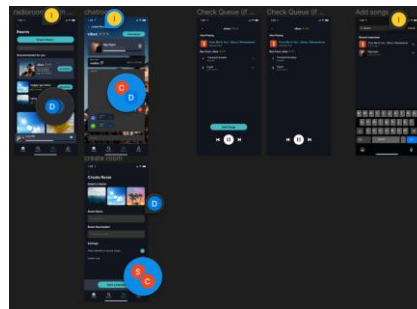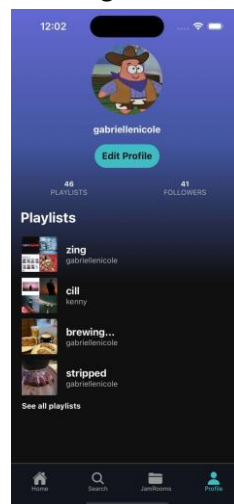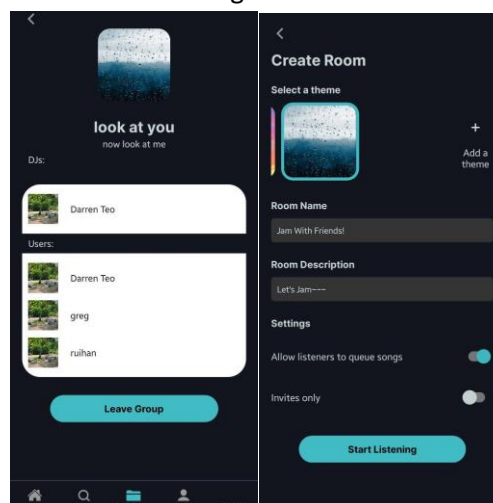
Figure 1

Figure 2

Figure 3

Figure 4