

Technical Documentation

Overall Architecture Design

We have so many classes that they wouldn't fit into a single UML diagram, so we have added a google drive folder in which all our diagrams are contained:

<https://drive.google.com/drive/folders/1uPuuzjccpa9NBFmLHJzbZHPfXlxQ4vSh?usp=sharing>

System Design Justification

Flutter

Flutter comes with many widgets and tools out of the box. It is cross platform which meets our goal of making cross platform apps. Sean has experience with Flutter and knew that it is intuitive to learn.

Considering we do not have a ton of time this semester, it seemed the best option to get the cross platform functionality that Swift lacks while not having the whole team learn something entirely new.

Alternative - React, Swift

Firebase Firestore

Firebase Firestore is quick and easy to set up. There is plentiful documentation related to connecting Firebase Firestore to Flutter Apps. This made it simple and easy to build classes within Flutter that are connected to our back end due to the packages provided by google to pull and push Firestore objects. It is connected to Firebase Auth which has made it easy to authenticate users and will make it easy to add additional login methods in the future.

Alternative - MongoDB, SQL databases

Dependencies related to other issues - Firestore works seamlessly with Flutter

Database Schema

COLLECTION: users

- STRING bio [field]
- STRING name [field]
- STRING userId [field]
- SUB-COLLECTION invited
 - STRING eventId [field]
 - STRING eventname [field]

COLLECTION: events

- STRING date_time [field]
- STRING desc [field]
- STRING location [field]

- STRING name [field]
- INT participants [field]
- STRING thumbnail [field]
- STRING title [field]
- STRING userId [field]
- SUB-COLLECTION members
 - STRING name [field]
 - STRING role [field]
 - STRING userId [field]