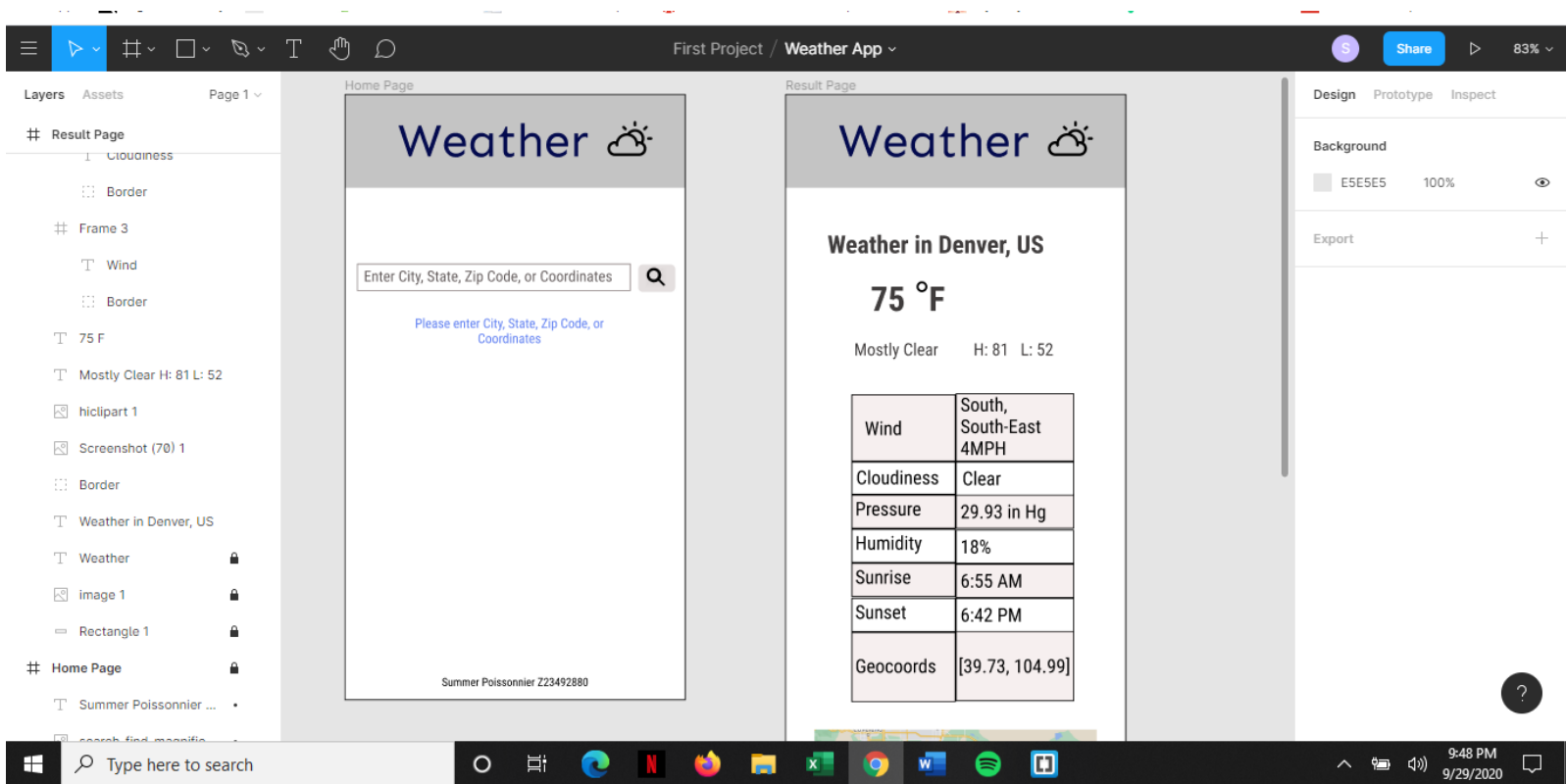
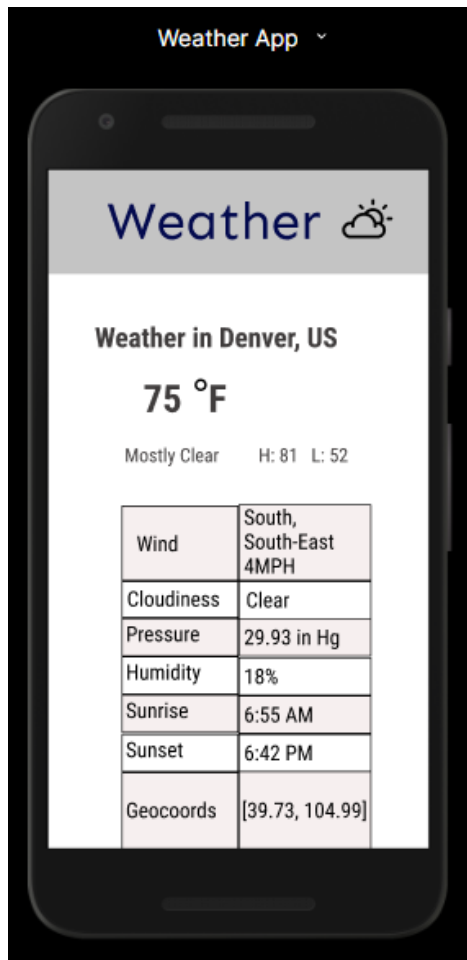
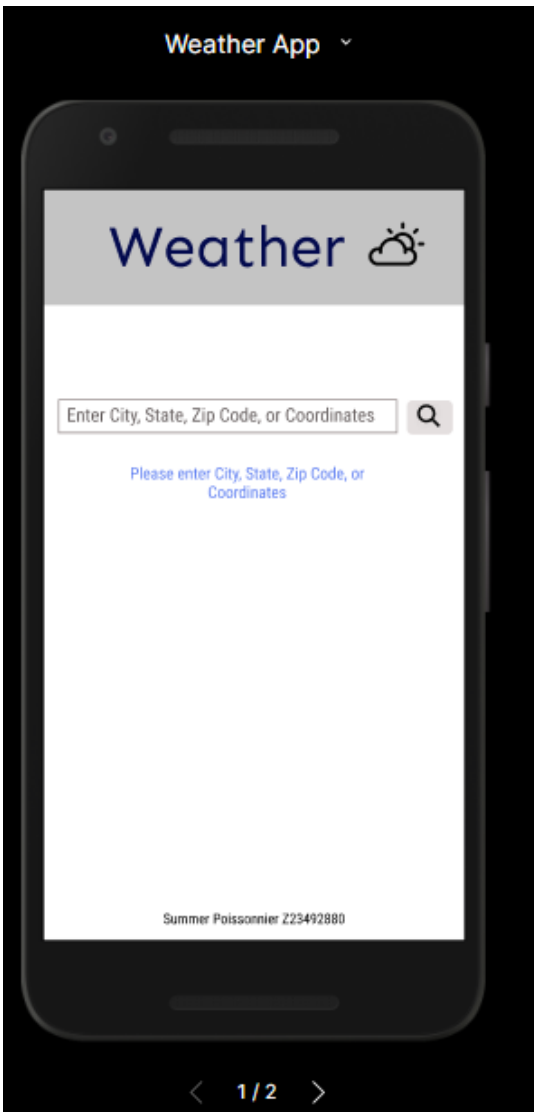


Summer Poissonnier
September 29, 2020
Mobile App Projects
Homework 4

UI Design

For the UI design of my Weather App, I decided to use Figma. I am familiar with Figma because I have used it with my undergraduate research team. It took me around 2 hours to design my app in Figma to make it the way I wanted.





Index.html Code Explanation

I used an index.html file for the design part of my app. I used a placeholder to make the part of the app where the user would type in the state, zip code, or city. I then created a button that I called “submit-btn” for the user to click on which would then take them to the results page that displays all of the weather information. I designed the submit-btn with a magnifying glass on it. If the user wants to search for the weather via GPS, I created a search button with a search symbol on it and I called the button “geo-btn”. Below the search bar, I also included some text explaining to the user what to do. At the bottom of the search page, I included a footer with my

name and Z-number. For the results page, which contained the weather information, I created a `<p>` tag and `` tag for the name display and the temperature display. I created “id” names for them so I could link the id names with my weatherapp.js file which would get the information from the weather API. For the 10 weather elements, I created a table in my index.html page and created id’s for the elements and linked them in my js file to get the data from the API. I wasn’t quite sure how to create two different app screens, so I googled it. When I googled it, I found something that helped me create two “pages” in one index.html page.

```
C:/Users/poiss/weatherapp/www/index.html (js) - Brackets
Debug Help

1 <!DOCTYPE html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0, user-scalable=no, minimum-scale=1.0, maximum-scale=1.0">
6   <link href="assets/css/styles.css" rel="stylesheet">
7 </head>
8 <body>
9
10 <div id="Page1"><div class='header'><h1 class="title">Weather</h1> </div>
11
12 <div class='search-view'>
13   <input type="text" placeholder="Enter City, State, or Zip Code" id="term"/>
14   <button id="submit-btn" onclick="return show('Page2','Page1');"></button>
15   <button id="geo-btn" onclick="return show('Page2','Page1');"></button>
16   <p>Please enter City, State, ZipCode, or Click on the Location Button</p>
17 </div>
18 <footer><h4>Summer Poissonnier Z23492880</h4></footer>
19 </div>
20
21 <div id="Page2" style="display:none">
22   <div class='header'><h1 class="title">Weather</h1> </div>
23   <h1><span id="name"></span> <span id="country"></span></h1>
24   <p id="f"><span id="temp"></span> °F</p>
25   <p id="desc"></p>
26   <p id="fh">H: <span id="tempmax"></span> °F</p>
27   <p id="fl">L: <span id="tempmin"></span> °F</p>
28
29   <table style="width:50%" id="weather-data">
30     <tr>
31       <th>Wind</th>
32       <td id="wind"></td>
33     </tr>
34     <tr>
35       <th>Cloudiness</th>
36       <td id="clouds"></td>
37     </tr>
38     <tr>
39       <th>Pressure</th>
40       <td id="pressure"></td>
41     </tr>
42   </table>
43 </div>
44 </body>
45 </html>
```

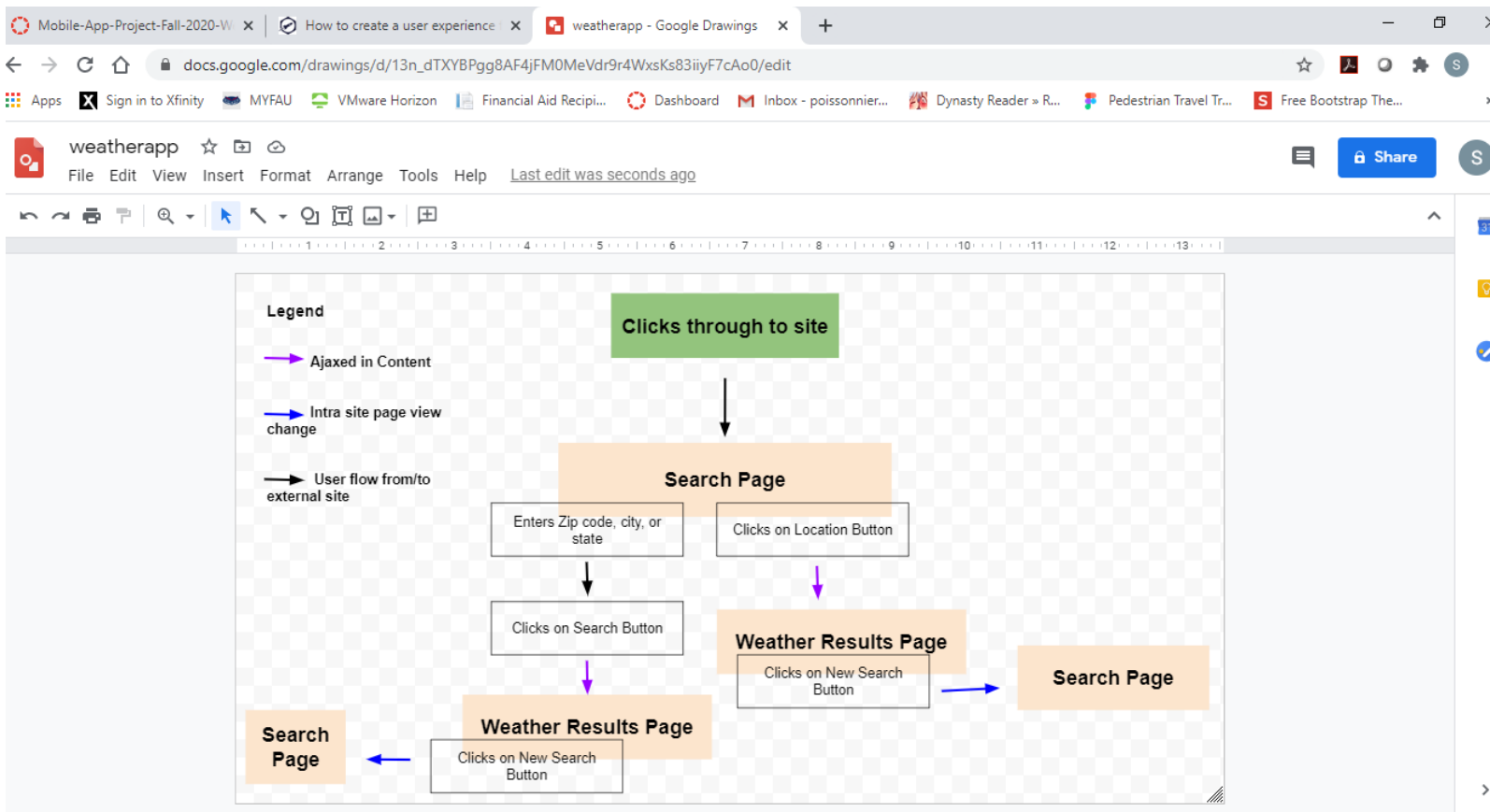
Line 31, Column 34 — 85 Lines

INS UTF-8 HTML Spaces

```
C:/Users/poiss/weatherapp/www/index.html (js) - Brackets
Debug Help
27 <p id="temp"><span id="tempmin"></span></p>
28
29 <table style="width:50%" id="weather-data">
30 <tr>
31 <th>Wind</th>|
32 <td id="wind"></td>
33 </tr>
34 <tr>
35 <th>Cloudiness</th>
36 <td id="clouds"></td>
37 </tr>
38 <tr>
39 <th>Pressure</th>
40 <td id="pressure"></td>
41 </tr>
42 <tr>
43 <th>Humidity</th>
44 <td id="humidity"></td>
45 </tr>
46 <tr>
47 <th>Sunrise</th>
48 <td id="sunrise"></td>
49 </tr>
50 <tr>
51 <th>Sunset</th>
52 <td id="sunset"></td>
53 </tr>
54 <tr>
55 <th>Longitude</th>
56 <td id="lon"></td>
57 </tr>
58 <th>Latitude</th>
59 <td id="lat"></td>
60 </table>
61 <iframe id="map"
62 width="300"
63 height="400"
64 margin-left="30"
65 frameborder="0" style="border:0"
66 src="https://www.google.com/maps/embed/v1/place?key=AIZA5yDvrkPfr-kgIbdMVPFRON40x_jqXLX830w
67 &q=center" >
68 </iframe>
69
70 <button class="newsearch-btn" onclick="return show('Page1','Page2');">New Search</button>
Line 31, Column 34 — 85 Lines
```

UI Flowchart

I was a little confused on how to go about making this flowchart. I used google docs drawing and created my flowchart for my app in there. I tried to follow the link that was in the PowerPoint for creating flowcharts. I hope my flowchart makes sense and is correct.



Open Weather API

I used the open weather API like I did in HW3 and supported searching for ZipCode, GPS, and City, State.

Google Maps API

I ran out of time for this because this assignment took me a really long time to do and for some reason, I just could not get this part of the assignment to work properly. I used an embed maps API from google for my map but I did not know how to make it show me my location based on my zip, city, or GPS. To register for the key, I had to make a google cloud account and go to credentials.

Weatherapp.js Code Explanation

For the js part of the code, I was very confused and I was not sure where to start. I watched a couple YouTube videos and tried to follow what they did. It took me 2 days to figure out how to set my code up and to get everything working since I am not very familiar with js. I also spent a lot of time looking at past assignments and trying to understand what was going on in the code. In my code, I created functions for getting the weather with zip code, GPS, and city/state. Inside the functions, I used the API for the weather. I then created a function I called showWeatherData to display the weather data on my app. I called the id names for the elements that I created in my index.html page to get the information from the JSON data in the weather API. I then tied my buttons (the search and location buttons) to my functions when clicking on them.

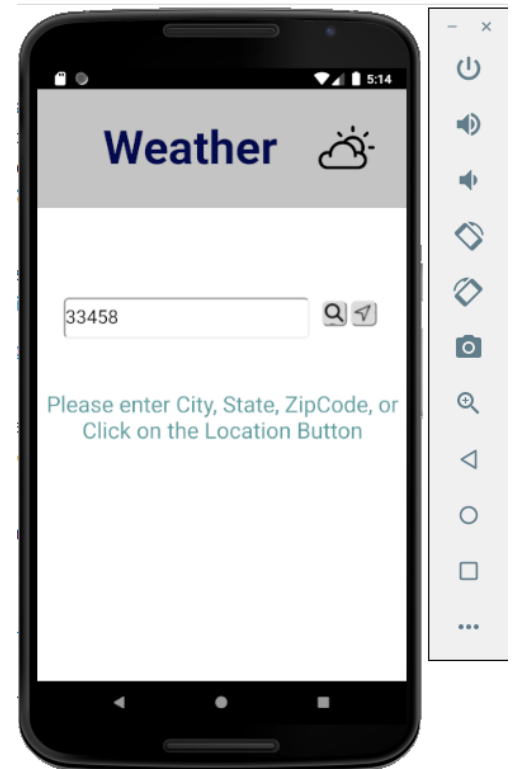
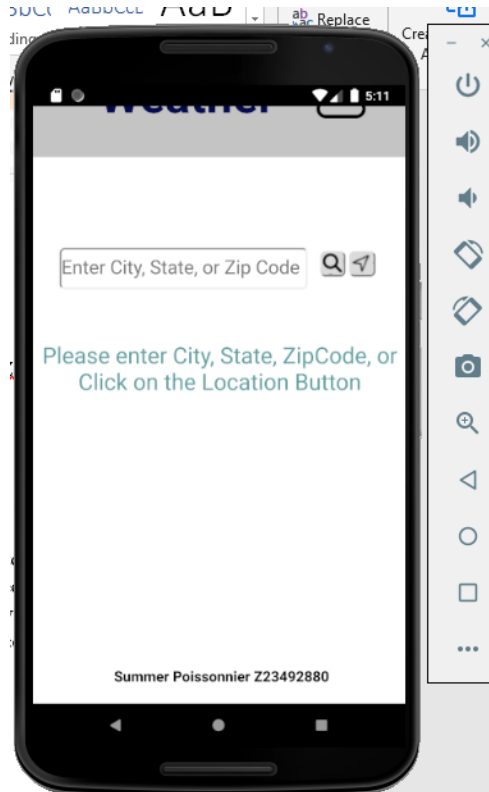
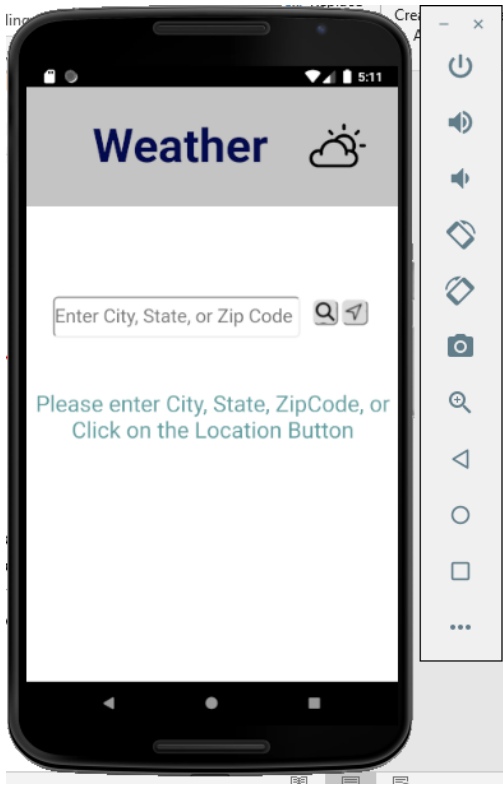
```
1  var OpenWeatherAppKey = "7e59cb29b6de97ff758260f346d64075";
2
3  function getWeatherWithZipCode() {
4
5      var zipcode = $('#term').val();
6
7      var queryString =
8          'http://api.openweathermap.org/data/2.5/weather?zip='
9          + zipcode + ',us&appid=' + OpenWeatherAppKey + '&units=imperial';
10
11     $.getJSON(queryString, function (results) {
12
13         showWeatherData(results);
14
15     }).fail(function (jqXHR) {
16         $('#error-msg').show();
17         $('#error-msg').text("Error retrieving data. " + jqXHR.statusText);
18     });
19
20     return false;
21 }
22
23 function getWeatherWithCity() {
24
25     var city = $('#term').val();
26
27     var queryString =
28         'http://api.openweathermap.org/data/2.5/weather?q='
29         + city + ',us&appid=' + OpenWeatherAppKey + '&units=imperial';
30
31     $.getJSON(queryString, function (results) {
32
33         showWeatherData(results);
34
35     }).fail(function (jqXHR) {
36         $('#error-msg').show();
37         $('#error-msg').text("Error retrieving data. " + jqXHR.statusText);
38     });
39
40     return false;
41 }
42
43 function showWeatherData(results) {
44
45     if (results.weather.length) {
46
47         $('#error-msg').hide();
48         $('#weather-data').show();
49         $('#name').text(results.name);
50         $('#country').text(results.sys.country);
51         $('#temp').text(results.main.temp);
52         $('#wind').text(results.wind.speed);
53         $('#humidity').text(results.main.humidity);
54         $('#lon').text(results.coord.lon);
55         $('#lat').text(results.coord.lat);
56         $('#desc').text(results.weather[0].description);
57         $('#tempmax').text(results.main.temp_max);
58         $('#tempmin').text(results.main.temp_min);
59         $('#pressure').text(results.main.pressure);
60         $('#clouds').text(results.clouds.all);
61
62         var sunriseDate = new Date(results.sys.sunrise * 1000);
63         $('#sunrise').text(sunriseDate.toLocaleTimeString());
64
65         var sunsetDate = new Date(results.sys.sunset * 1000);
66         $('#sunset').text(sunsetDate.toLocaleTimeString());
67
68     } else {
69         $('#weather-data').hide();
70         $('#error-msg').show();
71         $('#error-msg').text("Error retrieving data. ");
72     }
73 }
74
75 }
76 $('#submit-btn').click(getWeatherWithZipCode);
77 $('#submit-btn').click(getWeatherWithCity);
78 $('#geo-btn').click(getWeatherWithGeoLocation);
79
80 function getWeatherWithGeoLocation() {
81
82     navigator.geolocation.getCurrentPosition(onGetLocationSuccess, onGetLocationError,
83         { enableHighAccuracy: true });
84
85     $('#error-msg').show();
86     $('#error-msg').text('Determining your current location ...');
```

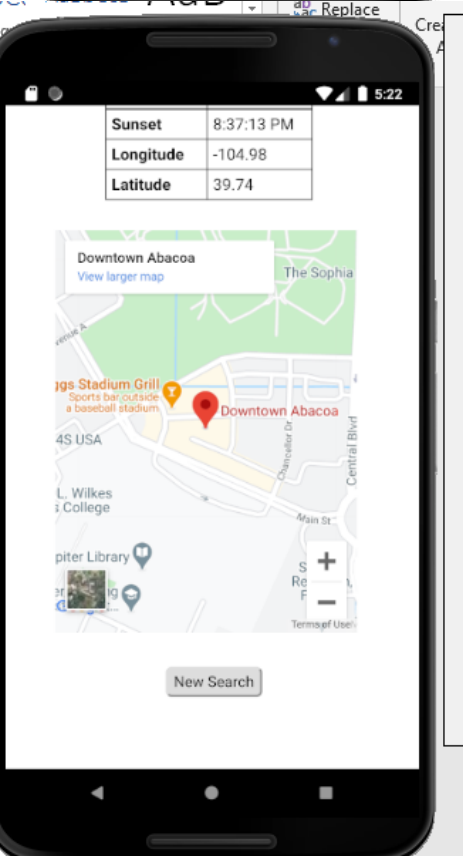
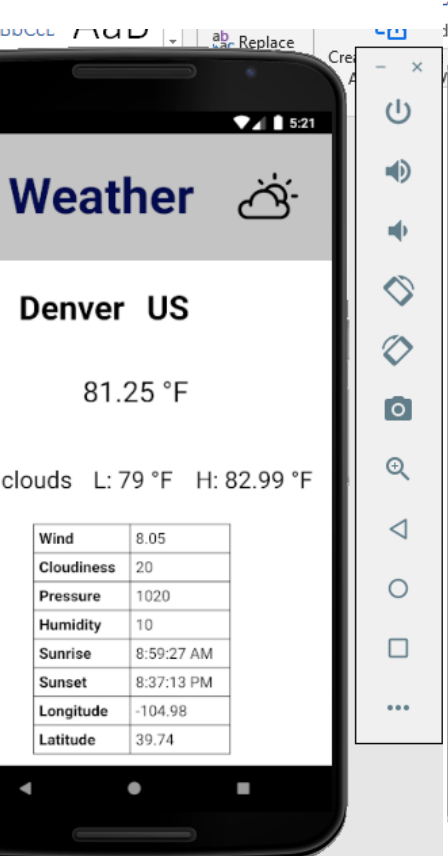
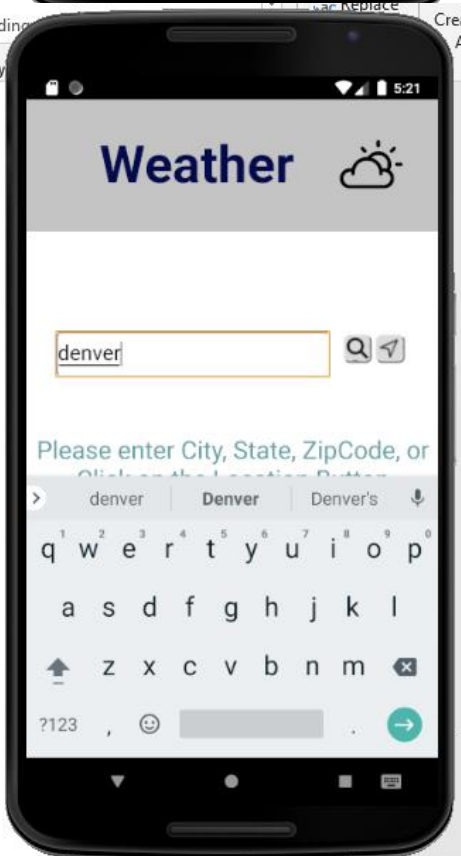
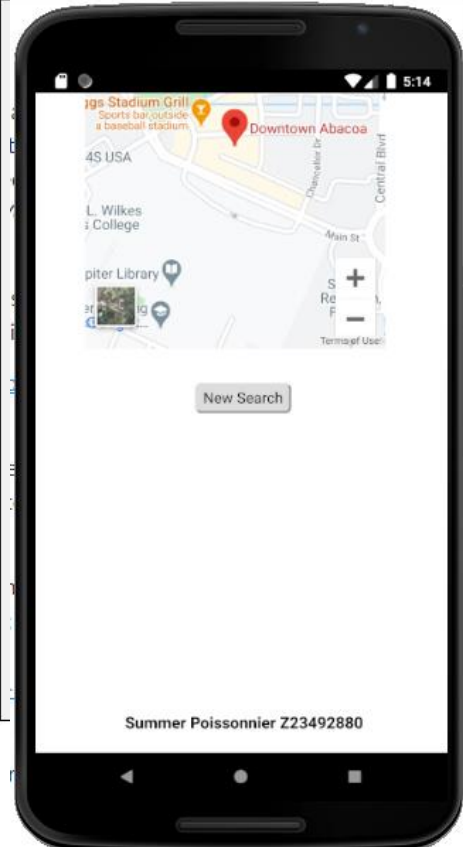
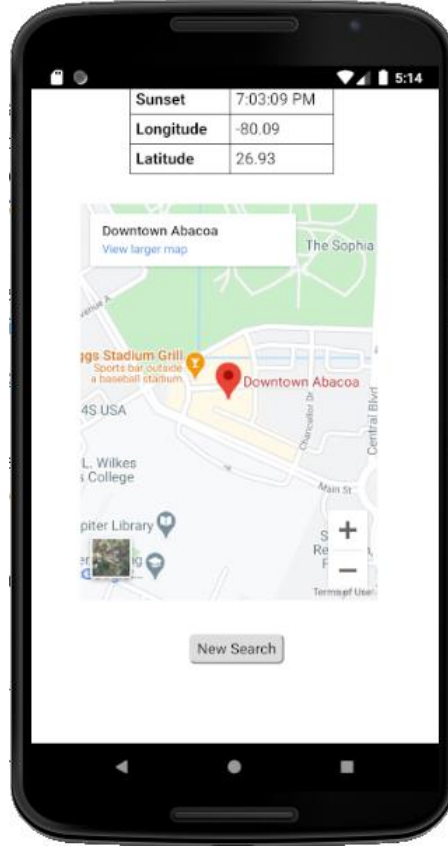
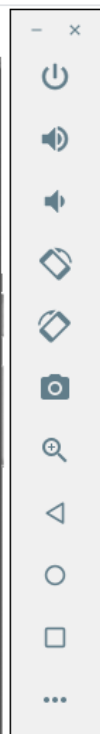
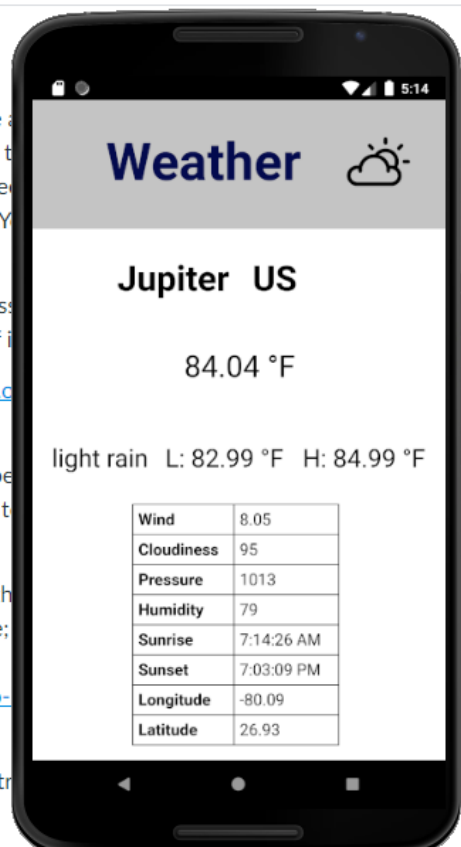
```

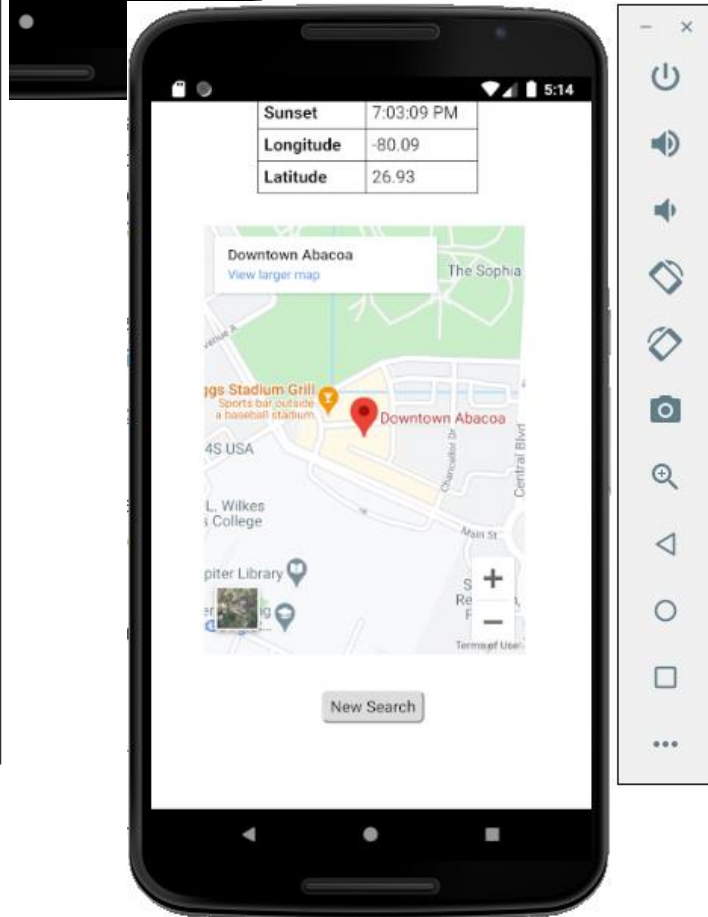
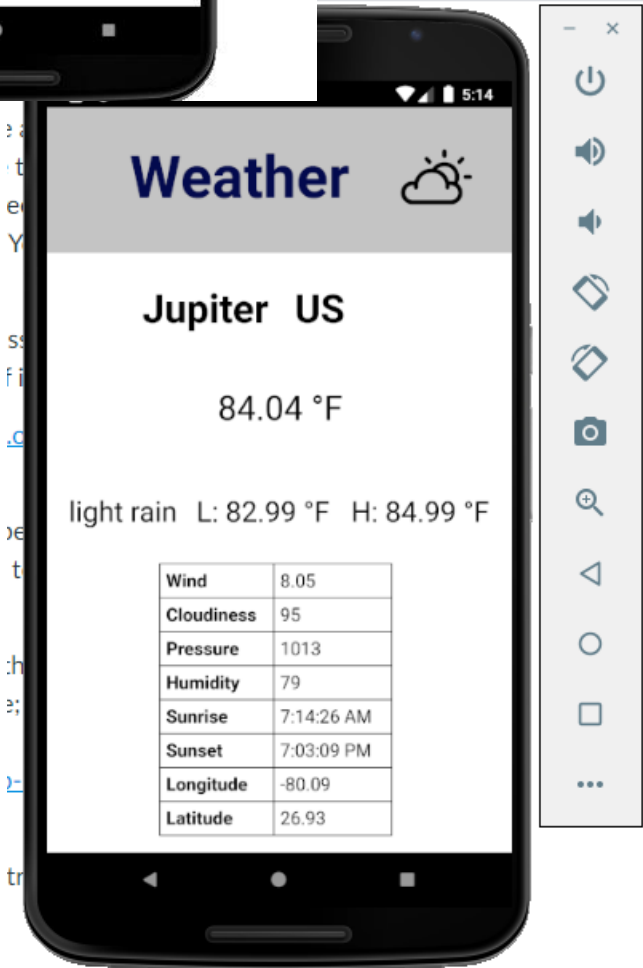
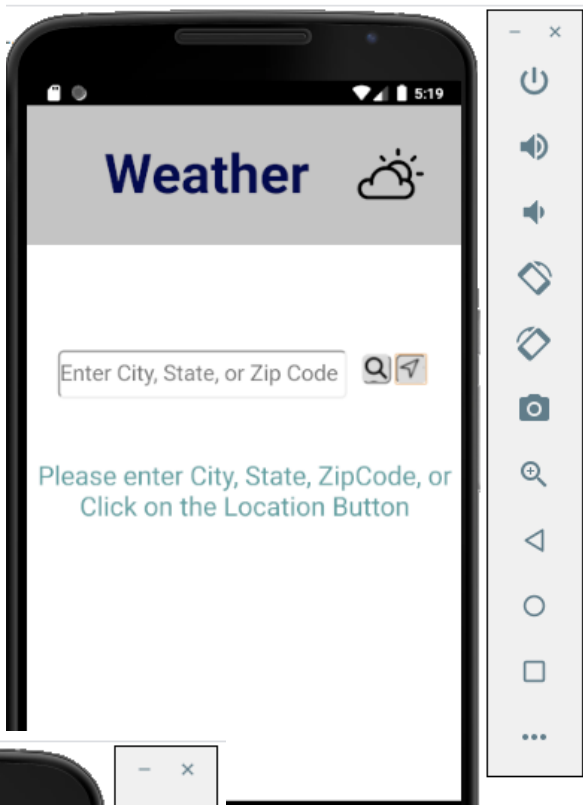
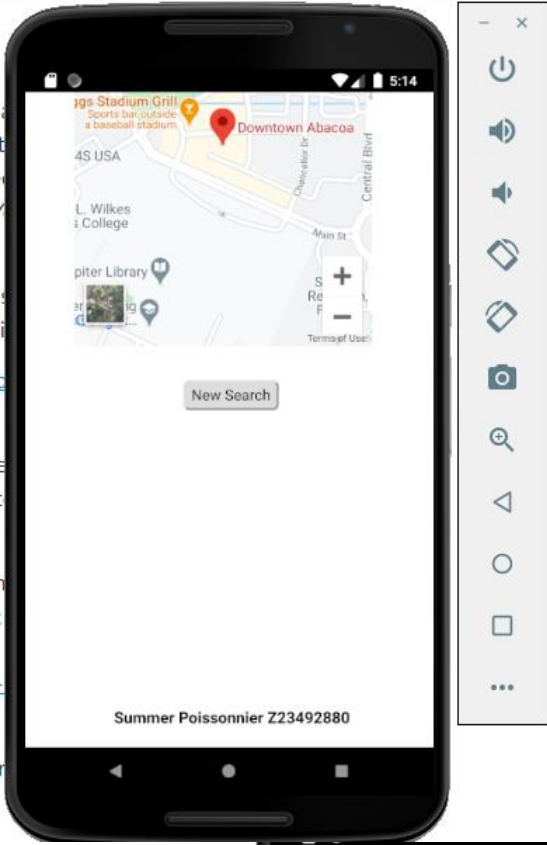
79
80 ▾ function getWeatherWithGeoLocation() {
81
82     navigator.geolocation.getCurrentPosition(onGetLocationSuccess, onGetLocationError,
83     { enableHighAccuracy: true });
84
85     $('#error-msg').show();
86     $('#error-msg').text('Determining your current location ...');
87
88     $('#geo-btn').prop('disabled', true);
89 }
90 ▾ function onGetLocationSuccess(position) {
91
92     var latitude = position.coords.latitude;
93     var longitude = position.coords.longitude;
94
95     var queryString =
96     'http://api.openweathermap.org/data/2.5/weather?lat='
97     + latitude + '&lon=' + longitude + '&appid=' + OpenWeatherAppKey + '&units=imperial';
98
99     $('#geo-btn').prop('disabled', false);
100
101 ▾ $.getJSON(queryString, function (results) {
102
103     showWeatherData(results);
104
105 ▾ }).fail(function (jqXHR) {
106     $('#error-msg').show();
107     $('#error-msg').text("Error retrieving data. " + jqXHR.statusText);
108 });
109
110 }

```

Weather App







Index.html Code:

```
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0,
user-scalable=no, minimum-scale=1.0, maximum-scale=1.0">
    <link href="assets/css/styles.css" rel="stylesheet">
</head>
<body>

    <div id = "Page1"><div class = 'header'><h1 class =
"title">Weather</h1> </div>

    <div class='search-view'>
    <input type="text" placeholder="Enter City, State, or Zip Code" id
="term"/>
    <button id ="submit-btn" onclick="return
show('Page2', 'Page1');"></button>
    <button id ="geo-btn" onclick="return
show('Page2', 'Page1');"></button>
    <p>Please enter City, State, ZipCode, or Click on the Location
Button</p>
</div>
    <footer><h4>Summer Poissonnier Z23492880</h4></footer>
</div>

    <div id="Page2" style="display:none">
    <div class = 'header'><h1 class =
"title">Weather</h1> </div>
    <h1><span id="name"></span> <span id ="country"></span></h1>
    <p id="f"><span id ="temp"></span> °F</p>
    <p id ="desc"></p>
    <p id="fh">H: <span id ="tempmax"></span> °F</p>
    <p id="fl">L: <span id ="tempmin"></span> °F</p>

    <table style="width:50%" id="weather-data">
        <tr>
            <th>Wind</th>
            <td id="wind"></td>
        </tr>
        <tr>
            <th>Cloudiness</th>
            <td id ="clouds"></td>
        </tr>
        <tr>
```

```

        <th>Pressure</th>
        <td id ="pressure"></td>
    </tr>
    <tr>
        <th>Humidity</th>
        <td id="humidity"></td>
    </tr>
    <tr>
        <th>Sunrise</th>
        <td id="sunrise"></td>
    </tr>
    <tr>
        <th>Sunset</th>
        <td id="sunset"></td>
    </tr>
    <tr>
        <th>Longitude</th>
        <td id ="lon"></td>
    </tr>
    <tr>
        <th>Latitude</th>
        <td id ="lat"></td>
    </table>
    <iframe id ="map"
        width="300"
        height="400"
        margin-left="30"
        frameborder="0" style="border:0"
        src="https://www.google.com/maps/embed/v1/place?key=AIzaSyDvrkPFR-
kgIbdMVPFRON4Ox_jqXLX830w
        &q=center" >
    </iframe>

    <button class ="newsearch-btn" onclick="return
show('Page1','Page2');">New Search</button>
    <footer><h4>Summer Poissonnier Z23492880</h4></footer>

<script src="cordova.js"></script>
<script src="lib/jquery.js"></script>
<script src="js/index.js"></script>
<script src="js/weatherapp.js"></script>
<script src="js/app.js"></script>

</body>
</html>

```

CSS Code:

```
.header{
    background-color: #C4C4C4 ;
    text-align: center;
    font-size: 26px;
    padding-bottom: .5px;
    padding-top: .5px;
    margin-bottom: 30px;
}

img{
    margin-top: 30px;
    margin-right: 10px;
    margin-left: 90px;
    float: right;
    position: absolute;
}

body{
    margin-top: 0px;
    margin-left: 0px;
    margin-right: 0px;
}

h1{
    color: #030A4e;
    font-family: "Arial Black", Gadget, sans-serif;
    margin-right: 70px;
}

#term{
    width: 270px;
    height: 40px;
    margin-left: 30px;
    margin-right: 10px;
    border-radius: 6px;
    font-size: 21px;
    font-family: inherit;
}

#submit-btn
{
    height: 28px;
    width: 28px;
    font-family: inherit;
    border-radius: 6px;
    background-image: url(images/mag.png);
}

#geo-btn
```

```
{
    height: 28px;
    width: 29px;
    font-size: 15px;
    font-family: inherit;
    border-radius: 6px;
    background-image: url(images/NAVIGATION-512.png);
}

.search-view{
    margin-top: 100px;
}

p{
    margin-top: 60px;
    margin-left: 2px;
    color: cadetblue;
    text-align: center;
    font-size: 25px;
    font-family: inherit;
}

#name{
    text-align: center;
    color: black;
    margin-left: 85px;
    font-family: inherit;
    font-size: 35px;
    margin-bottom: 10px;
}

#country{
    text-align: center;
    color: black;
    font-family: inherit;
    font-size: 35px;
    margin-bottom: 10px;
    margin-left: 15px;
}

#temp{
    margin-top: 0px;
    margin-bottom: 10px;
    color: black;
    font-size: 30px;
    text-align: center;
}

#f{
    color: black;
    font-size: 30px;
    margin-top: 50px;
    font-family: inherit;
    margin-bottom: 10px;
}
```

```

}

#desc{
    margin-top: 50px;
    margin-left: 20px;
    float: left;
    font-family: inherit;
    color:black;
}

#fh{
    float: right;
    margin-top:50px;
    margin-right: 20px;
    font-family: inherit;
    color:black;
}

#f1{
    color:black;
    font-family: inherit;
}

footer{
    font-family: inherit;
    margin-left: 90px;
    color: black;
}

#page2{
    overflow: scroll;
}

table, th, td {
    border: 1px solid black;
    border-collapse: collapse;
}

th, td {
    padding: 5px;
    text-align: left;
}

.table-view {
    margin: 0 !important;
    border: none;
}

h4{
    font-family: inherit;
    margin-top: 300px;
    color: black;
}

```

```

}
#weather-data{
    margin-top: 30px;
    margin-left:100px;
    margin-bottom: 30px;
}

#map{
    margin-left: 50px;
}

.newsearch-btn{
    margin-top:30px;
    margin-left: 160px;
    height: 30px;
    font-size: 15px;
    font-family:inherit;
    border-radius: 6px;
}

```

Weatherapp.js Code:

```

var OpenWeatherAppKey = "7e59cb29b6de97ff758260f346d64075";

function getWeatherWithZipCode() {

    var zipcode = $('#term').val();

    var queryString =
        'http://api.openweathermap.org/data/2.5/weather?zip='
        + zipcode + ',us&appid=' + OpenWeatherAppKey + '&units=imperial';

    $.getJSON(queryString, function (results) {

        showWeatherData(results);

    }).fail(function (jqXHR) {
        $('#error-msg').show();
        $('#error-msg').text("Error retrieving data. " + jqXHR.statusText);
    });

    return false;
}

function getWeatherWithCity() {

```



```

var city = $('#term').val();

var queryString =
    'http://api.openweathermap.org/data/2.5/weather?q='
    + city + ',us&appid=' + OpenWeatherAppKey + '&units=imperial';

$.getJSON(queryString, function (results) {

    showWeatherData(results);

}).fail(function (jqXHR) {
    $('#error-msg').show();
    $('#error-msg').text("Error retrieving data. " + jqXHR.statusText);
});

return false;
}

function showWeatherData(results) {

    if (results.weather.length) {

        $('#error-msg').hide();
        $('#weather-data').show();
        $('#name').text(results.name);
        $('#country').text(results.sys.country);
        $('#temp').text(results.main.temp);
        $('#wind').text(results.wind.speed);
        $('#humidity').text(results.main.humidity);
        $('#lon').text(results.coord.lon);
        $('#lat').text(results.coord.lat);
        $('#desc').text(results.weather[0].description);
        $('#tempmax').text(results.main.temp_max);
        $('#tempmin').text(results.main.temp_min);
        $('#pressure').text(results.main.pressure);
        $('#clouds').text(results.clouds.all);

        var sunriseDate = new Date(results.sys.sunrise * 1000);
        $('#sunrise').text(sunriseDate.toLocaleTimeString());

        var sunsetDate = new Date(results.sys.sunset * 1000);
        $('#sunset').text(sunsetDate.toLocaleTimeString());

    } else {
        $('#weather-data').hide();
        $('#error-msg').show();
        $('#error-msg').text("Error retrieving data. ");
    }
}

$('#submit-btn').click(getWeatherWithZipCode);
$('#submit-btn').click(getWeatherWithCity);

```

```

$('#geo-btn').click(getWeatherWithGeoLocation);

function getWeatherWithGeoLocation() {

    navigator.geolocation.getCurrentPosition(onGetLocationSuccess,
onGetLocationError,
        { enableHighAccuracy: true });

    $('#error-msg').show();
    $('#error-msg').text('Determining your current location ...');

    $('#geo-btn').prop('disabled', true);
}
function onGetLocationSuccess(position) {

    var latitude = position.coords.latitude;
    var longitude = position.coords.longitude;

    var queryString =
        'http://api.openweathermap.org/data/2.5/weather?lat='
        + latitude + '&lon=' + longitude + '&appid=' + OpenWeatherAppKey +
        '&units=imperial';

    $('#geo-btn').prop('disabled', false);

    $.getJSON(queryString, function (results) {

        showWeatherData(results);

    }).fail(function (jqXHR) {
        $('#error-msg').show();
        $('#error-msg').text("Error retrieving data. " + jqXHR.statusText);
    });
}
function onGetLocationError(error) {

    $('#error-msg').text('Error getting location');
    $('#geo-btn').prop('disabled', false);
}

```