Angular Services and Dependency Injection

.NET

Services are a great way to share information among classes that don't know each other and to make requests to an API. Components should never fetch or save data directly.

https://angular.io/tutorial/toh-pt4#why-services

Dependency Injection – Services and Injectables

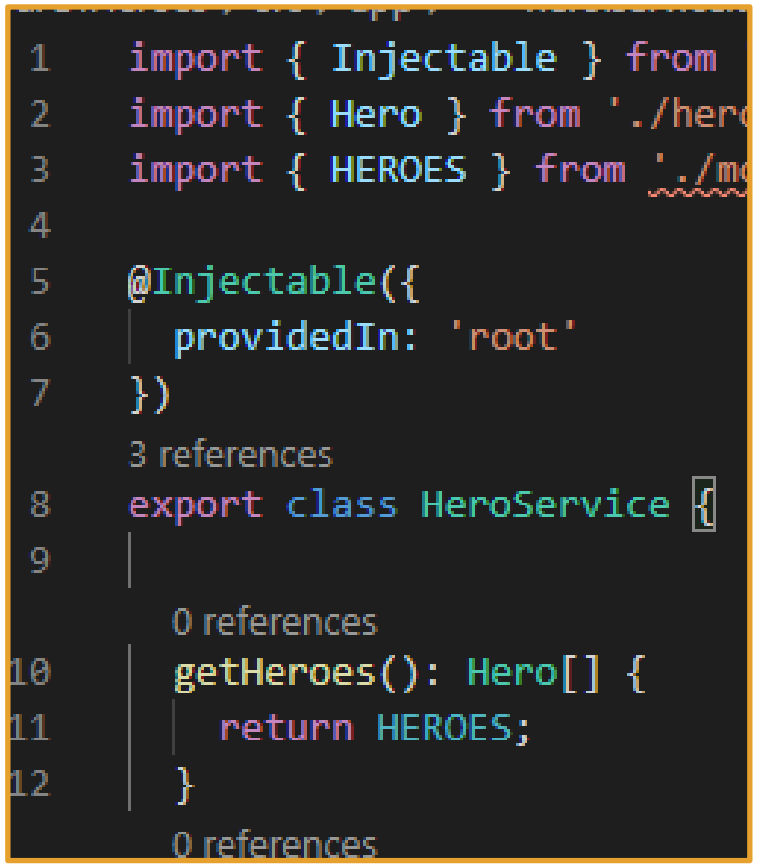
https://angular.io/guide/glossary#dependency-injection-di
https://angular.io/guide/dependency-injection

Components should always delegate data access to a ***Service***. A ***Service*** can get data from an API web service, local storage, a mock data source, and more.

Services are integral to Angular. A ***service*** is an instance of a class that you can make available to any part of your application using ***Angular***'s ***Dependency Injection*** system.

A ***Service*** is your portal to persist data and have methods to access that data.

The @Injectable() decorator accepts a metadata object for the service, the same way the @Component() decorator does for component classes.



Dependency Injection – Services and Injectables

https://angular.io/tutorial/toh-pt4#provide-the-heroservice
https://angular.io/guide/dependency-injection
https://angular.io/guide/architecture-services

Services must be registered with Angular's Dependency Injection system before they can be injected into a ***Component***.

By default, the ***Angular CLI*** command ng generate service registers a ***provider*** with the ***root*** injector for your ***Service*** by including ***provider*** metadata that's providedIn: 'root' in the @Injectable() ***decorator*** of the ***Service Component***.

When a ***Service*** is provided at the root level, Angular creates a single, shared instance of the ***Service*** and injects it into any class that asks for it.

Angular will also remove any unused ***Services***.

```
1   import { Injectable } from
2   import { Hero } from './her
3   import { HEROES } from './m
4
5   @Injectable({
6     providedIn: 'root'
7   })
    3 references
8   export class HeroService {
9
      0 references
10    getHeroes(): Hero[] {
11      return HEROES;
12    }
      0 references
```

Angular – Use DI to Get a Service

https://angular.io/tutorial/toh-pt4

Create a service:

1. Create a ***Service***:
   - ng generate service <ServiceName>.
2. Import the ***Injectable*** symbol into the ***Service Component*** To allow the ***Service*** to be injected into ***Components***:
   - import { Injectable } from '@angular/core';
3. Import the ***Service*** into the ***Component*** where it will be used:
   - import { ServiceName } from '../relative/location';.
4. Inject the ***Service*** into the constructor of the ***Component*** where it will be used:
   - constructor(private ServiceVariableName: ServiceName) {}.

Use ngOnInit() to access and retrieve data from a service on instantiation of the ***Component*** instead of using the constructor.

```
2   import { Hero } from '../hero';
3   import { HeroService } from '../hero.service';
```

```
0 references | 1 reference
constructor(private heroService: HeroService) {}

1 reference
getHeroes(): void {
  this.heroes = this.heroService.getHeroes();
}
6 references
ngOnInit(): void {
  this.getHeroes();
}
```