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Harmony IT Solution

Angular

Tahaluf Training Center 2022





1

Hit API (Login).

2

Interceptor.

3

Guard.





Objective



The Objective of this lecture

- Get Knowe about the Interceptor and how to add the bearer authorization for each request.
- Understand the guard concept and how to apply the authorization on the URL.



Hits API(Login)



Install the jwt-decode package:

This package decodes the token retrieved from the login function.

<https://www.npmjs.com/package/jwt-decode>

The command :

```
npm i jwt-decode
```



How to deal with login function

In order to log in using the email and password which are saved in the database

```
login(email: any, password: any){  
  var body = {  
    username : email.value.toString(),  
    password: password.value.toString()  
  }  
  const headerDict = {  
    'Content-Type': 'application/json',  
    'Accept': 'application/json'  
  }  
  const requestOptions = {  
    headers: new HttpHeaders(headerDict)  
  }  
}
```



How to deal with login function

```
this.http.post('https://localhost:44320/api/Login', body,  
requestOptions).subscribe((res:any)=>{  
  this.spinner.hide();  
  const response={  
    token: res.toString()      }  
  localStorage.setItem('token', response.token);  
  let data:any=jwt_decode(response.token);  
  console.log(data);  
  localStorage.setItem('user', JSON.stringify({...data}));  
  if(data.role=='admin')  
  {  
    this.router.navigate(['admin/managecourse']);  
  }  
});
```




How to deal with login function

```
else if (data.role=='customer')
{
  this.router.navigate(['home']);
}})
this.spinner.hide();
this.toastr.error('Error on Email or Password ')
}
}
```



Interceptor



Overview of Interceptor

HttpInterceptors are used to handle and intercept the HttpRequest and HttpResponse.



Overview of Interceptor

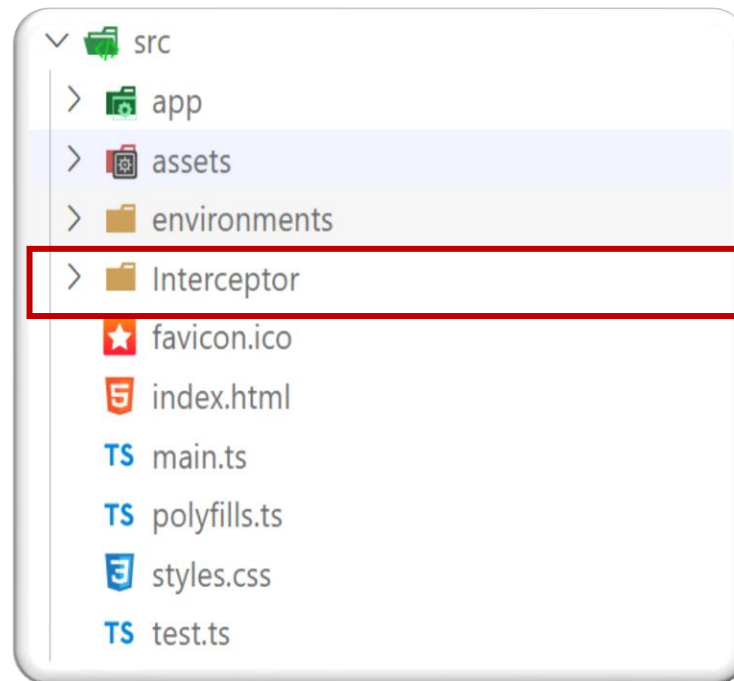
Interceptors transform outgoing requests before passing them to the next interceptor, with the call `next.handle(transformedReq)`.

Interceptors can also transform response event streams through the use of RxJS operators on the stream returned by `next.handle ()`.



How to deal with the interceptor

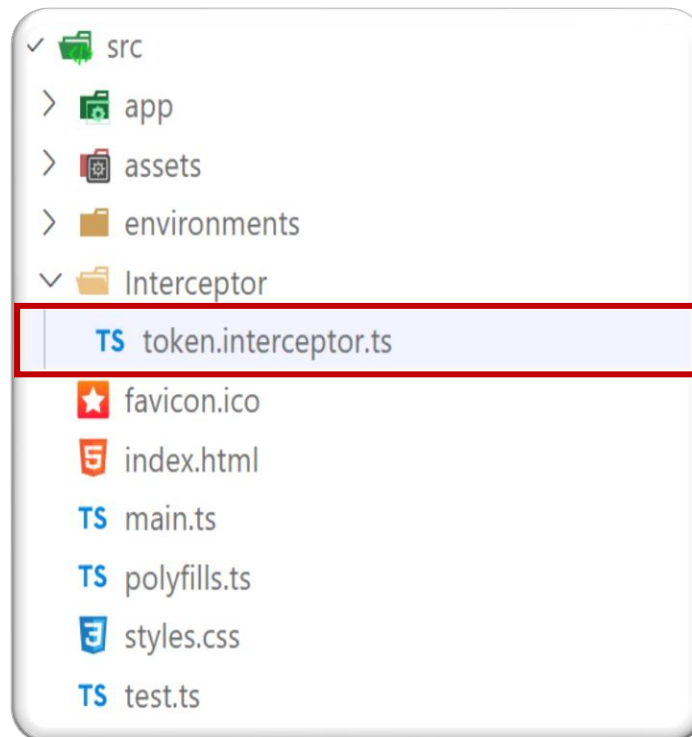
1. Create a new folder called **Interceptor** in the src folder.





How to deal with the interceptor

2. In this folder create a new file called **token.interceptor.ts**





How to deal with the interceptor

In token.interceptor.ts:

```
import { HttpEvent, HttpHandler, HttpInterceptor, HttpRequest } from "@angular/common/http";
import { Observable } from "rxjs";

export class TokenInterceptor implements HttpInterceptor {
  intercept(req: HttpRequest<any>, next: HttpHandler): Observable<HttpEvent<any>> {
    const token = localStorage.getItem('token');
    console.log(token);
    req= req.clone({
      headers:{
        Authorization:`Bearer ${token}`
      }
    })
    return next.handle(req);
  }
}
```



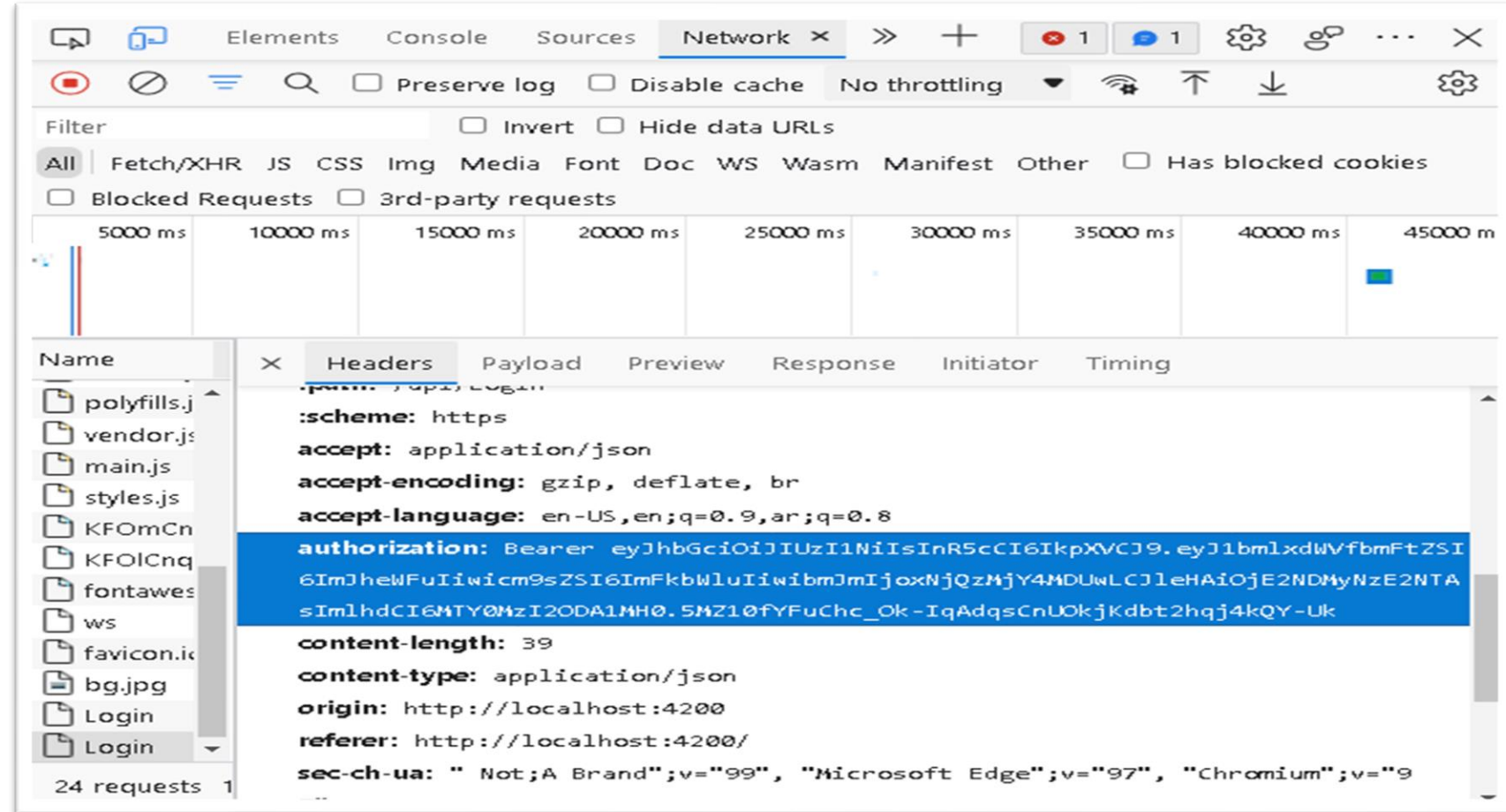
How to deal with the interceptor

3. Apply the interceptor class In the App Module
In app.module.ts (In providers array):

```
providers: [  
  {  
    provide:HTTP_INTERCEPTORS,  
    useClass:TokenInterceptor,  
    multi:true  
  },  
],
```




The Result



A large green rectangle with rounded corners, tilted slightly to the right. It is surrounded by a thick red outline that follows its shape. There are several red circles of different sizes around the rectangle: one at the top right, one at the bottom left, and one at the bottom right. Two black circles are positioned below the rectangle, resembling eyes. The word "Guard" is written in white, bold, sans-serif font in the center of the green rectangle.

Guard



Overview of Guard

CanActivate: This interface lets classes implement guards that decide whether a route can be activated. Navigation continues if all guards return true. Navigation is canceled if any guard returns false. The current navigation is canceled if any guard returns a `UrlTree` and new navigation begins based on the `UrlTree`.



How to include the guard in the project

Generate a new guard via this command :

ng generate guard guardName or **ng g g guardName**. (Chose canActivate)

```
PS C:\Users\d.kanaan.ext\Desktop\EduTech> ng g g Authorization
```

```
Your global Angular CLI version (14.1.1) is greater than your local version (13.3.9). The local Angular CLI version is used.
```

```
To disable this warning use "ng config -g cli.warnings.versionMismatch false".
```

```
? Which interfaces would you like to implement? (Press <space> to select, <a> to toggle all, <i> to invert selection, and <enter> to proceed)
```

```
>(*) CanActivate
```

```
( ) CanActivateChild
```

```
( ) CanDeactivate
```

```
( ) CanLoad
```

```
( ) CanLoad
```

```
( ) CanLoad
```

```
( ) CanLoad
```



How to include the guard in the project

```
state: RouterStateSnapshot): Observable<boolean | UrlTree> |  
  const token = localStorage.getItem('token');  
  if(token){  
    if(state.url.indexOf('admin')>=0){  
      let user :any =localStorage.getItem('user');  
      if(user){  
        user=JSON.parse(user);  
        if(user.role=='admin'){  
          this.toaster.success('Welcome in admin pages ');  
          return true;  
        }  
        else {  
          this.toaster.warning('this page for admin');  
          return false;  
        }  
      }  
    }  
  }
```



How to include the guard in the project

```
    else {  
      this.toaster.warning('this page for admin');  
      this.router.navigate(['homepage']);  
      return false;  
    }  
  }  
  console.log(state);  
  return true;  
}  
else {  
  this.router.navigate(['security/login']);  
  this.toaster.warning('You are not Authorized');  
  return false;  
}  
}
```



Apply the guard on the admin module

```
{  
  path: 'admin',  
  loadChildren: () => AdminModule, |  
  canActivate: [AuthorizationGuard]  
}
```



References

- [1] Angular, “Angular,” *Angular.io*, 2019. <https://angular.io/>
- [2] “Complete Angular Tutorial For Beginners,” *TekTutorialsHub*.
<https://www.tektutorialshub.com/angular-tutorial/>
- [3] “npm | build amazing things,” *Npmjs.com*, 2019. <https://www.npmjs.com/>
- [4] “Angular Tutorial for Beginners | Simplilearn,” *Simplilearn.com*.
<https://www.simplilearn.com/tutorials/angular-tutorial> (accessed Aug. 19, 2022).





Any
Question?

