Exercise (Instructions):

Setting up a Server using json-server

Objectives and Outcomes

The Node module, *json-server*, provides a very simple way to set up a web server that supports a full-fledged REST API server. We will talk about REST API in the next lesson. It can also serve up static web content from a folder. This lesson will leverage these two features to provide the back-end for your Angular application. In this exercise, you will configure and start a server using *json-server* to enable serving your application data to your Angular application. At the end of this exercise, you will be able to:

* Configure and start a simple server using the json-server module
* Configure your server to serve up static web content stored in a folder named *public*.

Installing json-server

* json-server is a node module, and hence can be installed globally by typing the following at the command prompt:

npm install json-server -g

If you are using OSX or Linux, use **sudo** at the front of the command. This will install json-server that can be started from the command line from any folder on your computer.

Configuring the Server

* At any convenient location on your computer, create a new folder named **json-server**, and move to this folder.
* Download the blogs.json file provided above to this folder.
* Move to this folder in your terminal window, and type the following at the command prompt to start the server:

json-server --watch blogs.json -d 2000

* --watch: to watch the request to and from the server
* -d 2000: delay for 2 second
* This should start up a server at port number 3000 on your machine. The data from this server can be accessed by typing the following addresses into your **browser address bar**:

http://localhost:3000/blogs

* Type these addresses into the browser address and see the JSON data being served up by the server. This data is obtained from the blogs.json file

Serving up the Images

* The json-server also provides a static web server. Any resources that you put in a folder named **public** in the **json-server** folder above, will be served by the server at the following address:

http://localhost:3000/

* Shut down the server by typing **ctrl-C** in the terminal window.
* Create a public folder in your json-server folder.
* Download the images.zip file that we provide above, unzip it and move the images folder containing the images to the public folder.
* Restart the json-server as we did before. Now your server will serve up the images for our Angular app. You can view these images by typing the following into your browser address bar:

http://localhost:3000/images/<image name>.png

To add or edit a post, we can edit post.service.ts

@Injectable()

export class PostService{

   // private postUrl ='https://jsonplaceholder.typicode.com/posts';

   private postUrl = 'http://localhost:3000/blogs';

    processHTTPMsgService: any;

    constructor(private \_http:HttpClient){

    }

    getPost():Observable<Post[]>{

        return this.\_http.get<Post[]>(this.postUrl).pipe(

            map(posts=>posts.sort((a,b)=> b.id - a.id))

);

    }

    editPost(post: Post): Observable<Post> {

        const httpOptions = {

          headers: new HttpHeaders({

            'Content-Type':  'application/json'

          })

        };

        return this.\_http.put<Post>(this.postUrl + '/' + post.id, post, httpOptions);

      }

      addPost(post: Post): Observable<Post> {

        const httpOptions = {

          headers: new HttpHeaders({

            'Content-Type':  'application/json'

          })

        };

        console.log("add post: " + post.id + post.title + post.body);

        return this.\_http.post<Post>(this.postUrl, post, httpOptions);

     }

}

change app.component template

@Component({

  selector: 'app-root',

  template: `<h1>Welcome </h1>

  <div>

    <form >

    <input type="text" placeholder ="Post Id" [(ngModel)] = "post.id" name="postid">

    <br><br>

    <input type="text" placeholder ="User" [(ngModel)] = "post.userid" name="userid">

    <br><br>

      <input type="text" placeholder ="Post Title" [(ngModel)] = "post.title" name="title">

      <br><br>

      <textarea placeholder="Post Body"  [(ngModel)]="post.body" name="body"></textarea>

      <br><br>

      <button  (click)=addPost(post) >Add</button>

    </form>

  </div>

  <div class = "container">

    <ul>

      <li \*ngFor="let post of posts">

        <h3><a href="" (click)="showPost(post.id)"> {{post.title}} </a></h3>

        <p>{{post.body}} </p>

      </li>

    </ul>

  </div>

  `,

  providers:[PostService],

  styleUrls: ['./app.component.css']

})

change app.component.ts

export class AppComponent {

  posts : Post[];

  post: Post;

  title: string;

  body: string;

  constructor(private \_postService : PostService){

    \_postService.getPost().subscribe(ps => this.posts=ps);

   // this.post = {id:0, userid:0, title:"post title", body:"post body"};

   this.post = new Post();

  }

 addPost(post:Post){

    this.\_postService.addPost(post).subscribe(

      response => {  console.log("Success", response)},

      (err: HttpErrorResponse) => {console.log(err);

  });

  }

editPost(post:Post){

     this.\_postService.editPost(post).subscribe(

       response => {  console.log("Success", response)},

       (err: HttpErrorResponse) => {console.log(err);

   });

   }

}

Conclusions

In this exercise, you learnt how to configure and start a simple server using the**json-server** node module. You also learnt how the server can serve up static web content.