Angular

DEMO 目錄

- **透過 npm 安裝 CLI**
- **建立新專案**
- **執行專案：透過 npm 指令執行專案**
- **新增兩個 comps & 整合 Route**
- **介紹 Data Biding & ngFor**
- **整合前端UI框架 ANT DESIGN**

透過 npm 安裝 CLI
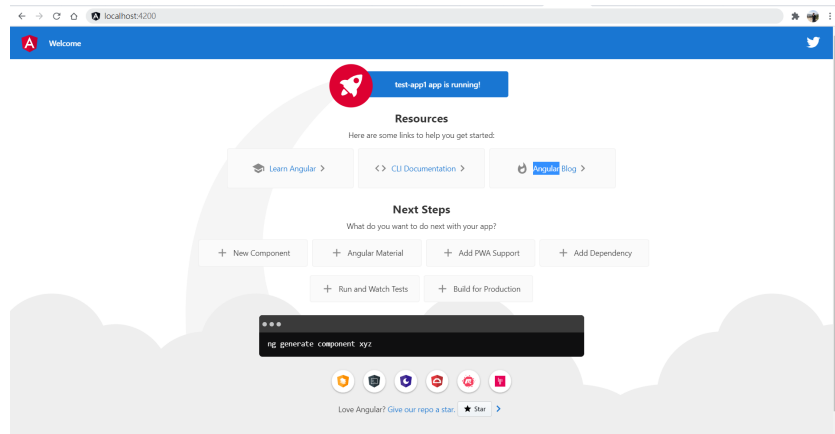
```
npm install -g @angular/cli
```

建立新專案

```
ng new study-app1

# 建立專案時，選擇新增 route 和 CSS style
```

說明專案目錄結構

- e2e (end-to-end tests for my-app)
- node_modules (NPM 管理套件)
- src (專案程式碼)

執行專案：透過 npm 指令執行專案

```
cd study-app1
npm run start

# 確認專案啟動：http://localhost:4200/
```

新增兩個 comps & 整合 Route

建立 comps

```
ng generate component pages/first
ng generate component pages/second
```

新增 routes 的設定路徑 app-routing.module.ts

```
const routes: Routes = [
  { path: 'first-component', component: FirstComponent },
  { path: 'second-component', component: SecondComponent }
];

//
```

重新編輯首頁 app.component.html

```
<h1>Angular Router App</h1>
<!-- This nav gives you links to click, which tells the router which route to use (defined in the routes constant in  AppRoutingModu
<nav>
  <ul>
    <li><a routerLink="/first-component" routerLinkActive="active">First Component</a></li>
    <li><a routerLink="/second-component" routerLinkActive="active">Second Component</a></li>
  </ul>
</nav>
<!-- The routed views render in the <router-outlet>-->
<router-outlet></router-outlet>
```

確認 Page & Route

Angular Router App

- First Component
- Second Component

first works!

介紹 Data Biding & ngFor

- Data Biding (One Way & Two Way)
- https://angular.io/guide/architecture-components#data-binding
- Directives
- https://angular.io/guide/architecture-components#directives

測試範例: 修改 First Component

編輯 first.component.ts

```
import { Component, OnInit } from '@angular/core';
interface Person {
  key: string;
  name: string;
  age: number;
  address: string;
}
@Component({
  selector: 'app-first',
  templateUrl: './first.component.html',
  styleUrls: ['./first.component.css']
})
export class FirstComponent implements OnInit {
  public show: boolean = true;
  public title: string;
  name: string = '';
  items = [{ name: 'work' }, { name: 'sport' }, { name: 'learn' }];
  listOfData: Person[] = [
    {
      key: '1',
      name: 'John Brown',
      age: 32,
      address: 'New York No. 1 Lake Park'
    },
    {
      key: '2',
      name: 'Jim Green',
      age: 42,
      address: 'London No. 1 Lake Park'
    },
    {
      key: '3',
      name: 'Joe Black',
      age: 32,
      address: 'Sidney No. 1 Lake Park'
    }
  ];

  constructor() { }
```

```
  ngOnInit(): void {
    this.title = "Hello First!!";
  }

  changeTitle(): void {
    console.log("log.............");
    this.title = "Hello Livia!!";
  }

  setValue():void { this.name = 'Nancy'; }
}
```

編輯 first.component.html

```
<p>{{ title }}</p>  <!-- One Way Binding-->
<ul>
    <li *ngFor="let item of items"> <!-- directives -->
    {{ item.name }}
    </li>
</ul>
<tr *ngFor="let data of listOfData">    <!-- directives -->
    <td>{{ data.name }} </td>
    <td>{{ data.age }} </td>
    <td>{{ data.address }} </td>
</tr>
<hr>
<button (click)="changeTitle()">CHANGE TITLE</button>
<hr>
<button (click)="show = !show">{{show ? 'HIDE' : 'SHOW'}}</button>
show = {{show}}
<br>
<div *ngIf="show">Text to show</div>    <!-- directives -->
<hr>
<input [(ngModel)]="name" #ctrl="ngModel" required> <!-- Two Way Binding-->
Value: {{ name }}
<button (click)="setValue()">Set value</button>
```

編輯 app.module.ts

```
import { FormsModule } from '@angular/forms'; // <--- JavaScript import from Angular
...
  imports: [
    BrowserModule,
    AppRoutingModule,
    FormsModule // Add
  ],
```

整合前端UI框架 ANT DESIGN

https://ng.ant.design/docs/introduce/en

安裝 ANT Module via NPM

```
ng add ng-zorro-antd
```

```
C:\Users\sclin\git\study-app1>ng add ng-zorro-antd
Installing packages for tooling via npm.
Installed packages for tooling via npm.
? Enable icon dynamic loading [ Detail: https://ng.ant.design/components/icon/en ] Yes
? Set up custom theme file [ Detail: https://ng.ant.design/docs/customize-theme/en ] Yes
? Choose your locale code: zh_TW
? Choose template to create project: blank
UPDATE package.json (1282 bytes)
UPDATE src/app/app.component.html (276 bytes)
✓ Packages installed successfully.
Could not set up "FormsModule" because "FormsModule" is already imported. Please manually check "/src/app/app.module.ts"
 file.
CREATE src/theme.less (28746 bytes)
UPDATE src/app/app.module.ts (1107 bytes)
UPDATE angular.json (3819 bytes)

C:\Users\sclin\git\study-app1>
```
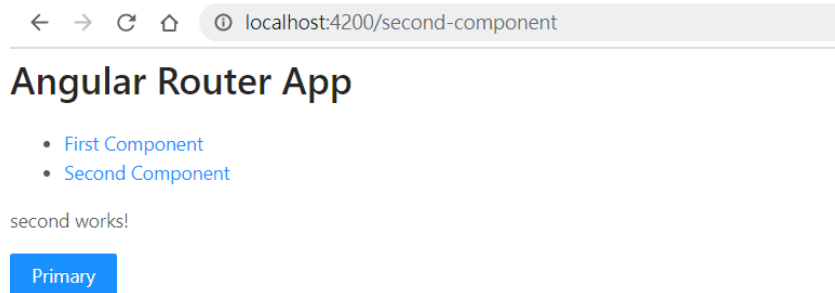
測試 ANT DESIGN STYLE WORK!!

編輯 second.component.html

```
<p>second works!</p>
<button nz-button nzType="primary">Primary</button>
```

編輯 app.module.ts

```
import { NzButtonModule } from 'ng-zorro-antd/button';  // Add
  ...
  imports: [
    ...
    BrowserAnimationsModule,
    NzButtonModule  // Add
  ],
  ...
```

重新執行 npm run start

整合 Layout Menus

Import ng-zorro-antd modules

```
...
import { NzButtonModule } from 'ng-zorro-antd/button';
import { NzLayoutModule } from 'ng-zorro-antd/layout';
import { NzMenuModule } from 'ng-zorro-antd/menu';
import { NzTableModule } from 'ng-zorro-antd/table';
```

```
import { NzDividerModule } from 'ng-zorro-antd/divider';
import { NzIconModule } from 'ng-zorro-antd/icon';
...
  imports: [
    ...
    NzButtonModule,
    NzLayoutModule,
    NzMenuModule,
    NzTableModule,
    NzDividerModule,
    NzIconModule
  ],
```

修改 app.component.html 參考 Ant Design Example

```
<nz-layout class="layout">
  <nz-sider nzCollapsible nzBreakpoint="lg" [(nzCollapsed)]="isCollapsed" [nzTrigger]="null">
    <div class="logo"></div>
    <ul nz-menu nzTheme="dark" nzMode="inline">


      <li nz-menu-item>
        <i nz-icon nzType="user"></i>
        <span>First-component</span>
        <a routerLink="/first-component"></a>
      </li>

      <li nz-menu-item>
        <i nz-icon nzType="video-camera"></i>
        <span>Second-component</span>
        <a routerLink="/second-component"></a>
      </li>

    </ul>
  </nz-sider>
  <nz-layout>

    <nz-header>
      <i class="trigger" nz-icon [nzType]="isCollapsed ? 'menu-unfold' : 'menu-fold'" (click)="isCollapsed = !isCollapsed"></i>
    </nz-header>

    <nz-content>
      <div class="inner-content">
        <router-outlet></router-outlet>
      </div>
    </nz-content>
    <nz-footer>Ant Design ©2020 Implement By Angular</nz-footer>
  </nz-layout>
</nz-layout>
```

修改 app.component.ts

```
import { Component } from '@angular/core';

@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
  styleUrls: ['./app.component.css']
})
export class AppComponent {
  isCollapsed = false;
}
```

編輯 app.component.css

```
.layout {
  min-height: 100vh;
  }

.trigger {
  font-size: 18px;
  line-height: 64px;
  padding: 0 24px;
  cursor: pointer;
  transition: color 0.3s;
}

.trigger:hover {
  color: #1890ff;
}

.logo {
  height: 32px;
  background: rgba(255, 255, 255, 0.2);
  margin: 16px;
}

nz-header {
  background: #fff;
  padding: 0;
}

nz-content {
  margin: 24px 16px 0;
}

.inner-content {
  padding: 24px;
  background: #fff;
  min-height: 360px;
}

nz-footer {
  text-align: center;
}
```
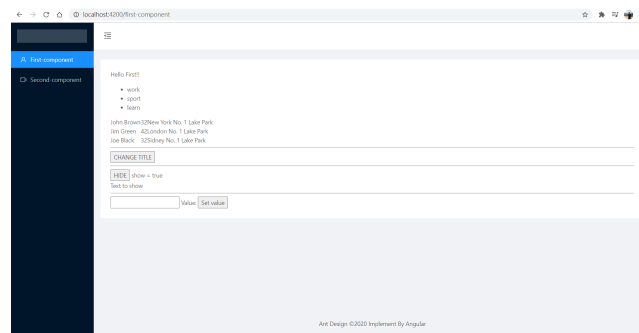
重新執行 npm run start

it's good day 😎