Angular2 in Action

章小飞(Aaron Zhang)

Google DevRel,Angular’s PM in China

2016-10-28

Contents

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- **Angular-cli**
- **Using Angular2**
  - Component(template,style,animation),Module,Route
- **Angular2 Core Architecture**
  - Dependency Injection,Data Binding
- **UI Libraries**
  - Angular-Material2,Prime-NG,ng-Bootstrap
- **A Complex Demo of ng2-bootstrap**

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Angular-cli

node
JS
2009, front-end big bang...

Angular-cli

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Angular-cli

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When we develop Angular apps,we need...

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Angular-cli

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Angular-cli is more than a tool,it is a PLATFORM!

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Angular-cli

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```
>npm install -g angular-cli
>ng help
>ng new my-project1
>ng serve
```

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Angular-cli

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>ng generate

cl:class
c:component
d:directive
e:enum
m:module
p:pipe
s:service

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Angular-cli

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angular-cli

```
WARNING in ./~/@angular/core/src/linker/system_js_ng_module_factory_loader.js
45:15 Critical dependency: the request of a dependency is an expression

WARNING in ./~/@angular/core/src/linker/system_js_ng_module_factory_loader.js
57:15 Critical dependency: the request of a dependency is an expression

ERROR in [default] E:\github\ng2-bootstrap-demo\src\app\user\add-user\add-user.component.spec.ts:8:20
Supplied parameters do not match any signature of call target.
13 10 2016 10:58:21.772:INFO [karma]: Karma v1.2.0 server started at http://localhost:9876/
13 10 2016 10:58:21.773:INFO [launcher]: Launching browser Chrome with unlimited concurrency
13 10 2016 10:58:21.897:INFO [launcher]: Starting browser Chrome
13 10 2016 10:58:24.805:INFO [Chrome 53.0.2785 (Windows 10 0.0.0)]: Connected on socket /#i6GL146TuIVZ1kPKAAAA with id 79091848
Chrome 53.0.2785 (Windows 10 0.0.0) App: Angular2BootstrapSass should create the app FAILED
        'router-outlet' is not a known element:
        1. If 'router-outlet' is an Angular component, then verify that it is part of this module.
        2. If 'router-outlet' is a Web Component then add "CUSTOM_ELEMENTS_SCHEMA" to the '@NgModule.schema' of this component to suppress this message.
        </div>
        <div class="main-container">
            [ERROR ->]<router-outlet></router-outlet>
        </div>
        "): AppComponent@42:4
        Error: Template parse errors:
            at TemplateParser.parse (http://localhost:9876/_karma_webpack_/0.bundle.js:7333:19)
            at RuntimeCompiler._compileTemplate (http://localhost:9876/_karma_webpack_/0.bundle.js:15632:51)
            at http://localhost:9876/_karma_webpack_/0.bundle.js:15555:83
            at Set.forEach (native)
            at compile (http://localhost:9876/_karma_webpack_/0.bundle.js:15555:47)
            at RuntimeCompiler._compileComponents (http://localhost:9876/_karma_webpack_/0.bundle.js:15557:13)
            at RuntimeCompiler._compileModuleAndAllComponents (http://localhost:9876/_karma_webpack_/0.bundle.js:15474:37)
            at RuntimeCompiler.compileModuleAndAllComponentsSync (http://localhost:9876/_karma_webpack_/0.bundle.js:15462:21)
            at TestingCompilerImpl.compileModuleAndAllComponentsSync (http://localhost:9876/_karma_webpack_/0.bundle.js:20504:35)
            at TestBed._initIfNeeded (webpack:///E:/github/ng2-bootstrap-demo/~/@angular/core/bundles/core-testing.umd.js:1059:0 <- src/test.ts:8814:40)
Chrome 53.0.2785 (Windows 10 0.0.0): Executed 1 of 10 (1 FAILED) (0 secs / 0.101 secs)
Chrome 53.0.2785 (Windows 10 0.0.0) App: Angular2BootstrapSass should create the app FAILED
        'router-outlet' is not a known element:
        1. If 'router-outlet' is an Angular component, then verify that it is part of this module.
        2. If 'router-outlet' is a Web Component then add "CUSTOM_ELEMENTS_SCHEMA" to the '@NgModule.schema' of this component to suppress this message.
        </div>
        <div class="main-container">
            [ERROR ->]<router-outlet></router-outlet>
        </div>
        "): AppComponent@42:4
        Error: Template parse errors:
            at TemplateParser.parse (http://localhost:9876/_karma_webpack_/0.bundle.js:7333:19)
```

>ng test

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Using Angular2

Using Angular2

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Android	Firefox	Chrome	IE
4.1 * ✔	46 7 ✔	52 7 ✔	9 7 ✖
4.2 * ✔			10 8 ✔
4.3 * ✔			11 8.1 ✔
4.4 * ✔			
5.1 * ✔			

Browser support of Angular2

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Using Angular2

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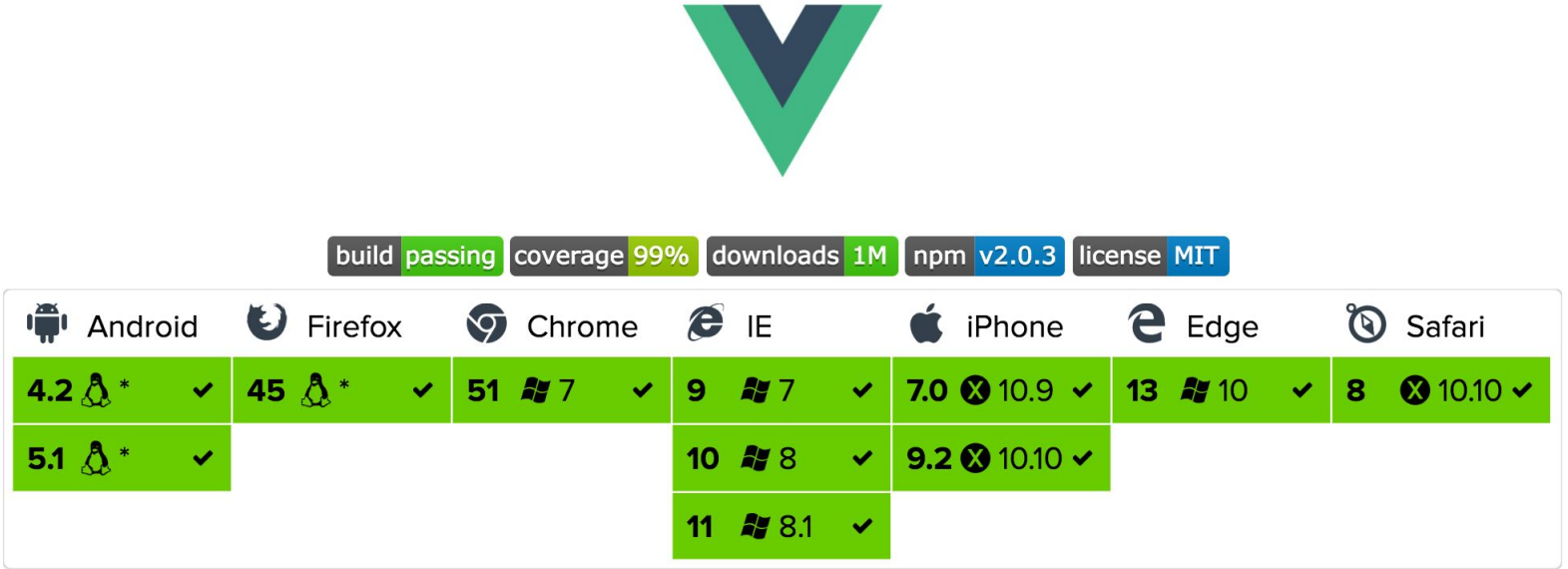

Browser support of Vuejs

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Using Angular2

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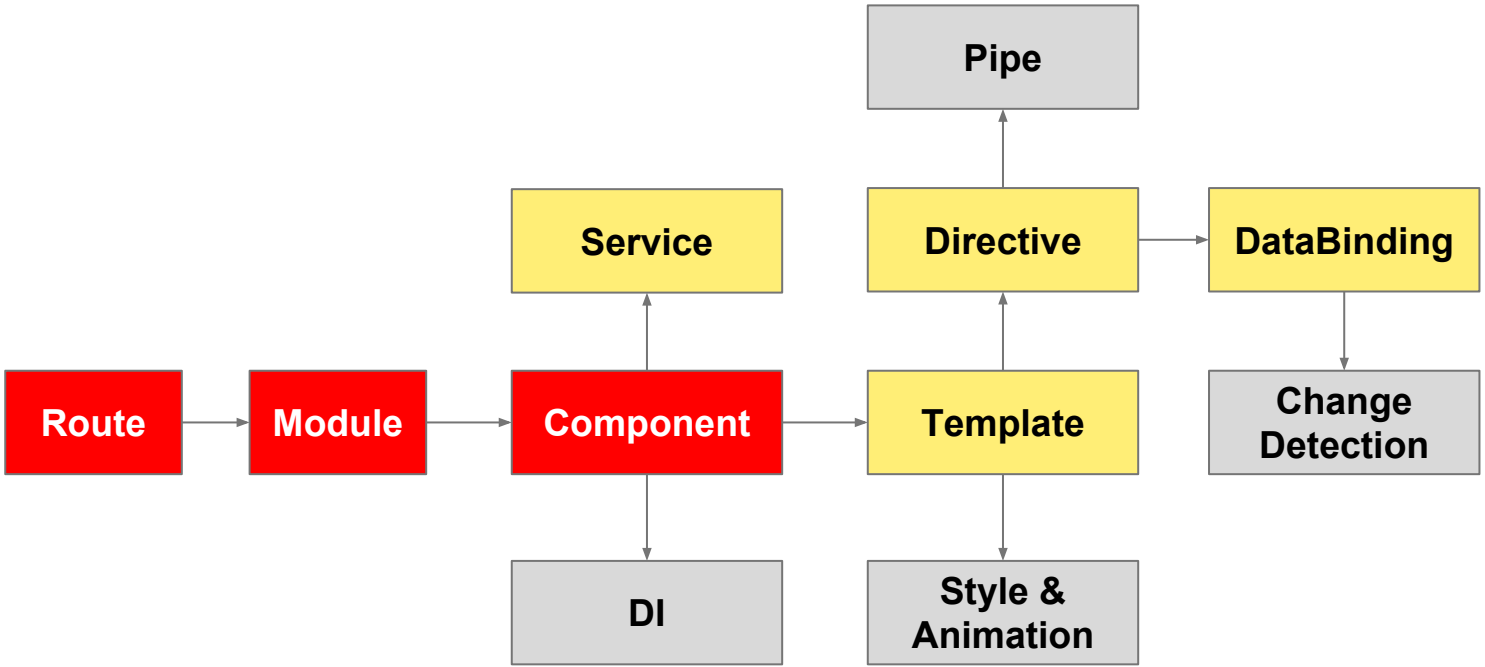

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Using Angular2

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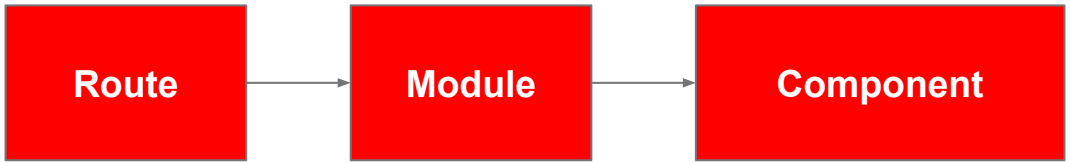

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Using Angular2

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https://github.com/damoqiongqiu/ng2-bootstrap-demo

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Using Angular2

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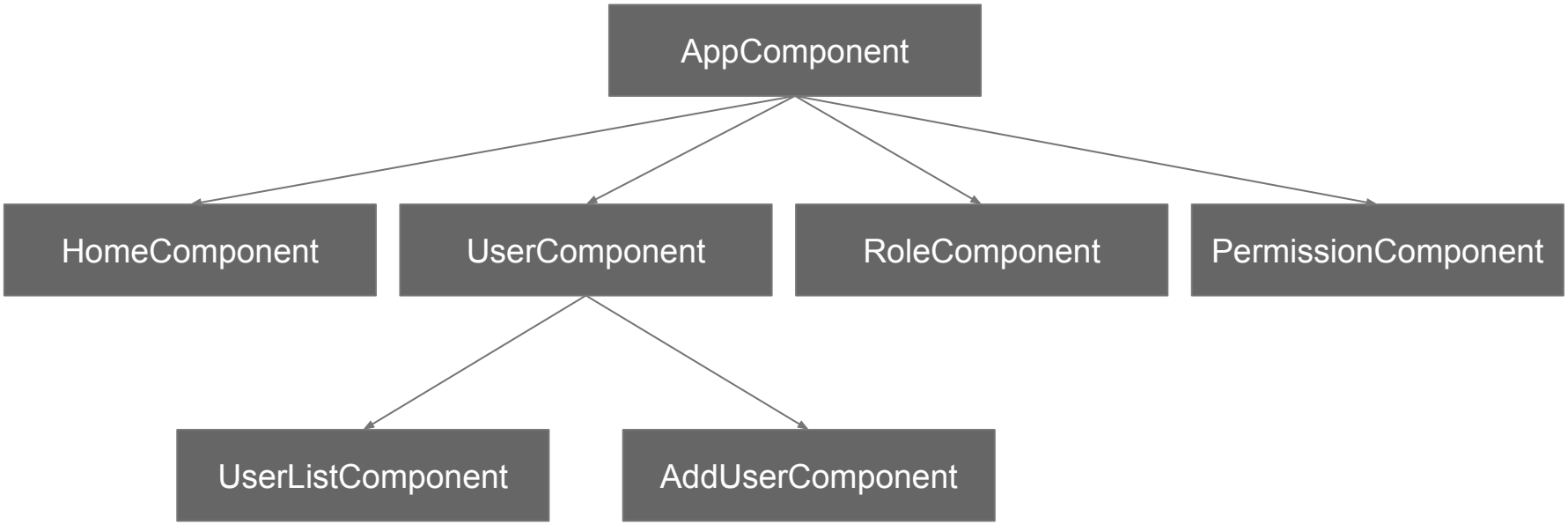

Tree

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Using Angular2

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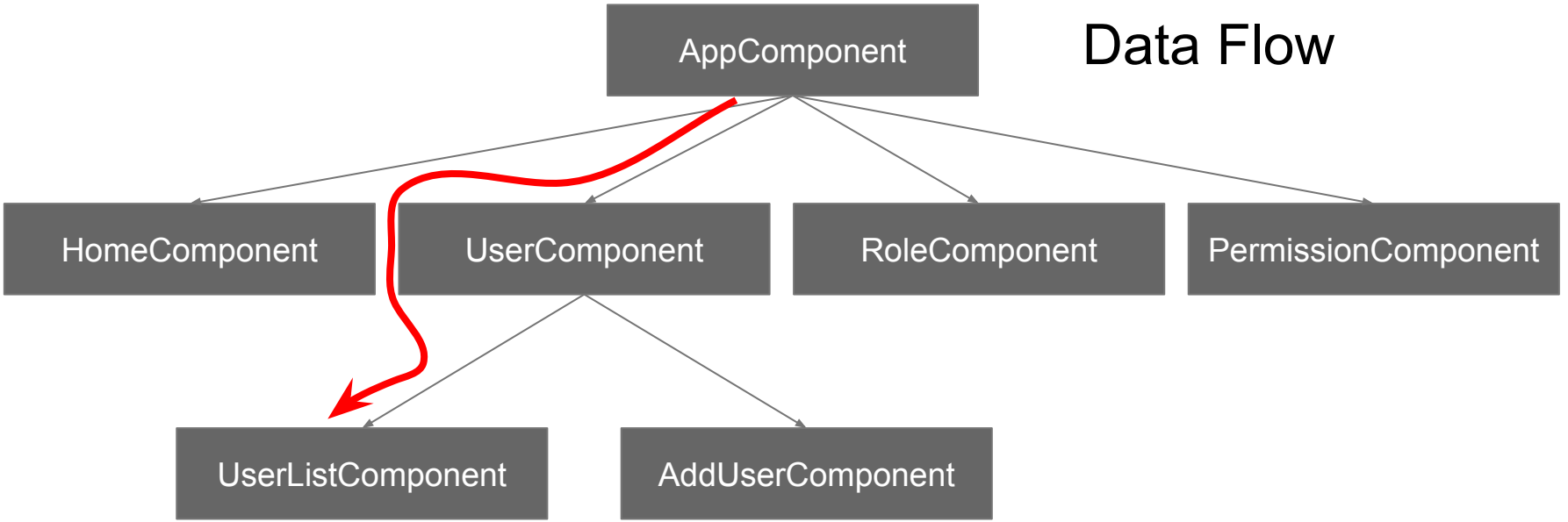

https://github.com/modern-javascript/angular2-data-flow

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Using Angular2

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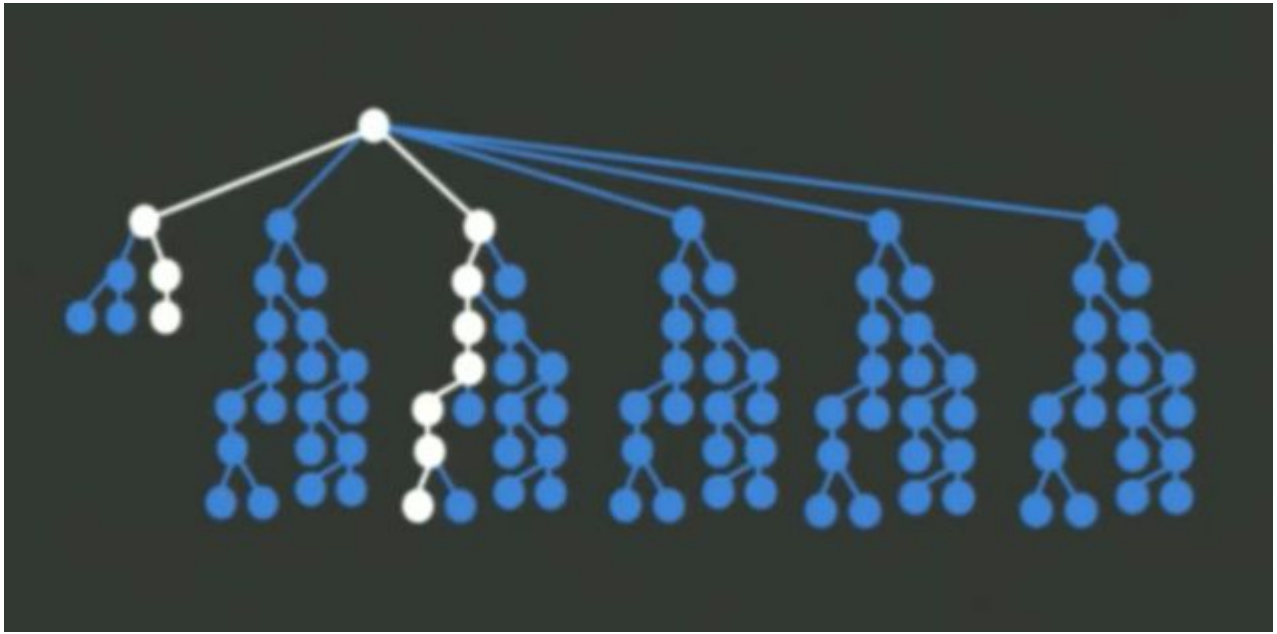

With immutable data

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Using Angular2:Module

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Why we need NgModule?

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Using Angular2:Module

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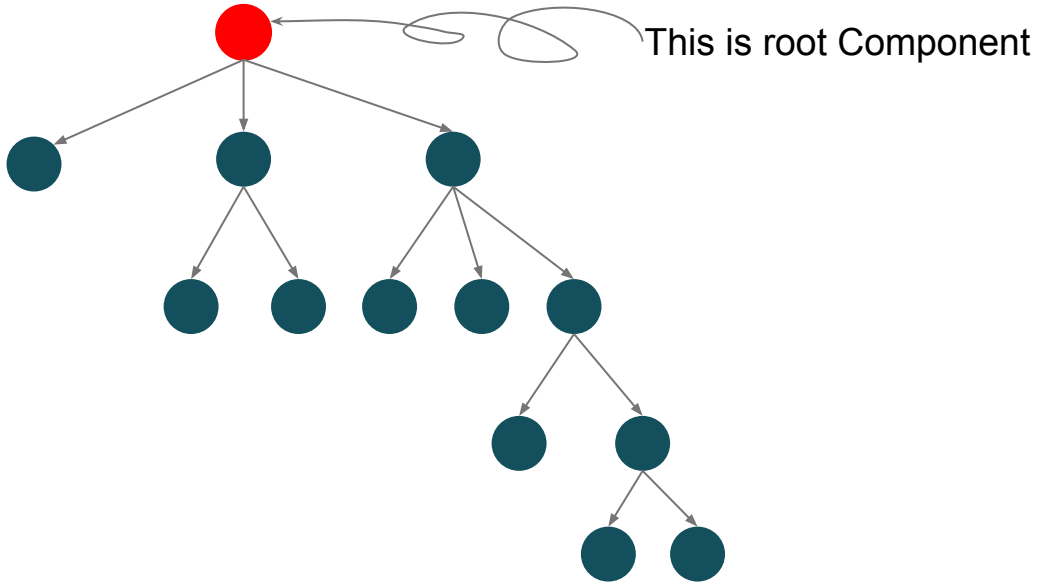

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Using Angular2:Module

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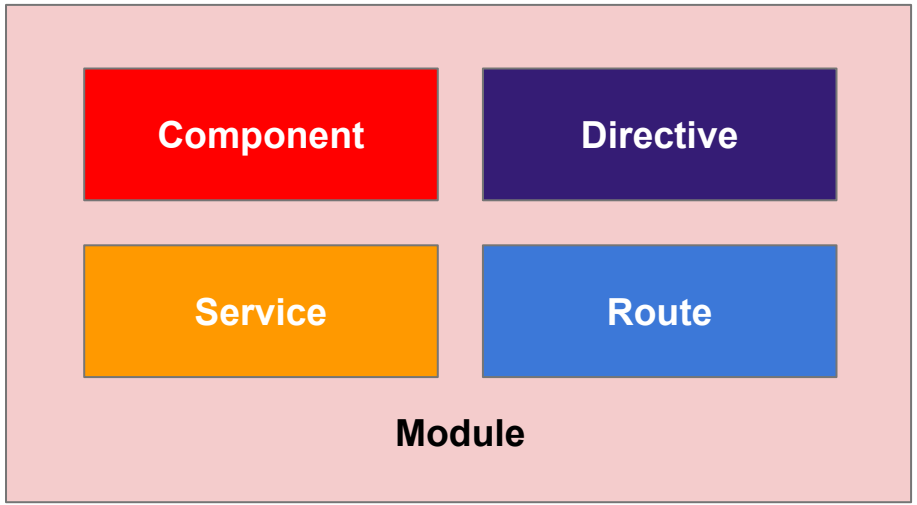

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Using Angular2:Module

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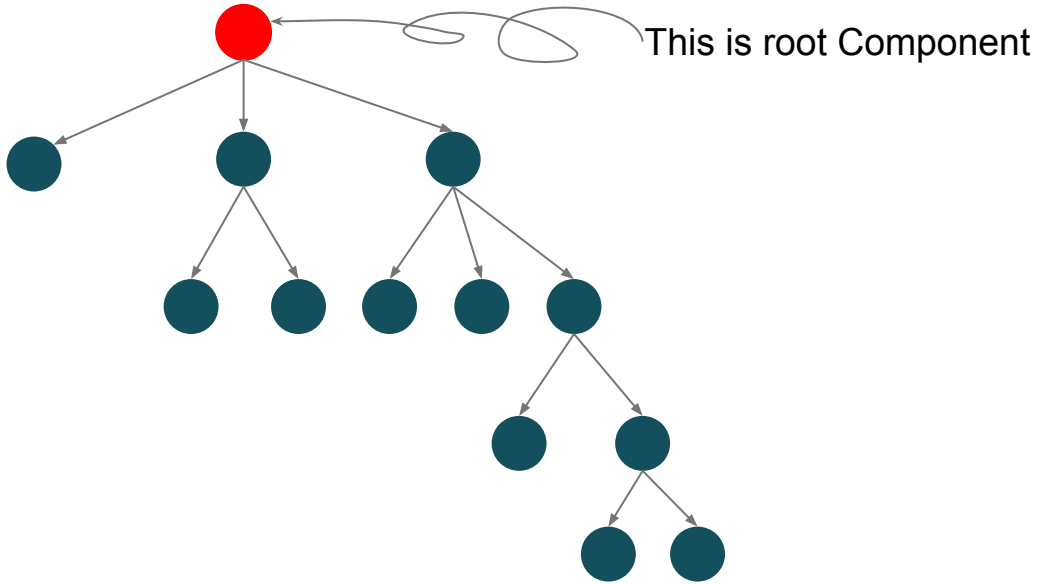

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Using Angular2:Module

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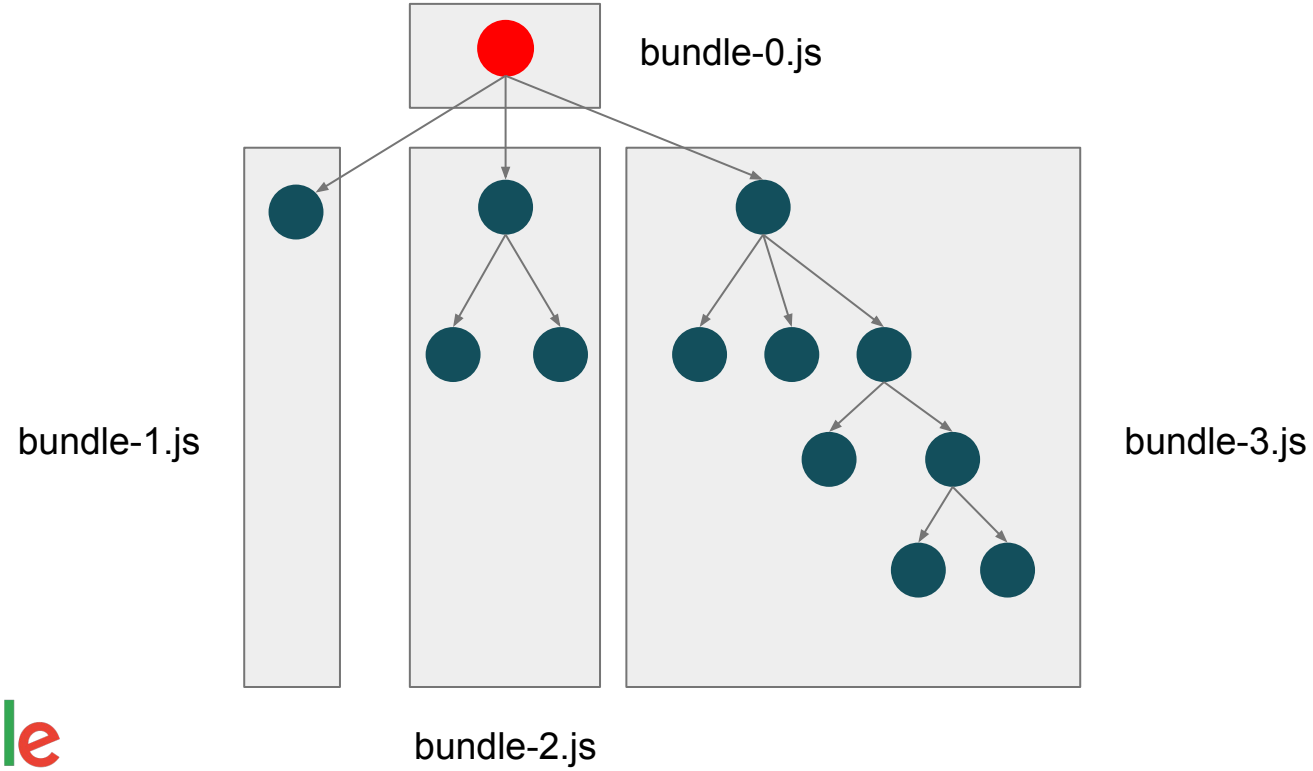

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Using Angular2:Module

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app.routes.ts

```
1  import { RouterModule } from '@angular/router';
2
3  const appRoutes=[
4      {
5          path:'',
6          loadChildren:'app/home/home.module'
7      },{
8          path:'home',
9          loadChildren:'app/home/home.module'
10     },{
11         path:'user',
12         loadChildren:'app/user/user.module'
13     },{
14         path:'role',
15         loadChildren:'app/role/role.module'
16     },{
17         path:'**',//fallback router must in the last
18         loadChildren:'app/home/home.module'
19     }
20 ];
21 export default RouterModule.forRoot(appRoutes);
```

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Using Angular2:Module

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home.routes.ts

```
1  import {RouterModule} from "@angular/router";
2  import {HomeComponent} from "./home.component";
3
4  const homeRoutes= [
5    {path: '', component: HomeComponent}
6  ];
7
8  export default RouterModule.forChild(homeRoutes);
```

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Using Angular2:Module

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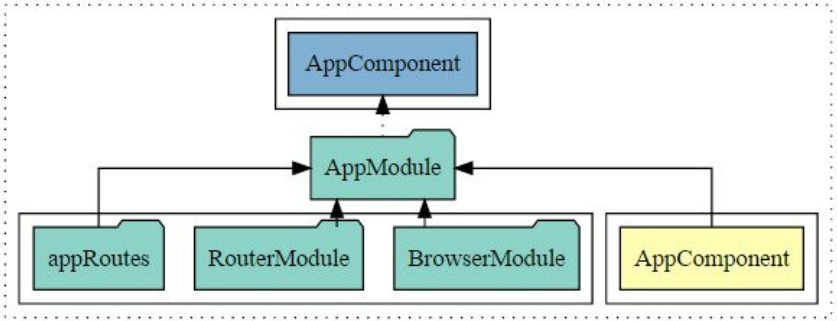

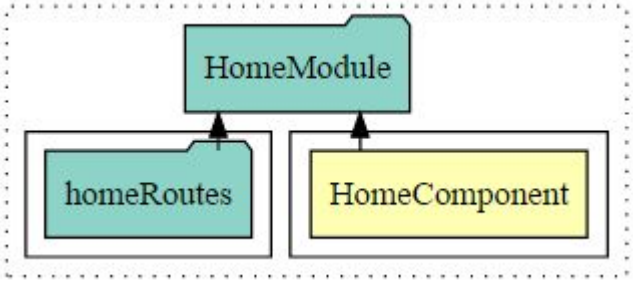

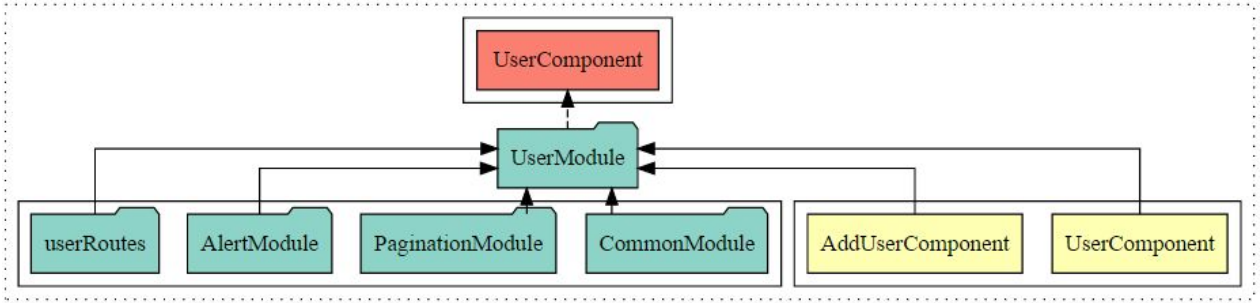

https://github.com/manekinekko/angular2-dependencies-graph

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Using Angular2:Module

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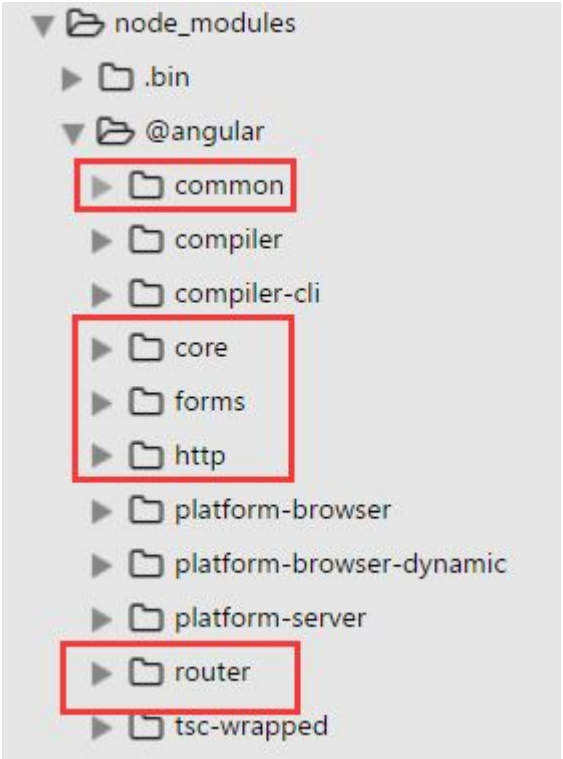

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Using Angular2:Route

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Basic Route

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Using Angular2:Route

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app.routes.ts

```
import { RouterModule } from '@angular/router';

const appRoutes=[
    {
        path:'',
        loadChildren:'app/home/home.module'
    },{
        path:'home',
        loadChildren:'app/home/home.module'
    },{
        path:'user',
        loadChildren:'app/user/user.module'
    },{
        path:'role',
        loadChildren:'app/role/role.module'
    },{
        path:'**',//fallback router must in the last
        loadChildren:'app/home/home.module'
    }
];
export default RouterModule.forRoot(appRoutes);
```

Route and lazy loading.

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Using Angular2:Route

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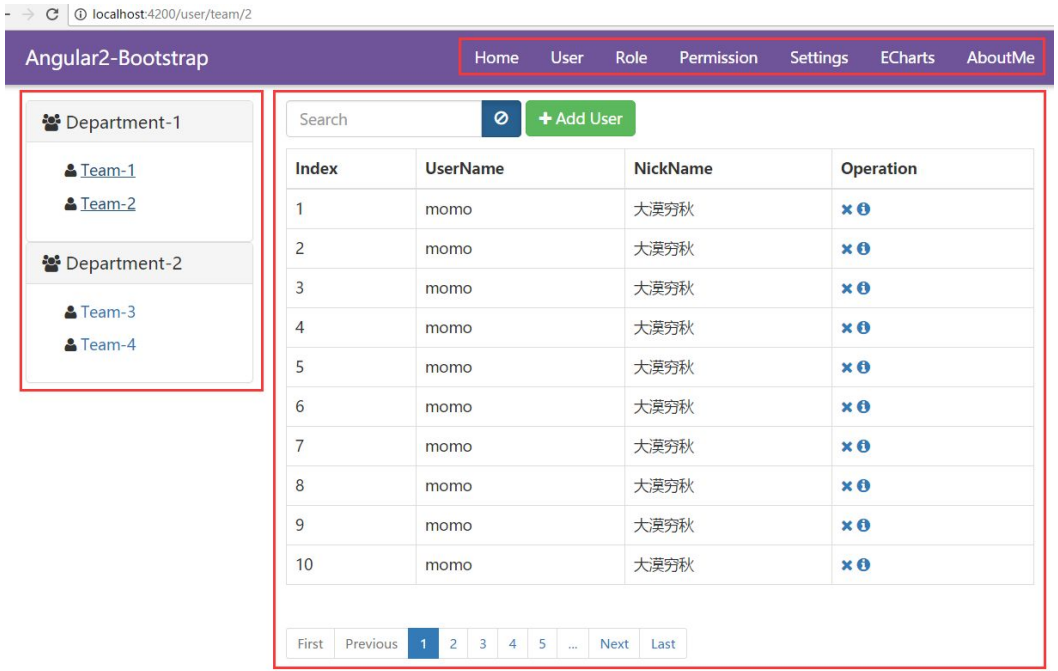

Nested Route

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Angular2 Core Architecture

Architecture:DI

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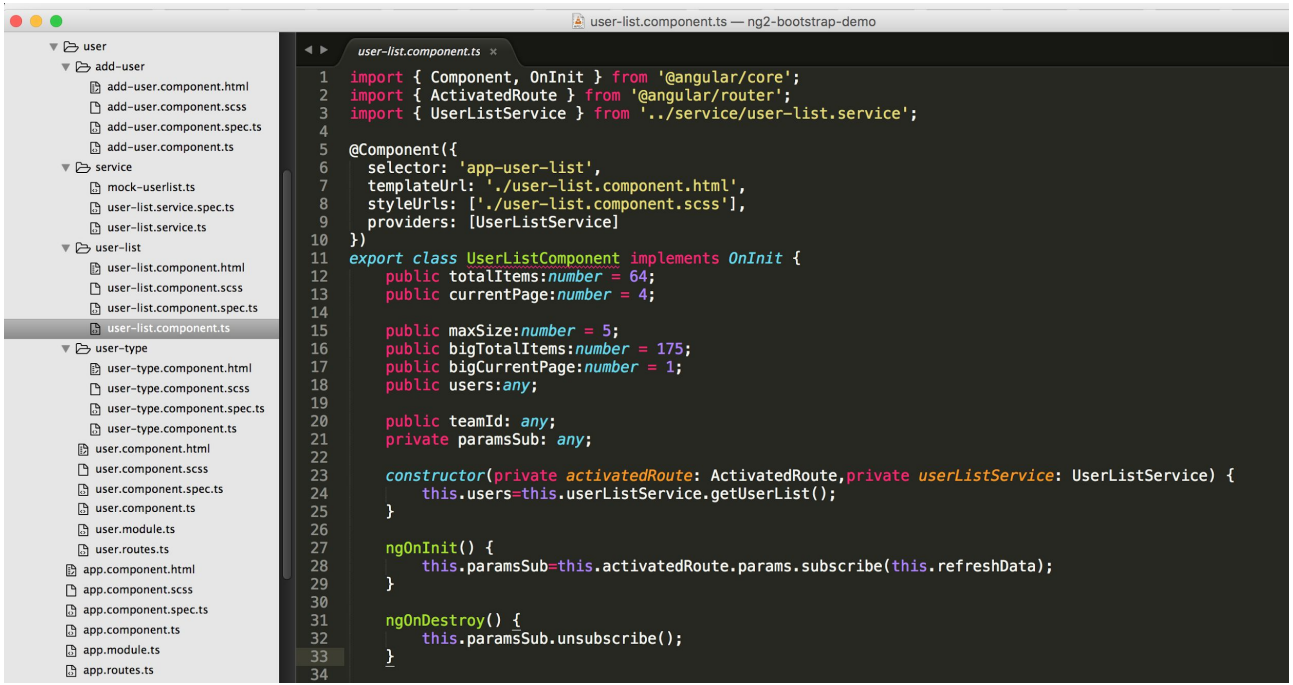

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Architecture:DI

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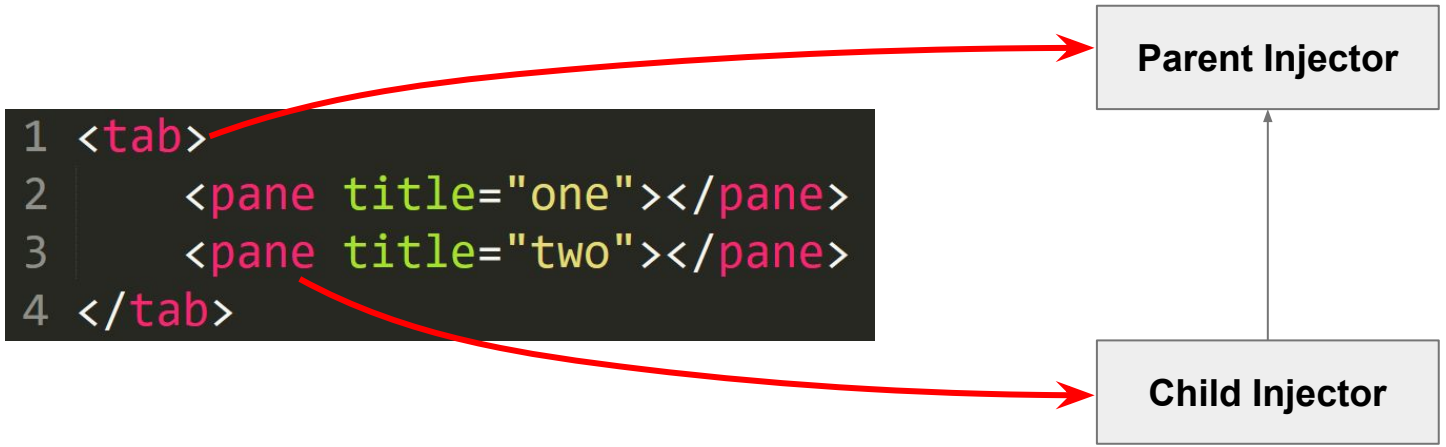
```
1 <tab>
2     <pane title="one"></pane>
3     <pane title="two"></pane>
4 </tab>
```



Injector tree

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Architecture:DI

Google Developers

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Architecture:DI

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- Each HTML tag has a injector
- Inject through constructor
- @Injectable and its children @Component

https://vsavkin.com/dependency-injection-in-angular-1-and-angular-2-d69589979c18#.3ptlx48zf

https://my.oschina.net/mumu/blog/775695

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Architecture:DataBinding

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http://blog.thoughtram.io/angular/2016/02/22/angular-2-change-detection-explained.html

http://pascalprecht.github.io/slides/angular-2-change-detection-explained/#/

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UI Libraries

UI Libraries

Google Developers

- ng-bootstrap is currently available.
- PrimeNG has largest number of components.
- Angular-Material2 is in beta.
- KendoUI is creating components for ng2.
- Ionic is very popular.

What if there is no ANSI C standard library?

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UI Libraries

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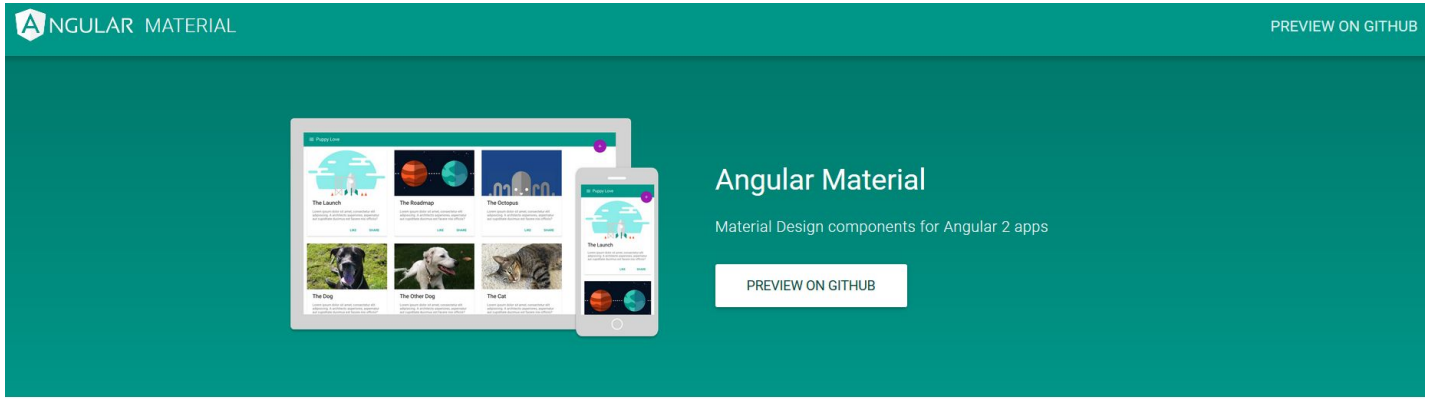

Angular2-Material

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UI Libraries

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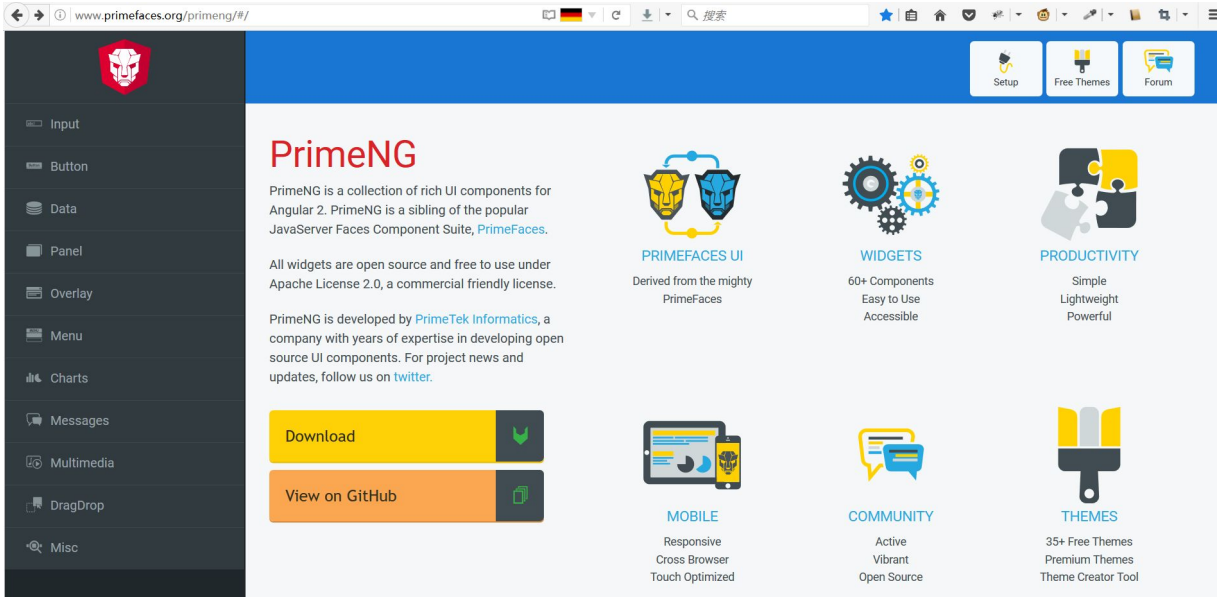

PrimeNG

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UI Libraries

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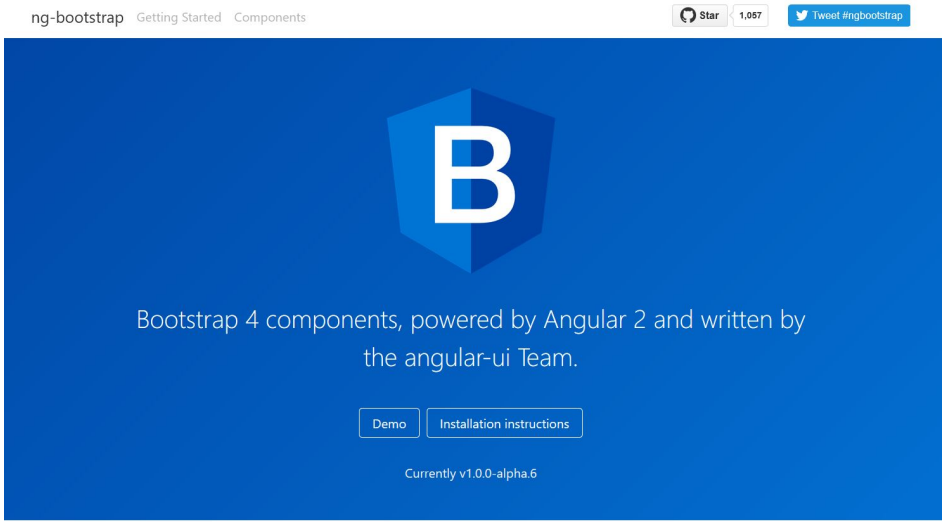

RECOMMENDED:ng-bootstrap

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UI Libraries

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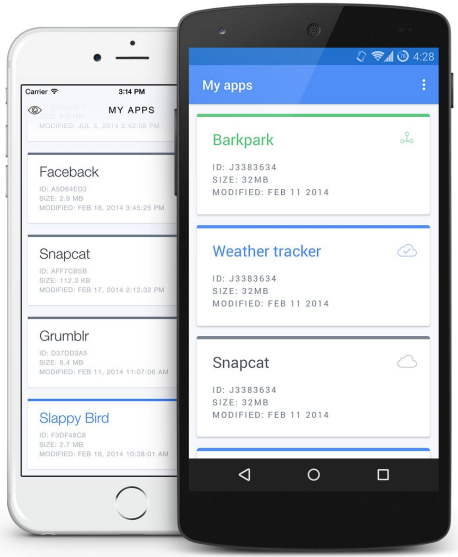

ionic

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A Complex Demo of ng2-bootstrap

A Complex Demo Of ng2-bootstrap

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https://github.com/damoqiongqiu/ng2-bootstrap-demo

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Angular Team

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长按关注 谷歌官方公众号

『谷歌开发者』

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DevRel-China-Contact@google.com

谢谢

GDG