

ESOF 423

Spring 2023

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Section 1 - Source listing. Include the specifications

Language: React Native

Using Expo for mobile app building, testing, and deployment

Github: <https://github.com/423s23/G2-Mach.git>

Section 2 - Teamwork

- Team Member 1 - mock up, UI, database
- Team Member 2 - Tasks, Settings, Login
- Team Member 3 - Leaderboards, Tasks
- Team Member 4 - Home Page, Database

Team Member 1 took control of the user interface, styling, and design of the project. They create a style theme for the other members to go off of and a mock up of what the app could look like in Adobe XD. They also worked on implementing the database and other features. Team Member 2 created the Profile, User Information, Login, and Sign up pages. The Login and Sign up pages needed to have error checking and security. These pages are very important for an app with many users. They also worked on implementing the database and other features. Team Member 3 created the Leaderboard page and the navigation bar. The navigation was crucial in making the app flow easily for the users. They also worked on implementing the database and other features. Team Member 4 created the Home, Tasks, Tasks List, Awards, and Points pages. They also made a persistent data example as a proof of concept for another group that might start where we left off and worked on implementing the database and other features. Overall, all team members contributed to a crucial part of the app.

Section 3 - Design Pattern

Model-View-Presenter (MVP) Pattern

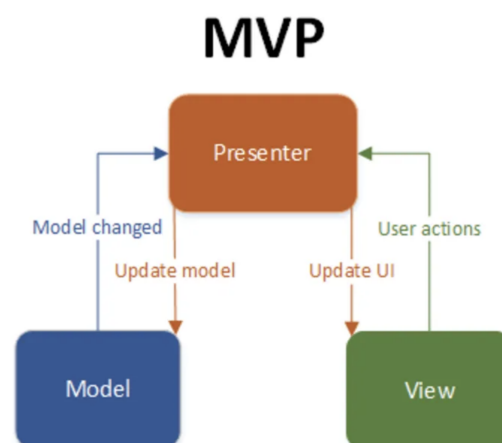


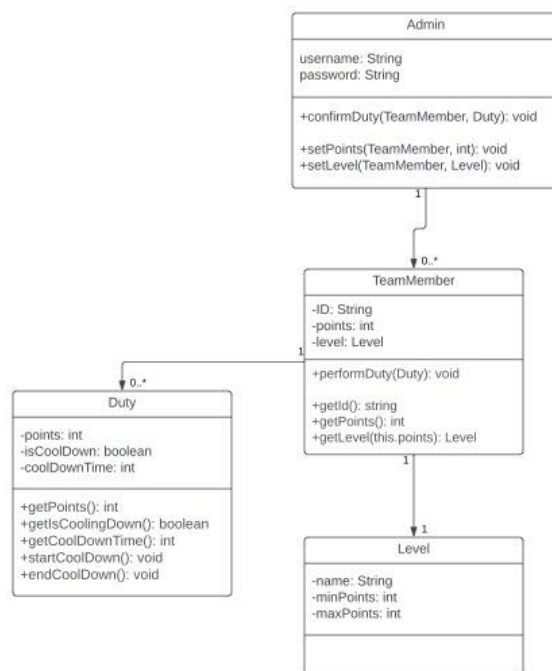
Image from: <https://anshul-vyas380.medium.com/model-view-presenter-b7ece803203c>

Section 4 - Technical writing

[User Documentation](#)

[Developer Documentation](#)

Section 5 - UML



This was subject to change, but helped get the initial idea down.

Section 6 - Design trade-offs

Using a SQL database was traded for an array database. We decided that the SQL database doesn't work with react-native and it was taking too much time to figure out, so we moved on to an array database. We would recommend a global database for a finished product of this app, but our app's features and functionality remained intact with the array database.

We used the model view presenter pattern for our app, which is a pattern that helps separate the view of the app from the backend business logic. This was a great pattern that helped us launch our app, but it did come with significant drawbacks. First, it took us a while to learn how to implement the pattern. Not only that, but it did make our app more complex, and

harder to understand. The relationship between view and presenter was hard to navigate, and hard to maintain. However, it was worthwhile to use this model as it gave us a solid structure for our mobile app, and kept our code readable and not overly complex.

Section 7 - Software development life cycle model

We used an Agile Model for this project. We had 6, 2 week sprints. In the beginning we created a sprint backlog and for every sprint we divided up each backlog item into small, bite sized chunks. This development model promoted a fast moving, feature based focus that helped our team hone in on the important aspects of our app.