

## **Journal Entries:**

Journal Entry - 4/10 - Introduction: For this project we will be using React Native, something that is completely new to me. Today I am spending some time to understand this language and what the development process will be like. After doing some research I have a better understanding of what his development process will be. There will definately be a steep learning curve and I am going to have to put a lot of time in, but I am ready to get going. A few resources I used for this are:

- <https://facebook.github.io/react-native/>
- <https://medium.com/@thinkwik/react-native-what-is-it-and-why-is-it-used-b132c3581df>

Journal Entry - 4/11 - Planning: Now that I have a general understanding of what I need to learn and build for this project, I made a general timeline for milestones I need to reach before the deadline. This will help me stay on track to reach a final product. I tend to procrastinate so I need to keep myself accountable and not fall behind.

1. Research: Learn what react native is and prepare to begin implementation
2. Environment Set up: get my computer ready to build React Native Apps.
3. Tutorial stage: Work through learning React Native and understanding how it works.
4. Initialize application: Get a basic application up and running.
5. Initialize database: Get database started and connected.
  - a. Follow a few tutorials to learn how to do this.
6. Unregistered user view: Build base UI for all users.
7. Build log in pages: Create account, login, unregistered.
8. Synchronize accounts with database: store registered users in the database.
9. login/logout: Add in functionality to actually log out.
10. Unregistered mode: make a better interface for users without an account.
11. Update profile: Add in user specific data storage.
12. UI match: make sure user interface flows throughout the application.
13. Clean up and testing: Do extra testing to make sure the app is working and in a deployable state. Make sure the UI is uniform throughout the application.
14. Extra credit as time allows: I want to focus on the core features first.

Journal Entry - 4/12 - Environment set up: Since I have never used React Native before I will begin by setting up my environment for the development process. I started from the official react native documentation to do this. However, there was a lot to install so this took longer than I had anticipated. I have to choose whether I want to use expo, and after some research I think it is in my best interest to not use expo. I do not have experience in mobile development, which makes expo a good choice for practice. Ultimately I want to get the most realistic experience to prepare me for the group project, where I will be working with people who have more mobile development experience than I. I will continue to sit on this decision now that I have my environment set up and I started up a few dummy applications.

Resources: <https://facebook.github.io/react-native/docs/getting-started>

Journal Entry - 4/13 - Took the day off this project.

Journal Entry - 4/14 - More environment set up and big tutorial day: Today I spent a few hours working through a react native tutorial series on Youtube. I am glad I did this, as it turns out my environment was not correctly set up, so I had to spend some time getting it right. Turns out there were issues with my xcode install, as well as a number of other dependencies I did not know that I needed to install until I actually started to code. I feel my environment is ready for the development of this spike exercise, as well as my group project.

Link to youtube tutorial series: <https://www.youtube.com/watch?v=C3oDJdlrEKE>

Journal Entry - 4/15 - More tutorials: Yesterday I worked through a tutorial that uses expo to initialize a react native app. This was a good way to get introduced to react native, but feels too limiting for features I want for the project. Ultimately I want to build my application following the react native cli quickstart guide I linked above. The tutorial series I followed yesterday has a few more videos in the series that I plan to watch if I get stuck in my future developments. The tutorial I started today is a one hour crash course in react native that works on building a grocery list app. I got through about half the video today.

React Native Crash Course: <https://www.youtube.com/watch?v=Hf4MJH0jDb4>

Journal Entry - 4/16 - I finished up the tutorial I was following to build a basic grocery app. It took me a long time to get through the video, but it was great practice to build an app start to finish, and I feel ready to build my spike exercise now. Brad Traversey introduced how to build and organize things well, focusing more on the small details than in building too much at once. This follows a similar goal for the project that I plan to follow: focus on implementing things well instead of more features. Overall, this tutorial was a great way to get knee deep in react development.

Link to finished product on github:

<https://github.com/Bajkowski/GroceryApp>

Journal Entry - 4/17 -Start my app: Today I got my base application set up. I tried to do this without first documenting any design or organization. I ran into problems deciding what to name my screens and what screens I ultimately want. So after I built my home login screen, I drew out a couple diagrams to organize my thoughts and development. I now have a better picture of what screens and navigation I need to build.

Diagram linked on github as: state.png

Journal Entry - 4/18 - Tutorials can be rough: Today I got lost in a tutorial and had to restart my whole application. This was a bit defeating but I think I have a better mindset for this project. I want to follow smaller pieces of documentation when I continue my development tomorrow. I found myself mindlessly following a tutorial and not understanding what my code was actually doing. At least I found my color scheme for the application...

Journal Entry - 4/19 part 1 - Fresh start: Today I started a new application with a new mindset. I got all of the screens I want to implement set up. I designed the basic style for my application. I spent a lot of time getting my buttons to look better. I switched to using a `TouchableOpacity` instead of a button, and getting them to have rounded corners was a good challenge. I also spent a large chunk of time getting my navigation to work. I was not sure how to do this, but got it working with a router. I need to work on formatting the header that it uses to look cleaner and more modern. I found a series of medium articles that really helped me get my base layer of the application built.

Designing homepage:

<https://medium.com/@chsvk/react-native-making-a-beautiful-home-screen-c79535f5b1c0>

Styling input:

<https://medium.com/@chsvk/react-native-styling-forms-the-easy-way-1c7bd880266a>

Making my buttons look nice:

<https://reactnativecode.com/rounded-corners-button-example/>

<https://stackoverflow.com/questions/50162879/create-raised-or-shadow-effect-on-touchableopacity-react-native>

Navigation: <https://medium.com/@chsvk/react-native-navigation-too-easy-how-695eeb637e23>

Journal Entry - 4/19 part 2 - Database: Since I am running short on time to get this done today's goal is to get my database set up and synchronized with my application. I decided to use Firebase for this project, because it seems to offer everything I need with ease. My group wants to use azure, but I am taking this opportunity to show them that Firebase can be a good option for our group project. Ultimately the set up was pretty easy, and there is a lot of documentation out there to help set it up. I also followed a tutorial on actually storing my user logins in the database. The tutorial went over email authentication in firebase and it was really well written and really helped me get that set up.

Formatting header:

<https://stackoverflow.com/questions/38802743/how-to-change-color-of-backbutton-arrow-in-react-native-router-flux>

Really good tutorial email authentication:

<https://heartbeat.fritz.ai/how-to-build-an-email-authentication-app-with-firebase-firestore-and-react-native-a18a8ba78574>

Journal Entry - 4/20 - More database: Turns out I did not have my database properly set up. User accounts were not synching and saving within the database. I had to change the rules to allow it to be written to, since it was essentially locked. Once I fixed this my user login process started to come together more fluidly. Next I moved onto building more of the screens of the application. I added more functionality to them beyond the base layer. I also spent a good chunk of time on styling since tomorrow is my last chance to get this all done before the deadline. I also looked into changing the default font, but read that sticking with the system font is better. Was having trouble connecting database based on my rules:

<https://firebase.google.com/docs/rules/basics>

Font stuff:

<https://medium.com/better-programming/using-custom-fonts-in-react-native-2019-289099609837>

Journal Entry - 4/21 - Final Stretch: Despite my best efforts I still have a lot of work to get done today. As I anticipated there was a steep learning curve for this project. I think that given I had to learn how to do pretty much everything to build this application, I did quite well. I am definitely not a natural at styling or adding in features yet, but I have a good understanding of what I will be doing in my group project. I did not get all of the features complete, but I got a lot of them pretty close. If I had more time I would have made my logins more secure and made the unregistered view more robust. I would like to continue my progress on this as time permits, and attempt the extra credit. It would be fun to do more with the user pages, like adding one for hobbies or adding in user profile pictures. This application will be a good project to publish on my github publicly once the course is over.