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# SPA Basics

|  |  |
| --- | --- |
| Structure | app-root Open “index.html” and thus has the main directive app-root. This is where the site will be rendered Changing the default title  1. Open “index.html” and replace the title tag with “My Social Connect”. 2. Then run the app with >ng serve 3. Pick up the url provided in the terminal and navigate to it 4. The new title should display in the browser.  Remove the default html  1. Go to src > app > app.component.ts    1. Change title to “My Social Connect” 2. Go to src > app > app.component.html    1. Remove all the html    2. And replace with <h1>{{ title }}</h1>    3. Refresh the page and now you should only see the new title  Running the SPA  1. run by issuing command >ng serve 2. stop by pressing CTRL+c  Setting up WebApiBaseURL Open environment.prod.ts and environment.ts and add following to json. Change the url per your WebApi url    usebaseUrlHttps: true,    webApiBaseUrlHttps: 'https://localhost:5000/',    webApiBaseUrlHttp: 'http://localhost:5001/' |

# HTTP Requests

Note: this code is in source control and is commented.

* Go to app.modules.ts and add to imports array “HttpClientModule”
* Also import it at the top
  + import { HttpClientModule} from '@angular/common/http';

**Getting the users from api gateway**

We are doing a simple setup. Later this will be refactored into a service call.

## app.component.ts

Go to app.component.ts and look at getUsers and getUsers2 method. Will remove this code later since this is not the best place to fetch the users and display.

#1

import { HttpClient } from '@angular/common/http';

import { Component, OnInit } from '@angular/core';

import { environment } from 'src/environments/environment';

#2

export class AppComponent implements OnInit

#3

  webApiUrl: string = "";

  //for subscripton first method

  users1: any;

  error1: string = "";

  complete1: string = "";

  //for subscripton second method

  users2: any;

  error2: string = "";

  complete2: string = "";

  constructor(private http: HttpClient){}

#4

  ngOnInit() {

    this.webApiUrl = environment.usebaseUrlHttps ? environment.webApiBaseUrlHttps : environment.webApiBaseUrlHttp;

    //preferred way of doing the subscription

    this.getUsers();

    //second and old way of doing subscripton

    this.getUsers2();

  }

  getUsers(){

    this.http.get(`${this.webApiUrl}api/users`).subscribe({

      next: r => {

        this.users1 = r;

      }, error: e => {

        this.error1 = e;

        console.log("Error1:"+e);

      }, complete: () => {

        this.complete1 = "Request 1 Complete";

      }

    });

  }

  getUsers2(){

    this.http.get(`${this.webApiUrl}api/users`).subscribe(response => {

      this.users2 = response;

    }, error => {

      this.error2 = error;

      console.log("Error2:"+error);

    }, () => {

      this.complete2 = "Request 2 Completed"

    });

  }

## Running the app

At this point api gateway will return CORS error.

Graphical user interface, text, application, email

Description automatically generated

My SPA url is [http://localhost:4200](http://localhost:4200/) so will add this to CORS in the api gateway. Check “[0004 Basic Setup - EntityFrameWork Setup Code First - DBContext - Sqlite.docx](0004%20Basic%20Setup%20-%20EntityFrameWork%20Setup%20Code%20First%20-%20DBContext%20-%20Sqlite.docx)” and then section where CORS is regestring.

## Result

Open developer tools in the browser, then go to network and click Users

Table

Description automatically generated

## app.component.html

Display the content of both the methods

|  |  |
| --- | --- |
| <p>WebApiURL: {{webApiUrl}}</p>  <hr>  <h2>Users Method 1</h2>  <div \*ngIf="error1 !== ''">      Error:{{error1}}  </div>  <div \*ngIf="error1 === ''">      <ul>          <li \*ngFor='let user of users1'>              {{user.id}} - {{user.userName}}          </li>      </ul>      Complete: {{complete1}}  </div>  <hr>  <h2>Users Method 2</h2>  <div \*ngIf="error2 !== ''">      Error:{{error2}}  </div>  <div \*ngIf="error2 === ''">      <ul>          <li \*ngFor='let user2 of users2'>              {{user2.id}} - {{user2.userName}}          </li>      </ul>      Complete: {{complete2}}  </div> |  |

# Setting up Angular App to use HTTPS

Check [Documents/GenerateTrustedSSL](GenerateTrustedSSL) folder for all the files needed.

## server.crt

1. Double click the file
2. Click install certificate
3. Select **local machine** and click next
4. Then select **place all certificates in the following store** options
   1. Click browse and select from options **Trusted Root Certificate Authorities** and click OK
   2. And then click next
5. And click on finish
6. And finally click on Ok

## Set up in VS Code 🡺 MySocialConnect-SPA

1. Open the SPA app in VS code
2. Create a folder in the root called ssl
   1. Copy server.crt and server.key at this location
3. Go to angular.json file, find section serve and then add following options to it

"options": {

            "sslKey": "./ssl/server.key",

            "sslCert": "./ssl/server.crt",

            "ssl": true,

            "browserTarget": "test:build"

          }

Run the app and now you should see <https://localhost:4200>. Go to the site and it should display as usual.