**Software Implementation and Testing Document**

**For**

**Group 21**

Version 1.0

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# Programming Languages

We are using Java for the entire framework of the app since it is the easiest for us to use because some members are already familiar with it and due to the fact that we are using Android Studio to implement the app, it makes sense to. We are also using Java for the interaction with the database via Google Firebase, for the same familiarity and ease of use reasons previously stated.

# Platforms, APIs, Databases, and other technologies used

For the Basic UI we have so far, we used elements native to Android Studio. We are using Google Firebase to create our database and we are using Google Maps API for the location services our app provides. We are also using Google Firebase for user authentication and for database management.

# Execution-based Functional Testing

Tested Google Maps API by using the Android emulator provided by Android Studio and fed it many different location data to ensure accuracy and that user location data is correctly uploaded to Firebase. Also used the Android Emulator to test User Authentication. Also used a physical Pixel XL running Android 9 to test User Authentication.

Tested messaging and display of users by using the Android emulator provided by Android Studio. After logging in, I clicked on the Users tab and clicked on the user I wanted to message. Then, the message page opened up and I sent messages. After this, I checked the database and ensure the chats data where being saved. I signed up for different accounts and did this to ensure messaging was working. The messages were also displaying on the UI. However, this feature is not yet fully implemented.

*Describe how/if you performed functional testing for your project (i.e., tested for the* ***functional requirements*** *listed in your RD).*

# Execution-based Non-Functional Testing

*Describe how/if you performed non-functional testing for your project (i.e., tested for the* ***non-functional requirements*** *listed in your RD).*

# Non-Execution-based Testing

*Describe how/if you performed non-execution-based testing (such as code reviews/inspections/walkthroughs).*