



Angular - One Framework

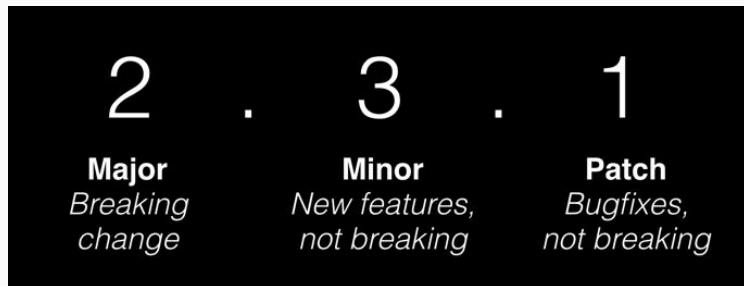
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Angular

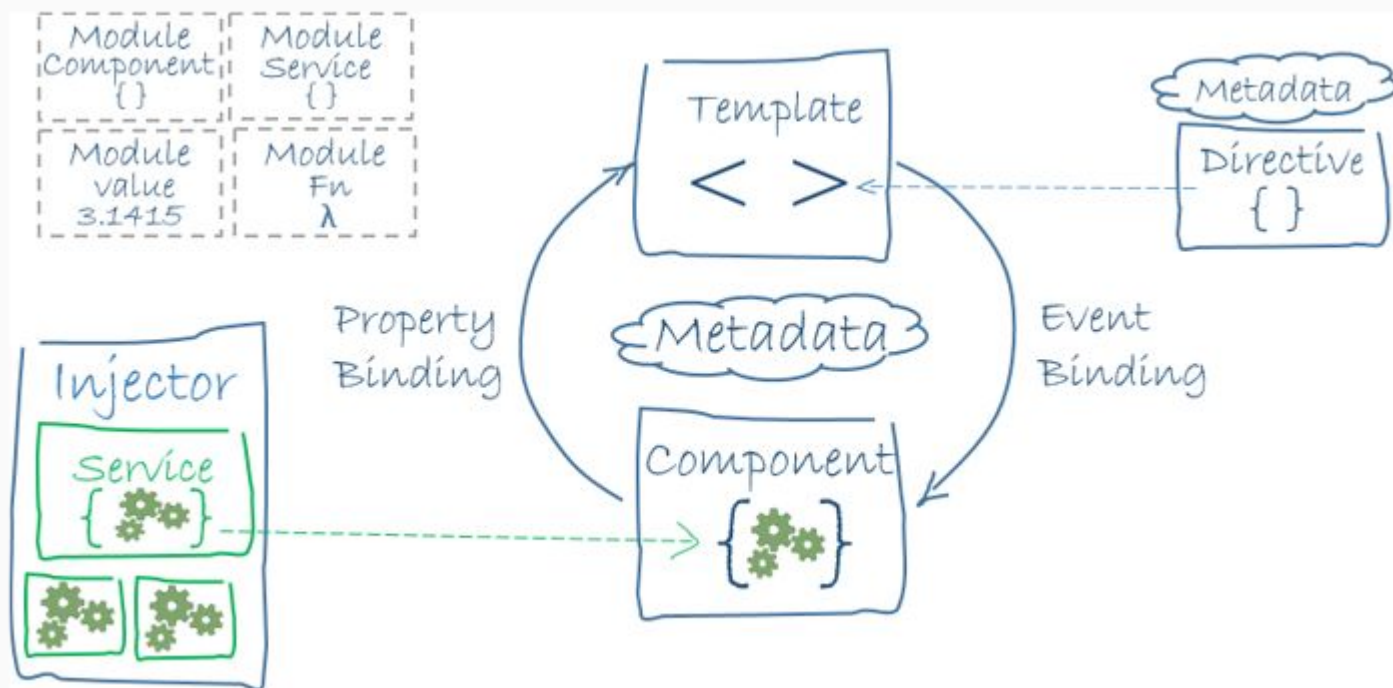
- Open Source in 2014 by Google as AngularJS, now just Angular...
- JavaScript Web Application Framework
- TypeScript & JavaScript
- Usable for Mobile & Desktop Apps
- Current Version 4.xxx

Semantic Versioning

- 2 releases per year
- No full rewrite anymore
- Detailed changelogs
- Upgrade guides



Overview



Modules

- @NgModule
- Help to organize large applications
- Imports other modules
- Consists of view components
- Every app has a root module
- Exposes services for Dependency Injection

```
11 import { AppComponent } from './app.component';
12 import { HomeComponent } from './home.component';
13
14 @NgModule({
15   ... imports: [
16     ... BrowserModule,
17     ... AppRoutingModule,
18     ... HttpClientModule,
19     ... LibModule
20   ],
21   ... declarations: [
22     ... LoginComponent,
23     ... AppComponent,
24     ... HomeComponent
25   ],
26   ... bootstrap: [
27     ... AppComponent
28   ],
29   ... providers: [
30     ... TableService,
31     ... AuthService,
32   ]
33 })
34
35 export class AppModule {}
36
```

Components

- @Component
- Plain TypeScript classes
- Responsible for view logic
- Every component has a template
- Templates use Angular template syntax

```
2 import { Component } from '@angular/core';
3 import { User } from '../lib/user';
4
5 @Component({
6   selector: 'home',
7   template: `
8     <h1>Welcome to the home component</h1>
9     <p>{{message | json}}</p>
10  `,
11   styles: ['home.component.scss']
12 })
13 export class HomeComponent {
14   private message: string;
15
16   constructor() {}
17 }
18
```

Directives & Pipes

- @Directive: Add behaviour/appearance

```
1 import { Directive, ElementRef, Renderer } from '@angular/core';
2 import { Product } from '../products/product';
3
4 @Directive({
5   selector: '[fo-no-select]'
6 })
7 export class NoSelectDirective {
8   private product: Product;
9
10  constructor(el: ElementRef, renderer: Renderer) {
11    renderer.setElementClass(el.nativeElement, 'no-select', true);
12  }
13 }
```

- @Pipe: Transform input to useful output
- Similar to unix pipes

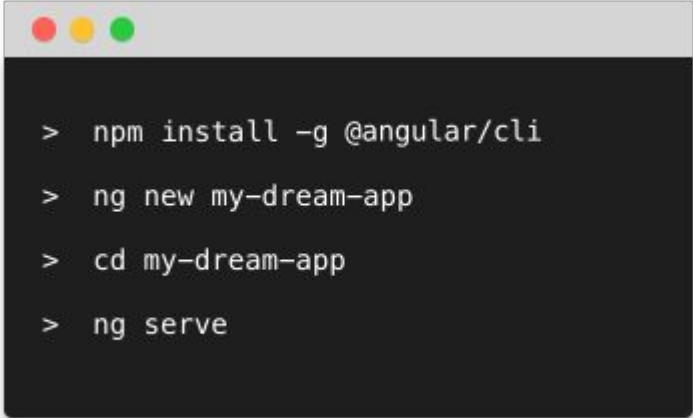
```
1 import { Pipe, PipeTransform } from '@angular/core';
2
3 @Pipe({
4   name: 'exponentialStrength'
5 })
6 export class ExponentialStrengthPipe implements PipeTransform {
7   transform(value: number, exponent: string): number {
8     let exp = parseFloat(exponent);
9     return Math.pow(value, isNaN(exp) ? 1 : exp);
10  }
11 }
12
```

Toolchain

- Dependency Management npm, yarn ...
- Compile TypeScript, Stylesheets, templates, assets tsc, ngc, scss, less ...
- Tests karma, jasmine, Protractor ...
- Post Processing & Bundling webpack, grunt, gulp, SystemJS ...
- Development Webserver for prod/dev environments, live reload ...

Angular CLI

- Fast and easy way to get started
 - Based on webpack
 - Configurable via `.angular-cli.json`
 - Supports different environments
-
- Magic ?

A terminal window with a dark background and a light gray title bar containing three colored window control buttons (red, yellow, green). The terminal displays four commands, each preceded by a prompt character '>'.

```
> npm install -g @angular/cli  
> ng new my-dream-app  
> cd my-dream-app  
> ng serve
```

{{ Demo }}