CSCI 370: MinuteMinutiae
Semester Project Reflection Document

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For this project, the team relied heavily on Slack for communication while also utilizing GitHub and Android Studio for development. Since classes were moved online due to the COVID-19, all communication went through Slack and there were no in-person team meetings after the very first meeting. Slack is very easy to use and was very helpful for this project. It allowed us to send pictures and documents to each other and keep the team updated on progress made and who was doing each feature of the app.

Our idea for this app was a trivia game. There would be different quiz types available for the player to choose one. For this project, we focused on the ‘single quiz’ piece. For this part, two players go head to head answering questions on one phone. The game is set up where two players should have the phone between them, there should be a question and a buzzer to press when they have the answer. The first player who presses the button is shown the answer choices presented oriented toward them. The default number of questions is 5. After the 5 questions, a screen shows with the winner and the number of points for each player. A settings menu has also been implemented. The user is able to change the number of questions asked in the single quiz between 5, 10, and 15, as well as being able to turn a wrong answer penalty on or off, which makes a player lose a point when they answer incorrectly.

Some of the features we wanted to implement but didn’t get a chance to were:

- Pull questions from the database.
- Store quiz history in the database.
- Store player information and scores in the database, to be used for rankings
- Tournament style quiz
- An optional round timer
- Game creation/customize screen

We did create a database in firebase for the project, created quiz questions and answers stored in the database. We did not get a chance to connect the code to the database and use it effectively.

With firebase and database knowledge coming at the end of the semester while also trying to get the project done in a crunch, it was difficult to implement properly and

therefore we went with storing info in the app for now. The main challenge and reason for the firebase code not being included was that finding the proper (most efficient way) to store data in the database and retrieve it for use in the app was puzzling. Reading about ways to pull information from the firebase and into the app, brought about restructuring of the data in the database, however no convenient way to structure the data efficiently and concisely whilst remaining easy to implement could be found.

From my understanding of the firebase and how to pull it, there would have had to have been many nested loops to go through and pull questions and answers. I am sure there is a better, more simple way to do this, but we could not find out how best to structure and implement and decided it was best to get other parts working.

We also intended to add various types of game modes/quiz types however for the purposes of the final and getting a finished product we focused on making a single quiz with a variety of questions/topics.

Our original idea had two modes a single quiz mode that would only give you questions of one topic (All geography questions for instance) and then a separate tournament or grand prix mode which would have the players answer questions from various topics (either in block style [so all geography at once then all history] or in random order, the user could decide this in the settings of the app/game creation screen).

This led to one of the other aspects that we dropped, more as a result of streamlining the quiz modes. Originally we intended to have a screen where the user could make their quiz settings at the start of each game, instead of having game settings made by default or the main menu settings screen. So the original flow of the app would have the users select the game mode and then they would fill-out/decide certain options before each game (i.e. some of the settings we have in-game; wrong answer penalty, score limit, etc…).

One part of the project that was more of a challenge was the orientation for the different players. We wanted the screen to be horizontal for the screen with the buzzers but then show the questions with answers portrait but facing the player. An example would be for player one, who would be looking at the phone facing player two and seeing the words on the screen upside down. We wanted to flip it so the words were oriented toward player one when they are answering the question. This caused more layout screens to be made and more intents to be made depending on who is answering the question. We also should have done a better job with planning out the data structures and transfers that we were going to use beforehand. We ended up going through three different ways of storing the quizzes for this app.

For unforeseen challenges, there was no bigger challenger than online classes and group project work. Without the group meeting in person, I feel you aren’t able to

accurately articulate your thoughts and ideas. How we handled this challenge was to discuss and talk as a group using Slack. This was a really helpful tool for us this semester.

Overall making this app was a fun challenge. For the class, we hadn't made a project this big before with this many activities and screens. It was interesting to put it all together and be able to see your sketches come to life.