Platform Selection

Tech Stack:

- Frontend
  - React Native
    - Why: Having one codebase that runs on Android and iOS reduces the number of bugs, redundancy, and development time
    - We all know Javascript, so the learning curve is less steep
  - Redux
    - Why: State management is difficult, Redux is relatively easy to learn and will make our app easier to manage and scale in the long term
  - React-Navigation
    - Why: Our app will need multiple screens, but transitions for this aren't built into React. This library is recommended by Facebook, the creators of React, as a way to accomplish this in terms of React components
- Backend
  - Heroku
    - Why: Easiest and fastest platform to host a backend; integrates naturally with Git and command line tools
    - By using Heroku, we will be able to attain some help from Dr. Terrell when we run into any issues
  - Node.js and Express
    - Why: Our backend is just a REST interface that returns/updates JSON objects. Express is a framework that is effectively built for this, and Node.js is convenient because it is easy to set up on Heroku and we all know Javascript already
- Database
  - MongoDB
    - Why: Data isn't particularly structured, so SQL might be overkill. MongoDB seems better because we're working with data that can naturally be represented as JSON. Also, easy to learn and integrate with node/express
  - Async Storage
    - Why: Built-in library to React Native that allows local storage of data on a device. Useful to allow caching of data so client doesn't exceed Heroku free tier and so users have fast access to data even with spotty internet connections
- Language
  - Javascript
    - Why: React Native, Redux, and Node.js are all built on Javascript, and all group members already are familiar with Javascript
- Version Control System
  - Git
    - Why: Git and Github will allow us to easily update and share code with one another, and it allows for returning to previous versions of our project, in the event that something is wrong with the current version