Read an External JSON file in Angular 4 and Convert Data to HTML Table

You can use the HttpClient service in Angular 4 to read and extract data from an external JSON file. Using the Get() method of HttpClient class, you can easily open and read data from a JSON file. Here in this post, I am sharing a simple example on how to read JSON data from a file and convert the data to an HTML table.

JSON or JavaScript Object Notation, as you know is a data format that allows you to conveniently store and share data using any medium. JSON is language independent and can be easily bind with any kind of application. You can use JSON data in your Angular 4 applications.

The JSON Data

Here's a sample data in JSON format. I have saved the data in a file named *Birds.json*.

```
[{
    "ID": "001",
    "Name": "Eurasian Collared-Dove",
    "Type": "Dove",
    "Scientific Name": "Streptopelia"
},
{
    "ID": "002",
    "Name": "Bald Eagle",
    "Type": "Hawk",
    "Scientific Name": "Haliaeetus leucocephalus"
},
{
    "ID": "003",
    "Name": "Cooper's Hawk",
    "Type": "Hawk",
```

```
    "Scientific Name": "Accipiter cooperii"
}]
```

Create the Angular 4 Project

I am hoping that you have already setup Angular 4 in your computer. If not, then please *read this post*. It will guide you with the setup procedure.

Open *cmd* prompt and go to the folder where you want to create your project. Type this command …

ng new json2angular

Now, go to the folder.

cd json2angular

Note: We have created a JSON file above named *Birds.json*. Save the file inside the *assets*folder. Here's the path.

/src/assets/birds.json

Import HttpClientModule to the Project

First, open *app.module.ts* file under *src/app/* folder and add *HttpClientModule*.

```
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';
import { AppComponent } from './app.component';
```

```
import { HttpClientModule } from '@angular/common/https';

@NgModule({
  declarations: [
    AppComponent
  ],
  imports: [
    BrowserModule,
    HttpClientModule
  ],
  providers: [],
  bootstrap: [AppComponent]
})
export class AppModule { }
```

Next, we'll create our component, where we'll add or import *HttpClient* service. Adding this service to our project will ensure that we have access to the *Get()* method and its properties, which we need to access files in the server and read its contents.

Open *app.component.ts* file and add the below code.

```
import { Component } from '@angular/core';
import { HttpClient } from '@angular/common/https';
import { HttpErrorResponse } from '@angular/common/https';

@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
  styleUrls: ['./app.component.css']
})
export class AppComponent {
  title = 'JSON to Table Example';
  constructor (private httpService: HttpClient) { }
```

```
  arrBirds: string [];


  ngOnInit () {
   this.httpService.get('./assets/birds.json').subscribe(
    data => {
     this.arrBirds = data as string [];          // FILL THE ARRAY WITH DATA.
     //  console.log(this.arrBirds[1]);
    },
    (err: HttpErrorResponse) => {
     console.log (err.message);
    }
   );
  }
}
```

I have declared an array named *arrBirds* of type string. I am adding the JSON data
extracted from the file into an array, which I'll later bind with a <table>
using *ngFor*directive.

You can now launch the server, *ng server --o*, to check if there are no errors. Please
make sure that you have saved the JSON file *Birds.json* in the *assests* folder in your
project, else it will throw an error.

Now let's create our application template. Its where we'll add the HTML <table> element
and bind the array to the table.

Open *app.commonent.html* file and copy and paste the below markup to the file.

```
<div style="text-align:left;width:500px;">
   <h1>
      {{ title }}!
   </h1>
```

```html
<table *ngIf="arrBirds">
    <!-- ADD HEADERS -->
    <tr>
        <th>ID</th>
            <th>Name of Bird</th>
                <th>Type of Bird</th>
    </tr>

    <!-- BIND ARRAY TO TABLE -->
    <tr *ngFor="let bird of arrBirds">
        <td>{{bird.ID}}</td>
            <td>{{bird.Name}}</td>
                <td>{{bird.Type}}</td>
    </tr>
</table>
</div>
```

Save the file. Go the browser to check the output. If you want you can style the <table> and its contents.

You can add in-line style to your table or add few classes in your *app.component.css* file.

```css
table, th, td
{
    margin: 10px 0;
    border: solid 1px #333;
    padding: 2px 4px;
    font: 15px Verdana;
}
th {
    font-weight:bold;
}
```

That's how you convert JSON data to an HTML table in Angular 4. Now you know how simple it is.