User Manual

Team Shining Sky

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1. Introduction

Team Shining Sky is pleased to have developed this model of the ARORA Community Mentor Portal App. This app has been designed with a focus on developing key features to support CANIS Lab's future development on the ARORA project. These key features include:

- User Authority Levels
- Mentee Info Screens
- Anonymous Question Feed
- Chat System
- Appointment List

We hope that this app will suit the needs of the ARORA project and its associated communities. The purpose of this user manual is to allow CANIS Lab to successfully install, administer, and maintain our version of the ARORA app. Our aim is to make sure that CANIS is able to smoothly transition development of the Community Mentor Portal App from Shining Sky to their internal team, allowing future development to proceed without major trouble.

2. Installation

This section provides instructions on setting up the toolchain for the app. Following the instructions in this section will result in a setup that allows the app to be run on an Android phone; the process for running the application is contained in the following section. These instructions are carried out in the Powershell terminal on a Windows 10 machine, but can be performed with the equivalent terminal on any operating system.

2.1 Prerequisites

In order to set up the environment for the ARORA app, a user must have the following tools installed:

- **Node JS** - https://nodejs.org/en/
  - The version of Node JS used herein is the latest at the time: 16.15.0 x64. We always install the LTS version of Node JS, and we expect that using the latest version will work in the future as well.
  - Proceed through the install wizard or install via the binaries for your chosen operating system. We used the Windows Installer (.msi) with all of the default settings.
- **Expo CLI** - https://docs.expo.dev/workflow/expo-cli/
  - With Node JS installed, Expo CLI can be installed using the terminal command **npm install -g expo-cli**
  - At the time of writing, Expo CLI 5.4.3 is the current version.
- **Expo Go** - https://expo.dev/client
  - Running the Community Mentor Portal App on Android requires the Expo Go app which can be downloaded from the Google Play Store.
  - The only other thing to note regarding Expo Go is that the Android device it is installed on will need to be on the same network as the PC from which Expo CLI is being run.

2.2 Packages

You have been given control of the GitHub repository from which the Community Mentor Portal App can be downloaded. Download the files and place them wherever you would like to run the app from. From there, run the command **npm install** from within the ARORA_App_v2 folder in order to install the required packages. See the Troubleshooting section if you see any messages about vulnerabilities.

A complete list of packages in use can be found within the app's source code, in the file **package.json** located in the root of the project file (ARORAMentorshipDemo / ARORA_App_v2 / package.json when navigating to the file from the GitHub repository as it is currently organized.). For ease of reference, they are also listed below:

- "@react-native-async-storage/async-storage": "^1.16.1"
- "@react-native-community/datetimepicker": "^6.1.1"
- "@react-navigation/bottom-tabs": "^6.0.9"
- "@react-navigation/native-stack": "^6.2.5"
- "async-storage": "^0.1.0"
- "expo": "~43.0.2"
- "expo-splash-screen": "~0.13.5"
- "expo-status-bar": "~1.1.0"
- "expo-updates": "~0.10.13"
- "moment": "^2.29.1"
- "react": "17.0.1"
- "react-dom": "17.0.1"
- "react-moment": "^1.1.1"
- "react-native": "0.64.3"
- "react-native-async-storage": "^0.0.1"
- "react-native-complete-flatlist": "^2.0.12"
- "react-native-date-picker": "^4.2.0"
- "react-native-elements": "^3.4.2"
- "react-native-gesture-handler": "~1.10.2"
- "react-native-gifted-chat": "^0.16.3"
- "react-native-highlight-words": "^1.0.1"
- "react-native-reanimated": "~2.2.0"
- "react-native-restart": "^0.0.24"
- "react-native-safe-area-context": "3.3.2"
- "react-native-screens": "~3.8.0"
- "react-native-web": "0.17.1"

- "react-navigation": "^4.4.4

3. Configuration and Daily Operation

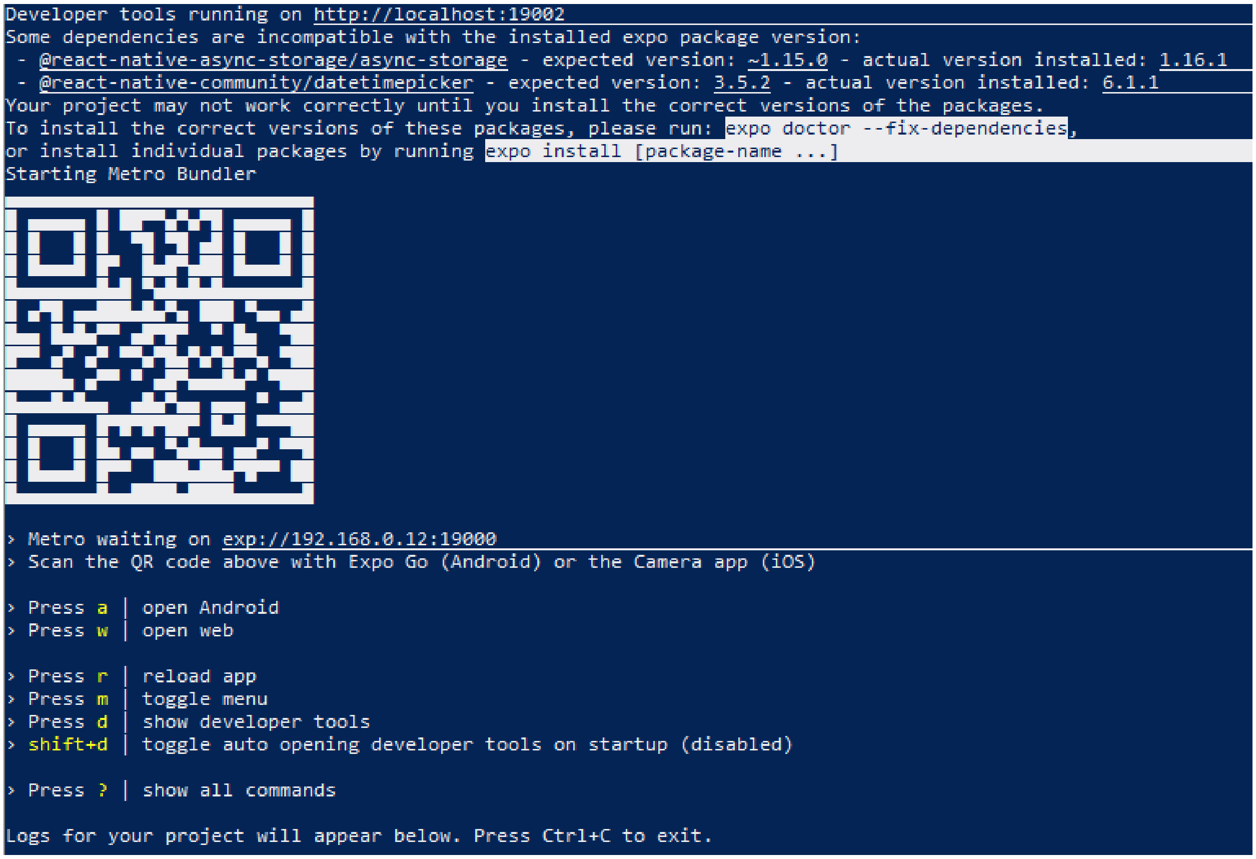
This section covers running the Community Mentor Portal App from the command line and on an Android phone running Android 9 via Expo Go. It also contains a walkthrough of the various screens on the app in addition to their functionality.

3.1 Running via Expo Go

This subsection covers the required steps to get the app running from a local version of the code. These instructions were written to be carried out in the Powershell terminal on a Windows 10 machine, but can be performed with the equivalent terminal on any operating system.

1. **cd** into the directory where the app’s code is. This should be, assuming a download of the code in the state it was handed off in, the **ARORA_App_v2** folder within the root directory.
2. If using Powershell, running the command **powershell.exe -executionpolicy bypass** is required. This starts Powershell with the execution policy preventing the running of arbitrary scripts bypassed. This should not be a dangerous step unless you purposefully run a malicious script (not anything from our project) from that Powershell terminal.

3. Run the **expo start** command to build and set up the code for execution. Your terminal window should show the following:



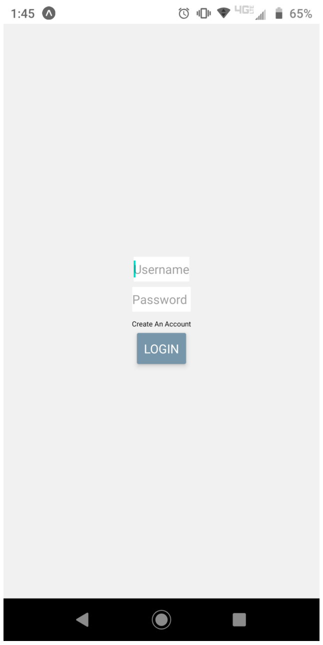
```
Developer tools running on http://localhost:19002
Some dependencies are incompatible with the installed expo package version:
 - @react-native-async-storage/async-storage - expected version: ~1.15.0 - actual version installed: 1.16.1
 - @react-native-community/datetimepicker - expected version: 3.5.2 - actual version installed: 6.1.1
Your project may not work correctly until you install the correct versions of the packages.
To install the correct versions of these packages, please run: expo doctor --fix-dependencies,
or install individual packages by running expo install [package-name ...]
Starting Metro Bundler

› Metro waiting on exp://192.168.0.12:19000
› Scan the QR code above with Expo Go (Android) or the Camera app (iOS)

› Press a │ open Android
› Press w │ open web

› Press r │ reload app
› Press m │ toggle menu
› Press d │ show developer tools
› shift+d │ toggle auto opening developer tools on startup (disabled)

› Press ? │ show all commands

Logs for your project will appear below. Press Ctrl+C to exit.
```

4. From there, simply scan the QR code from the Expo Go app on an Android phone connected to the same network as the PC running the terminal window, and the app will start up on that phone. Other development tools can also be used from the terminal window, per the options presented on screen and visible in the above screenshot.

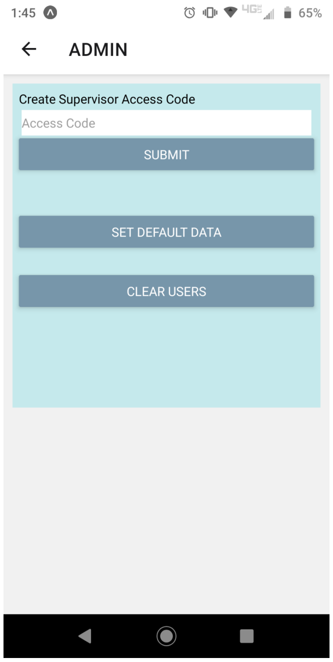
3.2 App Walkthrough

This subsection consists of a walkthrough of the app starting from running it on an Android phone running Android 9 per the previous subsection.

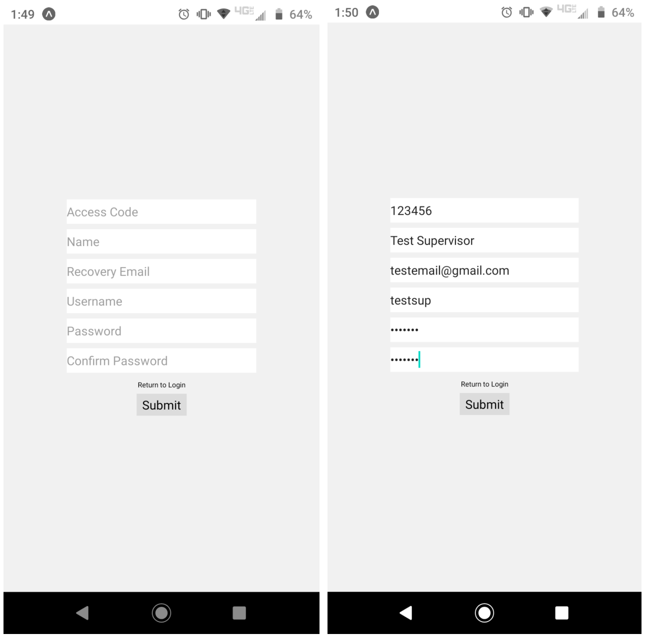
1. When first running the app, it will take you to the login screen. Using the username **ADMIN** and the password **ADMIN** will allow access to the admin tool for first time setup.



2. From the admin tool, you can:
   - Create a supervisor access code with any number of numeric digits, used to register a supervisor account.
   - Use the **SET DEFAULT DATA** button to fill our test data. (The rest of this instruction set is carried out using this example data.)
   - Use the **CLEAR USERS** button to clear all created accounts and reset the app to the default state where only the admin tool is present.



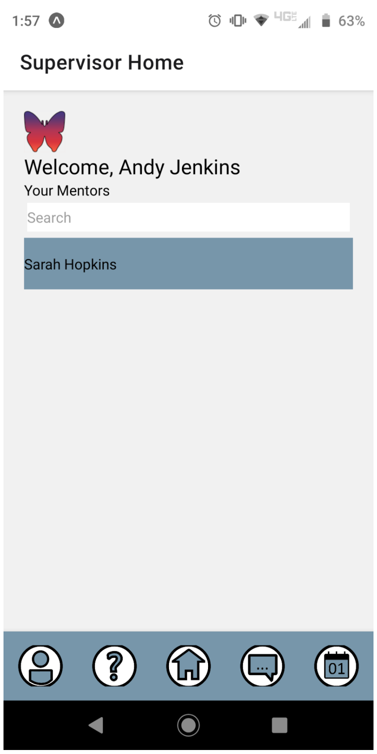
3. From the login screen, selecting **Create An Account** allows an account to be created by filling out the template and entering in a valid access code generated either via the admin tool (for new supervisor accounts) or a supervisor account (for new mentor accounts).



Access Code
Name
Recovery Email
Username
Password
Confirm Password

123456
Test Supervisor
testemail@gmail.com
testsup
•••••••
•••••••

4. When using the test data, username **supervisor** and password **supervisor** will load an example supervisor account.
5. From the **Supervisor Home** screen, you can view a searchable list of mentors assigned to that supervisor account. When clicking a mentor's name, you can view a searchable list of mentees assigned to that mentor's account as well as whether they have been flagged for review or not. Finally, clicking a mentee's name will show the same mentee information screen that a mentor account would see. From there, you can jump to the chat logs between that mentor and mentee, and view the mentee's mood reports.

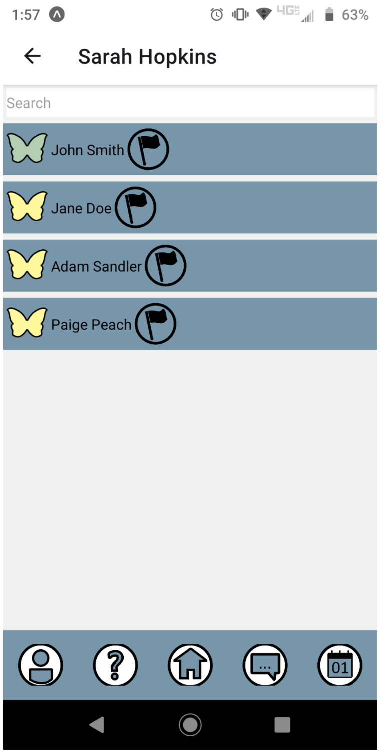


Supervisor Home

Welcome, Andy Jenkins

Your Mentors

Sarah Hopkins



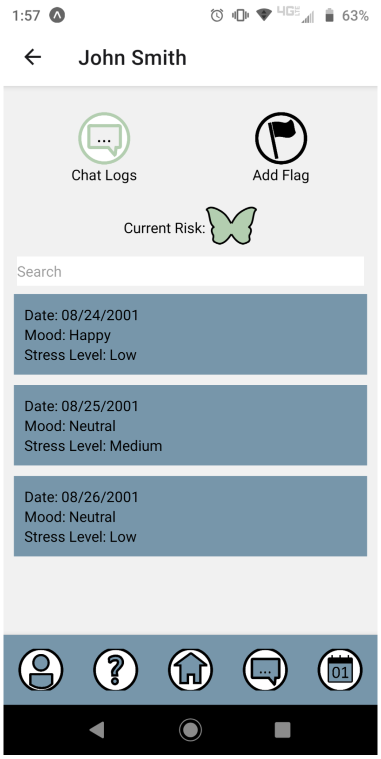
Sarah Hopkins

John Smith

Jane Doe

Adam Sandler

Paige Peach



John Smith

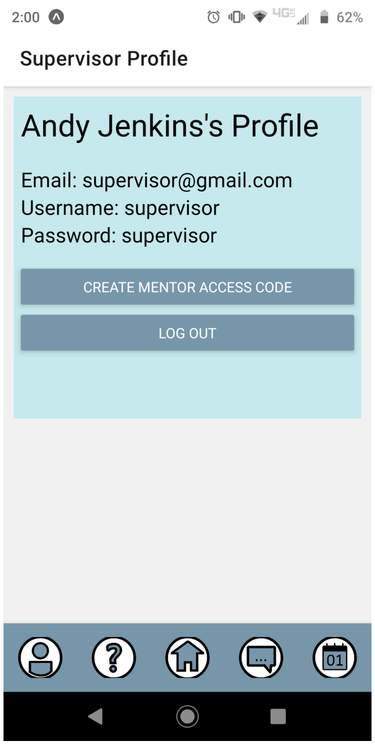
Current Risk:

Date: 08/24/2001
Mood: Happy
Stress Level: Low

Date: 08/25/2001
Mood: Neutral
Stress Level: Medium

Date: 08/26/2001
Mood: Neutral
Stress Level: Low

6. The **Supervisor Profile** screen allows for creation of an access code to be used in creating a mentor account, as well as a button to log out of the currently logged in account.

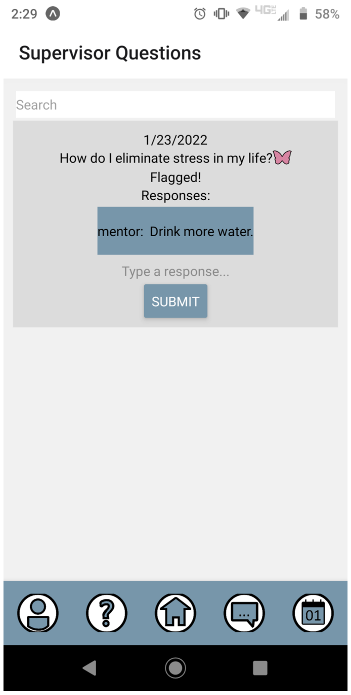


Supervisor Profile

Andy Jenkins's Profile

Email: supervisor@gmail.com
Username: supervisor
Password: supervisor

7. The **Supervisor Questions** screen provides a searchable list of questions flagged for supervisor review and the ability to add a response.



2:29 58%

Supervisor Questions

Search

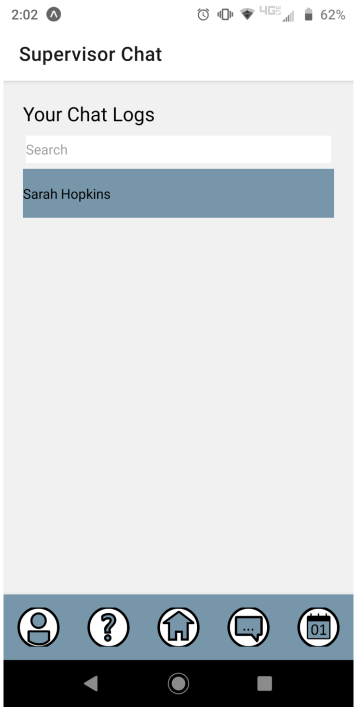
1/23/2022
How do I eliminate stress in my life?
Flagged!
Responses:

mentor: Drink more water.

Type a response...

SUBMIT

8. The **Supervisor Chat** screen provides a searchable list of chat logs for assigned mentors, which can be clicked to show a searchable list of chats with associated mentees, which can then each be clicked to show the chat log itself.



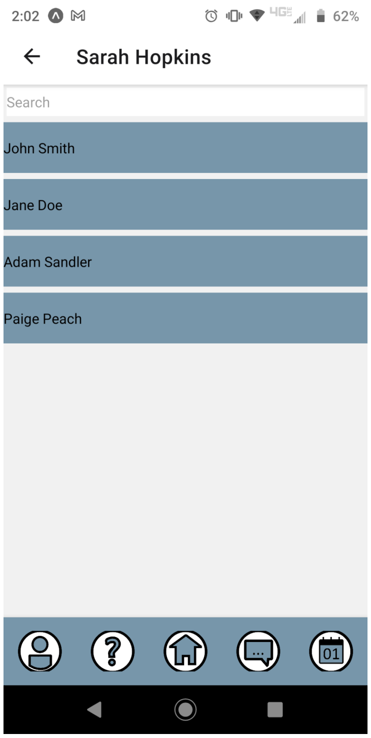
2:02 62%

Supervisor Chat

Your Chat Logs

Search

Sarah Hopkins



2:02 62%

Sarah Hopkins

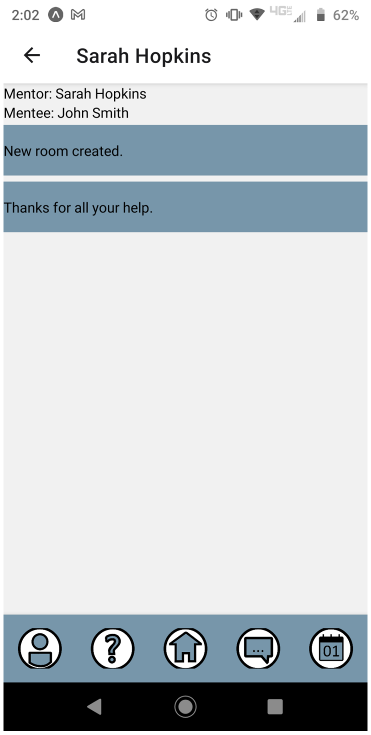
Search

John Smith

Jane Doe

Adam Sandler

Paige Peach



2:02 62%

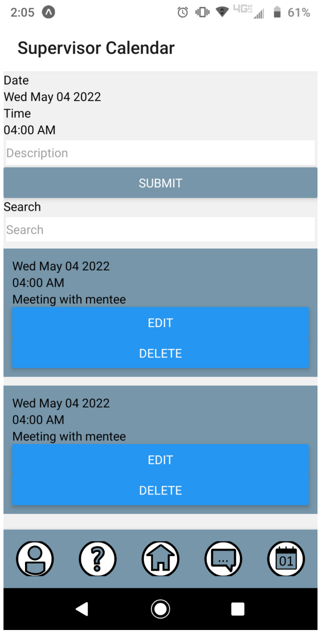
Sarah Hopkins

Mentor: Sarah Hopkins
Mentee: John Smith

New room created.

Thanks for all your help.

9. The **Supervisor Calendar** screen provides a searchable list of user-created appointments. Clicking date and time allows for those values to be set, and typing into the description field creates a description for that appointment. Appointments can be edited or deleted using the appropriate buttons.



Supervisor Calendar

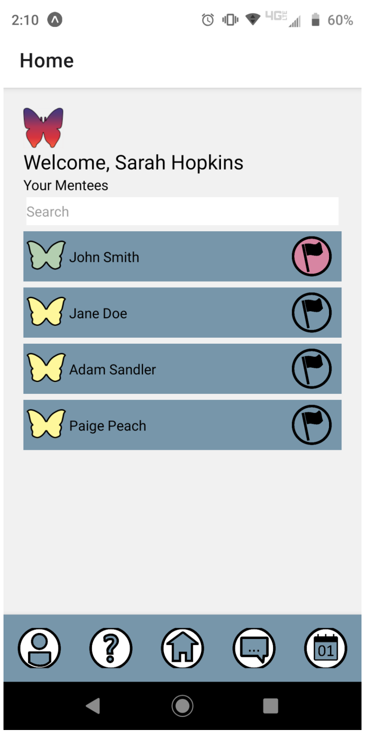
Date
Wed May 04 2022
Time
04:00 AM

Search

Wed May 04 2022
04:00 AM
Meeting with mentee

Wed May 04 2022
04:00 AM
Meeting with mentee

10. When using the test data, username **mentor** and password **mentor** will load an example mentor account.
11. From the **Mentor Home** screen, you can view a searchable list of mentees assigned to that mentor account. Clicking a mentee's name will show the mentee information screen. From there, you can jump to the chat with that mentee, view the mentee's mood reports, and jump to the calendar with a search for appointments including that mentee's name.



Welcome, Sarah Hopkins

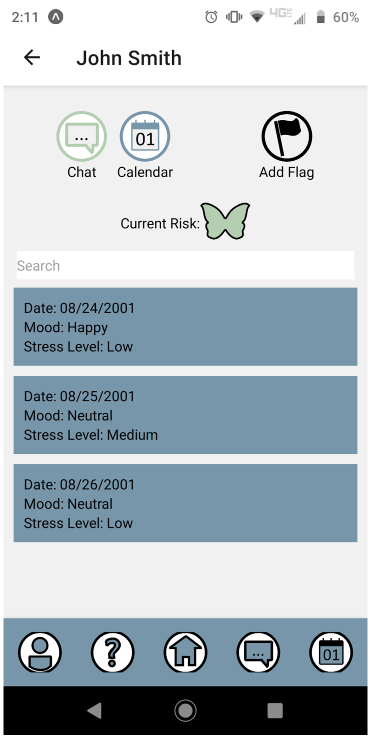
Your Mentees

John Smith

Jane Doe

Adam Sandler

Paige Peach



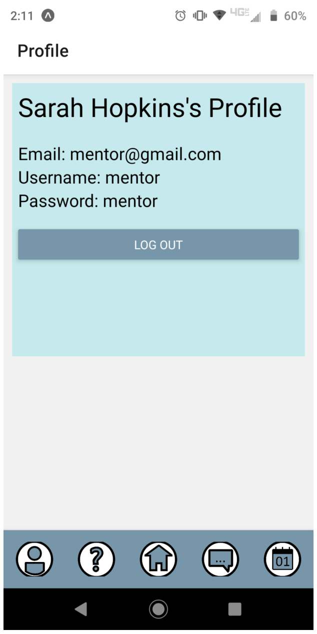
Current Risk:

Date: 08/24/2001
Mood: Happy
Stress Level: Low

Date: 08/25/2001
Mood: Neutral
Stress Level: Medium

Date: 08/26/2001
Mood: Neutral
Stress Level: Low

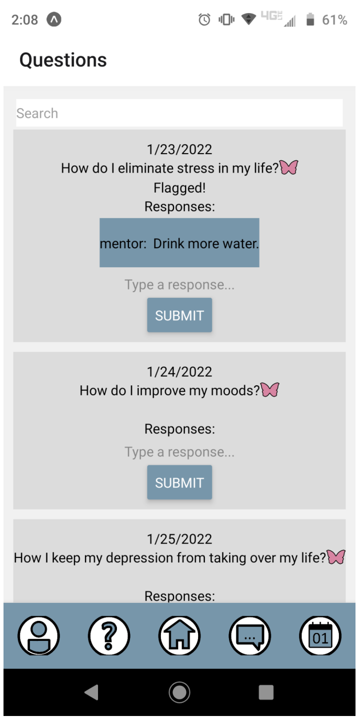
12. The **Mentor Profile** screen contains a button to log out of the currently logged in account.



Sarah Hopkins's Profile

Email: mentor@gmail.com
Username: mentor
Password: mentor

13. The **Mentor Questions** screen provides a searchable list of questions that can be flagged for supervisor review and the ability to add a response.



Questions

Search

1/23/2022
How do I eliminate stress in my life?🦋
Flagged!
Responses:

mentor: Drink more water.

Type a response...

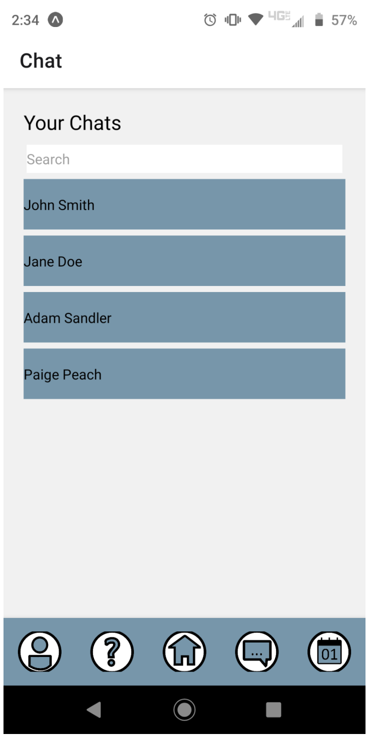
1/24/2022
How do I improve my moods?🦋

Responses:
Type a response...

1/25/2022
How I keep my depression from taking over my life?🦋

Responses:

14. The **Mentor Chat** screen provides a searchable list of chats with assigned mentees, which can be clicked to open a chat window that functions as a typical text messager.



Chat

Your Chats

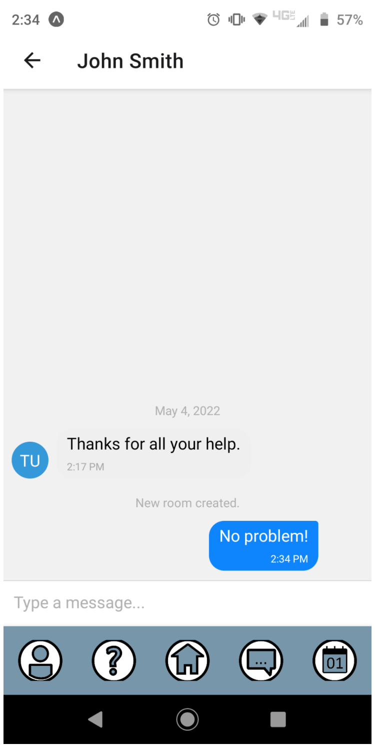
Search

John Smith

Jane Doe

Adam Sandler

Paige Peach



John Smith

May 4, 2022

Thanks for all your help.
2:17 PM

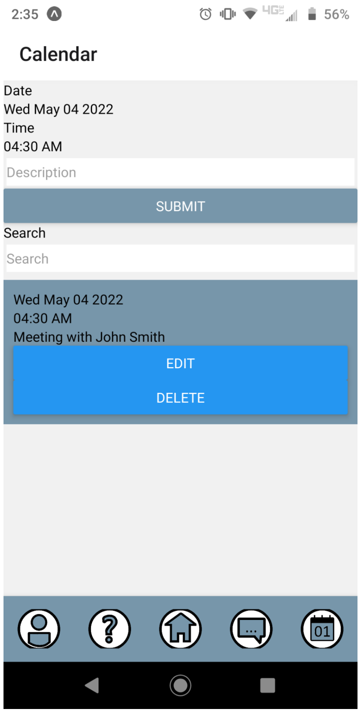
New room created.

No problem!
2:34 PM

Type a message...

15. The **Mentor Calendar** screen provides a searchable list of user-created appointments. Clicking date and time allows for those values to be set, and typing into the description

field creates a description for that appointment. Appointments can be edited or deleted using the appropriate buttons.



Date
Wed May 04 2022
Time
04:30 AM

Wed May 04 2022
04:30 AM
Meeting with John Smith

4. Maintenance

This section covers our estimate on what needs to be done to maintain the project in the state it was provided in during handoff.

4.1 Backups

We highly recommend making regular backups of the Community Mentor Portal App during the course of future development, as well as maintaining a copy in the state in which it was provided during handoff. We also recommend the use of a versioning tool such as GitHub during future development, so that any breaking changes can be rolled back to the last working state.

As part of the handoff process, we provided both the transfer of our GitHub repository with the most recent version of our code, as well as a USB drive containing a zip file of the most recent version of our code. We suggest saving a copy of that zip file or downloading it as-is from the GitHub repository as a backup before continuing development on the project.

4.2 Package Updates

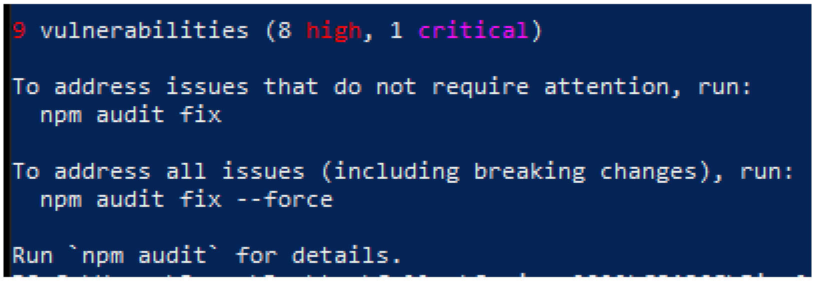
The other main maintenance activity that we foresee is package updates. For the most part we were able to update packages with no issue, however we occasionally ran into temporary compatibility problems and had to roll updates back. For this reason, we recommend that package updates be conducted in an isolated development environment and double-checked for functionality before rolling them out to the master copy of the app.

5. Troubleshooting

This section covers troubleshooting and explanations for all of the issues we know about in regards to setting up and running the Community Mentor Portal App.

5.1 Vulnerabilities

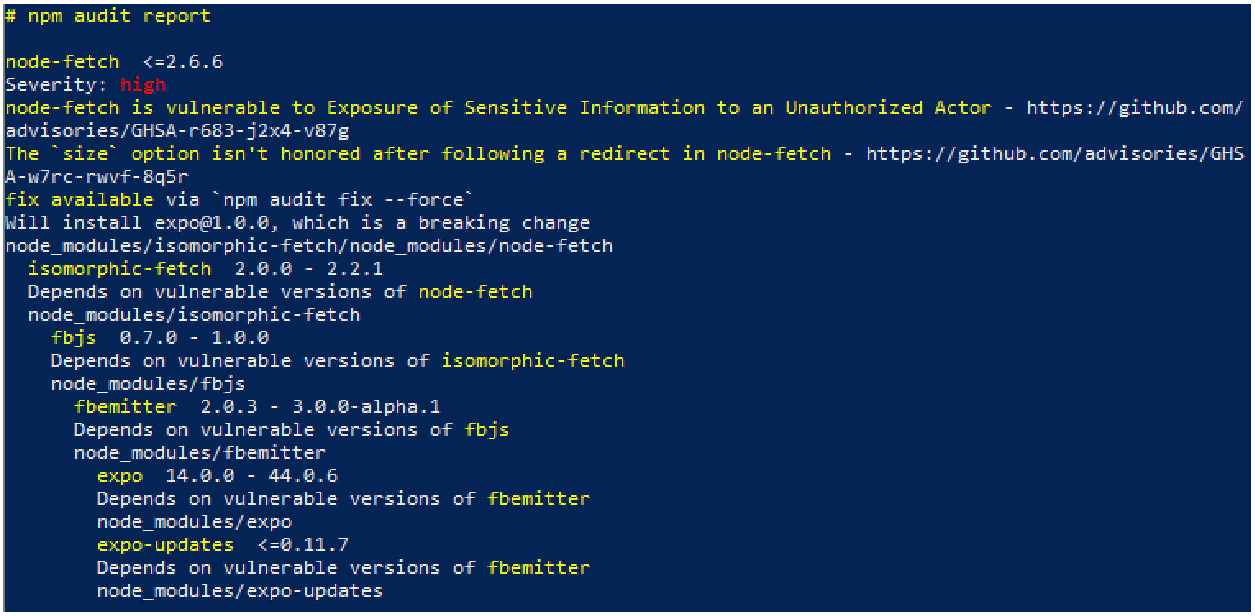
When running **npm install**, a message about vulnerabilities may appear. See the screenshot below.



```
9 vulnerabilities (8 high, 1 critical)

To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
```

Figure 5.1.1: Vulnerabilities Message

Running the command **npm audit fix** removes all but one vulnerability from the current version of our code. The remaining vulnerability is in node-fetch. Our understanding of the issue is that Expo relies on node-fetch in order to run web applications, and uses node-fetch for this functionality. Cookies sent via node-fetch do not include any authentication, so if they are sent to incorrect hosts they could be used for a session hijack attack. Since our app is targeted towards the mobile platform, we do not think that this vulnerability will affect it at all, however we wanted to note it as something for future developers to keep an eye on. Below is a screenshot of the remaining node-fetch vulnerability information per the **npm audit** command after running **npm audit fix**.



```
# npm audit report

node-fetch  <=2.6.6
Severity: high
node-fetch is vulnerable to Exposure of Sensitive Information to an Unauthorized Actor - https://github.com/
advisories/GHSA-r683-j2x4-v87g
The `size` option isn't honored after following a redirect in node-fetch - https://github.com/advisories/GHS
A-w7rc-rwvf-8q5r
fix available via `npm audit fix --force`
Will install expo@1.0.0, which is a breaking change
node_modules/isomorphic-fetch/node_modules/node-fetch
  isomorphic-fetch  2.0.0 - 2.2.1
  Depends on vulnerable versions of node-fetch
  node_modules/isomorphic-fetch
    fbjs  0.7.0 - 1.0.0
    Depends on vulnerable versions of isomorphic-fetch
    node_modules/fbjs
      fbemitter  2.0.3 - 3.0.0-alpha.1
      Depends on vulnerable versions of fbjs
      node_modules/fbemitter
        expo  14.0.0 - 44.0.6
        Depends on vulnerable versions of fbemitter
        node_modules/expo
        expo-updates  <=0.11.7
        Depends on vulnerable versions of fbemitter
        node_modules/expo-updates
```

Figure 5.1.2: node-fetch Vulnerability Information

5.2 Known Bugs

- Assets for the flag icon will sometimes be retrieved improperly while in the Supervisor view, on the mentor view screen, instead being replaced with an “X”. After the initial load of the app, this issue will disappear, so if it is encountered then press on the icon to update the value and prevent the issue from appearing from then on.
- CSS styling issues sometimes prevent information from being completely visible. This is something that will have to be fixed in the course of future development.

6. Conclusion

Team Shining Sky would like to thank CANIS Lab for the opportunity to create the first version of the ARORA Community Mentor Portal App. We are glad to have been part of a project that will have a direct positive impact on people's lives, and we are looking forward to checking back in on the project in a few years to see the great place it will surely have reached. We would also like to extend our congratulations in advance on receiving your pending grant for the ARORA project. If you have any questions about the app in the coming months, please feel free to reach out to us using the email addresses provided below. We at Shining Sky wish you all the best in continued development and implementation of the ARORA Community Mentor Portal App.

Team Shining Sky

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