

# Introduction to Angular 4

-- PEI CHEN

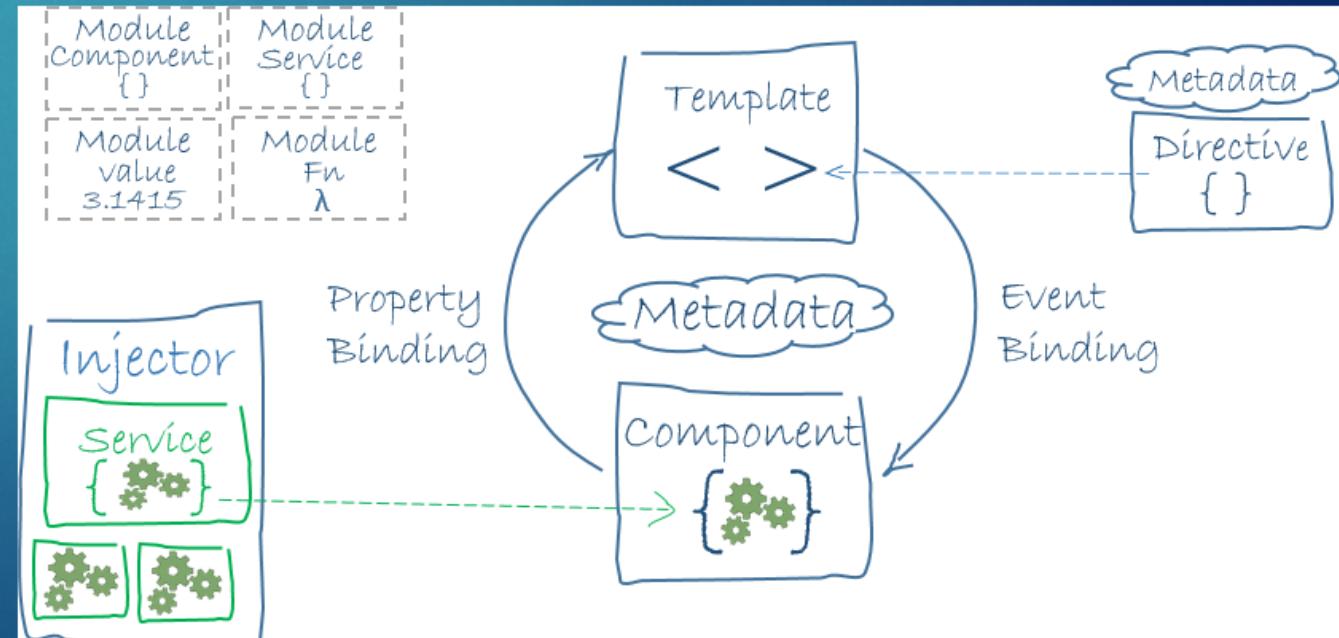
# Background

- ▶ Angular 4 was released in March 2017.
- ▶ Version number 3 was skipped.
- ▶ Backward compatible to Angular 2

# Architecture

Eight building blocks:

- ▶ **Modules**
- ▶ **Components**
- ▶ **Templates**
- ▶ **Metadata**
- ▶ **Data binding**
- ▶ **Directives**
- ▶ Services
- ▶ Dependency injection



# Module

- ▶ A module is a pack of code designed to execute a task.
- ▶ An Angular Module is a class with an `@NgModule` decorator.
- ▶ Each Angular app has at least one Angular module class.

## app/app.module.ts:

```
import { NgModule }      from '@angular/core';
import { BrowserModule } from '@angular/platform-browser';
@NgModule({
  imports:      [ BrowserModule ],
  providers:    [ Logger ],
  declarations: [ AppComponent ],
  exports:      [ AppComponent ],
  bootstrap:   [ AppComponent ]
})
export class AppModule { }
```

# Component

- ▶ Similar to React Component

src/app/hero-list.component.ts (class)

```
export class HeroListComponent implements OnInit {  
  heroes: Hero[];  
  selectedHero: Hero;  
  
  constructor(private service: HeroService) {}  
  
  ngOnInit() {  
    this.heroes = this.service.getHeroes();  
  }  
  
  selectHero(hero: Hero) { this.selectedHero = hero; }  
}
```

# Template

- ▶ HTML-like file

src/app/hero-list.component.html

```
1.  <h2>Hero List</h2>
2.
3.  <p><i>Pick a hero from the list</i></p>
4.  <ul>
5.    <li *ngFor="let hero of heroes" (click)="selectHero(hero)">
6.      {{hero.name}}
7.    </li>
8.  </ul>
9.
10. <hero-detail *ngIf="selectedHero" [hero]="selectedHero"></hero-detail>
```

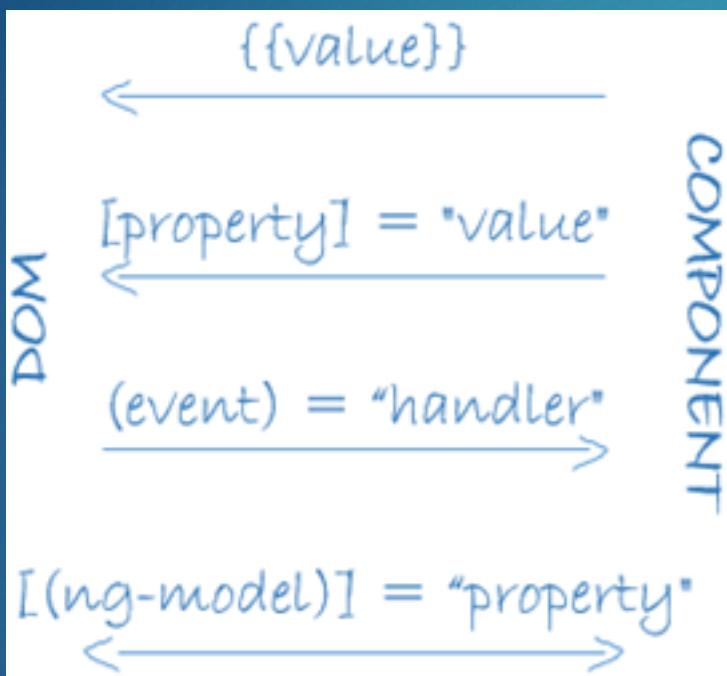
# Metadata

## ► Metadata

```
src/app/hero-list.component.ts (metadata)

@Component({
  selector:    'hero-list',
  templateUrl: './hero-list.component.html',
  providers:  [ HeroService ]
})
export class HeroListComponent implements OnInit {
  /* . . . */
}
```

# Data binding



src/app/hero-list.component.html (binding)

```
<li>{{hero.name}}</li>
<hero-detail [hero]="selectedHero"></hero-detail>
<li (click)="selectHero(hero)"></li>
```

# Directive

- ▶ <li \*ngFor="let element of elements"></li>
- ▶ <the-name-of-component \*ngIf="isSelected"></the-name-of-component>

# Services

- ▶ Service is a broad category encompassing any value, function, or feature that your application needs.

Examples include:

Logging service

Data service

Message bus

Tax calculator

Application configuration

# Dependency Injection

- ▶ Dependency injection is a way to supply a new instance of a class with the fully-formed dependencies it requires. Most dependencies are services.

# What's New in Angular 4

- ▶ if...else syntax in component HTML templates
- ▶ Stand alone animation module
- ▶ TypeScript's StrictNullChecks compliancy
- ▶ Angular Universal adoption by team to live in core
- ▶ Performance boost with FESM

5 Features To Watch Out for in Angular v4:

<https://scotch.io/tutorials/5-features-to-watch-out-for-in-angular-4>



# Thank you!