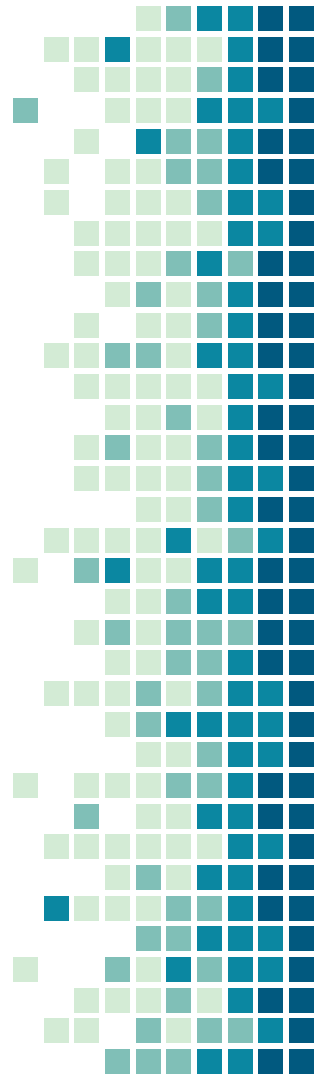


G1-Mach

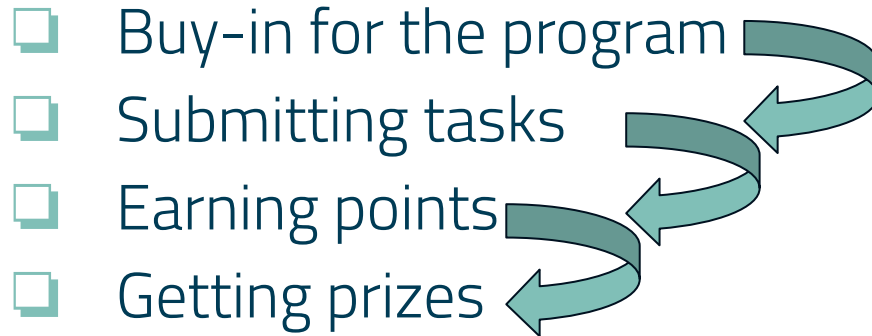
Lukas Bernard, William Jordan, Kirsten Keblish,
Joey Knappenberger, & Bryce Lehn



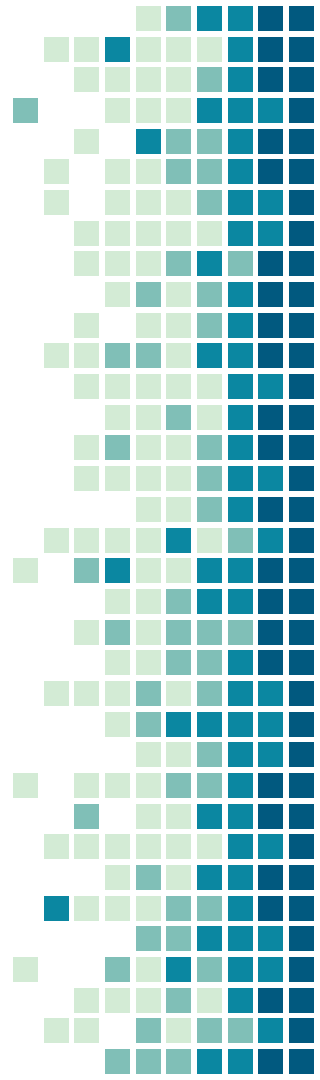
Mach Incentive Program



Mach Incentive Program

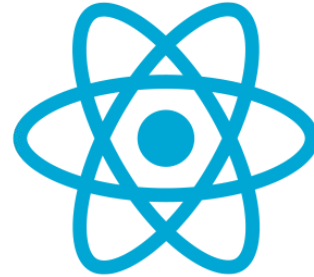


Development

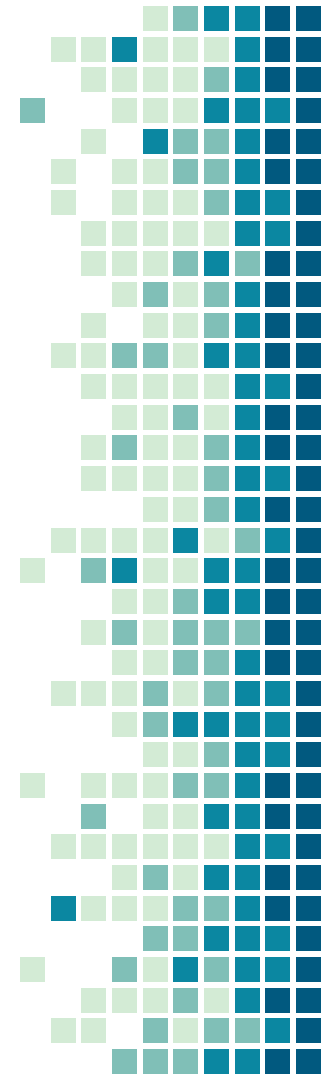


Development

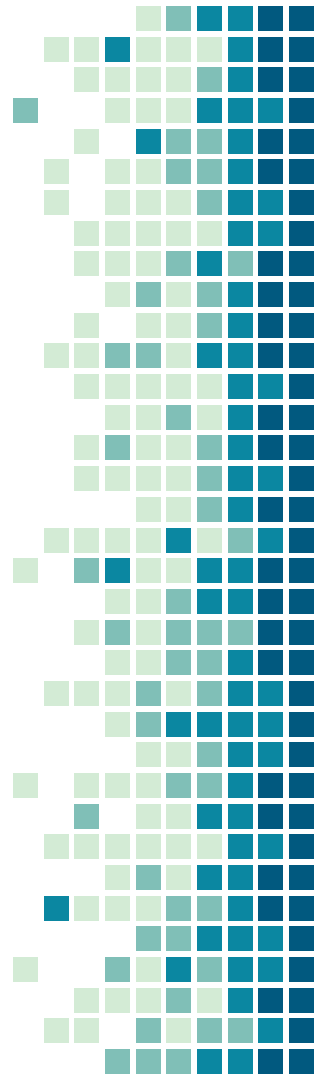
- Started with NPM
- React Native and Expo
- Firebase
- MacOS/Windows Development
- IOS/Android Sizing, ETC.



React Native



Firebase



Firebase

- Authentication
- Firestore
- Tickets
- Futureproofing

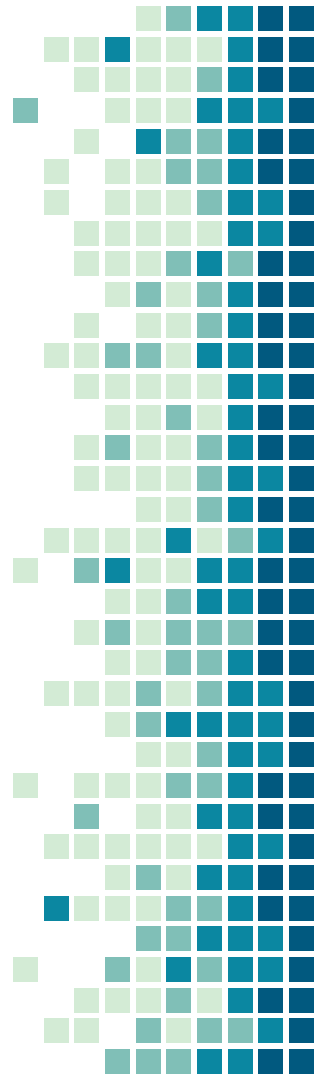


```
PAzCAsEtIdfiG6Vj2oi9T3Luo2I3 >  
qFlrMLtDHXjpD7SHjnfL  
wanccQnI5dVQsdBYR5EZ
```

+ Add field

```
admin: true  
▶ availableTasks: [true, 11, April 25, 2022 ...]  
birthday: "01/01/2023"  
currentPoints: 3550  
email: "joebob@gmail.com"  
firstName: "Joe"  
lastName: "Bob"  
notificationStatus: true  
phoneNumber: "(111)-111-1111"  
username: "joebob_runs"
```

Continuous Integration

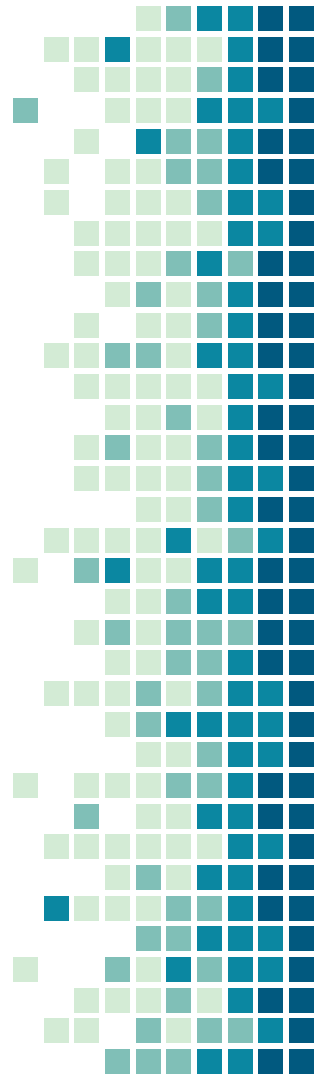


Continuous Integration

- ❏ Github action - Problematic
- ❏ Expo Snack
- ❏ Final Solution - Expo Build Service w/ two GitHub Actions
- ❏ Push to build - full new build of the app
- ❏ Push to main - updates last build w/ any small changes



User Friendliness

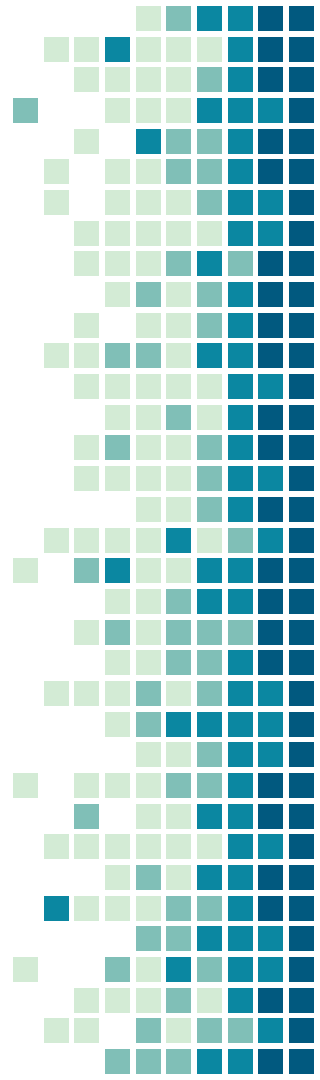


User Friendliness

- ❏ Stashing complex details
- ❏ Minimizing what's shown
- ❏ Keeping shared styles consistent
- ❏ Carefully labeling
- ❏ React Navigation
- ❏ Making pressable items generally the same
- ❏ Large Icons
- ❏ Verticality in App

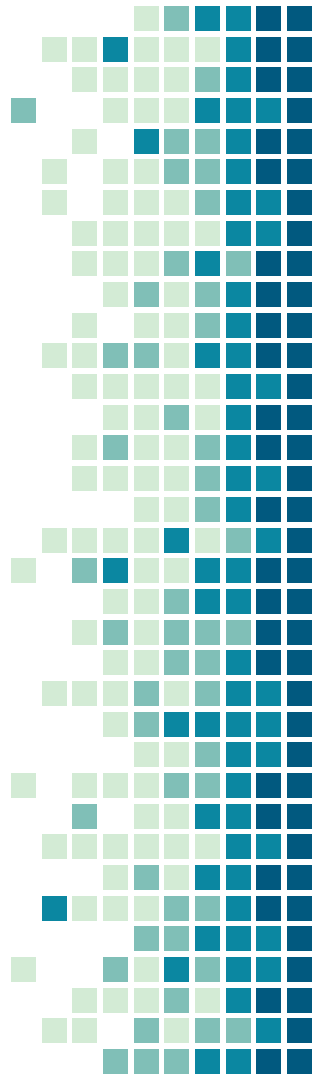


Admin Friendliness

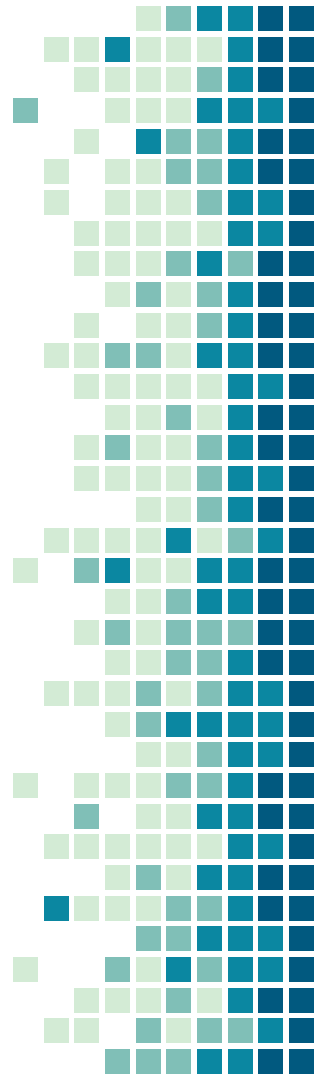


Admin Friendliness

- ❏ Admin approval page
- ❏ Easily approve tasks
- ❏ Automation with Firebase
- ❏ History of Tasks in Firebase (Approved/Denied)
- ❏ Easily Add/Delete Users with Firebase
- ❏ Everything goes through the Admin



User Testing



User Testing

User 1

-  Homepage popup & progress bar
-  Rewards page claimed rewards

Level 16



50pts/500pts

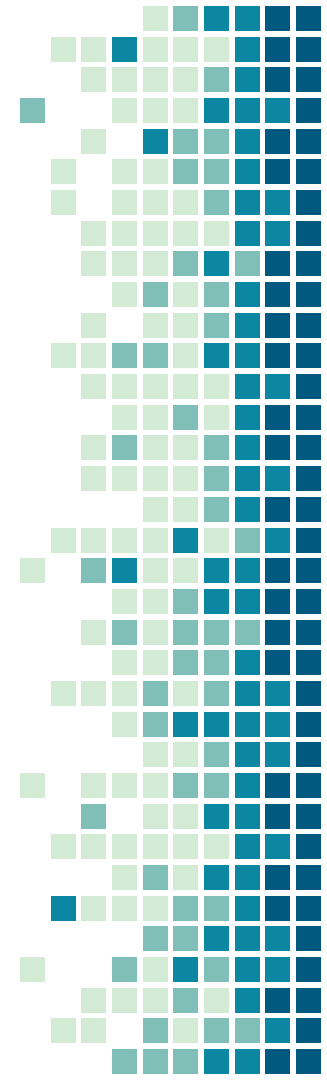


User 2

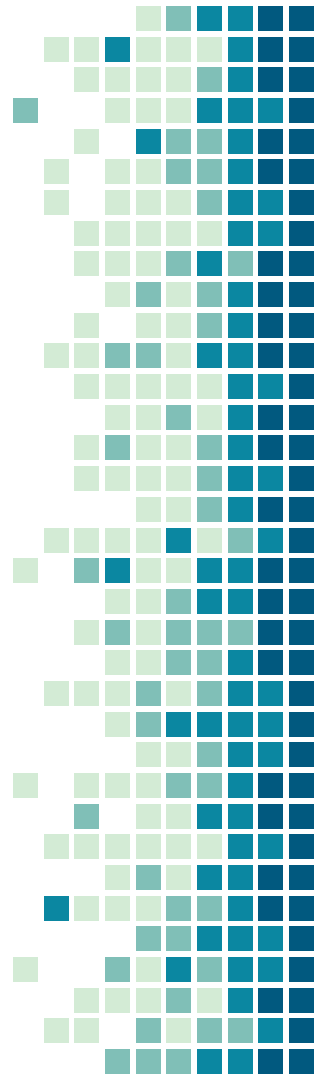
-  Positives: Consistent coloring for buttons, easy to navigate
-  Redundancy was an issue

User 3

-  Positives: Everything was explained well, complex was hidden
-  Thought items were button due to their color



With The Benefit of Hindsight

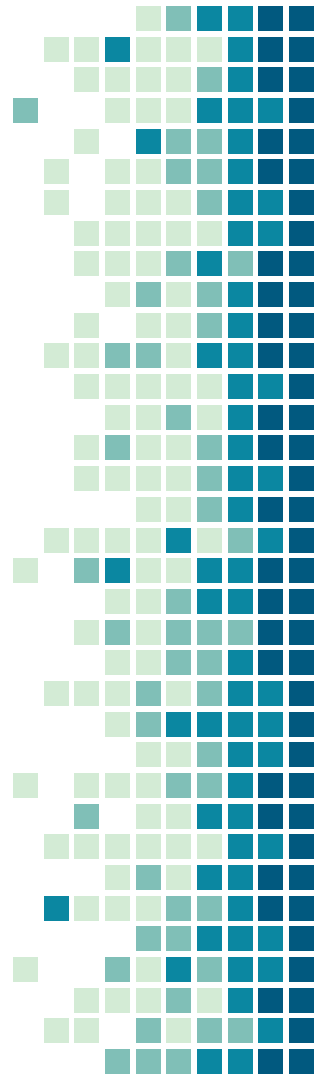


With The Benefit of Hindsight

- React Native Requires Lots of External Modules and is Hacky
- Flutter is “Batteries Included” and integrates much better with Firebase
- Yarn plays better with github actions
- Flutter also allows native credential stores so you don't have to relog every time
- React native can, but it breaks expo and requires writing kotlin and swift



Demo



Questions?

