FrontEnd Overview (for JWT)

Types of Files
a. Models
b. Services
c. Components
    TS
    HTML
    CSS
d. Interceptor
e. Guard

TypeScript -- Core Java
Angular   -- Spring MVC

Core Java
```
class Employee {
    int empId;
    Employee(int empId){
      this.empId = empId;
    }
}
```
--Angular-----
```
class Employee {
  empId : number;
  constructor(empId:number){
     this.empId = empId;
  }
}
```
Anguar Short Code (Creating variable and setting data)
```
class Employee {

  constructor(public empId:number ) { }
}
```
===
Spring /Boot

    Emp--<>Addr

```
class Addr {}
class Emp {
  @Autowired
  private  Addr  aob;
}
```
--Angular---
 Emp--<>Addr

```
class Addr {}
class Emp {
   //DI
   constructor(public aob:Addr ) { }
}
```

```
---Java---------------------Angular-------
  Annotation                 Decorators

  @Component                 @Component
  @Service                   @Injectable
-----------------------------------------------
    methods                    function

  RT method(DT var) {        function(var:DT) : RT {

  }                          }
-------------------------------------------------
    Objects                       JSON (Java Script Object Notation)

  RestTemplate                    HttpClient

   java.lang.Object                any


===========================================================
a. Models

Register User From Angualr
 HTML --> TS --> object ?? [UserModel]

---UserModel.ts------------------------
export class UserModel {
    constructor(
        public username : string,
        public email : string,
        public password : string,
    ){

    }
}

On Register submit --response--Object?? [MessageModel]
----MessageModel.ts-----------
export class MessageModel {
  constructor(public message: string) {}
}
----------------------------

On Login Request Submit
HTML Form --Login Submit--> object ?? [LoginModel]

---LoginModel.ts-------------
export class LoginModel {
  constructor(public username: string, public password: string) {}
}

Response--> JWT Information --> object ?? [JwtModel]
-------JwtModel.ts---------------------
export class JwtModel {

    constructor(
```

```java
        public token : string,
        public type : string,
        public id : string,
        public username : string,
        public email : string,
        public roles : string[],
    )
    {

    }
}
```

--(Java)------------------------------
Convert Employee to String Object?
 Employee e =...
 String s = e.toString();

 String to Employee.....

--Angular-----------
 JSON to String:-
 JSON.stringify(obj)

 String to JSON:-
 JSON.parse(str)

*) SessionStorage is memory used to hold data for a period of time
    in key=val at browser side.

=> both key=val are String type
=> SessionStorage supports methods
    setItem(key:string, val:string)
    getItem(key:string):val string
    removeItem(key:string)
    clear() [remove all keys data]

----
 string a = 'AAA' // or any object

 if data exist true, else false
 boolean exist = !!a; //any object convert to boolean
----
https://developer.mozilla.org/en-US/docs/Web/API/Window/localStorage

<input type="" th:field="*{variableName}"..>

String s=...
if(s!=null)...

s!=null? ---->

--Angular---
 forms.setup?.userData?.userAddr?.hno

Angular Form Validations:

https://angular.io/guide/form-validation