COVID Guardian External Documentation

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Build and Run

Links

Github:
- **Application: https://github.com/squaredx/cta**
- **Server Side: https://github.com/squaredx/cta-cloudfunctions**

NodeJS (at least version 12 LTS): https://nodejs.org/en/download/

Requirements

- NodeJS: At least version 12 LTS
- NPM (should be installed with node)
- Expo-cli
  - Can be installed by running the following command (ensure NPM and node are installed)
    - `npm install -g expo-cli`
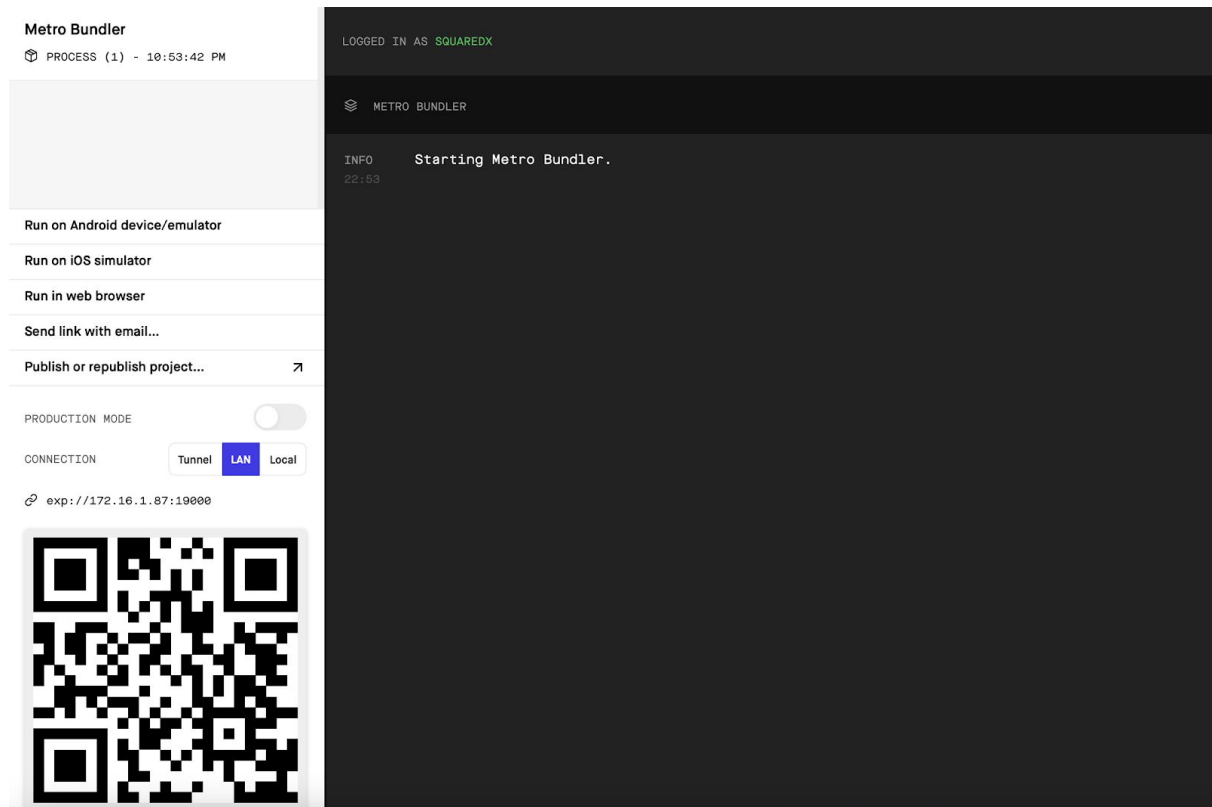- Windows, Mac, Linux computer

Running COVID Guardian with Expo-CLI

This is the easiest way of running the application. It utilizes the functionality provided by the expo package. This works with both Android and iOS devices along with their corresponding simulated devices.

Instructions:
- Clone git repository to your computer
- Open a terminal window and navigate to the location where you cloned the repo (where App.js is located)
- Install the expo package
  - `npm install expo`
- Install all the package requirements
  - `expo install`
- Now all that all the required components are installed, it is now time to run the application through expo
  - `expo start`
  - This will run the application through the expo-cli. Upon running this program a webpage will be loaded, this webpage is the Expo Developer Tools interface. The interface provides all sorts of useful information.
  - There are **TWO** ways to run the application:
    - **Simulated/Emulated**: This is where the application runs on a simulated device on your computer. It requires that the developer tools for the respected platform are installed on your computer. This will not be covered in this documentation.

- **On Device (preferred)**: This is where the application runs on your device through the Expo app. It is the easiest way to run the application.
    - Download and install the Expo client app on your device. The links can be found here: https://docs.expo.io/get-started/installation/#2-expo-client-app-for-ios-and
    - Use a QR code scanner on your phone to scan the QR code that is provided on the Expo Developer Tool CLI (pictured below).

- The application will then open the Expo app and load the COVID Guardian application. You may now use the app!

Building application file

Out of the scope of this guide. If you would like to build a standalone copy of the application (not run through expo) please consult:
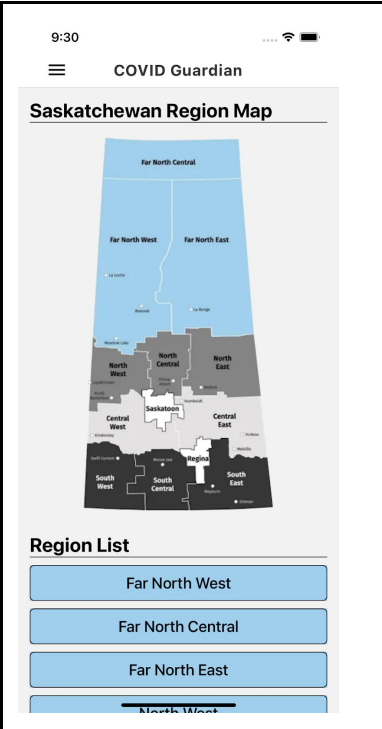*https://docs.expo.io/distribution/building-standalone-apps/*

User Guide

After following the Build and Run guide described above, the application should be loaded on your phone at the home screen. You are now ready to use the application!
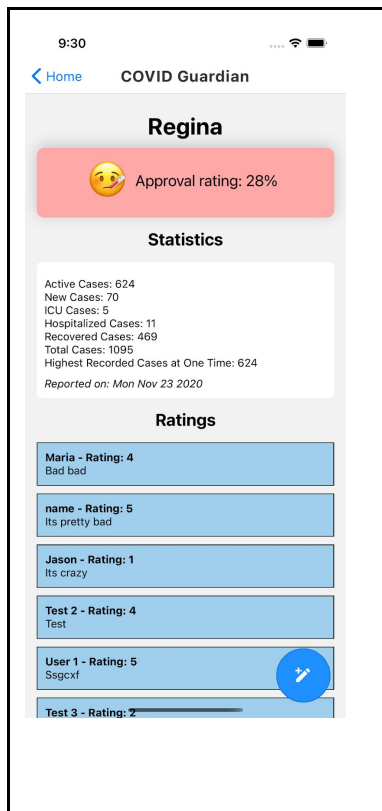
The application is designed so that the average user does not have to sign up in order to use the core features of the application. By this fact, the user is initially greeted with the home screen, instead of a login screen. The only functionality of the app that requires the user to be signed-in is the rating system.

We will now go into the functionality of each screen.
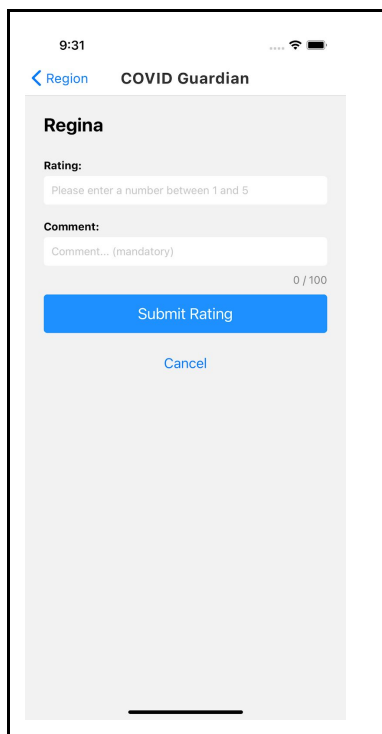
Home Screen

- The menu drawer is located on the top-left of the navigation bar. This is used to access several other screens.
- On the region screen, the user can see a map that corresponds to the Saskatchewan Health Authority COVID-19 reporting regions.
- Below the map is a list of buttons that corresponds to the regions in the map.

Region Screen

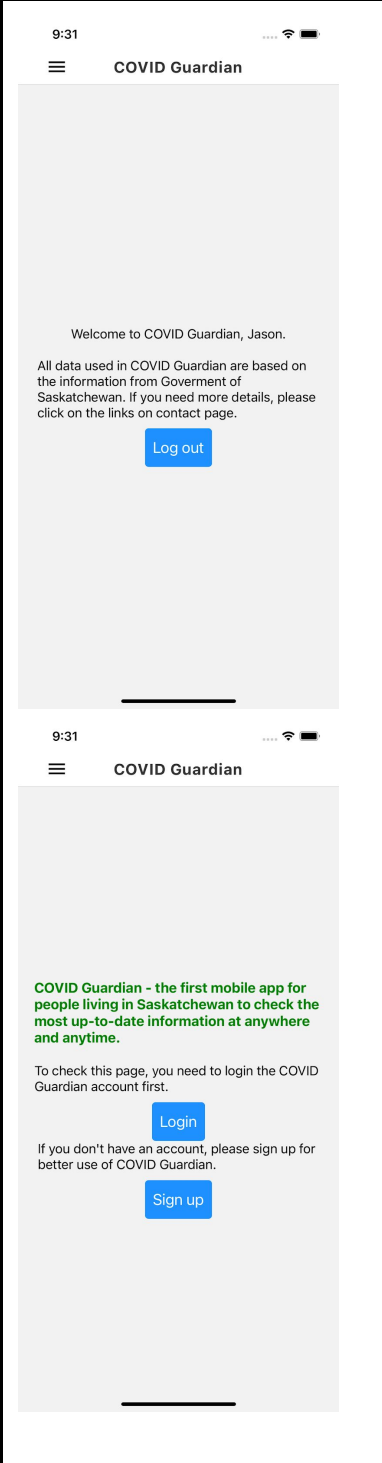|	
9:30 ‹ Home **COVID Guardian** **Regina** 🥴 Approval rating: 28% **Statistics** Active Cases: 624 New Cases: 70 ICU Cases: 5 Hospitalized Cases: 11 Recovered Cases: 469 Total Cases: 1095 Highest Recorded Cases at One Time: 624 *Reported on: Mon Nov 23 2020* **Ratings** **Maria - Rating: 4** Bad bad **name - Rating: 5** Its pretty bad **Jason - Rating: 1** Its crazy **Test 2 - Rating: 4** Test **User 1 - Rating: 5** Ssgcxf **Test 3 - Rating: 2**	• The Region screen provides up-to-date and accurate COVID-19 details that are pulled from our Firebase Firestore. The data in the Firestore is pulled daily (Around 1PM - 3PM Regina time) from the Government of Saskatchewan website. • The raw statistics from the Firestore are listed under the **Statistics** header. • The box directly under the region name provides a "Danger Rating". This percentage ranges from 0% (really bad) to 100% (really good). This value is calculated from the government case statistics and the last 10 user ratings (with a bias towards the government data as it is presumed to be more accurate). • The emoji and the background colour of the box change based upon the value of this percentage. • Below the statistics section there is a location for all the user ratings for the region to be shown. The newest ratings are on the top • Finally there is a floating button on the bottom-right of the screen. This is the "**Submit Rating**" button. When pressed, this will take the user to the rating screen so they can submit a review

Rating Screen

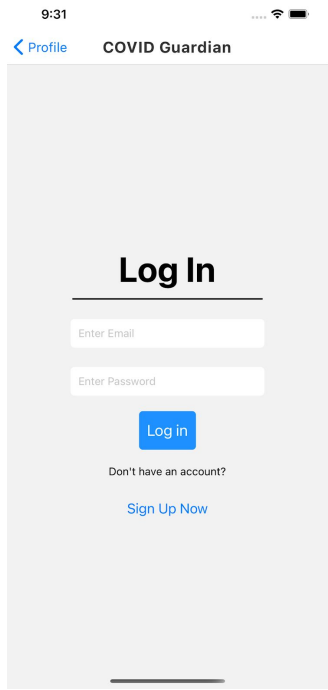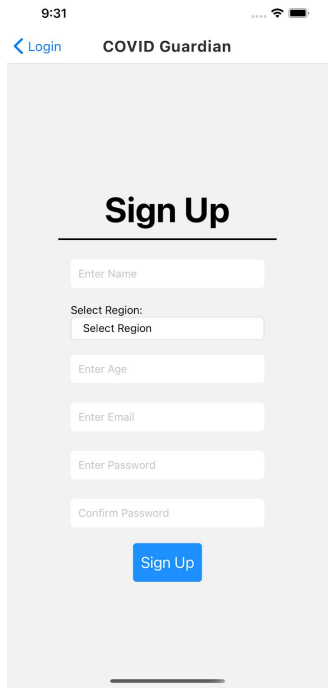|	

9:31   ‹ Region   **COVID Guardian**
 	
Regina
 	
Rating:
Please enter a number between 1 and 5
 	
Comment:
Comment... (mandatory)
 	
                          0 / 100
 	
Submit Rating
 	
Cancel
	• **The user has to be authenticated in order to access this page.**
	   ○ If they are not authenticated, they will be prompted to either: sign-up, log-in, or cancel.
	• The screen prompts the user to enter both: a rating for the region and a comment to justify the rating. Both of these fields are mandatory.
	• The rating must be a number from 1-5 (inclusive). 1 corresponds to very bad and 5 corresponds to really good.
	• The comment must be 100 or less characters. There is a live character counter below the textbox.
	• Upon submitting the data, validation occurs to ensure that the data is correct before sending it to Firebase.
	   ○ If there is an error, an alert message will be shown to describe the error.
	   ○ If the rating is submitted successfully then the user will be brought back to the home screen.

Profile Screen

- The content of this screen depends on if the user is authenticated with the application.
- **If authenticated:** the first screenshot will be shown.
  - This will welcome user on the first line (using the name that was given during registration)
  - A logout button is provided to allow the user to logout of the application.
- **If not authenticated:** the second screenshot will be shown
  - The application will provide two buttons for the user to either Login or sign up.
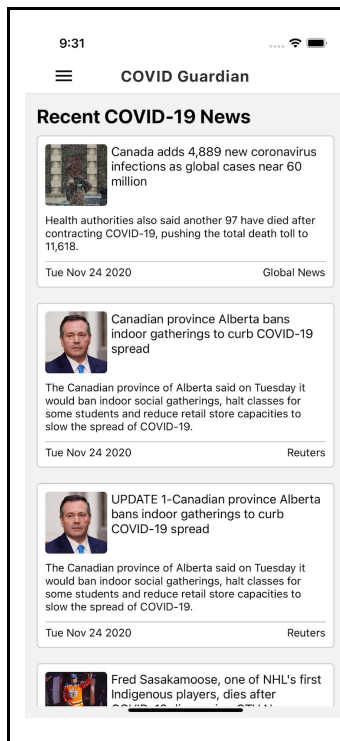
Log In Screen

- This screen allows the user to login to their account for the purpose of writing ratings for the regions.
- Upon pressing the "Login" button, the application will validate the email form (ensuring that it is a proper email address), and then it will authenticate with Firebase.
- If the user does not have an account, they can press the "Sign Up Now" link below the login form.
- **If the login was successful**, the user will be transferred to the profile screen
- **If the login was unsuccessful**, the appropriate error message will be alerted to the user.
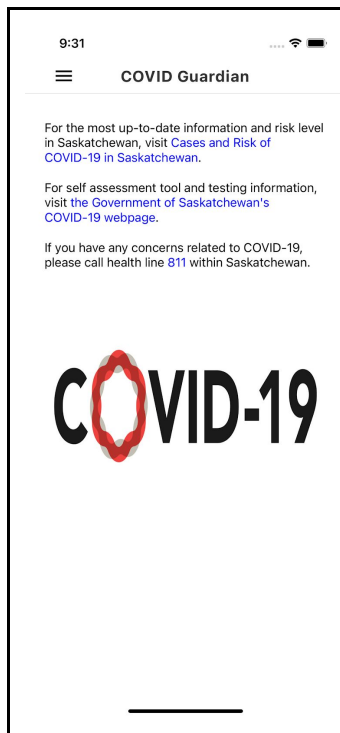
Sign Up Screen

- This screen allows the user to create an account for COVID Guardian.
- The user's must be at least 16 years old.
- Upon pressing the "Sign Up" button, the form will validate the following aspects:
    - The "Select Region" dropbox must be selected.
    - The age must be greater than or equal to 16.
    - The email must be in the correct email format.
    - The password must be at least 6 characters in length.
    - The confirm password must be the exact same as the password.
- **If the sign up was successful**, the user will be transferred to the profile screen.
- **If the sign up was unsuccessful**, the appropriate error message will be alerted to the user.

News Screen

- The news screen provides users with the latest news articles related to COVID-19 in Saskatchewan.
- These articles are provided by NewsAPI
  - There is a cooldown of 5 minutes between fetching new articles from the API. This is done because we are utilizing a free developer license from the API that has usage limits.
  - Along with the usage limits, the free tier only provides new articles every hour.
- The user is able to scroll through several news headlines on this page.
- Each card provides the article title, a brief description, a thumbnail, source, and the date it was published.
- The articles are sorted from newest to oldest.
- The list supports "pull-to-refresh". But new articles are only fetched every 5 minutes
- When the card is pressed, the article will open in the user's web browser.

Contact Screen

- On this screen the user is provided with several links to the Government of Saskatchewan's COVID-19 related information.
- Additionally, a link is provided for the user to instantly call the 811 health hotline.