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Ionic 3 – Leaflet maps – Geolocation & Markers

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Friends,

pe you are all well. This is one of the most requested posts
n this site. In this post let's see how to use leaflet.js library to
clude a map inside your Ionic apps. We'll also see how to do
imple geolocation and place a marker at a co-ordinate on
a map.

Let's begin.

A screencast of this post

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The code for this post is available – [here](#). (leave a star if you loved the repo !!)

Before trying to run this on a device, kindly scroll down and read the instructions for running this on devices. Thanks.

First let's create a new project using the below command.

```
1 ionic start ionic3leaflet blank
```

Next let's install leaflet.

```
1 npm install leaflet --save
```

Now open up index.html (inside src directory) and add the below link to the leaflet css file.

```
1 <link href="https://unpkg.com/leaflet@1.1.0/dist/1
```

Now open up home.html and modify it as shown below.

```
1 <ion-header>
2   <ion-navbar>
3     <ion-title>
```

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View results

```

4         Maps
5     </ion-title>
6 </ion-navbar>
11 </ion-header>
12
13 <ion-content>
14     <div id="map" style="width:100%; height:100%;">
15 </ion-content>

```

have simply added a container using the div tags with id as map.

Open home.ts and modify it as shown below.

```

1 import { Component, ViewChild, ElementRef } from
2   import { NavController } from 'ionic-angular';
3 import leaflet from 'leaflet';
4
5 @Component({
6   selector: 'page-home',
7   templateUrl: 'home.html'
8 })
9 export class HomePage {
10   @ViewChild('map') mapContainer: ElementRef;
11   map: any;
12   constructor(public navCtrl: NavController) {
13
14   }
15
16   ionViewDidEnter() {
17     this.loadmap();
18   }
19
20   loadmap() {
21     this.map = leaflet.map("map").fitWorld();
22     leaflet.tileLayer('http://{s}.tile.openstreet
23       attributions: 'www.tphangout.com',
24       maxZoom: 18
25     }).addTo(this.map);
26   }
27
28 }

```

This will add a map to the device.

Now let's add geolocation. To add geolocation we can simply call the locate() function.

Open home.ts file again and modify it as shown below.

```

1 import { Component, ViewChild, ElementRef } from
2 import { NavController } from 'ionic-angular';
3 import leaflet from 'leaflet';

```

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```

4
5 @Component({
6   selector: 'page-home',
7   templateUrl: 'home.html'
8 })
9 export class HomePage {
10   @ViewChild('map') mapContainer: ElementRef;
11   map: any;
12   constructor(public navCtrl: NavController) {
13
14   }
15
16   ionViewDidEnter() {
17     this.loadmap();
18   }
19
20   loadmap() {
21     this.map = leaflet.map("map").fitWorld();
22     leaflet.tileLayer('http://{s}.tile.openstreetmap.org/{z}/{x}/{y}.png', {
23       attributions: 'Map data &copy; <a href="http://openstreetmap.org">OpenStreetMap</a>',
24       maxZoom: 18
25     }).addTo(this.map);
26     this.map.locate({
27       setView: true,
28       maxZoom: 10
29     }).on('locationfound', (e) => {
30       console.log('found you');
31     })
32   }
33 }
34

```

Now when you run the app, you will see that you are being taken to your location on the map (or rather the location where your device is currently).

Let's add a marker to the map as well.

Modify home.ts again as shown below.

```

1 import { Component, ViewChild, ElementRef } from '@angular/core';
2 import { NavController } from 'ionic-angular';
3 import leaflet from 'leaflet';
4
5 @Component({
6   selector: 'page-home',
7   templateUrl: 'home.html'
8 })
9 export class HomePage {
10   @ViewChild('map') mapContainer: ElementRef;
11   map: any;
12   constructor(public navCtrl: NavController) {
13
14   }
15

```

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- June 2016
- May 2016
- April 2016
- March 2016
- February 2016
- December 2015
- August 2015
- April 2015
- April 2014
- January 2014

```

15
16   ionViewDidEnter() {
17       this.loadmap();
18   }
19
20   loadmap() {
21       this.map = leaflet.map("map").fitWorld();
22       leaflet.tileLayer('http://{s}.tile.openstreetmap.org/{z}/{x}/{y}.png', {
23           attributions: 'Map data © OpenStreetMap contributors, Imagery © Mapbox',
24           maxZoom: 18
25       }).addTo(this.map);
26       this.map.locate({
27           setView: true,
28           maxZoom: 10
29       }).on('locationfound', (e) => {
30           let markerGroup = leaflet.featureGroup();
31           let marker: any = leaflet.marker([e.latitude, e.longitude]);
32           alert('Marker clicked');
33       })
34       markerGroup.addLayer(marker);
35       this.map.addLayer(markerGroup);
36       this.map.on('locationerror', (err) => {
37           alert(err.message);
38       })
39   }
40 }

```

Now we have added a featuregroup, created a marker and added the marker to the feature layer. Then we add this layer to the map.

We can similarly add shapes, markers of different colors etc., to our map.

Running it on devices:

Now if you try running this on your device you won't get the desired features. To do that one has to install the cordova-geolocation plugin first.

Use the below command to install cordova-geolocation plugin

```
1 ionic cordova plugin add cordova-plugin-geolocation
```

Now use the below command to install the wrapper.

```
1 npm install @ionic-native/geolocation --save
```

Add Geolocation import to the app.module.ts file as shown

11 low.

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```

1 import { BrowserModule } from '@angular/platform-
2 import { ErrorHandler, NgModule } from '@angular/
8 import { IonicApp, IonicErrorHandler, IonicModule
9 import { SplashScreen } from '@ionic-native/splas
import { StatusBar } from '@ionic-native/status-b
3 import { Geolocation } from '@ionic-native/geoloc

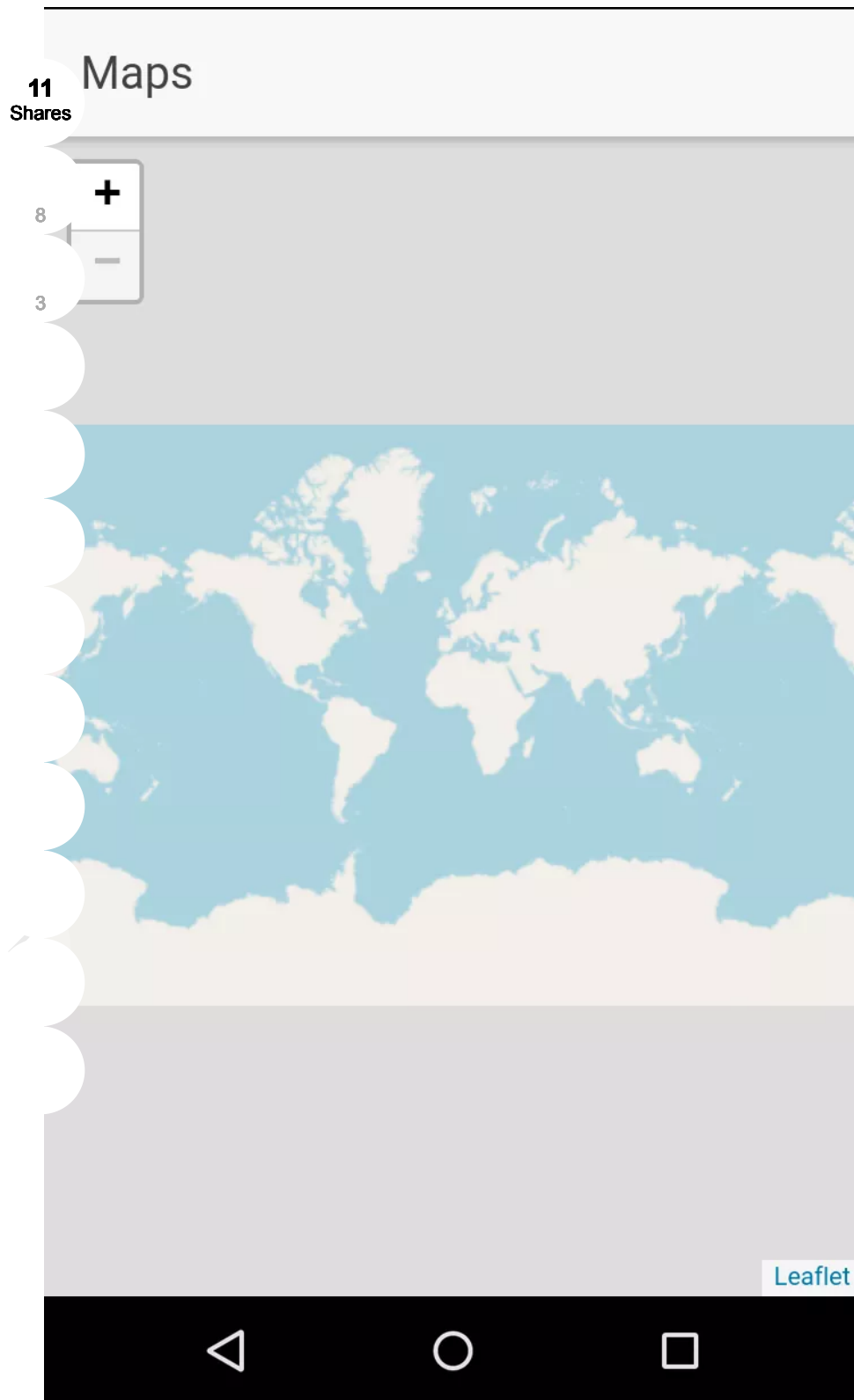
import { MyApp } from './app.component';
import { HomePage } from '../pages/home/home';

10 @NgModule({
11   declarations: [
12     MyApp,
13     HomePage
14   ],
15   imports: [
16     BrowserModule,
17     IonicModule.forRoot(MyApp)
18   ],
19   bootstrap: [IonicApp],
20   entryComponents: [
21     MyApp,
22     HomePage
23   ],
24   providers: [
25     StatusBar,
26     SplashScreen,
27     Geolocation,
28     {provide: ErrorHandler, useClass: IonicErrorH
29   ]
30 })
31 export class AppModule {}

```

Now you would see the below screens.

The initial map:



With Geolocation:



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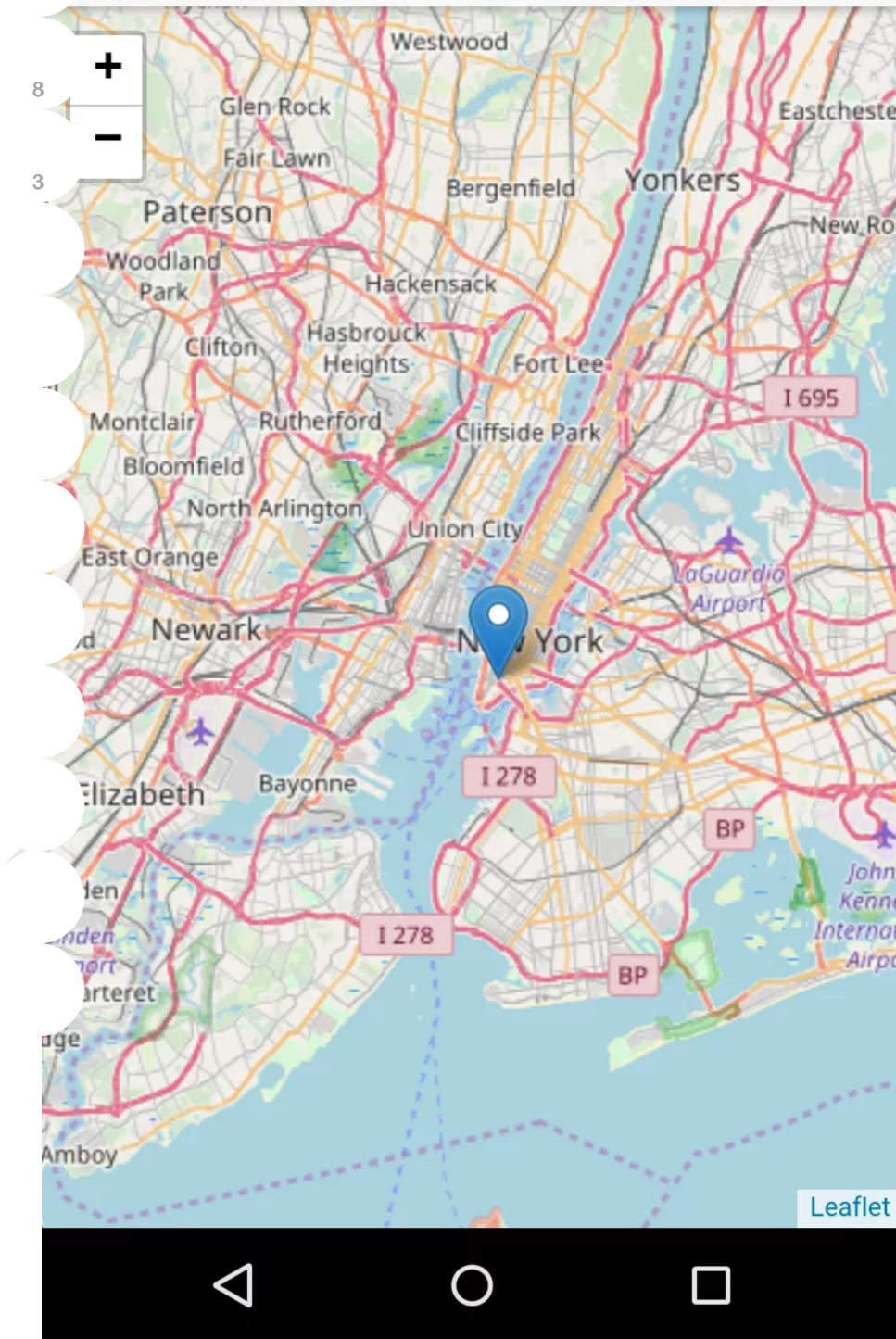
Python Developers Survey 2017 Results

[View results](#)



With Markers.

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Try clicking on the marker and see what happens.

Explore the mapbox product for more customised maps and a ton of other cool features that can be added to your leaflet maps.

Hope this post helped you guys. If you found this helpful,

11 Kindly share it with someone and help them too.

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Thanks for reading. Peace.. 😊

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Oliver Karst • 3 months ago

Very interesting post and very good explained.
When following your post everything is fine running in browser with
ionic serve.

May you can help me when trying to use that example on a
webserver/mobile device?

Problems:

When generating a static web page via ionic build and copy the files
to www folder of a web-server it throws an error: Geolocation error:
Only secure origins are allowed.

As well it shows in the developer console: Failed to load resource: cordova.js the server responded with a status of 404 (Not Found)

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Generated an apk for Android and run on a device with Android => 6.0 it throws the error:

8

Alert Geolocation error: application does not have sufficient geolocation permissions.

3

Great example, but how to let it run standalone on a device or web-server without ionic serve?

1 ^ | v • Reply • Share ›



Oliver Karst → Oliver Karst • 3 months ago

Hi,

solved the issues. What I did:

- when deploying to a web server chrome wants to have https! not http! Only using http with geolocation results in an error. When you only display a map, when http is okay, but when you want to locate the current position chrome wants to have a https connection to the web server
- building the app for android requires for the geolocation plugin minimum android 6.3.0!

You can check if it is present via `cordova platform rm android && ionic cordova platform add android@6.3.0`

May you need afterwards to reinstall npm i android-versions -
-save

- building the app for iOS requires a change in info.plist. You can change the config.xml and adding this piece for iOS

```
<edit-config file="*-Info.plist" mode="merge"
target="NSLocationWhenInUseUsageDescription">
<string>This App wants to track your location</string>
</edit-config>
```

Hope that helps others struggling with build and deploy problems to web server or android

1 ^ | v • Reply • Share ›



Humberto Llauradó Falcó • a year ago

Hi, That is a great article, but I have a question about the geolocation. In some device the geolocation plugin is not working well even when the geolocation device is activated. Do you know what is the reason and how I can fix this problem? Thank you for those great articles.

1 ^ | v • Reply • Share ›



raja yogan Mod → Humberto Llauradó Falcó • a year ago

Do you get any errors sir, if yes, could you post it here..?

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Humberto Llauradó Falcó → raja yogan • a year ago

The problem is in some devices, exactly never enters the `geolocation.getCurrentPosition` function.

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Justine Lance T. Mojal → Humberto Llauradó Falcó • 16 days ago

please check if you have sufficient permission to get location on the said device

^ | v • Reply • Share ›



Kasun Sulochana • 2 months ago

I've some issue, when i reload i've an error who said "Error: Map Container Is Already Initialized"

^ | v • Reply • Share ›



Enzo Magsino • 2 months ago

it says cannot find module "leaflet"

anyone who knows how to resolve this? :(

^ | v • Reply • Share ›



Juan Mamani • 4 months ago

Thanks for sharing! I've troubles to build apk...

^ | v • Reply • Share ›



Dharan • 8 months ago

please post angular 5 firestore geolocation

^ | v • Reply • Share ›



Rashmut • 8 months ago

Hi Raja Yogan,

I thank you for your tutos, very goood work!

Do you have Skype or Viber? I really need to discuss about some developement details

Please, let me know here : belkedah.bilal@gmail.com

Thanks a lot and very soon

^ | v • Reply • Share ›

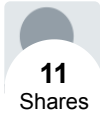


ابو الحارث السوداني • 9 months ago

good is worck

but how can get many locations mark from json file ..?

^ | v • Reply • Share ›

**Paul Cannell** • 10 months ago

Any idea how you get a reference to a marker so you can remove it later?

^ | v • Reply • Share ›

**jagpreet singh** • 10 months ago

Any idea on adding a search box ? (Use Case: Search for location and place the markers depending upon the search)

^ | v • Reply • Share ›

**Md. Azizul Alam (Toton)** • a year ago

Helpfull. Can I use custom mbtiles file with http request over internet? I found leaflet-tilelayer-mbtiles npm library but I dont know how to use that. There is another github project

<https://github.com/Onza1101>..... unfortunately which is not running

^ | v • Reply • Share ›

**Carole Hermouet** • 8 months ago

Hi, thank you very much for your great article ! I've some issue, when i reload i've an error who said "Error: Map Container Is Already Initialized". Could you help me to fix it ? Thank you, have a nice day !

^ | v • Reply • Share ›



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