# Weather Assistant Tool - User Manual

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June 2024

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## 1 Introduction

Welcome to the Weather Assistant Tool App!!!

The Weather Assistant Tool is a comprehensive app designed to provide the latest weather updates for any selected location. With a range of functionalities, it ensures users have a seamless experience. Utilizing GPS, it can automatically detect and provide weather information for your current location. For broader searches, the global search feature allows users to find weather updates for any place worldwide. To keep users informed, the app includes customizable notifications for weather changes and alerts. Users can also set favorite locations for quick access and view their search history for convenience. The app supports both dark and light modes, catering to user preferences for visual comfort. Additionally, it allows easy switching between Fahrenheit and Celsius, ensuring users can view temperature data in their preferred unit. You can view the website on mobile or on PC, but mobile version does look the best.

# 2 Installation Instructions

If you want to view the code in progress and make no changes, simply view our live website at link here. Otherwise, continue to create your own setup.

## 2.1 Front End

To set up the front end, follow these steps:

1. Install Node.js
   https://nodejs.org/en

2. Next, open the command prompt and enter the following commands:

   ```
   npm install -g @vue/cli
   # Installing Vue
   npm install -g @ionic/cli @capacitor/assets
   # Installing Ionic and Capacitor to make emulator
   ```

3. Navigate in the command prompt to the directory where you want to put the project folder, then run these commands to clone and set up the necessary files:

   ```
   git clone https://github.com/Sanmeet-EWU/github-teams-project-bid-ctrl-freaks.git
   cd ./github-teams-project-bid-ctrl-freaks
   cd ./App-files
   npm install @capacitor/geolocation
   npm install @capacitor/local-notifications
   npm install firebase
   npm install && ionic serve
   ```

   And finally to run the front end:

   ```
   npm install && ionic serve
   ```

   Running this command should open up the app in the browser. If not, then you're missing Vue or Ionic.

4. You should now be able to open the ‘App-files‘ folder (open the entire ‘App-files‘ folder or it doesn't work) with a code editor like VSCode (required: Vue, TypeScript, and Ionic extensions) to edit the code within the ‘src‘ folder.

### Emulator Instructions (Optional)

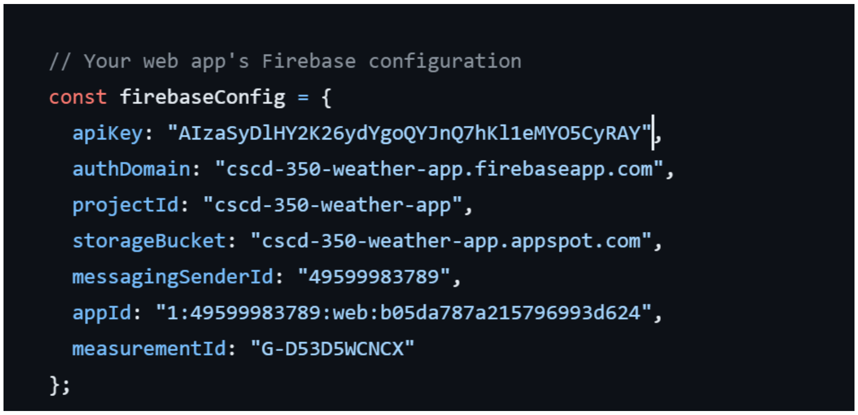
In the terminal of the project, run:
*Remember to have Android Studio installed and open during the first run to build.*

```
ionic cap add android
# Adding Capacitor Android files
ionic cap build android
# This should open up Android Studio and build the emulator
ionic cap run
# Should open up the emulator by itself (may take a while)
ionic cap sync
# If major changes and the emulator doesn't update
```

## 2.2 Back End

- You will need to setup a fire base account and database using this guide HERE.

- Once account is set up, you will need to find your credentials on the database info page at your projects overview page, link similar to (https://console.firebase.google.com/u/0/project/ThisChangesPerProject/overview. We are looking for the information located alongside the apiKey. You will need to take this info and insert the needed info on lines 43 to 49 seen here /App-files/src/main.ts or in the image below.



```
// Your web app's Firebase configuration
const firebaseConfig = {
  apiKey: "AIzaSyDlHY2K26ydYgoQYJnQ7hKl1eMYO5CyRAY",
  authDomain: "cscd-350-weather-app.firebaseapp.com",
  projectId: "cscd-350-weather-app",
  storageBucket: "cscd-350-weather-app.appspot.com",
  messagingSenderId: "49599983789",
  appId: "1:49599983789:web:b05da787a215796993d624",
  measurementId: "G-D53D5WCNCX"
};
```

- *Note* The backend is used to reduce api calls as well granting the potential to create user accounts, and store user data such as history and favorites on potential device wipe.

# 3 Run Instructions

To run the application, follow these steps:

1. Ensure both the front end and back end are set up and configured correctly.

2. Start the backend server.

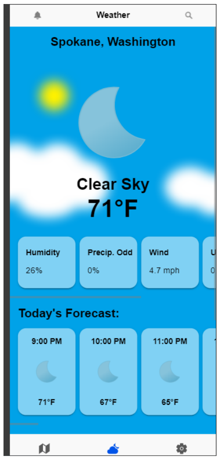
3. Run the front end application using the command `ionic serve or npm run dev`.

4. Access the application via your web browser.

## 4 Usage Instructions

The Weather Assistant Tool provides various functionalities:

- View current weather based on your location, or a default location of Spokane, WA.
  Which can be viewed on the main page of the start-up



Spokane, Washington

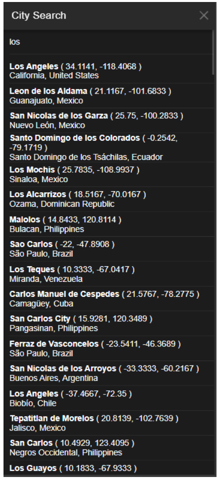
Clear Sky
71°F

Humidity 26%
Precip. Odd 0%
Wind 4.7 mph

Today's Forecast:

9:00 PM 71°F
10:00 PM 67°F
11:00 PM 65°F

- Search for weather updates for any location worldwide.
  This can be accessed by clicking on the top-right search symbol to open up the search function.



los

**Los Angeles** ( 34.1141, -118.4068 )
California, United States

**Leon de los Aldama** ( 21.1167, -101.6833 )
Guanajuato, Mexico

**San Nicolas de los Garza** ( 25.75, -100.2833 )
Nuevo León, Mexico

**Santo Domingo de los Colorados** ( -0.2542, -79.1719 )
Santo Domingo de los Tsáchilas, Ecuador

**Los Mochis** ( 25.7835, -108.9937 )
Sinaloa, Mexico

**Los Alcarrizos** ( 18.5167, -70.0167 )
Ozama, Dominican Republic

**Malolos** ( 14.8433, 120.8114 )
Bulacan, Philippines

**Sao Carlos** ( -22, -47.8908 )
São Paulo, Brazil

**Los Teques** ( 10.3333, -67.0417 )
Miranda, Venezuela

**Carlos Manuel de Cespedes** ( 21.5767, -78.2775 )
Camagüey, Cuba

**San Carlos City** ( 15.9281, 120.3489 )
Pangasinan, Philippines

**Ferraz de Vasconcelos** ( -23.5411, -46.3689 )
São Paulo, Brazil

**San Nicolas de los Arroyos** ( -33.3333, -60.2167 )
Buenos Aires, Argentina

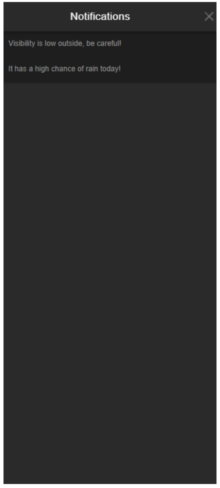
**Los Angeles** ( -37.4667, -72.35 )
Biobío, Chile

**Tepatitlan de Morelos** ( 20.8139, -102.7639 )
Jalisco, Mexico

**San Carlos** ( 10.4929, 123.4095 )
Negros Occidental, Philippines

**Los Guayos** ( 10.1833, -67.9333 )

- Customize notifications for weather changes and alerts.
  This can be accessed by clicking on the top-left notification symbol to open up the notification list.



Notifications

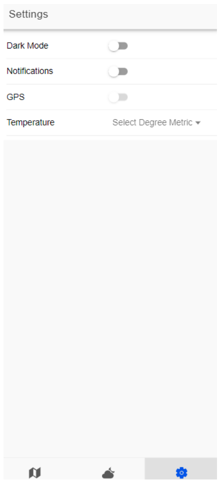
Visibility is low outside, be careful!

It has a high chance of rain today!

- Set and access favorite locations quickly. (Currently not finished)
  This can be accessed by clicking on the bottom-left map symbol.(Currently not finished)

- View search history for convenience. (Currently not finished)

- Switch between dark and light modes for visual comfort.
  This can be accessed by clicking on the bottom-right settings symbol.



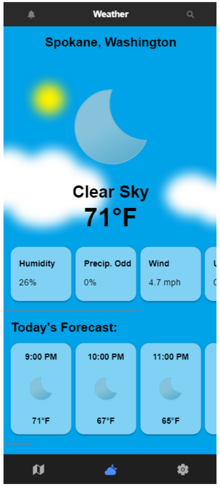
Settings

Dark Mode

Notifications

GPS

Temperature Select Degree Metric ▾



Weather

Spokane, Washington

Clear Sky

71°F

Humidity 26%

Precip. Odd 0%

Wind 4.7 mph

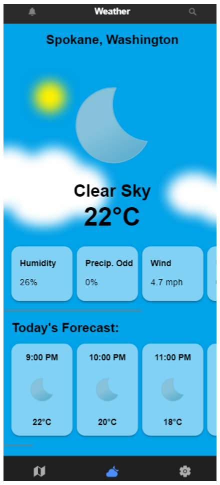
Today's Forecast:

9:00 PM 71°F

10:00 PM 67°F

11:00 PM 65°F

- Toggle between Fahrenheit and Celsius for temperature data.
  This can be accessed by clicking on the bottom-right settings symbol.



Weather

Spokane, Washington

Clear Sky
22°C

Humidity 26%

Precip. Odd 0%

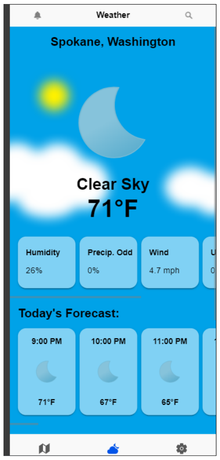
Wind 4.7 mph

Today's Forecast:

9:00 PM 22°C

10:00 PM 20°C

11:00 PM 18°C



Weather

Spokane, Washington

Clear Sky
71°F

Humidity 26%

Precip. Odd 0%

Wind 4.7 mph

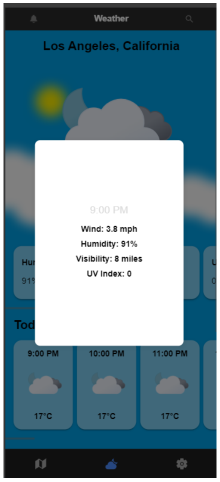
Today's Forecast:

9:00 PM 71°F

10:00 PM 67°F

11:00 PM 65°F

- Detailed Information on the hour or day
  Clicking on the weather on your select day within the weekly forecast opens up a weather card with the information.



Weather

Los Angeles, California

9:00 PM

Wind: 3.8 mph

Humidity: 91%

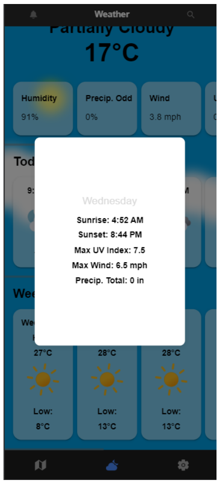
Visibility: 8 miles

UV Index: 0

9:00 PM 17°C

10:00 PM 17°C

11:00 PM 17°C



Weather

Partially Cloudy
17°C

Humidity 91%

Precip. Odd 0%

Wind 3.8 mph

Wednesday

Sunrise: 4:52 AM

Sunset: 8:44 PM

Max UV Index: 7.5

Max Wind: 6.5 mph

Precip. Total: 0 in

27°C Low: 8°C

28°C Low: 13°C

28°C Low: 13°C

## 5 Missing Functionality

We were able to make good progress but not complete several potentially good features for the app. The following aspects could be further worked on to improve the security, accuracy, and scope of features.

- We could ensure we match the result location to the asking location. If you select an abstract city from our unrefined list, it may return a nearby larger cities weather, as that is all our weather API can handle.

- We could swap our weather API from a free open source to a paid service for improved accuracy and api call scaling.
- We could extend firebase to also have a login system, and to store user data such as favorites and history.
- Extend notifications out to observers that are currently in or favorited a location.