

Lab3 说明文档

17302010075 孙梦

Part1 安装 Node 和 npm

在 lab 之前电脑已经安装好了 node 和 npm

```
C:\Users\bh1b\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular>npm -v
6.13.4

C:\Users\bh1b\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular>node -v
v12.16.1
```

Part2 安装 angular

(1) 设置开发环境

全局安装 Angular Cli

```
C:\Users\bh1b\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular>npm install -g @angular/cli
npm WARN deprecated request@2.88.2: request has been deprecated, see https://github.com/request/request/issues/3142
C:\Users\bh1b\.npm-global\ng -> C:\Users\bh1b\.npm-global\node_modules\@angular\cli\bin\ng

> @angular/cli@9.1.4 postinstall C:\Users\bh1b\.npm-global\node_modules\@angular\cli
> node ./bin/postinstall/script.js

+ @angular/cli@9.1.4
removed 1 package and updated 15 packages in 13.079s
```

```
C:\Users\bh1b\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular>ng version
```

Angular CLI

```
Angular CLI: 9.1.0
Node: 12.16.1
OS: win32 x64
```

```
Angular:
...
Ivy Workspace:
```

Package	Version
@angular-devkit/architect	0.901.0
@angular-devkit/core	9.1.0
@angular-devkit/schematics	9.1.0
@schematics/angular	9.1.0
@schematics/update	0.901.0
rxjs	6.5.4















(2) 创建工作区和初始应用

```

C:\Users\bhlb\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab
2.1_Docs-Angular>ng new angular-learning
? Would you like to add Angular routing? Yes
? Which stylesheet format would you like to use? CSS
CREATE angular-learning/angular.json (3646 bytes)
CREATE angular-learning/package.json (1292 bytes)
CREATE angular-learning/README.md (1032 bytes)
CREATE angular-learning/tsconfig.json (489 bytes)
CREATE angular-learning/tslint.json (3125 bytes)
CREATE angular-learning/.editorconfig (274 bytes)
CREATE angular-learning/.gitignore (631 bytes)
CREATE angular-learning/browserslist (429 bytes)
CREATE angular-learning/karma.conf.js (1028 bytes)
CREATE angular-learning/tsconfig.app.json (210 bytes)
CREATE angular-learning/tsconfig.spec.json (270 bytes)
CREATE angular-learning/src/favicon.ico (948 bytes)
CREATE angular-learning/src/index.html (301 bytes)
CREATE angular-learning/src/main.ts (372 bytes)
CREATE angular-learning/src/polyfills.ts (2835 bytes)
CREATE angular-learning/src/styles.css (80 bytes)
CREATE angular-learning/src/test.ts (753 bytes)
CREATE angular-learning/src/assets/.gitkeep (0 bytes)
CREATE angular-learning/src/environments/environment.prod.ts (51 bytes)

```

项目结构

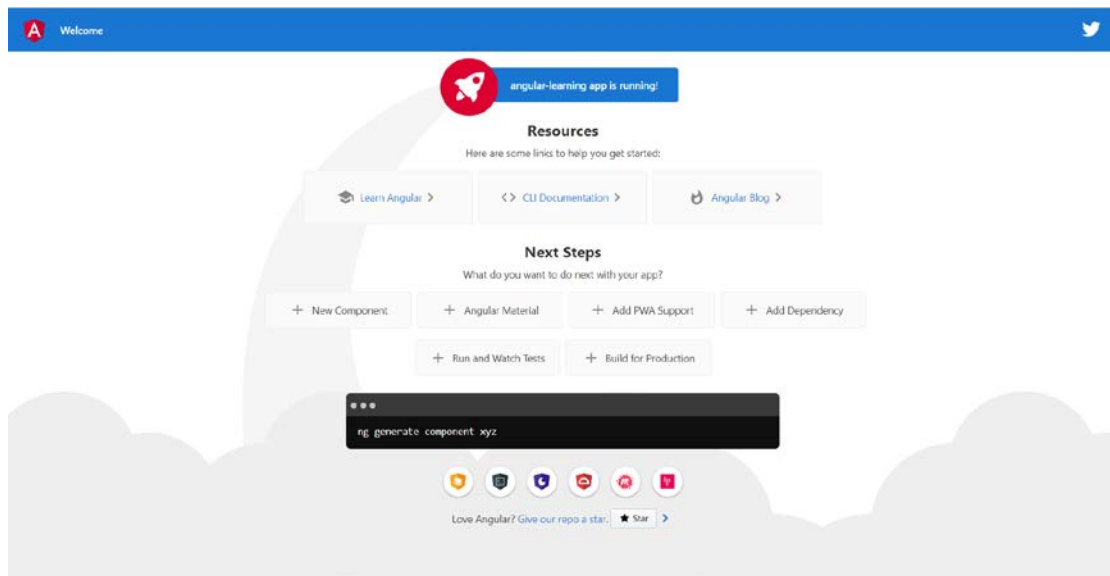
名称	修改日期	类型
 e2e	2020/5/4 18:38	文件夹
 node_modules	2020/5/4 18:38	文件夹
 src	2020/5/4 18:38	文件夹
 .editorconfig	2020/5/4 18:38	EDITORCONF
 .gitignore	2020/5/4 18:38	文本文档
 angular.json	2020/5/4 18:38	JetBrains Web
 browserslist	2020/5/4 18:38	文件
 karma.conf.js	2020/5/4 18:38	JetBrains Web
 package.json	2020/5/4 18:38	JetBrains Web
 README.md	2020/5/4 18:38	MD 文件
 tsconfig.app.json	2020/5/4 18:38	JetBrains Web
 tsconfig.json	2020/5/4 18:38	JetBrains Web
 tsconfig.spec.json	2020/5/4 18:38	JetBrains Web
 tslint.json	2020/5/4 18:38	JetBrains Web

(3) 启动服务器

```

C:\Users\bhlb\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular\angular-learning>ng serve --open
? Would you like to share anonymous usage data about this project with the Angular Team? Would you like to share anonymous usage data about
this project with the Angular Team? Would you like to share anonymous usage data about this project with the Angular Team at
Google under Google's Privacy Policy at https://policies.google.com/privacy? For more
details and how to change this setting, see http://angular.io/analytics. Yes
Thank you for sharing anonymous usage data. Would you change your mind, the following command will disable this feature entirely:
  ng analytics project off
Compiling @angular/animations : es2015 as esm2015
Compiling @angular/compiler/testing : es2015 as esm2015
Compiling @angular/core : es2015 as esm2015

```



(4) 使用 npm 安装 Material UI 库

```
C:\Users\bh1b\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular\angular-learning>npm install --save @angular/cdk
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.1.3 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.1.3: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.12 (node_modules\webpack-dev-server\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.12: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.12 (node_modules\webpack\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.12: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
+ @angular/cdk@9.2.2
added 2 packages from 1 contributor and removed 1 package in 14.228s
```

```
C:\Users\bh1b\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular\angular-learning>npm install --save @angular/material
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.1.3 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.1.3: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.12 (node_modules\webpack-dev-server\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.12: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.12 (node_modules\webpack\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.12: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
+ @angular/material@9.2.2
added 1 package in 15.259s

48 packages are looking for funding
  run `npm fund` for details
```

package.json 的变化

```
@angular/animations : 9.1.10
"@angular/cdk": "^9.2.2",
```

```
"@angular/material": "^9.2.2",
```

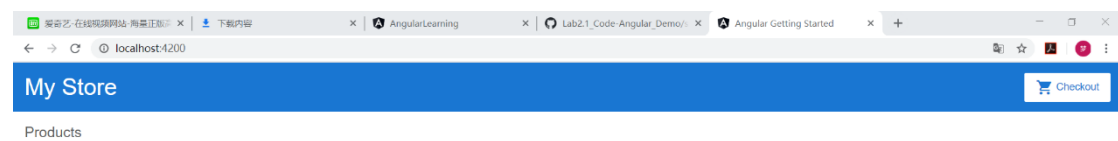
Part3 angular 起步

下载项目并启动

```
sunmeng@DESKTOP-GTKV9C9 MINGW64 ~/Desktop/大三下/高级web/lab/lab3/web_2020-Lab2.1_Docs-Angular-master/Lab2.1_Docs-Angular
$ git clone https://github.com/2020-web/Lab2.1_Code-Angular_Demo.git
Cloning into 'Lab2.1_Code-Angular_Demo'...
remote: Enumerating objects: 38, done.
remote: Total 38 (delta 0), reused 0 (delta 0), pack-reused 38
Unpacking objects: 100% (38/38), done.
```

```
C:\Users\bhlb\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular\Lab2.1_Code-Angular_Demo>npm install
C:\Users\bhlb\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular\Lab2.1_Code-Angular_Demo>ng serve
Your global Angular CLI version (0.1.0) is greater than your local
```

页面展示



3.1 angular 基本概念

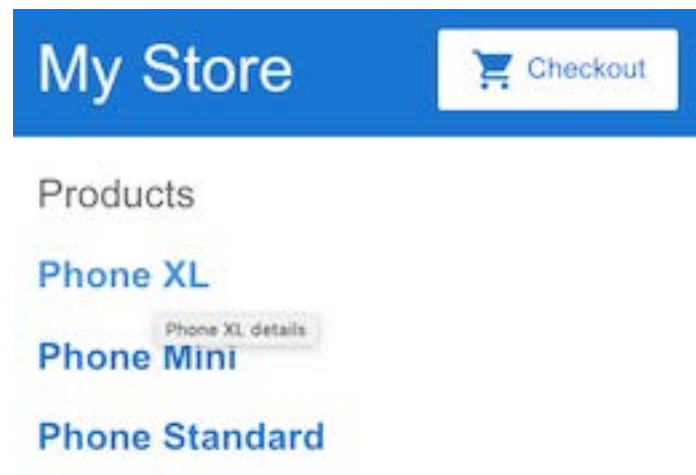
3.2 Typescript

3.3 理解起始功能

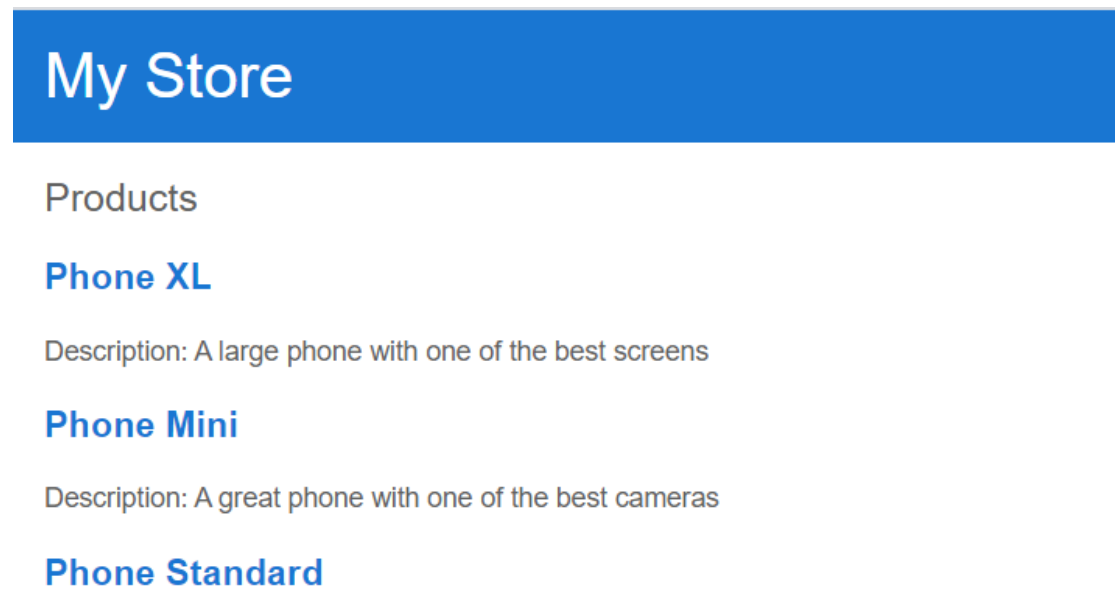
通过 ng-for 指令渲染出属性



[]属性绑定



ngIf 添加商品说明



添加按钮和事件绑定 ()

Products

Phone XL

Description: A large phone with one of the best screens

Share

Phone Mini

Description: A great phone with one of the best cameras

Share

Phone Standard

Share

代码

```
<h2>Products</h2>

<div *ngFor="let product of products">
  <h3>
    <a [title]="product.name + ' details'">
      {{ product.name }}
    </a>
  </h3>

  <p *ngIf="product.description">
    Description: {{ product.description }}
  </p>

  <button (click)="share()">
    Share
  </button>
</div>
```

组件

创建新组件

```
C:\Users\bhlb\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular\Lab2.1_Code-Angular_Demo>ng generate component product-alerts
Your global Angular CLI version (9.1.0) is greater than your local
version (7.0.7). The local Angular CLI version is used.

To disable this warning use "ng config -g cli.warnings.versionMismatch false".
CREATE src/app/product-alerts/product-alerts.component.html (33 bytes)
CREATE src/app/product-alerts/product-alerts.component.spec.ts (678 bytes)
CREATE src/app/product-alerts/product-alerts.component.ts (300 bytes)
CREATE src/app/product-alerts/product-alerts.component.css (0 bytes)
UPDATE src/app/app.module.ts (1140 bytes)
```

product-alerts.component.ts

```
import { Component, OnInit } from '@angular/core';
import { Input } from '@angular/core';
import { Output, EventEmitter } from '@angular/core';

@Component({
  selector: 'app-product-alerts',
  templateUrl: './product-alerts.component.html',
  styleUrls: ['./product-alerts.component.css']
})
export class ProductAlertsComponent implements OnInit {
  @Input() product;
  @Output() notify = new EventEmitter();
  constructor() { }

  ngOnInit() {
  }
}
```

product-alerts.component.html

```
<p *ngIf="product.price >700">
  <button (click)="notify.emit()">notify me</button>
</p>
```

product-list.component.html

```
<p *ngIf="product.description">
  Description: {{ product.description }}
</p>

<button (click)="share()">
  Share
</button>

<app-product-alerts [product]="product" (notify)="onNotify()"></app-pr>

</div>
```

页面展示

Products

Phone XL

Description: A large phone with one of the best screens

Share

notify me

Phone Mini

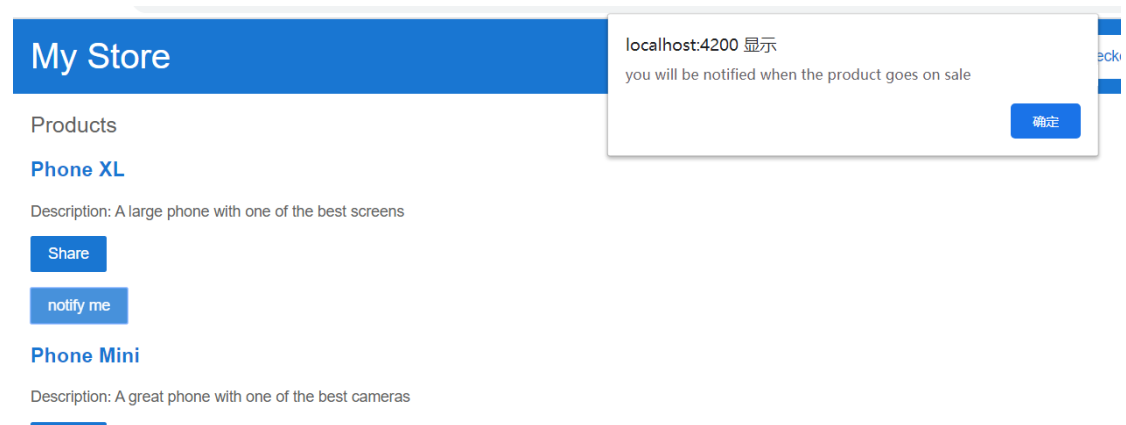
Description: A great phone with one of the best cameras

Share

Phone Standard

Share

添加响应



3.6 路由

创建 product-details 组件

```
C:\Users\bh1b\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular\Lab2.1_Code-Angular_Demo>ng generate component product-details
Your global Angular CLI version (9.1.0) is greater than your local
version (7.0.7). The local Angular CLI version is used.

To disable this warning use "ng config -g cli.warnings.versionMismatch false".
CREATE src/app/prduct-details/prduct-details.component.html (33 bytes)
CREATE src/app/prduct-details/prduct-details.component.spec.ts (678 bytes)
CREATE src/app/prduct-details/prduct-details.component.ts (300 bytes)
CREATE src/app/prduct-details/prduct-details.component.css (0 bytes)
UPDATE src/app/app.module.ts (1136 bytes)
```


在 app.module.ts 中修改路由规则

```
import { BrowserModule,
  ReactiveFormsModule,
  RouterModule.forRoot([
    { path: '', component: ProductListComponent },
    {path: 'products/:productId', component: PrductDetailsComponent},
  ])
} from '@angular/core';
```

在 product-list.component.html 加入 routerLink

```
<div *ngFor="let product of products; index as productId">
  <h3>
    <a [title]="product.name + ' details'" [routerLink]="['/products',productId]">
      {{ product.name }}
    </a>
  </h3>
</div>
```



使用路由信息

product-details.component.ts

```
import { Component, OnInit } from '@angular/core';
import { ActivatedRoute } from '@angular/router';
import { products } from '../products';

@Component({
  selector: 'app-prduct-details',
  templateUrl: './product-details.component.html',
  styleUrls: ['./product-details.component.css']
})
export class PrductDetailsComponent implements OnInit {
  constructor(private route :ActivatedRoute) { }

  ngOnInit() {
    this.route.paramMap.subscribe(params =>{
      this.product =products[+params.get('productId')];
    });
  }
}
```

product-details.component.html

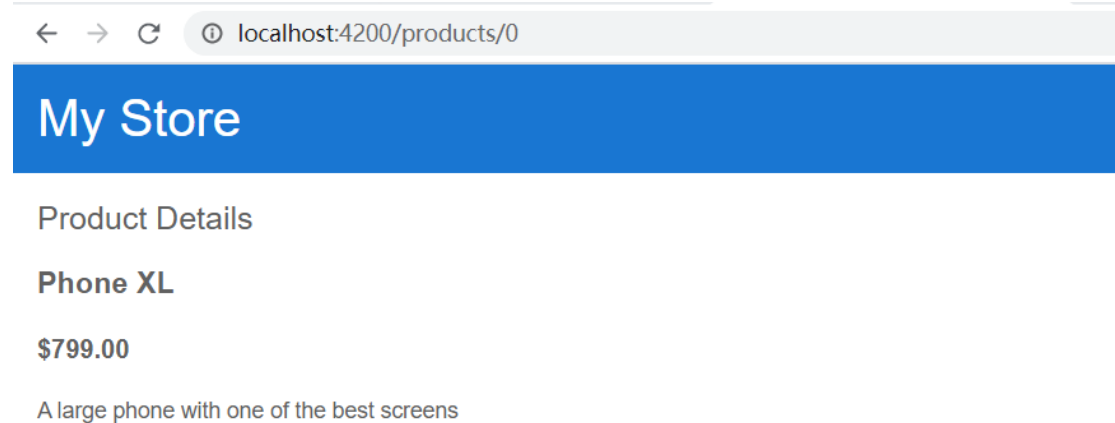
```

<h2>Product Details</h2>

<div *ngIf="product">
  <h3>{{ product.name }}</h3>
  <h4>{{ product.price | currency }}</h4>
  <p>{{ product.description }}</p>
</div>

```

页面展示



Part4 继续学习 angular

原来对于 angular 组件之间的通信和路由控制搞得不是很明白，网上的相关教程太多导致反而有点乱，通过本次 lab 有了一比较清晰地认识。

Angular 与后端通信，angular 中 nginx 反向代理

Part5 部署

```

C:\Users\bh1b\Desktop\大三下\高级web\lab\lab3\web_2020-Lab2.1_Docs-Angular-master\Lab2.1_Docs-Angular\Lab2.1_Code-Angular_Demo>ng build --prod
Your global Angular CLI version (9.1.0) is greater than your local
version (7.0.7). The local Angular CLI version is used.

To disable this warning use "ng config -g cli.warnings.versionMismatch false".

```

会生成一个 dist 文件夹，然后将文件夹上传到服务器

Part6 lab 中遇到的问题

(1) 删除组件

首先是删除对应的文件夹，还要将 app.module.ts 中相关的引入，组件名称删掉。