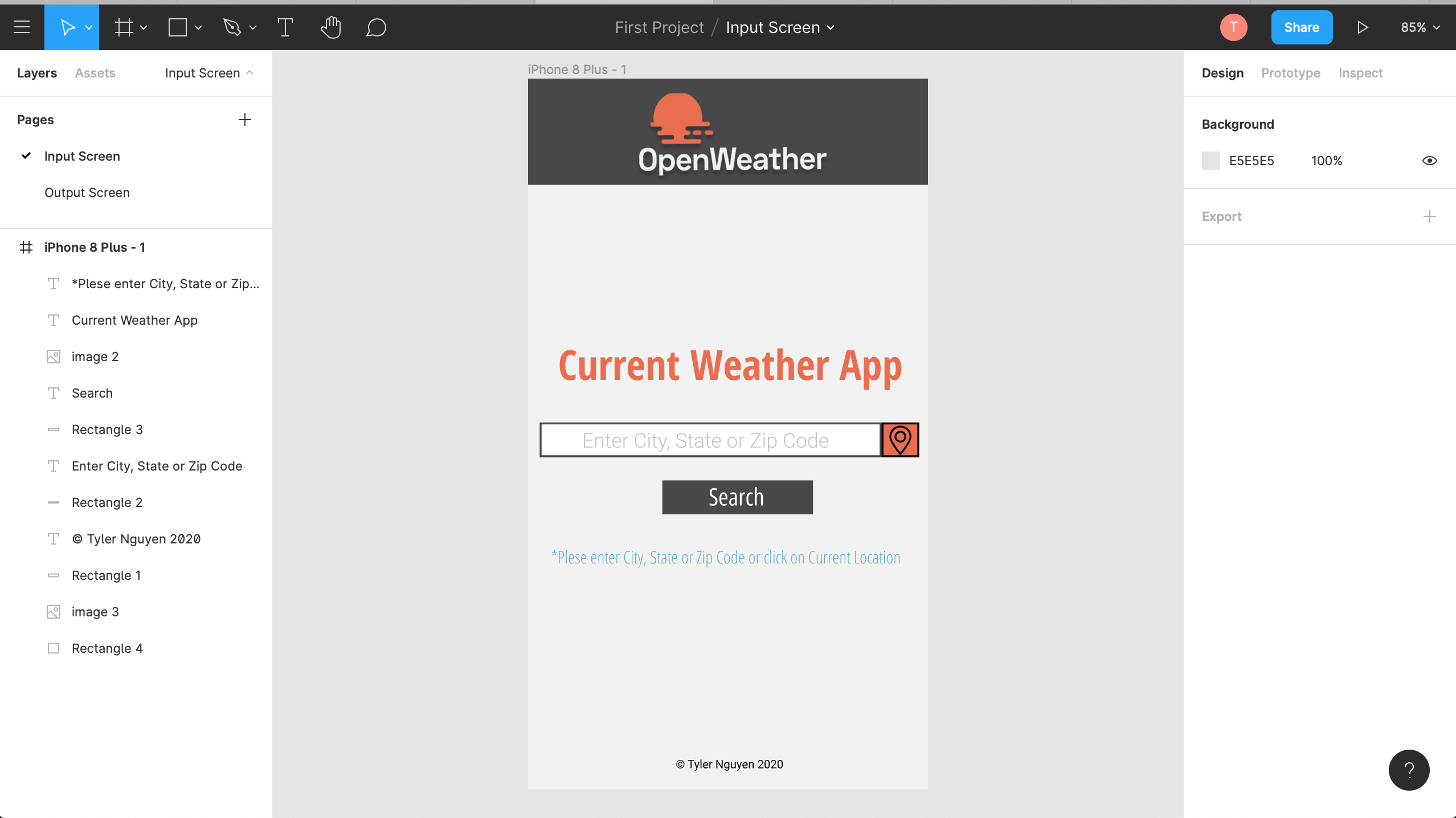
Tyler Nguyen

Mobile App Project

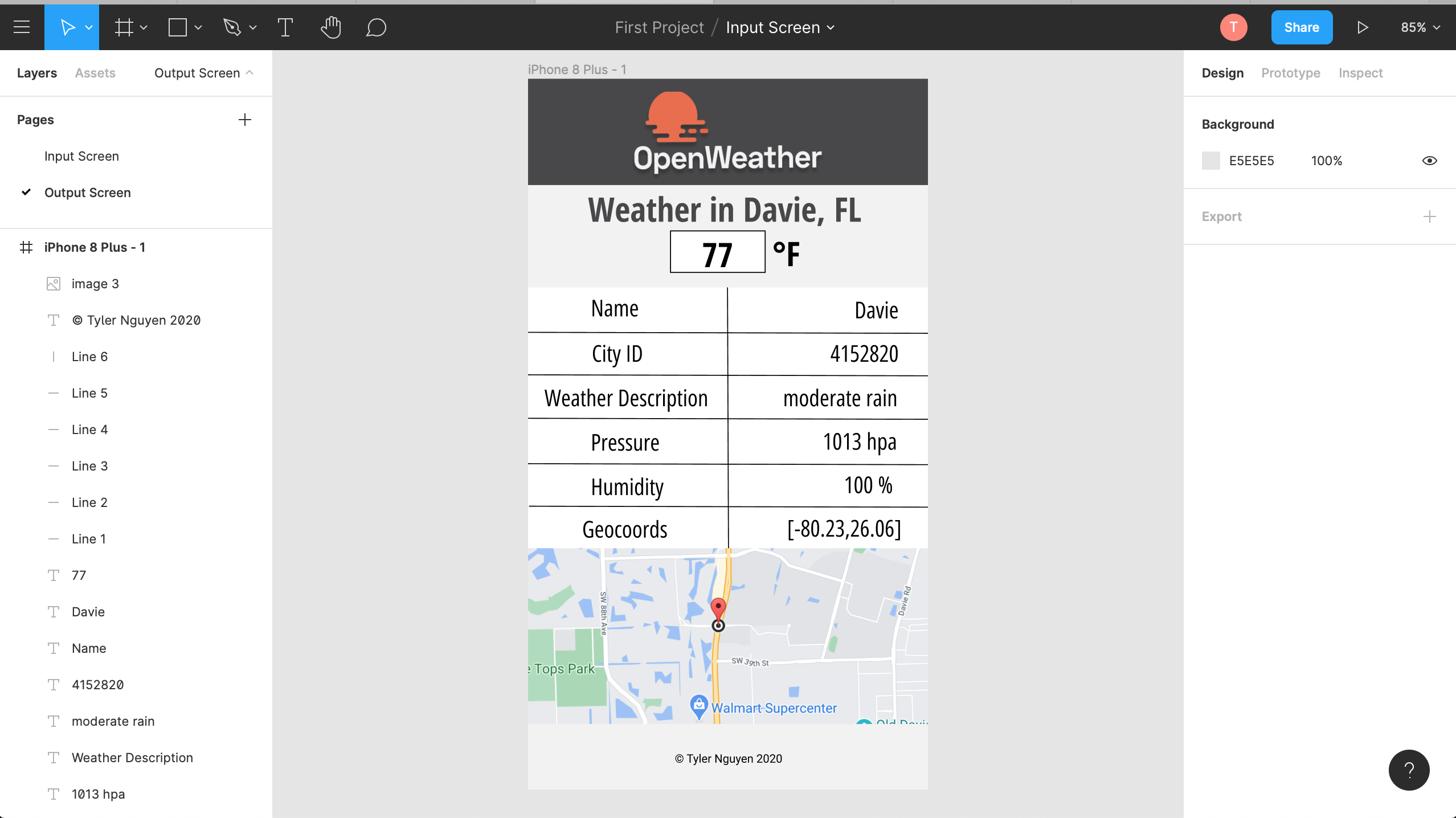
**Homeword 4**

**Part 1: Create UI Design**

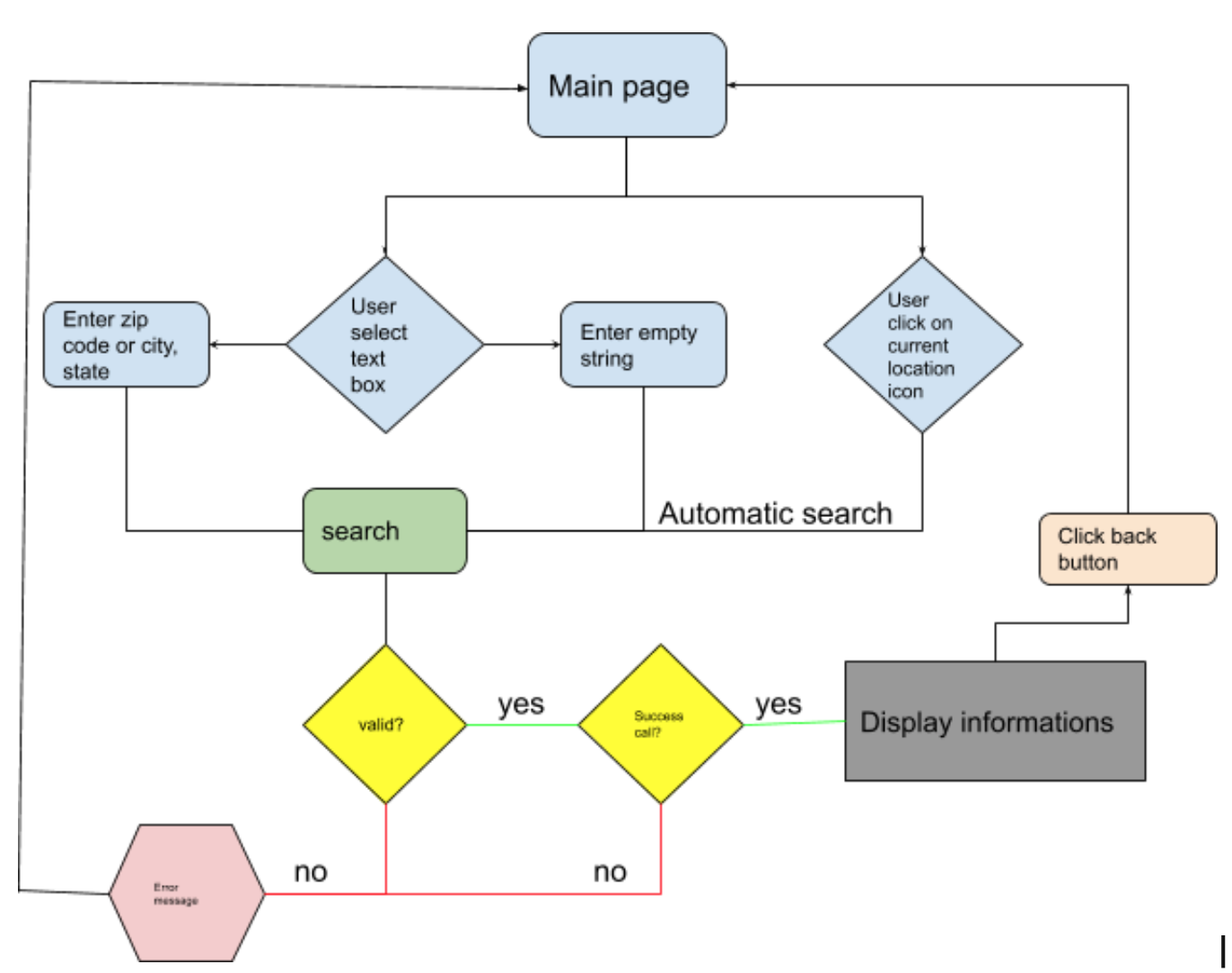
* I used Figma to design my app
* I liked the design of the sample design, but I also add some my styles to it too
* Here is the main screen



* Here is the result screen

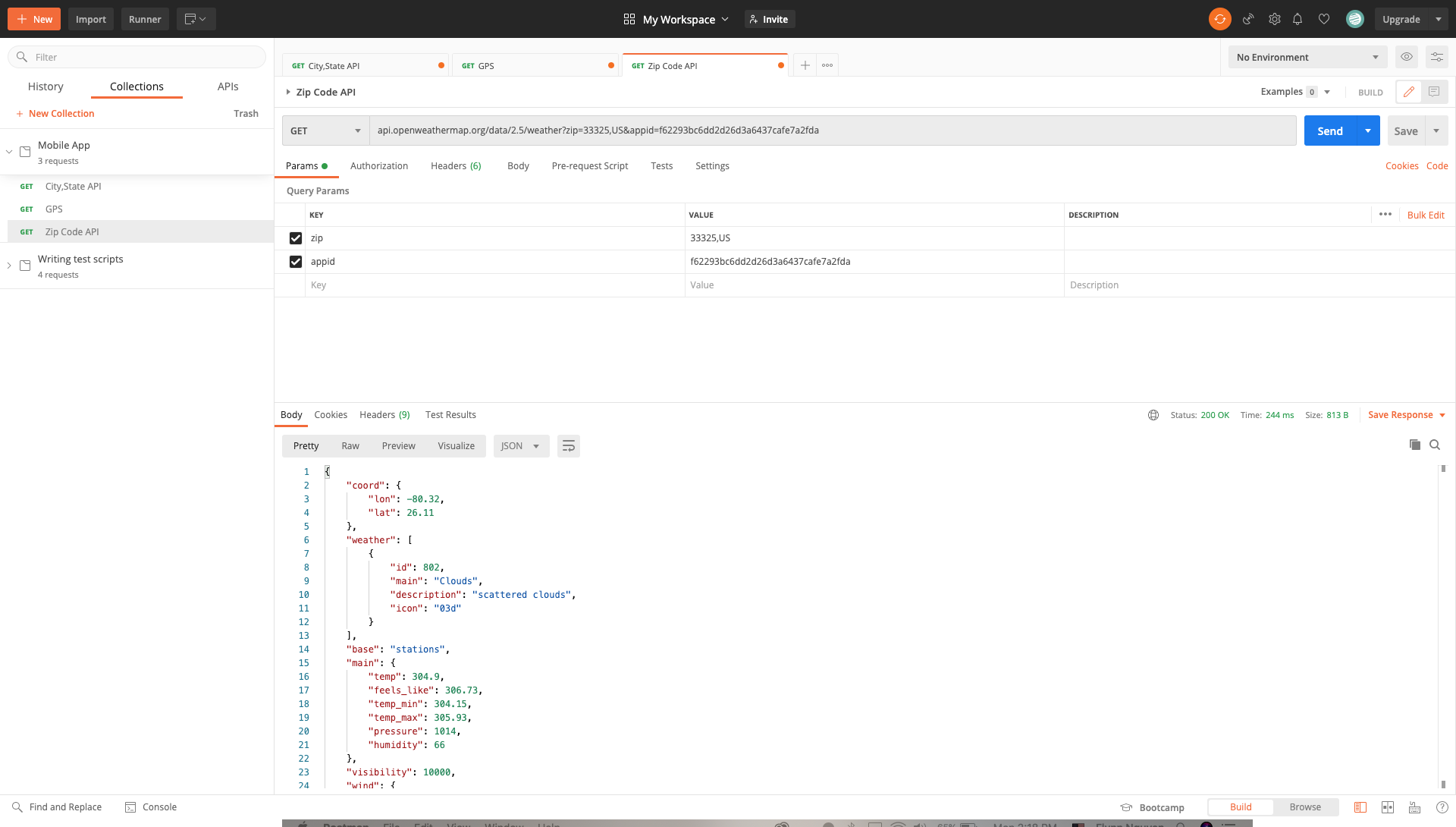


**Part 2: Application Flow**

****

**Part 3: Weather API**

* I got API key and I use all 3 links to request weather api by zipcode, city and state, and gps

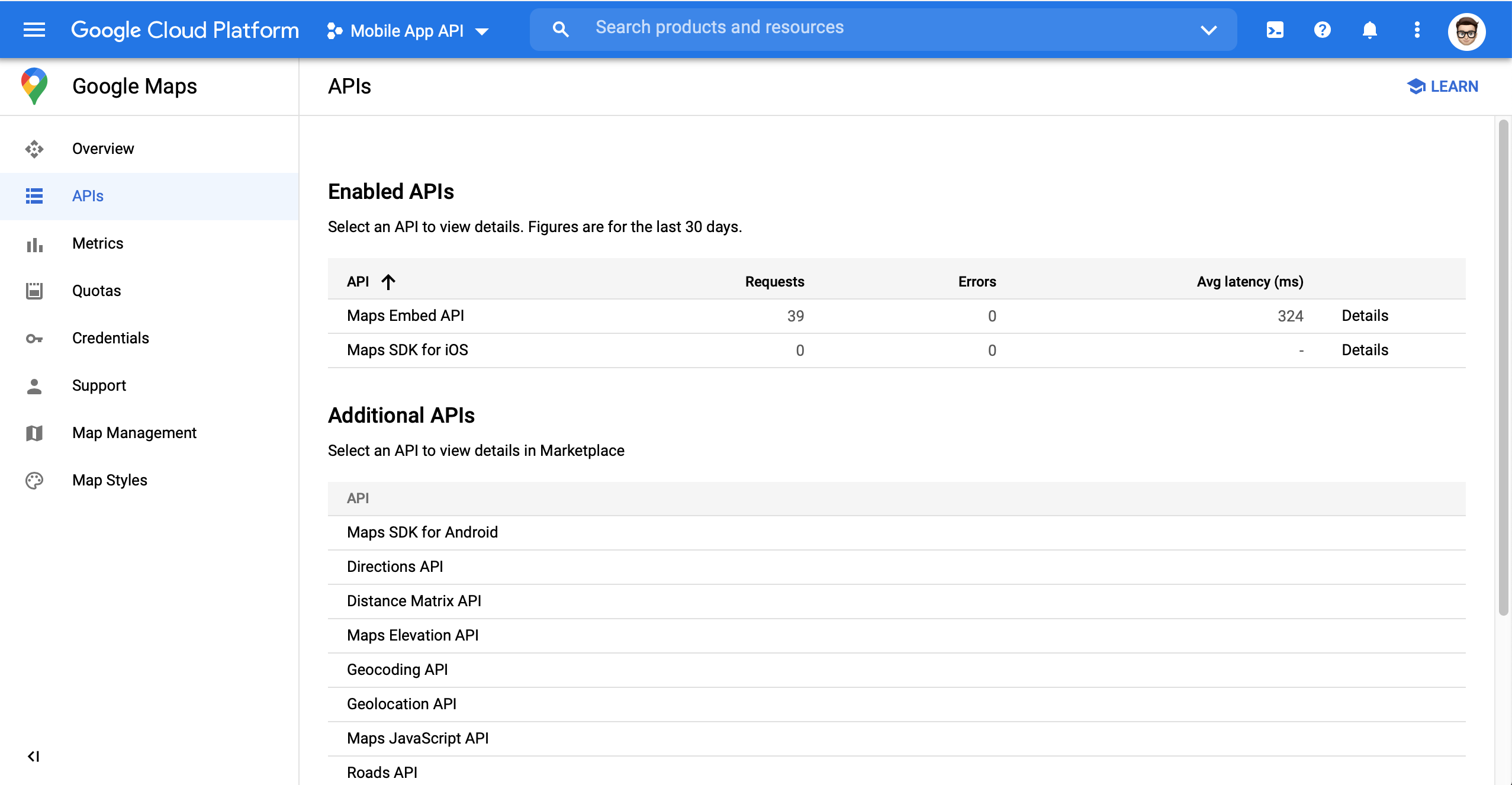


**Part 4: Display at least 10 elements**

* I chose to display temperature in F, temperature description, pressure, humidity, longtitude, latitude, wind speed, country name, city name, and short description

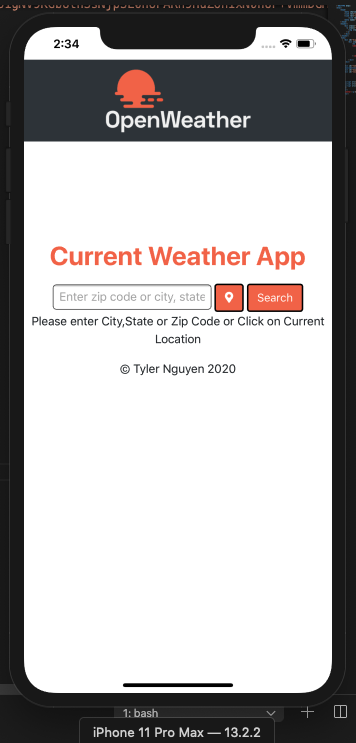
**Part 5: Displayed map API**

* I registered map api through google and got the api key below, I used embedded maps api

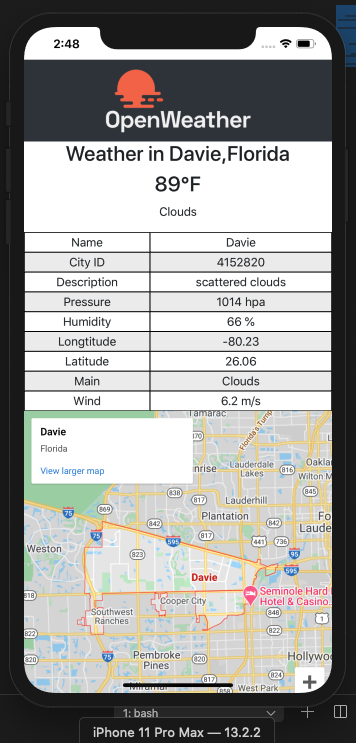
****

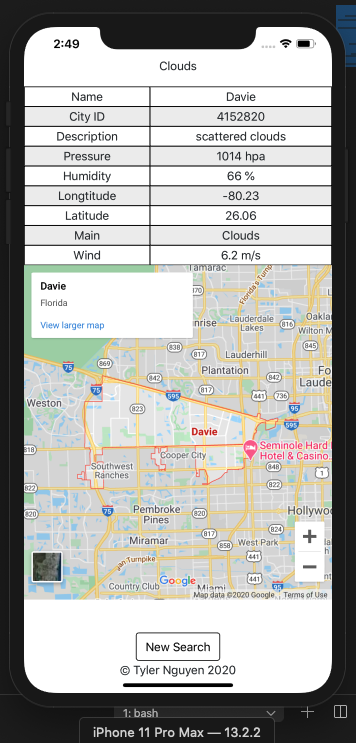
**Part 6: Explaination**

* So this is my html code
* <!DOCTYPE html>
* <html>
* <head>
* <meta charset="utf-8">
* <link rel="stylesheet" href="css/index.css">
* <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css" integrity="sha384-JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z" crossorigin="anonymous">
* <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.14.0/css/all.min.css">
* <meta name="viewport" content="width=device-width, user-scalable = no">
* </head>
* <header>
* <div class="navbar navbar-dark bg-dark">
* <a class="navbar-brand mx-auto" href="#">
* <img class="small-logo" src="img/logo.png" alt="OpenWeatherAPI logo">
* </a>
* </div>
* </header>
* <body>
* <div id="big\_container">
* <div class="content search-container">
* <h2 class="content-title">Current Weather App</h2>
* <center>
* <input type="text" id="searchBar" placeholder="Enter zip code or city, state" name="searchBar" minlength="5" required>
* <button class="btn btn-link" id="cus\_btn"><i class="fas fa-map-marker-alt"></i></button>
* <button value="Search" onclick="search()" class="btn btn-link" id="cus\_btn">Search</button>
* <p>Please enter City,State or Zip Code or Click on Current Location</p>
* </center>
* </div>
* </div>
* <div id="table\_header"></div>
* <div id="result\_table"></div>
* <div id="map"></div>
* <div id="new\_search"></div>
* <script src="cordova.js"></script>
* <script src="js/index.js"></script>
* <script src="js/map.js"></script>
* </body>
* <footer>
* <center><p>© Tyler Nguyen 2020</p></center>
* </footer>
* </html>
* It will look like this

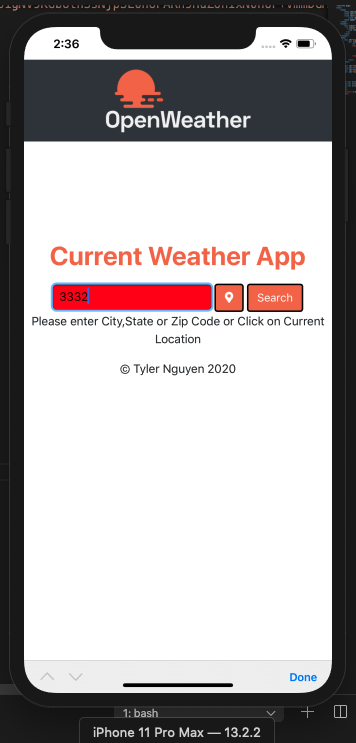
****

**-** Once I enter zipcode or city and state or gps lat lon my output will be like this





* I also added if the user enter not enough minimum characters the box will turn red



* Short explaination would be once user enter more than 5 characters then hit search my index.js will validate if it is a zipcode or city and state or gps then in anycase the link of weather api will be different and use the right link to call the api to get data, once data is collected the div of search bar will be hidden to display the table and the map, with the new search button which will refresh the page for a new search entry
* Below is my index.js and map.js
* /\*if user input zipcode take zip code and run \*/
* //get zip from user input
* function search(){
* //get user input
* var searchInput = document.getElementById('searchBar').value
* //validate if it's zip code or city and state
* if(is\_zipcode(searchInput) && searchInput.length >= 5){
* //if it is a good zipcode
* //create a link to search that zipcode
* console.log('it is good zipcode')
* //hide the search bar
* document.getElementById("big\_container").style.display = "none";
* //request api
* var new\_link ="https://api.openweathermap.org/data/2.5/weather?zip="+searchInput+",US&appid=f62293bc6dd2d26d3a6437cafe7a2fda"
* var request = new XMLHttpRequest()
* request.open("GET", new\_link, true)
* request.onload = function(){
* //data came back stores in this var
* var data = JSON.parse(this.response)
* //if the status is successful then do the work
* if (request.status >= 200 && request.status < 400){
* //this is for temparature in Kelvin
* var temp\_Kel = data.main.temp
* //convert to Fahrenhein
* var temp\_Fah = (((temp\_Kel - 273.15) \* 9) / 5) + 32
* //fixed the variable not to show decimals
* var fixed\_tempFah = temp\_Fah.toFixed(0)
* //create variable to display table row title
* var title\_row = {
* 'Name': data.name,
* 'Country': data.sys.country,
* 'Description': data.weather[0].description,
* 'Pressure' : data.main.pressure + ' hpa',
* 'Humidity': data.main.humidity + ' %',
* 'Longtitude' : data.coord.lon,
* 'Latitude': data.coord.lat,
* 'Wind Speed': data.wind.speed+ ' m/s'
* }
* // write header
* var table\_header\_html = ""
* table\_header\_html += "<div class='header\_html'><h3>Weather in " + searchInput + "</h3> <h3>" + fixed\_tempFah +
* "°F</h3><p>"+data.weather[0].main +"</p></div>"
* // write table into html
* var table\_html = ""
* table\_html += "<table id='t01'>"
* //use for loop to display table row
* for (let [key, value] of Object.entries(title\_row)) {
* table\_html += "<tr><td>" + key + "</td> <td>" + value + "</td></tr>"
* //console.log(`${key}: ${value}`);
* }
* table\_html += "</table>"
* var map\_html =""
* map\_html += "<iframe width='100%' height='450' frameborder='0' style='border:0' src='https://www.google.com/maps/embed/v1/place?key=AIzaSyBnGO9dB2LPbzCrALKf-WsL52l9x9Fmhj0&q=Davie+FL' allowfullscreen></iframe>"
* //new search button
* var new\_src = ""
* new\_src += '<center><button class="btn btn-link" id="newsrc" onClick="window.location.reload()">New Search</button></center>'
* document.getElementById('table\_header').innerHTML = table\_header\_html
* document.getElementById('result\_table').innerHTML = table\_html
* document.getElementById('map').innerHTML = map\_html
* document.getElementById('new\_search').innerHTML = new\_src
* }else{
* alert('Can not connect to API, try again')
* }
* }
* request.send()
* //create a link to search that city and state
* }
* if(is\_city(searchInput) && searchInput.length >= 5){
* console.log('is is good city and state')
* //hide the search bar
* document.getElementById("big\_container").style.display = "none";
* var link\_city = "https://api.openweathermap.org/data/2.5/weather?q=" + searchInput +"&appid=f62293bc6dd2d26d3a6437cafe7a2fda"
* var request = new XMLHttpRequest()
* request.open("GET", link\_city, true)
* request.onload = function(){
* //data came back stores in this var
* var data = JSON.parse(this.response)
* //if the status is successful then do the work
* if (request.status >= 200 && request.status < 400){
* //this is for temparature in Kelvin
* var temp\_Kel = data.main.temp
* //convert to Fahrenhein
* var temp\_Fah = (((temp\_Kel - 273.15) \* 9) / 5) + 32
* //fixed the variable not to show decimals
* var fixed\_tempFah = temp\_Fah.toFixed(0)
* //create variable to display table row title
* var title\_row = {
* 'Name': data.name,
* 'City ID': data.id,
* 'Description': data.weather[0].description,
* 'Pressure' : data.main.pressure + ' hpa',
* 'Humidity': data.main.humidity + ' %',
* 'Longtitude' : data.coord.lon,
* 'Latitude': data.coord.lat,
* 'Main' : data.weather[0].main,
* 'Wind': data.wind.speed + ' m/s'
* }
* // write header
* var table\_header\_html = ""
* table\_header\_html += "<div class='header\_html'><h3>Weather in " + searchInput + "</h3> <h3>" + fixed\_tempFah +
* "°F</h3><p>"+data.weather[0].main +"</p></div>"
* // write table into html
* var table\_html = ""
* table\_html += "<table id='t01'>"
* //use for loop to display table row
* for (let [key, value] of Object.entries(title\_row)) {
* table\_html += "<tr><td>" + key + "</td> <td>" + value + "</td></tr>"
* //console.log(`${key}: ${value}`);
* }
* table\_html += "</table>"
* //add map
* var map\_html =""
* map\_html += "<iframe width='100%' height='450' frameborder='0' style='border:0' src='https://www.google.com/maps/embed/v1/place?key=AIzaSyBnGO9dB2LPbzCrALKf-WsL52l9x9Fmhj0&q=Davie+FL' allowfullscreen></iframe>"
* map\_html += '<button class="btn btn-link" id="cus\_btn"><i class="fa fa-refresh" aria-hidden="true"></i></button>'
* //new search button
* var new\_src = ""
* new\_src += '<center><button class="btn btn-link" id="newsrc" onClick="window.location.reload()">New Search</button></center>'
* document.getElementById('table\_header').innerHTML = table\_header\_html
* document.getElementById('result\_table').innerHTML = table\_html
* document.getElementById('map').innerHTML = map\_html
* document.getElementById('new\_search').innerHTML = new\_src
* }else{
* alert('Can not connect to API, try again')
* }
* }
* request.send()
* }
* if(!is\_city(searchInput) && !is\_zipcode(searchInput) && searchInput.length < 5){
* //if it not a good entry then display a error message
* alert('Please enter another valid entry')
* }
* }
* //get city, state
* //validate city,state
* function is\_city(entry){
* //can validate with array for each
* var state = Array('AL','AK','CA','CT','DE','FL','GA','HI','LA','ME','NH','NJ','NY','NC','OR','MD','MA','MS','RI','SC','TX','VA','WA',
* 'Arizona','Arkansas','California','Colorado','Connecticut','Delaware','District of Columbia','Florida','Georgia','Hawaii','Idaho','Illinois','Indiana','Iowa','Kansas','Kentucky','Louisiana','Maine','Maryland','Massachusetts','Michigan','Minnesota','Missippi','Montana','Nebraska','Nevada','New Hampshire','New Jersey','New Mexico','New York','North Carolina','North Dakota','Ohio','Oklahoma','Oregon','Pennsylvania','Rhode Island','South Carolin','Tennessee','Texas','Utah','Vermont','Virginia','Washington','West Virginia','Wisconsin','Wyoming')
* // just validate word by now
* return /([A-Z][a-z]+\s?)+,[A-Z][a-z]/.test(entry)
* }
* //validate zipcode
* function is\_zipcode(entry){
* //check if it is a zipcode or city and state
* return /^\d{5}(-\d{4})?$/.test(entry)
* }
* map.js
* document.addEventListener("deviceready", onDeviceReady, false);
* function onDeviceReady() {
* console.log("navigator.geolocation works well");
* navigator.geolocation.getCurrentPosition(onSuccess, onError,
* { enableHighAccuracy: true, timeout: 20000 });
* }
* function onSuccess(position) {
* /\*
* alert('Latitude: ' + position.coords.latitude + '\n'
* 'Longitude: ' + position.coords.longitude + '\n' +
* 'Altitude: ' + position.coords.altitude + '\n');
* \*/
* var lat = position.coords.latitude;
* var lang = position.coords.longitude;
* //Google Maps
* var myLatlng = new google.maps.LatLng(lat, lang);
* var mapOptions = {
* zoom: 15,
* center: myLatlng
* }
* var map = new google.maps.Map(document.getElementById('map-canvas'), mapOptions);
* var marker = new google.maps.Marker({
* position: myLatlng,
* map: map
* });
* }
* function onError(error) {
* alert('code: ' + error.code + '\n' +
* 'message: ' + error.message + '\n');
* }
* google.maps.event.addDomListener(window, 'load', onSuccess);