

Angular 2 Service Example – TypeScript

 www.waynehong.com/javascript/angular-2-service-example-typescript/

by Wayne Hong

In this tutorial, we will be creating an application that is able to consume a remote REST API and list countries by region. [Looking for this example in javascript?](#)

Folder Structure

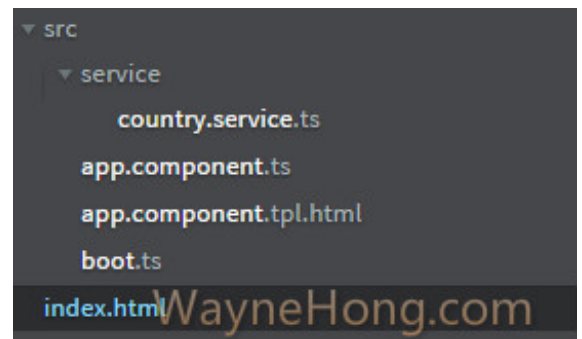
How about download the [source code](#) and check?

boot.ts

In order to use http, we need to add HTTP_PROVIDERS to the injector. This is done via the second parameter of the bootstrap function.

boot.ts

```
1 import {bootstrap} from 'angular2/platform/browser';
2 import {HTTP_PROVIDERS} from 'angular2/http';
3 import {AppComponent} from './app.component';
4
5 bootstrap(AppComponent, [HTTP_PROVIDERS]);
```



app.component.ts

This is our main component – AppComponent, which has CountryService injected. Below is also how we call our service method and retrieve data from http response. We also display error message if the remote API returns error.

app.component.ts

```

1  import {Component} from 'angular2/core';
2  import {CountryService} from './service/country.service'
3
4  @Component({
5    selector: 'app-component',
6    templateUrl: 'src/app.component.tpl.html',
7    providers: [CountryService]
8  })
9  export class AppComponent {
10    constructor(private _countryService: CountryService){
11      this._countryService = _countryService;
12    }
13
14    getCountriesByRegion(){
15      this.error = "";
16      this.countries = [];
17      this._countryService.getCountriesByRegion(this.region)
18        .subscribe(
19        data => this.countries = data,
20        error => this.error = "Region " + this.region + " is invalid."
21      );
22    }
23  }

```

app.component.tpl.html

This is the template of AppComponent. It has a search form and also a section to show the search result.

app.component.tpl.html

```

1  <form (ngSubmit)="getCountriesByRegion()">
2    <label>Region:</label>
3    <input type="text" [(ngModel)]="region" required>
4    <button type="submit">Search</button>
5  </form>
6  <hr>
7  <p style="color:red">{{error}}</p>
8  <h1>Countries in {{region}}</h1>
9  <div *ngFor="#country of countries">{{country.name}}</div>
10

```

country.service.ts

Here is the CountryService . In the service method getCountriesByRegion , we use http.get to retrieve data from REST API and convert the response into json before passing it to further downstream in this example.

country.service.ts

```
1  import {Injectable} from "angular2/core"
2  import {Http} from 'angular2/http';
3  import 'rxjs/Rx'
4
5  @Injectable()
6  export class CountryService{
7
8      endpoint_url:String = "https://restcountries.eu/rest/v1/region/";
9
10     constructor(http: Http){
11         this.http = http;
12     }
13
14     getCountriesByRegion (region:String){
15         return this.http.get(this.endpoint_url + region).map(res => res.json());
16     }
17 }
```

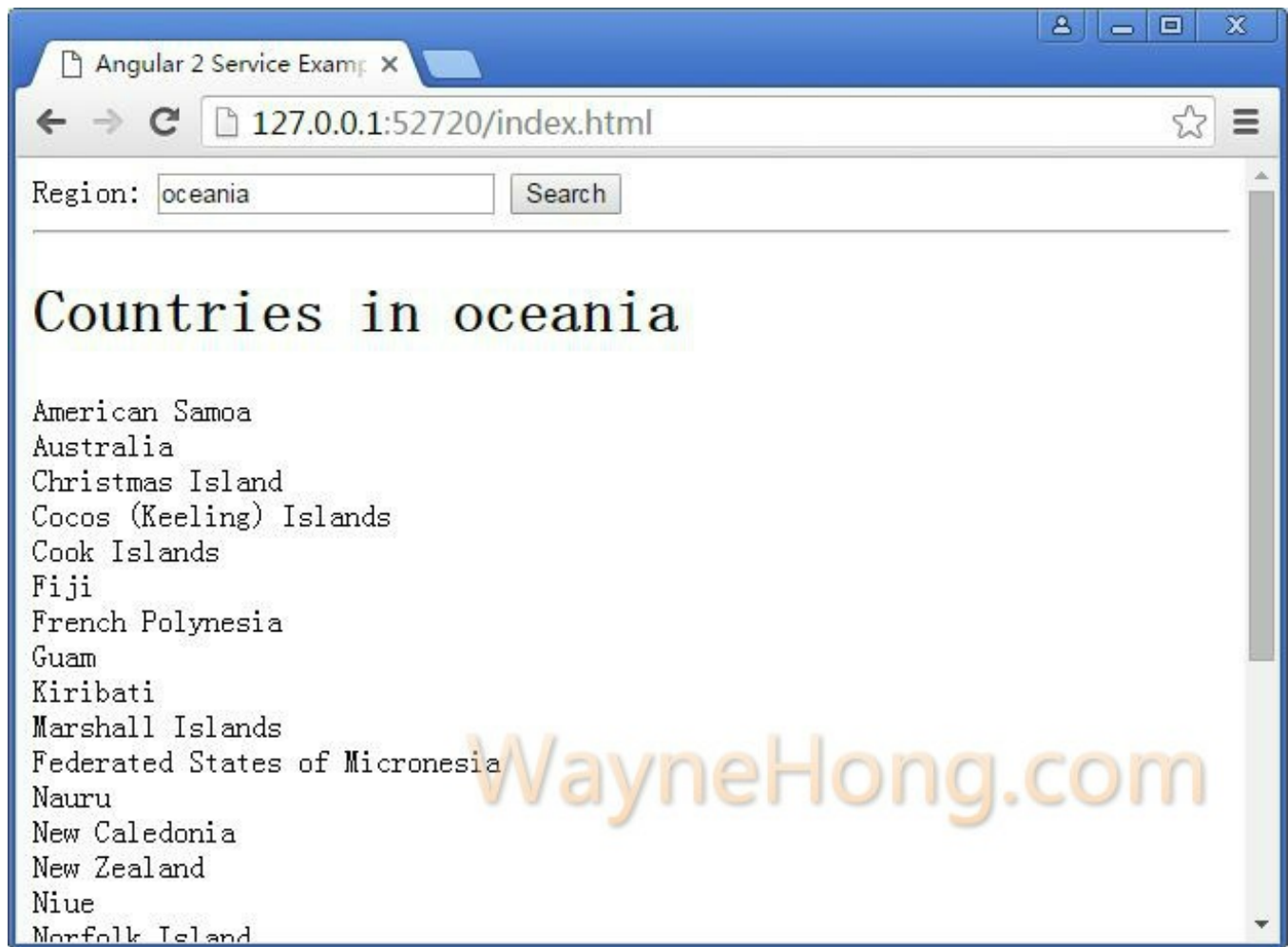
index.html

index.html

```
1  <!DOCTYPE html>
2  <html>
3
4  <head>
5    <title>Angular 2 Service Example</title>
6
7    <!-- libraries -->
8    <script src="https://raw.githubusercontent.com/systemjs/systemjs/0.19.6/dist/system.js"></script>
9    <script src="https://code.angularjs.org/tools/typescript.js"></script>
10   <script src="https://code.angularjs.org/2.0.0-beta.0/angular2-polyfills.js"></script>
11   <script src="https://code.angularjs.org/2.0.0-beta.0/Rx.js"></script>
12   <script src="https://code.angularjs.org/2.0.0-beta.0/angular2.dev.js"></script>
13   <script src="https://code.angularjs.org/2.0.0-beta.0/http.dev.js"></script>
14
15   <script>
16     System.config({
17       transpiler: 'typescript',
18       typescriptOptions: {
19         emitDecoratorMetadata: true
20       },
21       packages: {
22         'src': {
23           defaultExtension: 'ts'
24         }
25       }
26     });
27
28   </script>
29
30   <script>
31     System.import('src/boot');
32   </script>
33
34 </head>
35
36 <body>
37   <app-component>Loading...</app-component>
38 </body>
39 </html>
```

Result

Run the example, type in “oceania” and click on Search, you should get a result the same as below, unless the remote API is broken. The [source code](#) is also available for download.



Resources

Angular 2

- [REST Countries service](#)
- [Angular 2](#)
- [Angular 2 Service Example – Javascript](#)