



## Angular : Services and Dependency injection

- ☐ Able to use Define Services
- ☐ Able to use understand DI
- ☐ Able to apply Dependency Injection

# Service and Dependency Injection

Restaurants

Logging



- ☐ A class with a focused purpose.
- ☐ Used for features that:
  - ☐ Are independent from any particular component
  - ☐ Provide shared data or logic across components
  - ☐ Encapsulate external interactions

## Service

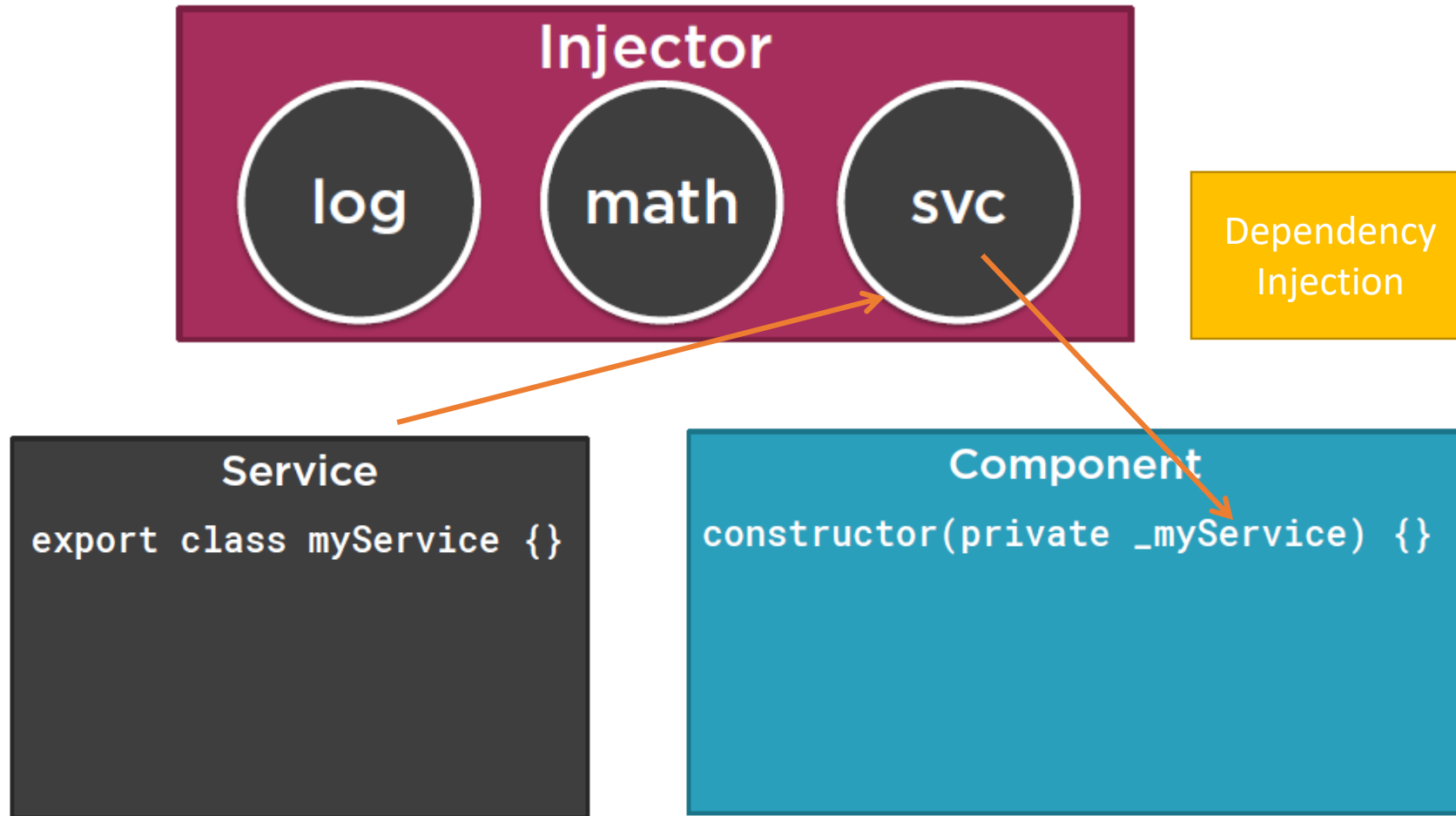
```
export class myService {}
```

## Component

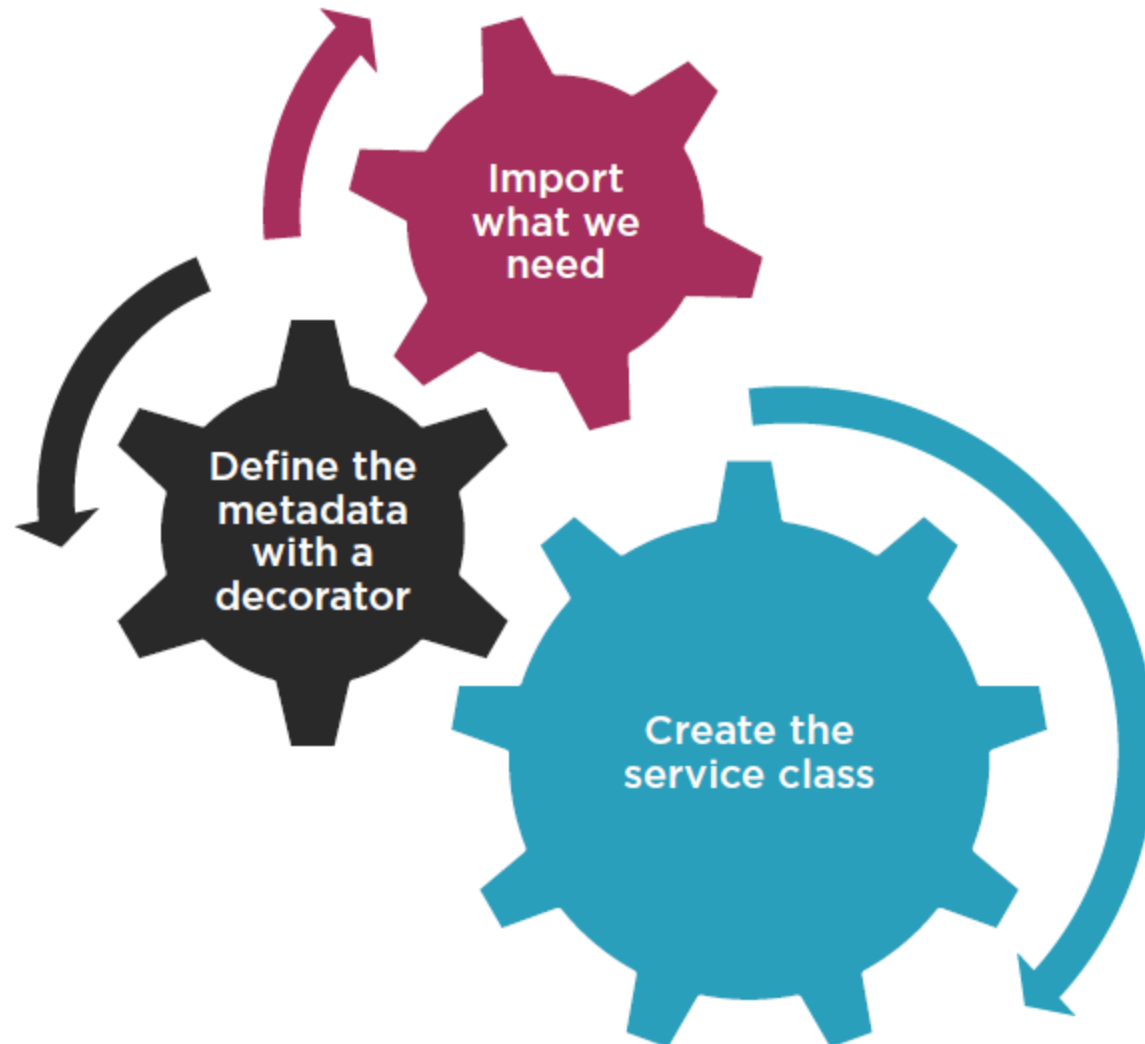
```
let svc = new myService();
```



# How Does It Work?



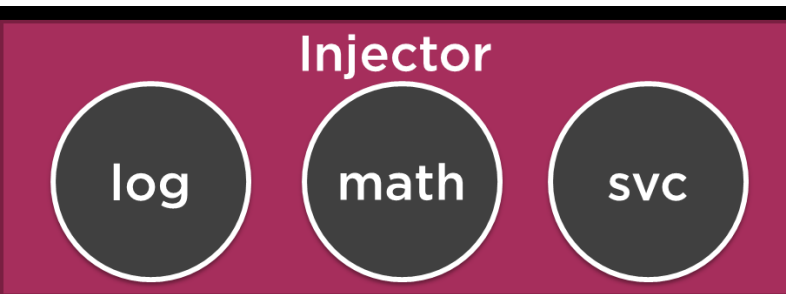
- A coding pattern in which a class receives the instances of objects it needs (called dependencies) from an external source rather than creating them itself.
- Building a Service :



```
restaurant.service.ts ✕ restaurant-list.component.ts

1  import { Injectable } from '@angular/core'
2  import { IRestaurant } from '../restaurant'
3  @Injectable()
4  export class RestaurantService {
5      getRestaurants(): IRestaurant[] {
6          return [
7              { ...
14              },
15              { ...
22              }
23          ];
24      }
25  }
```





- ☐ Register a provider
  - ☐ Code that can create or return a service
  - ☐ Typically the service class itself
- ☐ Define in component OR Angular module metadata
- ☐ Registered in component:
  - ☐ Injectable to component AND its children
- ☐ Registered in Angular module:
  - ☐ Injectable everywhere in the application

```
import {Component} from '@angular/core'
import {RestaurantService} from '../restaurants/restaurant.service'
@Component({
  selector: 'rms-app',
  template: `
    <div>

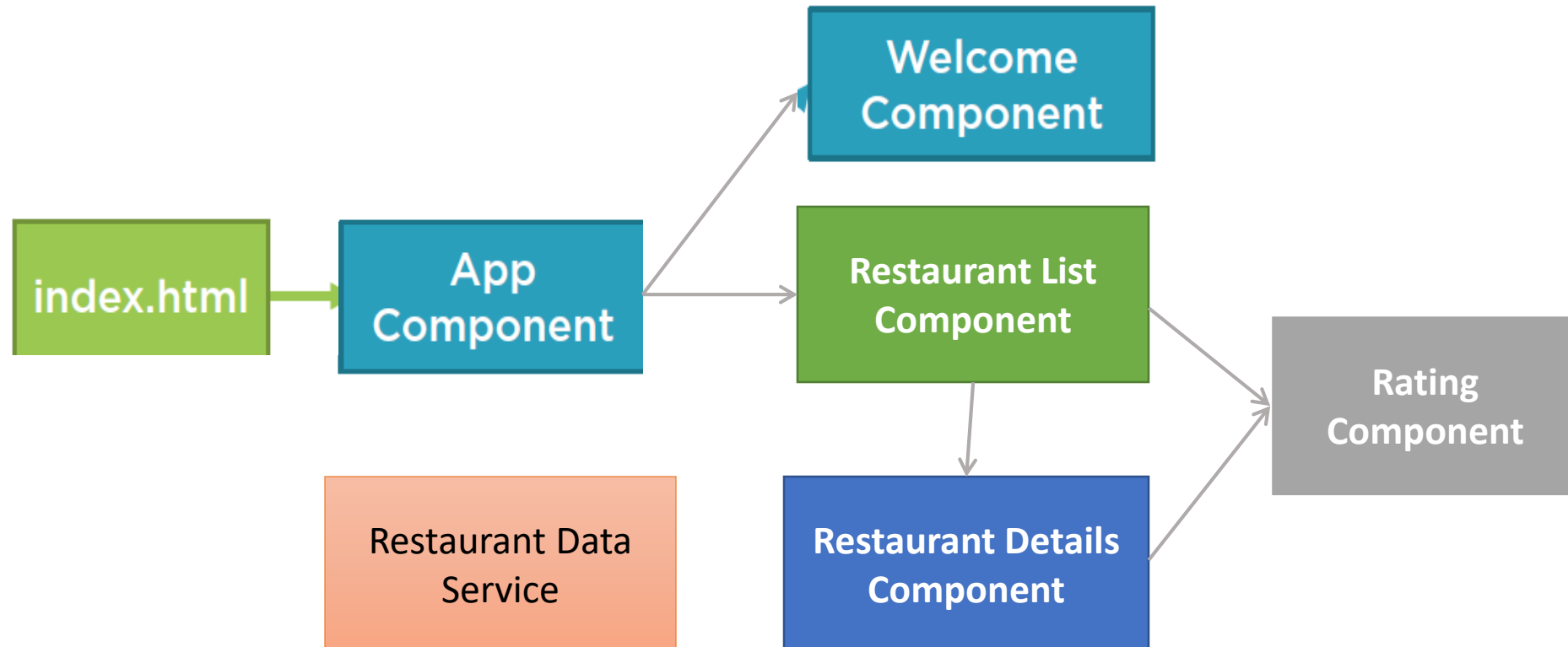
      <rms-rl> </rms-rl>
    </div>
  `,
  providers : [RestaurantService]
})
export class AppComponent{
  pageTitle: string= "Restaurant Management System App"
}
```

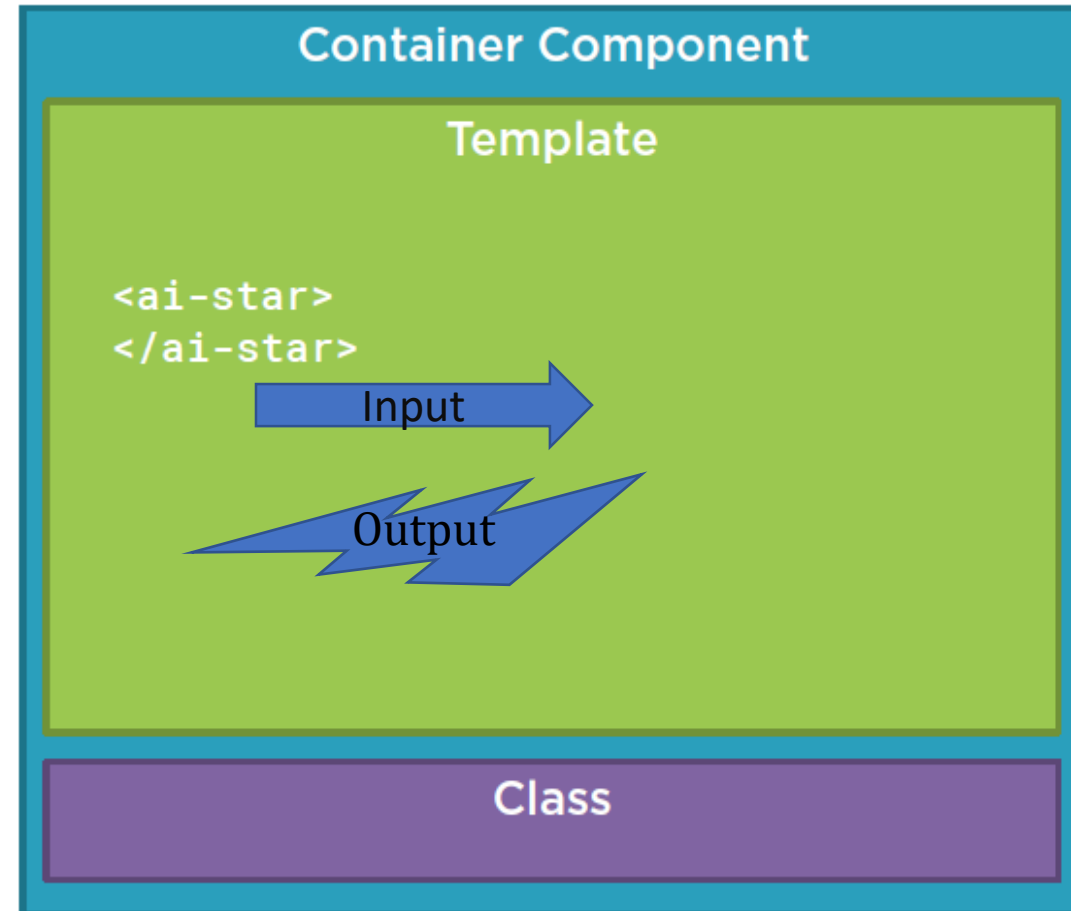
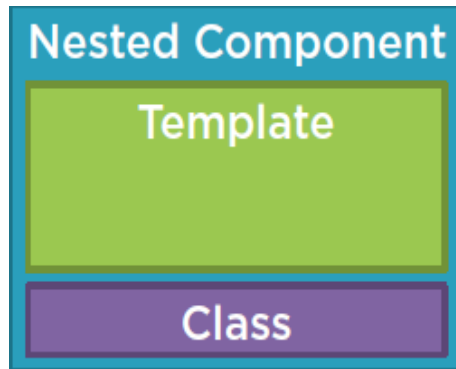
# Registering a provider

```
restaurant.service.ts  restaurant-filter.pipes.ts  restaurant-list.component.ts x  app.component.ts
1  import {Component,OnInit} from '@angular/core'
2  import {IRestaurant} from '../Restaurant'
3  import {RestaurantService} from '../restaurant.service'
4
5  @Component({ ...
11 })
12 export class RestaurantListComponent implements OnInit{
13   private _restService : RestaurantService;
14
15   pageTitle:string ="Restaurants List !";
16   imageWidth:number=150;
17   imageMargin:number=2;
18   showImage: boolean = false;
19   listFilter : string = 'mogli';
20   restaurants: IRestaurant[];
21
22   constructor(restService:RestaurantService) {
23     this._restService = restService;
24   }
25
26
27   toggleImage() : void{ ...
29   }
30   ngOnInit():void{
31     this.restaurants= this._restService.getRestaurants();
32   }
33 }
```

# Building Nested Components







# Building a Nested Component

```
8 import { StarComponent } from './shared/star.component';
9
10 @NgModule({
11   imports: [ BrowserModule, FormsModule ],
12   declarations: [ AppComponent, RestaurantListComponent, RestaurantFilterPipe , StarComponent],
13   bootstrap: [ AppComponent ]
14 })
15 export class AppModule { }
17 |
-
3 @Component({
4   selector : 'rm-star',
5   templateUrl: 'app/shared/star.component.html',
6   styleUrls: ['app/shared/star.component.css']
7 })
8 export class StarComponent implements OnChanges{
9
10   @Input() rating : number; // Input property
11   //   rating: number=3;
12   starWidth:number;
13
14   ngOnChanges() : void {
15
16     this.starWidth = this.rating *86/5;
17   }
18 }
```

```
<!--<td>{{ restaurant.starRating }}-->
  <td> <rm-star [rating] = 'restaurant.starRating'> </rm-star> </td>
</tr>
</tbody>
```





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