Name: Pratibha Arjun Barsale
E-mail: pbarsale@buffalo.edu
Title: Weather App using Visual Studio Cordova and VueJS

IMPLEMENTATION:

The Weather App has been created using Visual Studio Cordova and tested in "Simulate in Browser – Nexus 7 Tablet" device of Visual Studio in "Chrome Browser". The app consists of three screens. Following are the details for each of the screens:

A) Screen 1 – Login (index.html)

- The login screen asks the user to enter the username and password.
- Upon submitting the form, the User.json file is fetched using XMLHttpRequest, parsed with JSON parser and the credentials are validated
- The user is redirected to the Screen2 upon correct credentials.

B) Screen 2 – Current/Specific location weather details (screen2.html)

- The Data binding in Screen2 is done using VueJS. Upon loading the screen2, user is prompted to select one of the following two options:

i. Current Location (Default when no option is selected)

- When user selects the "Current Location" option, the first thing done is fetching the current location of the user through https://ipinfo.io/json
- The JSON response got upon the XMLHttpRequest is parsed and the latitude and longitude of the current location are stored.
- This collected latitude and longitude are further used for fetching weather detail's JSON file using "openweathermap" API and the API ID.

ii. Specified Location

- When user selects the "Specified Location" option, he is asked to enter the Zip code (a valid max 5-digit number USA zip code)
- This zip code is further used for fetching weather detail's JSON file using "openweathermap" API and the API ID.

In both the above options, the required information (City, State, Time, Weather Description, Temperature (Fahrenheit and Celsius), humidity, windspeed and visibility) are stored in Vue Data attributes bind to the HTML elements. Also, the user can switch back and forth between the two options when he wishes.

C) **Screen 3 – Weather data representation (screen3.html)**

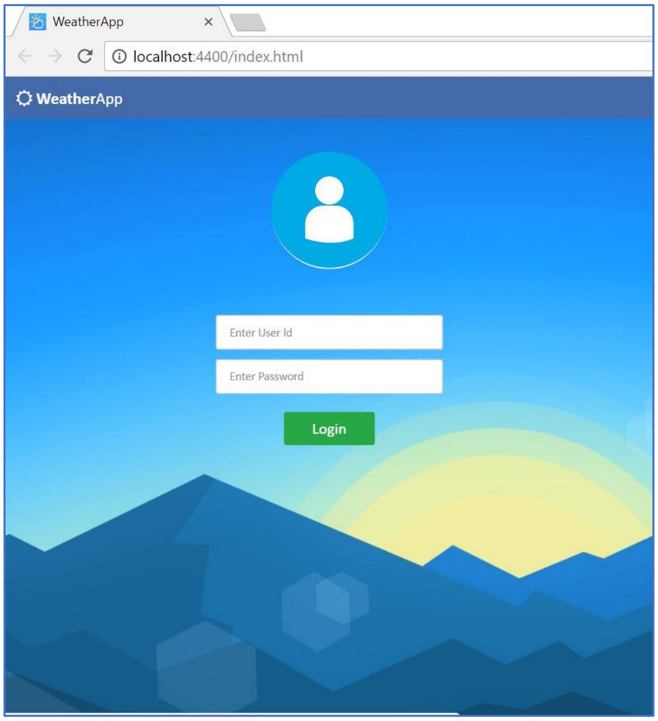
- The entire functionality of this screen is done using VueJS. Vue has been created which manages the screen.
- I have collected 4 days data from 21st March – 24th March for around 450 USA zip code (**Total 2100+ data in CSV file named ‘finaldata.csv’**)
- Upon Vue creation, the local CSV file is read and each weather entry is pushed into the Vue Data List.
- This Vue list is rendered using the “v-for” and displayed in an HTML table.
- Filtering has been provided to this data, based on Zip code and City/State Name. This is done using the Vue Filters and the Computed methods of Vue
- Upon clicking specific location’s weather entry, a pop modal is shown with detailed description. This is done using Conditional Rendering of Vue.

The user has been given the feature to move back and forth on the last two screens. To make the GUI more attractive, I have used Bootstrap CSS for some elements while designing these pages.

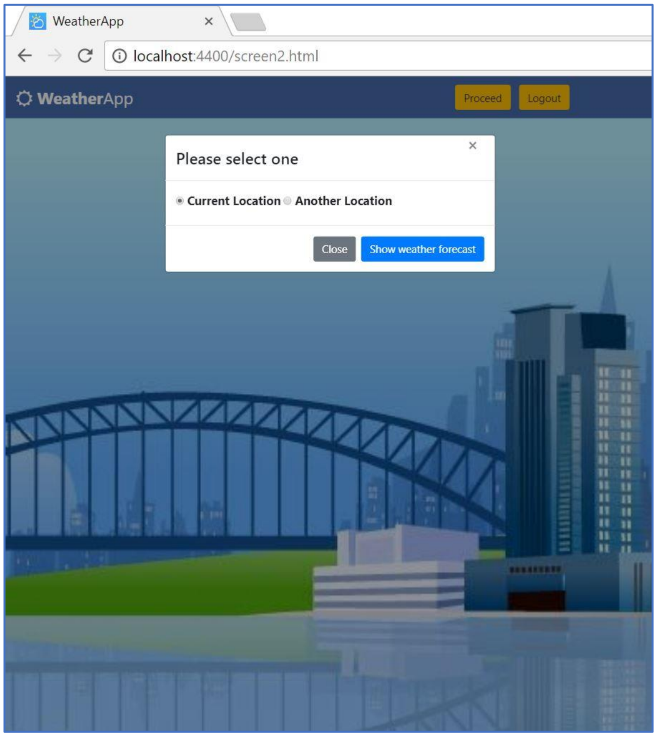
GITHUB LINK **of Weather App**

SCREENSHOTS:

Screen 1 : Figure 1



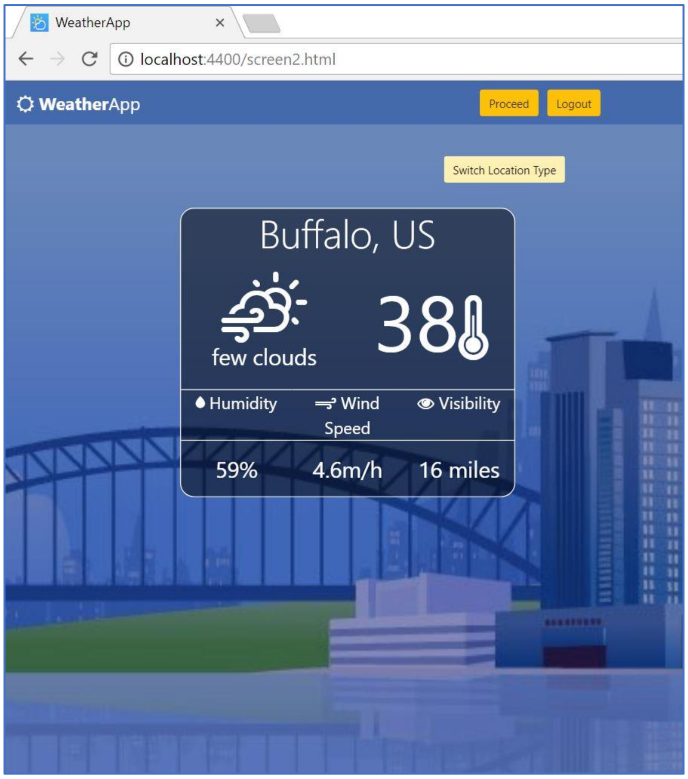
Screen 2: Figure 1



Please select one

● Current Location ○ Another Location

Screen 2: Figure 2



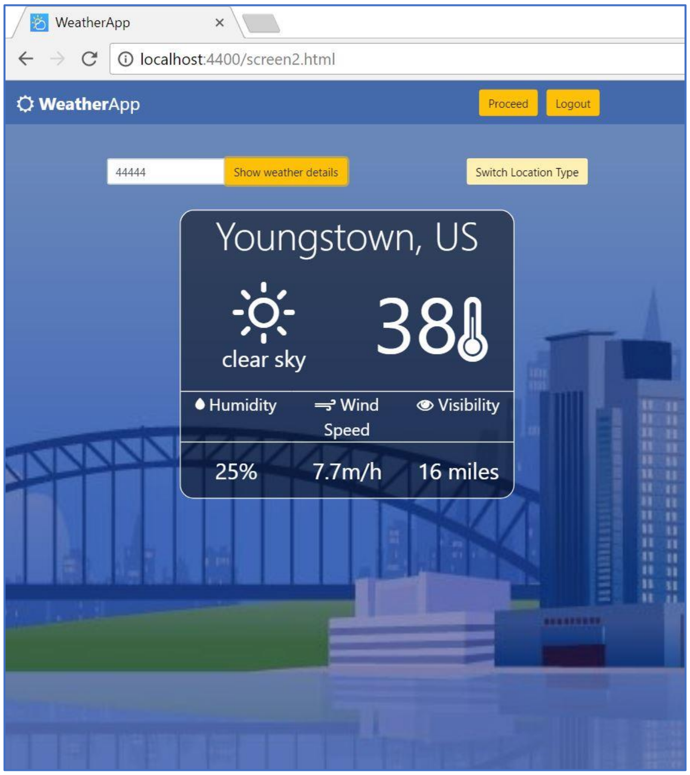
Buffalo, US

few clouds

38

Humidity	Wind Speed	Visibility
59%	4.6m/h	16 miles

Screen 2: Figure 3



44444

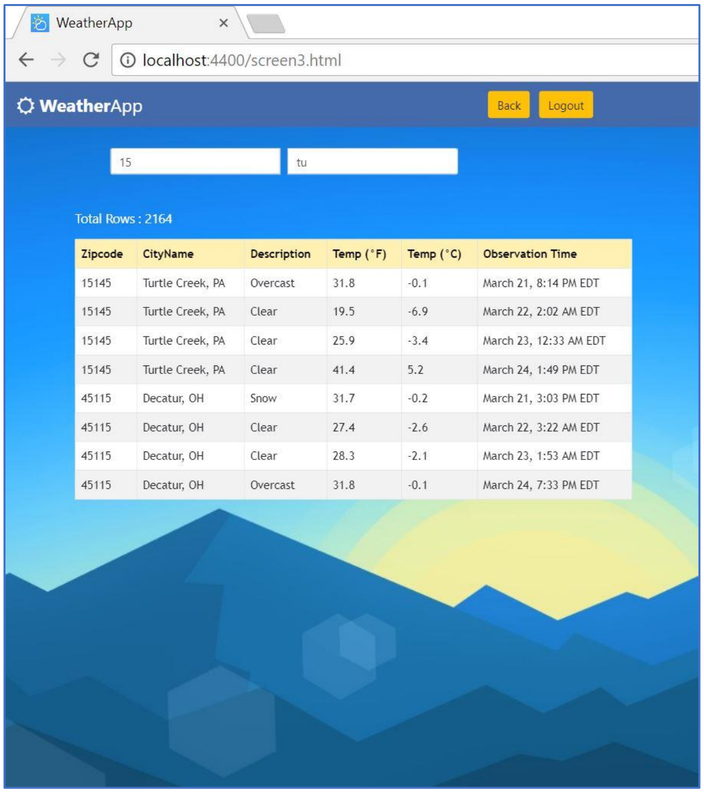
Youngstown, US

clear sky

38

Humidity	Wind Speed	Visibility
25%	7.7m/h	16 miles

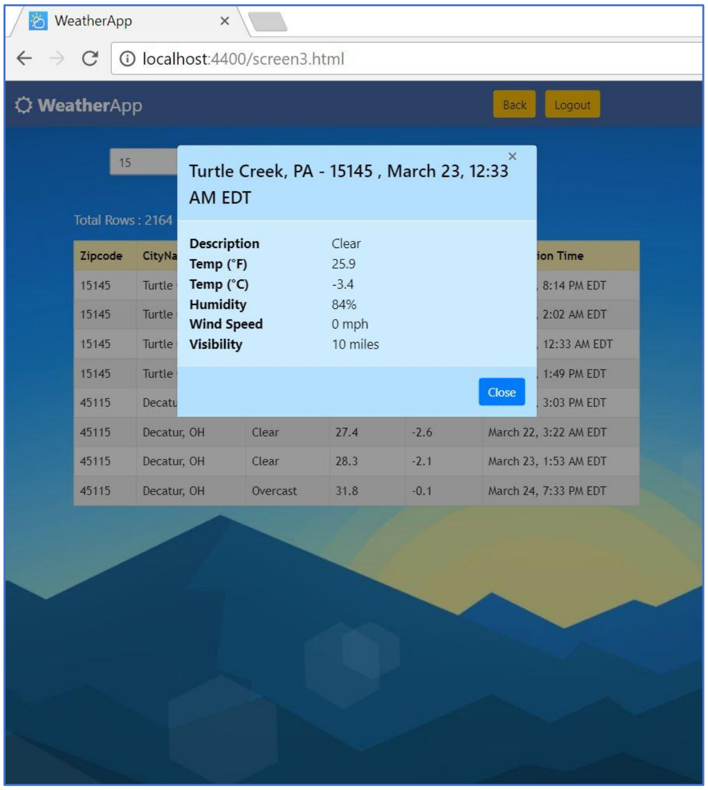
Screen 3 – Figure 1



Total Rows : 2164

Zipcode	CityName	Description	Temp (°F)	Temp (°C)	Observation Time
15145	Turtle Creek, PA	Overcast	31.8	-0.1	March 21, 8:14 PM EDT
15145	Turtle Creek, PA	Clear	19.5	-6.9	March 22, 2:02 AM EDT
15145	Turtle Creek, PA	Clear	25.9	-3.4	March 23, 12:33 AM EDT
15145	Turtle Creek, PA	Clear	41.4	5.2	March 24, 1:49 PM EDT
45115	Decatur, OH	Snow	31.7	-0.2	March 21, 3:03 PM EDT
45115	Decatur, OH	Clear	27.4	-2.6	March 22, 3:22 AM EDT
45115	Decatur, OH	Clear	28.3	-2.1	March 23, 1:53 AM EDT
45115	Decatur, OH	Overcast	31.8	-0.1	March 24, 7:33 PM EDT

Screen 3 – Figure 2



Total Rows : 2164

Turtle Creek, PA - 15145 , March 23, 12:33 AM EDT

Description	Clear
Temp (°F)	25.9
Temp (°C)	-3.4
Humidity	84%
Wind Speed	0 mph
Visibility	10 miles