

Building and Publishing Angular Libraries



谢亚东 (执衡)
Angular Developer



谢亚东 (执衡) Angular Developer

NG-ZORRO

Search in ng.ant.design

Ant Design of Angular

Getting Started

Schematics

Internationalization

Customize Theme

Third-Party Libraries

FAQ

Contributing to NG-ZORRO

Change Log

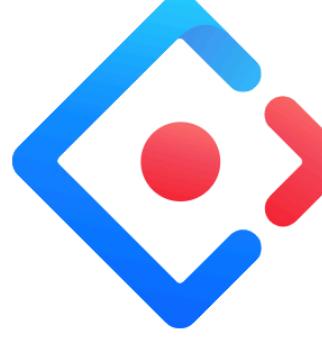
Components

General

Button

Ant Design of Angular

Following the Ant Design specification, we developed a Angular UI library [ng-zorro-antd](#) quality components and demos for building rich, interactive user interfaces.

 + 

Code Issues 195 Pull requests 24 Projects 2 Wiki Insights Settings

An enterprise-class UI components based on Ant Design and Angular. <https://ng.ant.design/docs/introduce/en>

607 commits 1 branch 49 releases 52 contributors MIT

README.md



NG-ZORRO

An enterprise-class UI components based on Ant Design and Angular.

build passing coverage 95% dependencies up to date release date last sunday npm v7.0.0-rc.0 downloads 21k/m license MIT

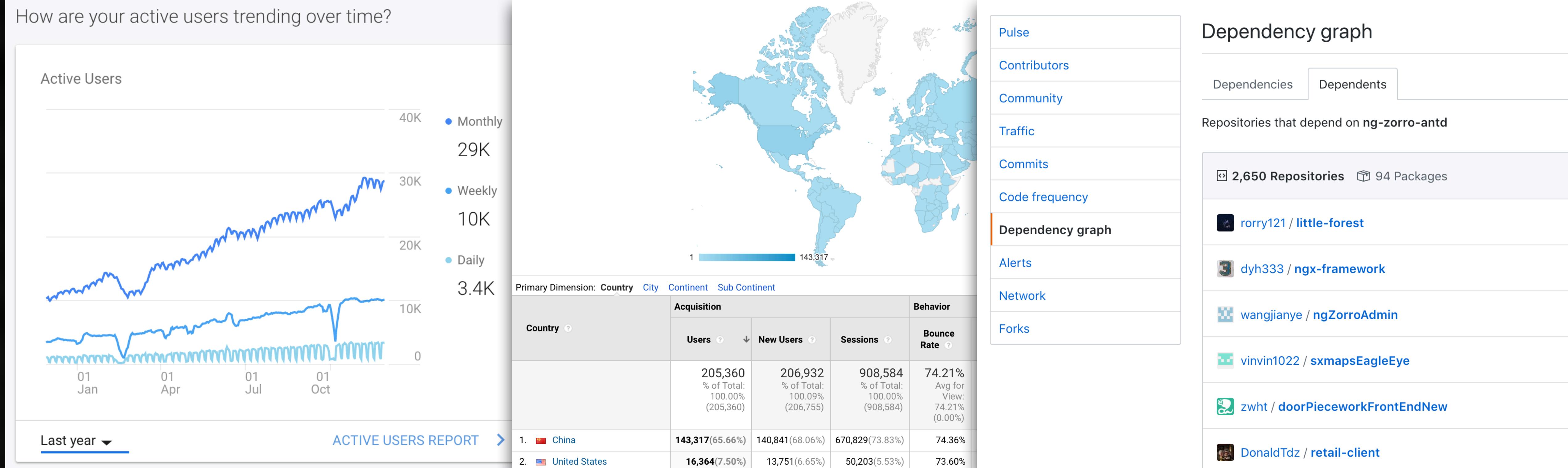
chat on gitter extension for VSCode

53+ Components

35+ Languages



谢亚东 (执衡) Angular Developer



29K / month

200,000 users 2600+ dependents



谢亚东 (执衡)
Angular Developer



NG-ZORRO

You have arrived.

ng add ng-zorro-antd

组件库的开发过程

Development Process

A large red circle is positioned in the bottom-left corner of the slide.

功能

Features

组件库的开发过程

Development Process



功能

Features



质量

QC

组件库的开发过程

Development Process

功能

Features

质量

QC

文档

Document

组件库的开发过程

Development Process

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Features

质量

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Document

发布

Release

组件库的开发过程

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文档

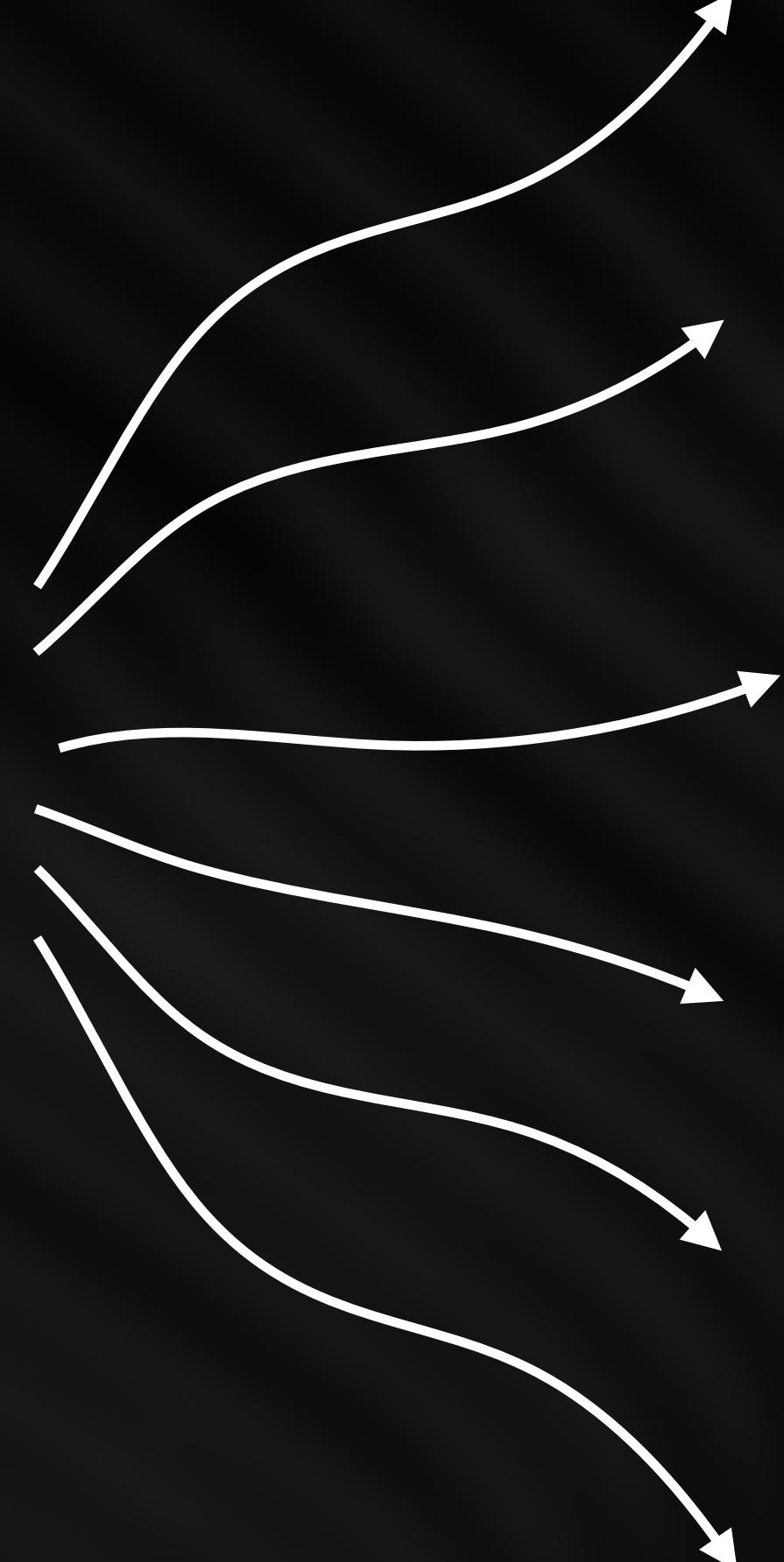
Document

发布

Release

维护

Maintenance



- 需求分析 Requirements Analysis
- 代码实现 Write Code
- 界面主题 Theme
- 国际化 Internationalization
- 代码优化 Optimization
- 配套设施 Facilities

需求分析 / Requirements Analysis

进度条 Progress



需求分析 / Requirements Analysis

进度条 Progress



需求分析 / Requirements Analysis

数据与界面的关系
View <-> Model

```
<div class="fill">
```

```
    [style.width.%] = "percent"
```

```
<div class="background">
```

```
@Input() percent = 0;
```

需求分析 / Requirements Analysis

Content of Tab Pane 1

Basic ↴

Default activate first tab.

需求分析 / Requirements Analysis

The screenshot shows a user interface with three tabs at the top: "Tab 1", "Tab 2", and "Tab 3". "Tab 1" is active, indicated by a blue underline and a blue border around its content area. The content area contains the text "Content of Tab Pane 1" and a "Basic" section with a radio group. The radio group has four options: A, B, C, and D. Option A is selected, indicated by a blue circle with a dot. Below the radio group, there is a "Default" section. At the bottom of the content area, there is a "Radio Group" section with a pencil icon and the text "A group of `nz-radio` components."

Content of Tab Pane 1

Basic

A B C D

Default

Radio Group

A group of `nz-radio` components.

需求分析 / Requirements Analysis

The screenshot shows a user interface with a dark background. At the top, there are three tabs: "Tab 1" (highlighted in blue), "Tab 2", and "Tab 3". The content area for "Tab 1" is visible, containing the text "Content of Tab Pane 1". Below this, there is a section titled "Basic" with four radio buttons labeled A, B, C, and D. The radio button for "A" is selected. There is also a "Default" section. A dropdown menu is open over the "Basic" section, showing two entries: "Lucy" and "Lucy". At the bottom of the content area, there is a section titled "Basic Usage" with a link icon, followed by the text "Basic Usage.".

Content of Tab Pane 1

Basic A B C D

Default

Radius

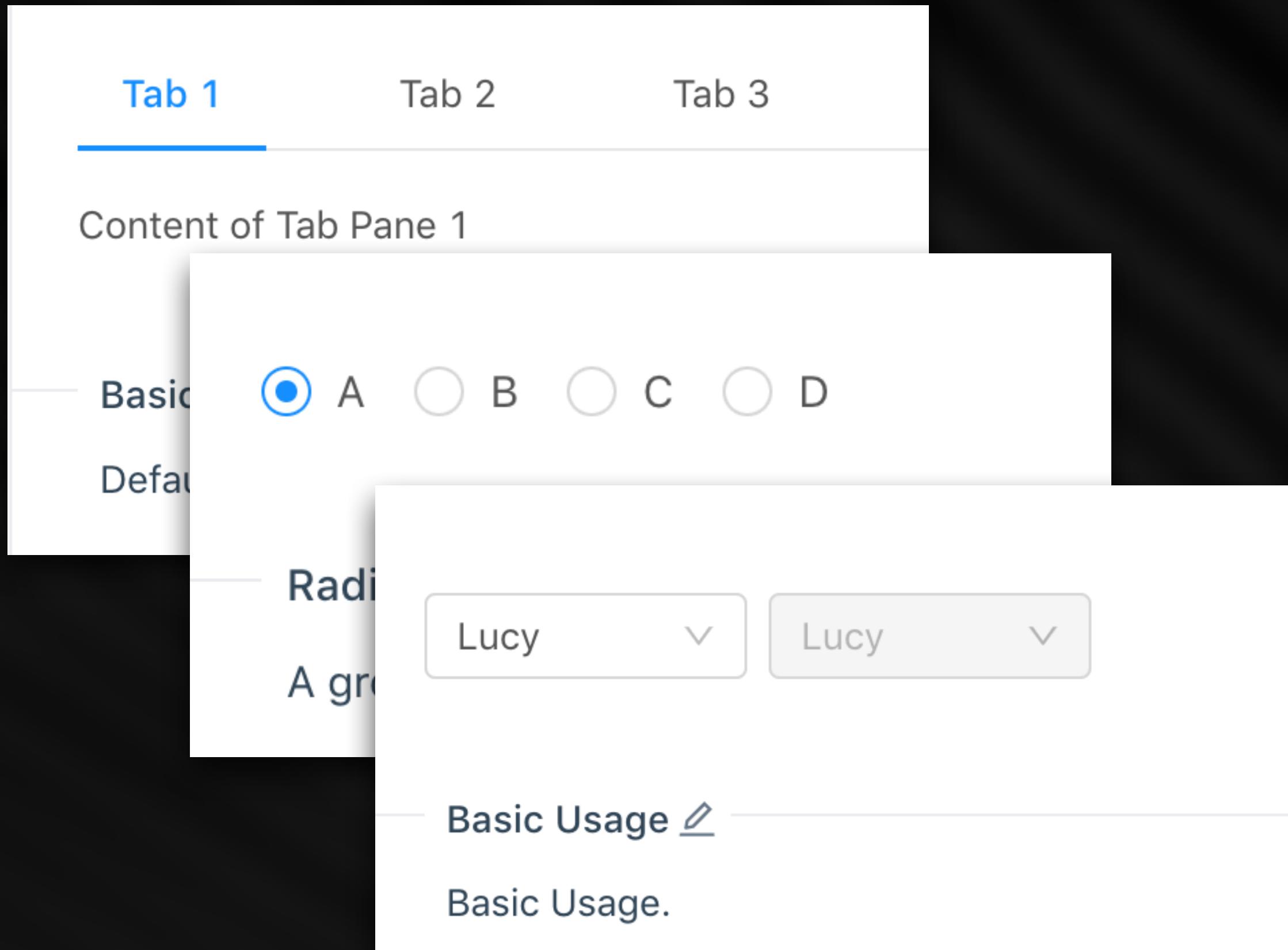
A group

Lucy ▾ Lucy ▾

Basic Usage ↗

Basic Usage.

需求分析 / Requirements Analysis



数据与界面的关系
View <-> Model

单选 Single Selection

- UI Model
- CDK Collections

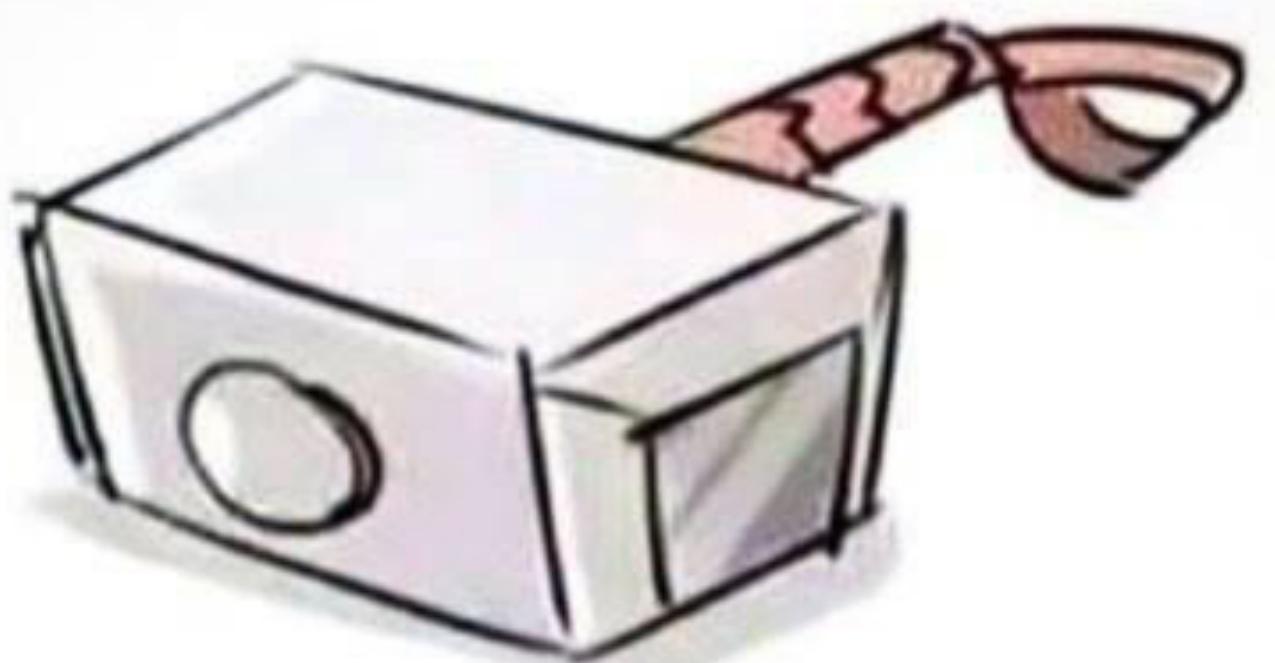
代码实现 / Write Code

```
@Component({
  selector: 'ngx-progress',
  template: `
    <div class="fill" [style.width.%]="progress"></div>
  `
})
export class NgxProgressComponent {
  @Input() progress = 0;
}
```

代码实现 / Write Code

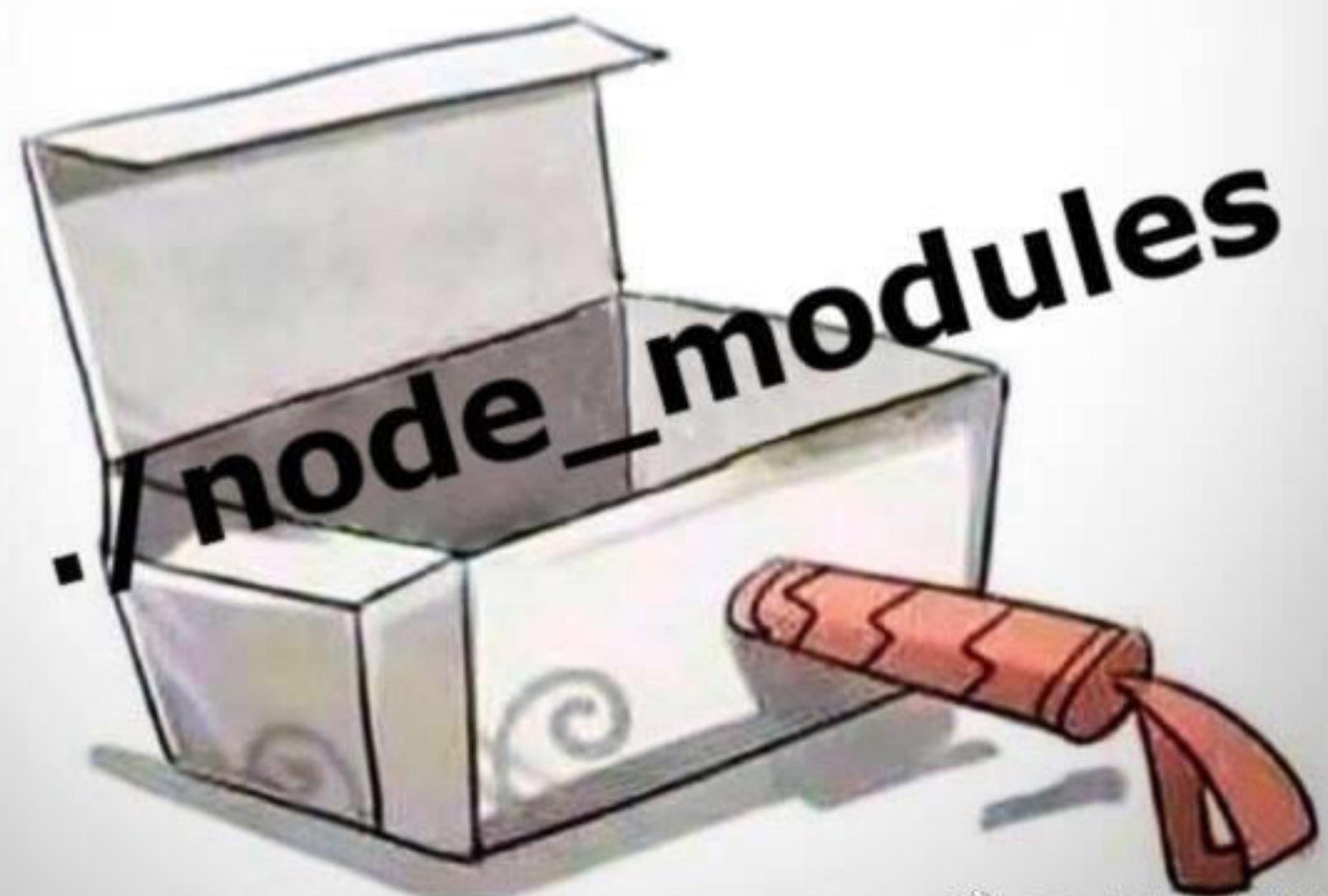
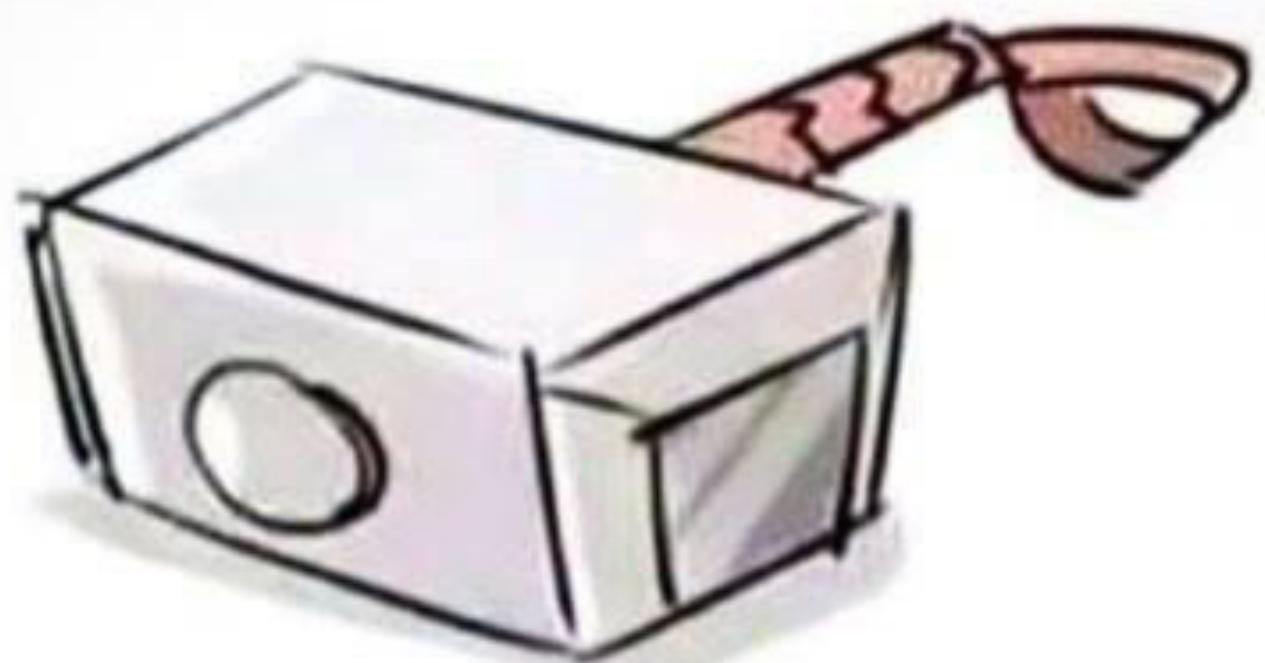
代码实现 / Write Code

揭秘：雷神索尔的锤子为什么这么重？



代码实现 / Write Code

揭秘：雷神索尔的锤子为什么这么重？



代码实现 / Write Code

ng-zorro-antd

1.8.1 • Public • Published 4 days ago

Readme Admin 4 Dependencies

Dependencies (4)

date-fns @angular/cdk @ant-design/icons-angular tslib

Dev Dependencies (0)



The screenshot shows the npm package page for 'ng-zorro-antd' version 1.8.1. The 'Dependencies' tab is selected, highlighted by a purple background. Below it, a yellow box highlights the listed dependencies: 'date-fns', '@angular/cdk', '@ant-design/icons-angular', and 'tslib'. The 'Readme' and 'Admin' tabs are also visible at the top.

代码实现 / Write Code

ng-zorro-antd
1.8.1 • Public • Published 4 days ago

Readme Admin **4 Dependencies**

Dependencies (4)

`date-fns @angular/cdk @ant-design/icons-angular tslib`

Dev Dependencies (0)

@angular/cdk
7.1.0 • Public • Published 8 days ago

Readme **2 Dependencies**

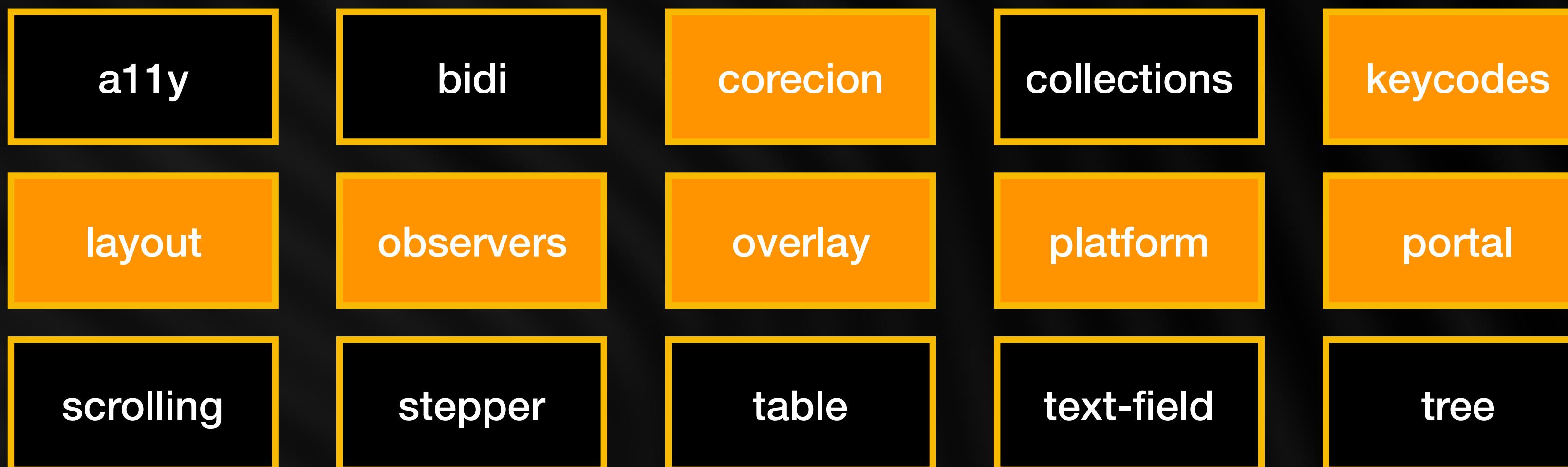
Dependencies (2)

`tslib parse5`

Dev Dependencies (0)

代码实现 / Write Code

Standing on the shoulders of giants
站在巨人的肩膀上



@angular/cdk
Angular Component Dev Kit

代码实现 / Write Code

layout

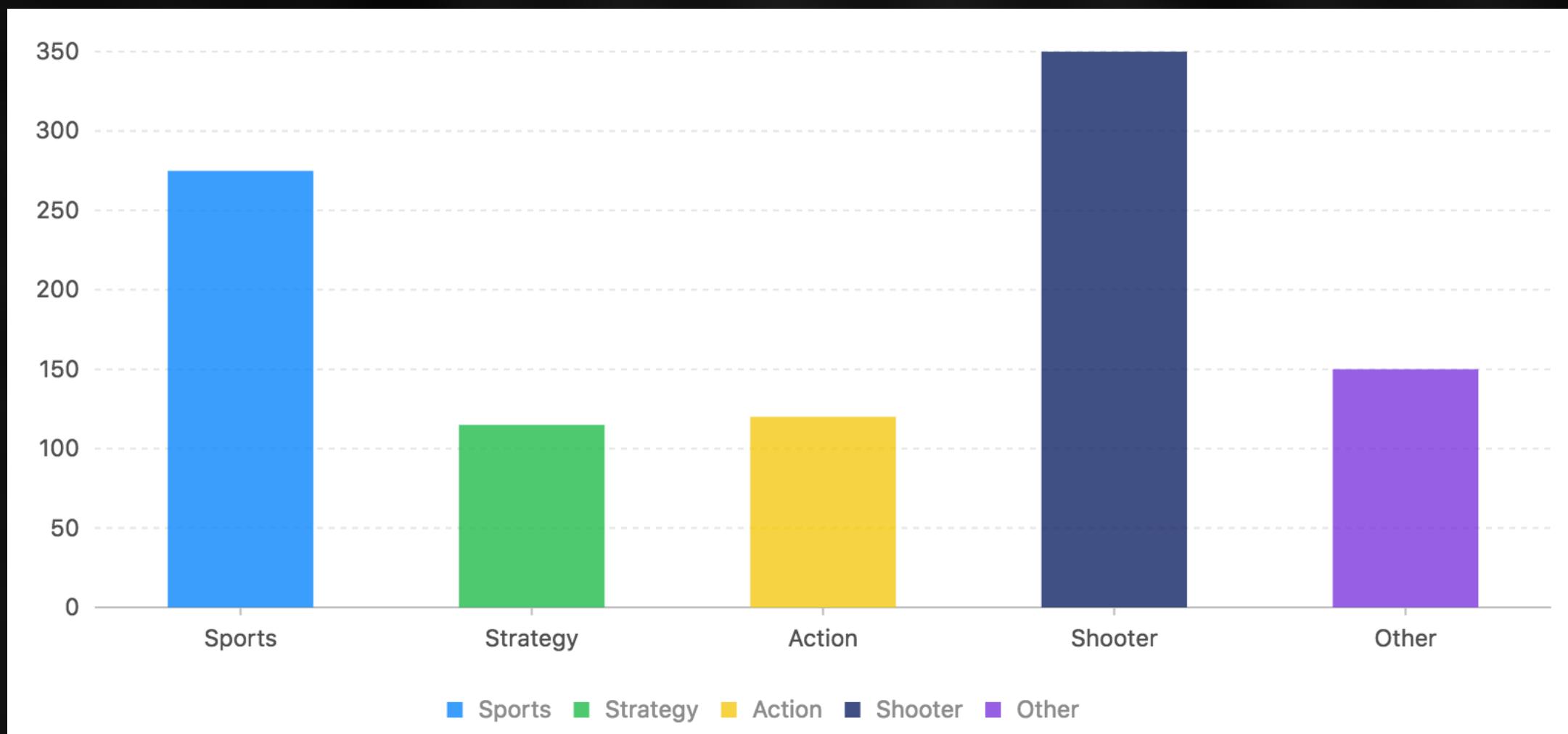
```
@Component({ ... })
export class MyWidget {
    isHandset: Observable<BreakpointState>

    constructor(bm: BreakpointObserver) {
        bm.observe(Handset).subscribe((state: BreakpointState) => {
            if (state.matches) {
                this.makeEverythingFitOnSmallScreen();
            } else {
                this.expandEverythingToFillTheScreen();
            }
        });
    }
}
```

代码实现 / Write Code

Make ngx-anything Yourself

G2 Graphic Library



```
import G2 from '@antv/g2';
const chart = new G2.Chart({
  container: 'c1',
  width: 400,
  height: 400
});
const data = [
  {genre: 'Sports', sold: 275},
  {genre: 'Strategy', sold: 115},
  {genre: 'Action', sold: 120},
  {genre: 'Shooter', sold: 350},
  {genre: 'Other', sold: 150},
];
chart.source(data);
chart.interval().position('genre*sold').color('genre');
chart.render();
```

代码实现 / Write Code

native g2

g2 in angular

```
import G2 from '@antv/g2';
const chart = new G2.Chart({
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const data = [
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  {genre: 'Shooter', sold: 350},
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代码实现 / Write Code

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  {genre: 'Shooter', sold: 350},
  {genre: 'Other', sold: 150},
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代码实现 / Write Code

native g2

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  {genre: 'Shooter', sold: 350},
  {genre: 'Other', sold: 150},
];
chart.source(data);
chart.interval().position('genre*sold').color('genre');
chart.render();
```

g2 in angular

```
@Directive({
  selector: '[ngxG2]'
})
export class NgxG2Directive implements AfterViewInit {
  @Output() configure = new EventEmitter();
  constructor(private elementRef: ElementRef) {}

  ngAfterViewInit() {
    const hostElement = this.elementRef.nativeElement;
    const box = hostElement.getBoundingClientRect();
    this.configure.emit(
      new G2.Chart({
        container: hostElement,
        width: box.width,
        height: box.height
      })
    );
  }
}
```

代码实现 / Write Code

g2 in angular

```
@Directive({
  selector: '[ngxG2]'
})
export class NgxG2Directive implements AfterViewInit {
  @Output() configure = new EventEmitter();

  constructor(private elementRef: ElementRef) {}

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    this.configure.emit(
      new G2.Chart({
        container: hostElement,
        width: box.width,
        height: box.height
      })
    );
  }
}
```

How to use

代码实现 / Write Code

g2 in angular

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@Directive({
  selector: '[ngxG2]'
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export class NgxG2Directive implements AfterViewInit {
  @Output() configure = new EventEmitter();

  constructor(private elementRef: ElementRef) {}

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    const box = hostElement.getBoundingClientRect();
    this.configure.emit(
      new G2.Chart({
        container: hostElement,
        width: box.width,
        height: box.height
      })
    );
  }
}
```

How to use

```
@Component({
  selector: 'app-root',
  template: `<div ngxG2 (configure)="configureChart($event)"></div>`
})
export class AppComponent {
  configureChart(chart) {
    const data = [
      { genre: 'Sports', sold: 275 },
      { genre: 'Strategy', sold: 115 },
      { genre: 'Action', sold: 120 },
      { genre: 'Shooter', sold: 350 },
      { genre: 'Other', sold: 150 }
    ];
    chart.source(data);
    chart.interval().position('genre*sold').color('genre');
    chart.render();
  }
}
```

代码实现 / Write Code

g2 in angular

```
@Directive({
  selector: '[ngxG2]'
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export class NgxG2Directive implements AfterViewInit {
  @Output() configure = new EventEmitter();

  constructor(private elementRef: ElementRef) {}

  ngAfterViewInit() {
    const hostElement = this.elementRef.nativeElement;
    const box = hostElement.getBoundingClientRect();
    this.configure.emit(
      new G2.Chart({
        container: hostElement,
        width: box.width,
        height: box.height
      })
    );
  }
}
```

How to use

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@Component({
  selector: 'app-root',
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      { genre: 'Action', sold: 120 },
      { genre: 'Shooter', sold: 350 },
      { genre: 'Other', sold: 150 }
    ];
    chart.source(data);
    chart.interval().position('genre*sold').color('genre');
    chart.render();
  }
}
```

代码实现 / Write Code

Template Driven

```
@Component({
  selector: 'app-root',
  template: `
    <ngx-select>
      <ngx-option
        *ngFor="let o of options"
        [value]="o.value"
        [label]="o.label"
        [disabled]="o.disabled">
      </ngx-option>
    </ngx-select>
  `
})
export class AppComponent {
  options = [
    { value: 'jack', label: 'Jack', disabled: false },
    { value: 'lucy', label: 'Lucy', disabled: false },
    { value: 'disabled', label: 'Disabled', disabled: true }
  ];
}
```

VS

Reactive

```
@Component({
  selector: 'app-root',
  template: `
    <ngx-select [options]="options"></ngx-select>
  `
})
export class AppComponent {
  options = [
    { value: 'jack', label: 'Jack', disabled: false },
    { value: 'lucy', label: 'Lucy', disabled: false },
    { value: 'disabled', label: 'Disabled', disabled: true }
  ];
}
```

代码实现 / Write Code

Building on Existing Technologies and Communities

```
@Component({
  selector: 'app-root',
  template: `
    <ngx-select>
      <ngx-option
        *ngFor="let o of options"
        (click)="clickEvent($event)",
        (dblclick)="dblclickEvent($event)"
        [class.gray]="o.disabled"
        [value]="o.value"
        [label]="o.label"
        [disabled]="o.disabled">
      </ngx-option>
    </ngx-select>
  `
})
export class AppComponent {
  options = [
    { value: 'jack', label: 'Jack', disabled: false },
    { value: 'lucy', label: 'Lucy', disabled: false },
    { value: 'disabled', label: 'Disabled', disabled: true }
  ];
}
```

代码实现 / Write Code

Building on Existing Technologies and Communities

```
@Component({
  selector: 'app-root',
  template: `
    <ngx-select>
      <ngx-option
        *ngFor="let o of options"
        (click)="clickEvent($event)",
        (dblclick)="dblclickEvent($event)"
        [class.gray]="o.disabled"
        [value]="o.value"
        [label]="o.label"
        [disabled]="o.disabled">
      </ngx-option>
    </ngx-select>
  `
})
export class AppComponent {
  options = [
    { value: 'jack', label: 'Jack', disabled: false },
    { value: 'lucy', label: 'Lucy', disabled: false },
    { value: 'disabled', label: 'Disabled', disabled: true }
  ];
}
```

代码实现 / Write Code

Building on Existing Technologies and Communities

```
@Component({
  selector: 'app-root',
  template: `
    <ngx-select>
      <ngx-option
        *ngFor="let o of options"
        (click)="clickEvent($event)",
        (dblclick)="dblclickEvent($event)"
        [class.gray]="o.disabled"
        [value]="o.value"
        [label]="o.label"
        [disabled]="o.disabled">
      </ngx-option>
    </ngx-select>
  `)
export class AppComponent {
  options = [
    { value: 'jack', label: 'Jack', disabled: false },
    { value: 'lucy', label: 'Lucy', disabled: false },
    { value: 'disabled', label: 'Disabled', disabled: true }
  ];
}
```

Event Reference: 196+
Attributes Reference: 122+

[Angular Blog](#)
[MDN web docs Event Reference](#)
[MDN web docs Attributes Reference](#)
[MDN web docs CSS Reference](#)

界面主题 / Theme

CSS preprocessor :

sass | less | stylus | ...

Global Style

VS

Component Style

```
"options": {  
  "styles": [  
    "src/styles.less"  
  ]  
}
```

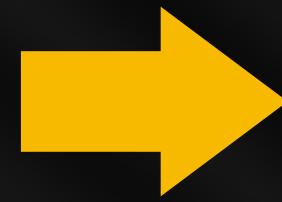
angular.json

```
@Component({  
  ...  
  styleUrls : [ "./style.less" ]  
})
```

component

界面主题 / Theme

```
styles : [  
  'ng-progress {  
    display: inline-block;  
    width: 100%;  
    background-color: #f5f5f5;  
  }  
  .fill {  
    height: 8px;  
    background-color: #1890ff;  
  }  
,  
]
```



```
{  
  encapsulation: 0,  
  styles: [  
    'ng-progress {  
      display:  
      inline-block;  
      width: 100%;  
      background-color: #f5f5f5;  
    }  
    .fill[_ngcontent-%COMP%] {  
      height:  
      8px;  
      background-color: #1890ff;  
    }  
  ]  
  data: {}  
}
```



Tree Shakeable



Can't Change Parameter at Runtime

回

我全都要

界面主题 / Theme



国际化 / Internationalization



日期
Date

@angular/common/locales
date-fns

国际化 / Internationalization



日期
Date

书写方向
LTR/RTL

@angular/common/locales
date-fns

@angular/cdk/bidi

国际化 / Internationalization



日期
Date

@angular/common/locales
date-fns

书写方向
LTR/RTL

@angular/cdk/bidi

文案
Local Text

pipes
ngx-translate

国际化 / Internationalization

代码优化 / Optimization

运行性能

Performance

- **Track By Function**
- **runOutsideAngular**
- **Avoid Function Calls in Views**
- **Pipes**
- **OnPush**

Links:

[Angular Guru](#)
[Mgechev Blog](#)

打包大小

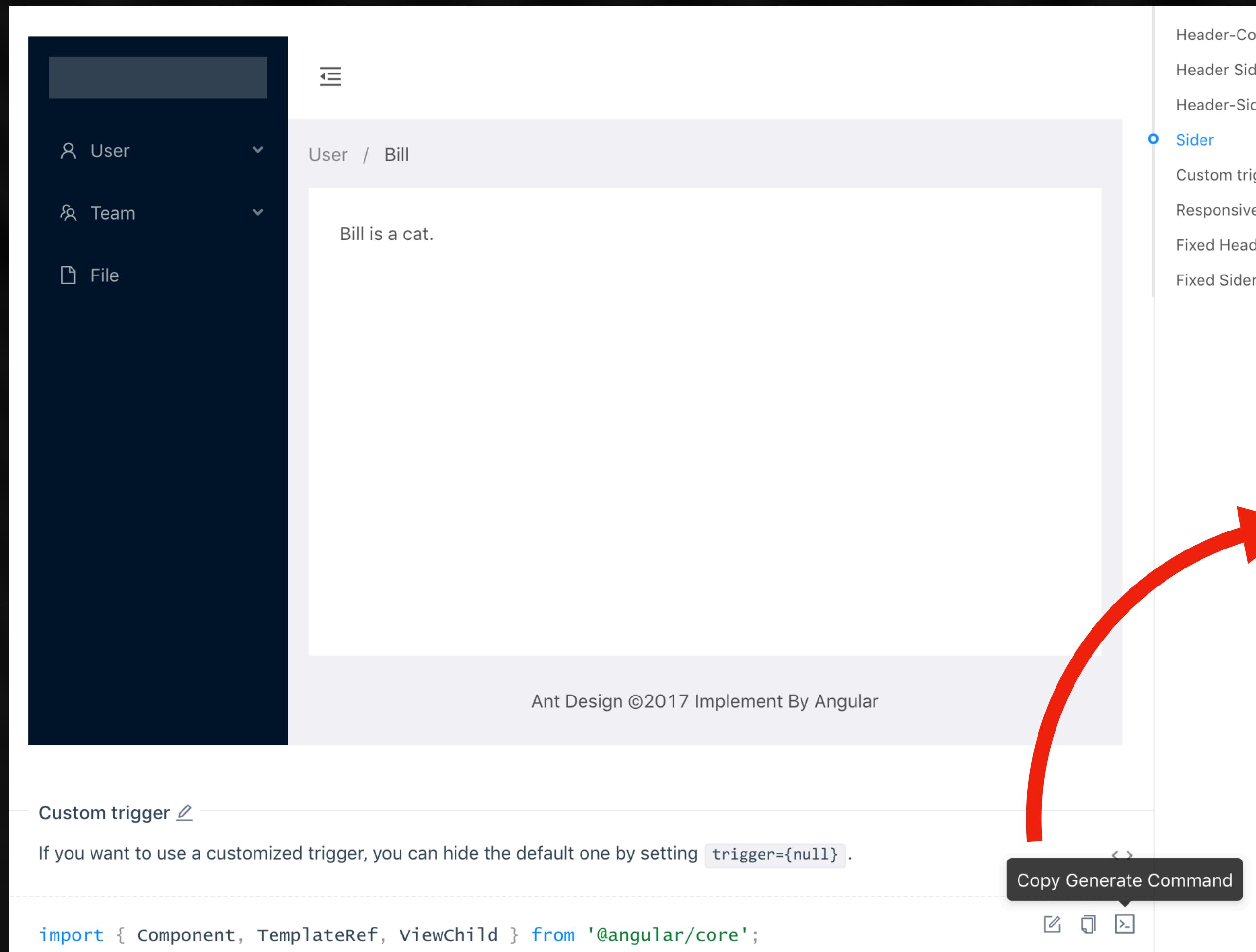
Package Size

- **Less Dependency**
- **provideIn**
- **No export default**

Links:

[Angular Package Format](#)
[CK's Notepad](#)
[Neufund Blog](#)

配套设施 / Facilities

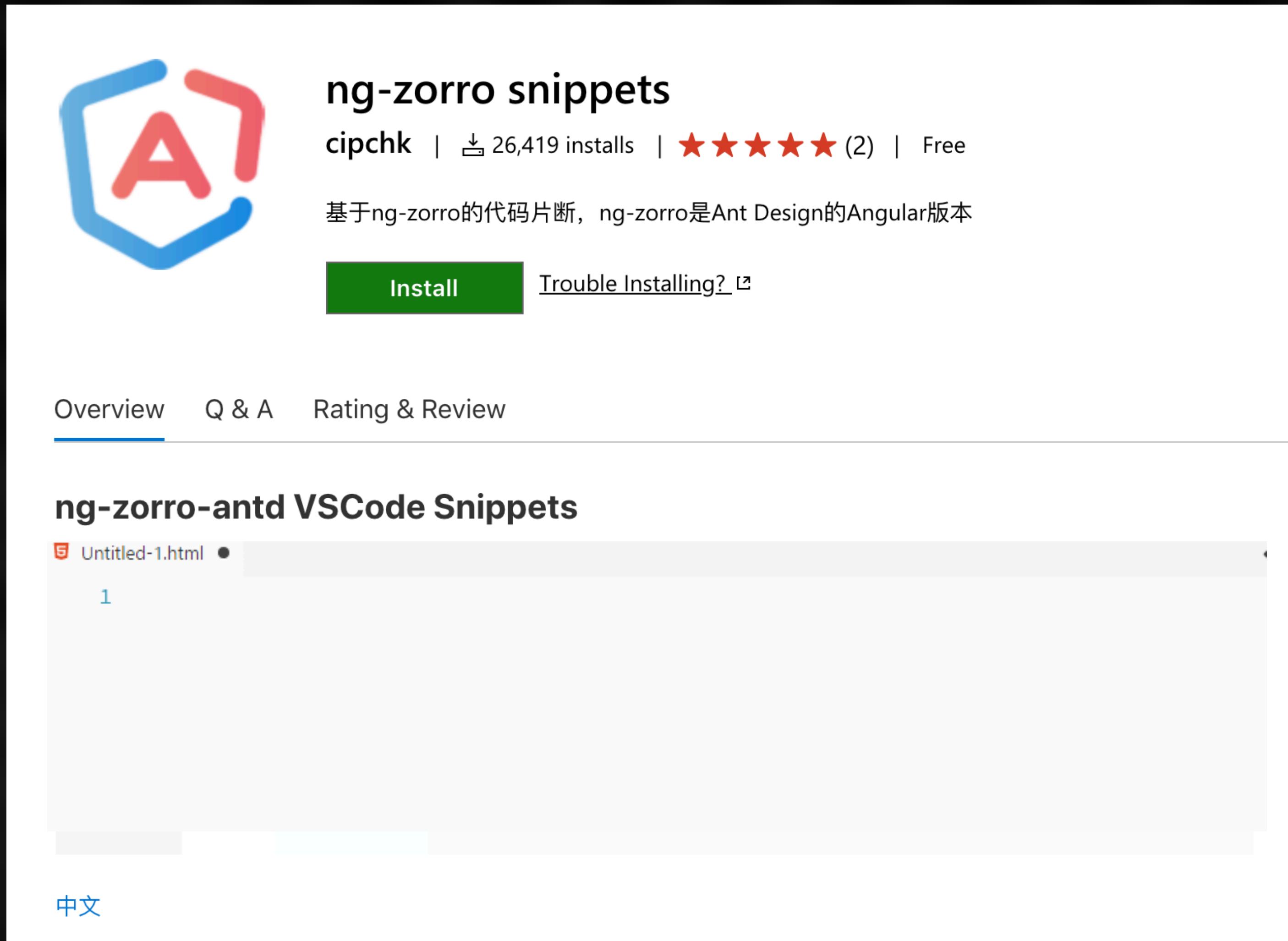


提升开发效率
schematics

ng g ng-zorro-antd:layout-top

Links: [Angular Blog](#)

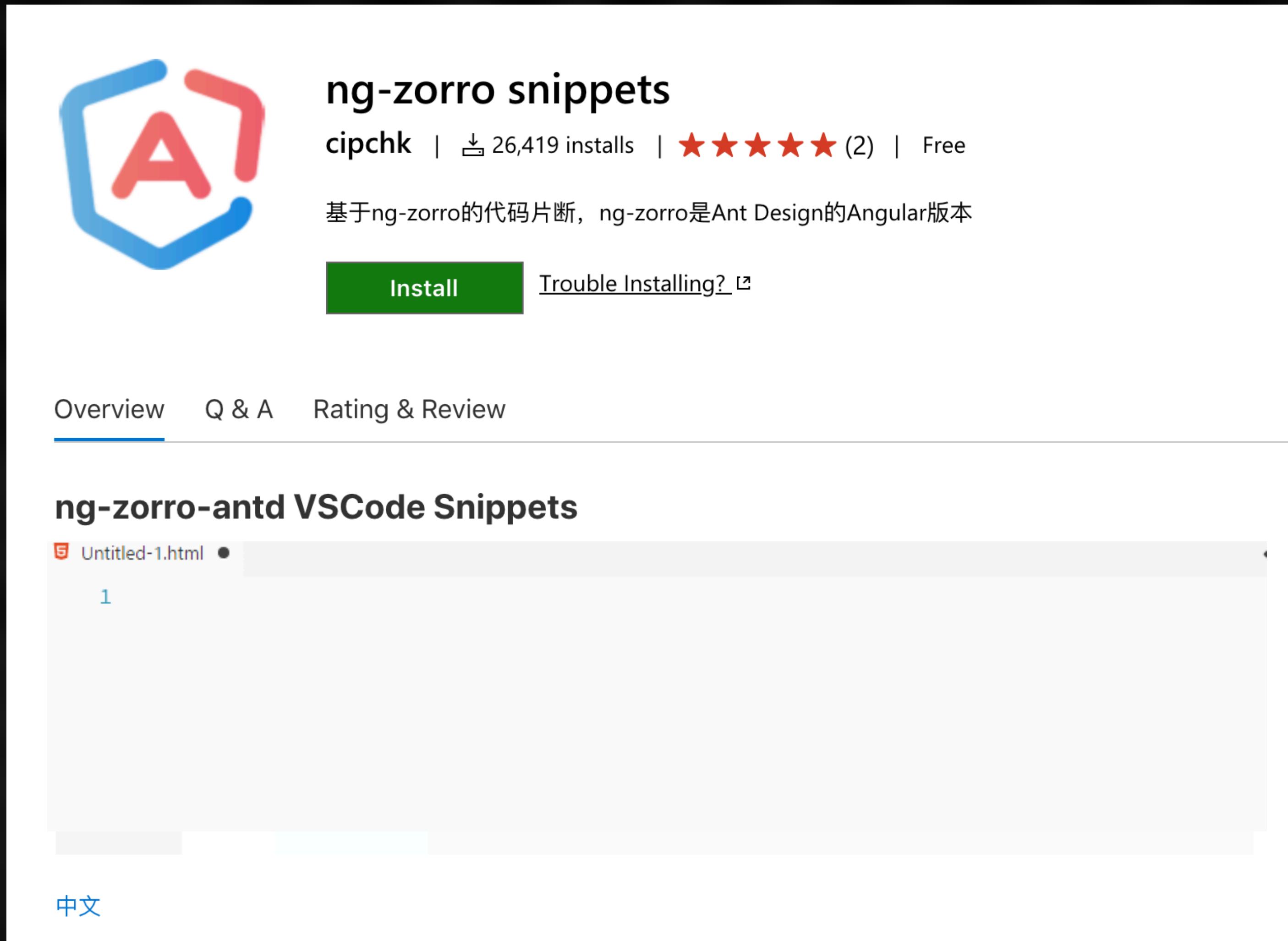
配套设施 / Facilities



The screenshot shows the Microsoft Store page for the "ng-zorro snippets" extension. The extension icon features a stylized 'A' inside a hexagon, with blue and red colors. The title is "ng-zorro snippets" by "cipchk". It has 26,419 installs and a rating of 5 stars from 2 reviews. The description states: "基于ng-zorro的代码片断, ng-zorro是Ant Design的Angular版本". Below the description are two buttons: "Install" (green) and "Trouble Installing?". At the bottom of the page, there are tabs for "Overview" (underlined), "Q & A", and "Rating & Review". A large preview window shows a VSCode interface with a file named "Untitled-1.html" containing the number "1". A small "中文" (Chinese) link is visible at the bottom left of the preview.

<https://github.com/ng-alain/ng-zorro-vscode>

配套设施 / Facilities



The screenshot shows the Microsoft Store page for the "ng-zorro snippets" extension. The extension icon features a stylized 'A' inside a hexagon, with blue and red segments. The title is "ng-zorro snippets" by "cipchk". It has 26,419 installs and a rating of 5 stars from 2 reviews. The description states it's a free extension based on ng-zorro, which is the Angular version of Ant Design. There are "Install" and "Trouble Installing?" buttons. Below the main card, there's a section titled "ng-zorro-antd VSCode Snippets" showing a preview of the VSCode interface with a single line of code: "1". A "中文" link is at the bottom.

ng-zorro snippets

cipchk | 26,419 installs | ★★★★★ (2) | Free

基于ng-zorro的代码片断, ng-zorro是Ant Design的Angular版本

Install Trouble Installing? ↗

Overview Q & A Rating & Review

ng-zorro-antd VSCode Snippets

Untitled-1.html •

1

中文

<https://github.com/ng-alain/ng-zorro-vscode>

组件库的开发过程

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Maintenance



- 单元测试 Unit Test
- 集成测试 Integration Test
- 编码规范 tslint codelyzer
- 提交规范 husky & angular commit

测试 / Test

NG-ZORRO / ng-zorro-antd  build passing

Current Branches Build History Pull Requests More options

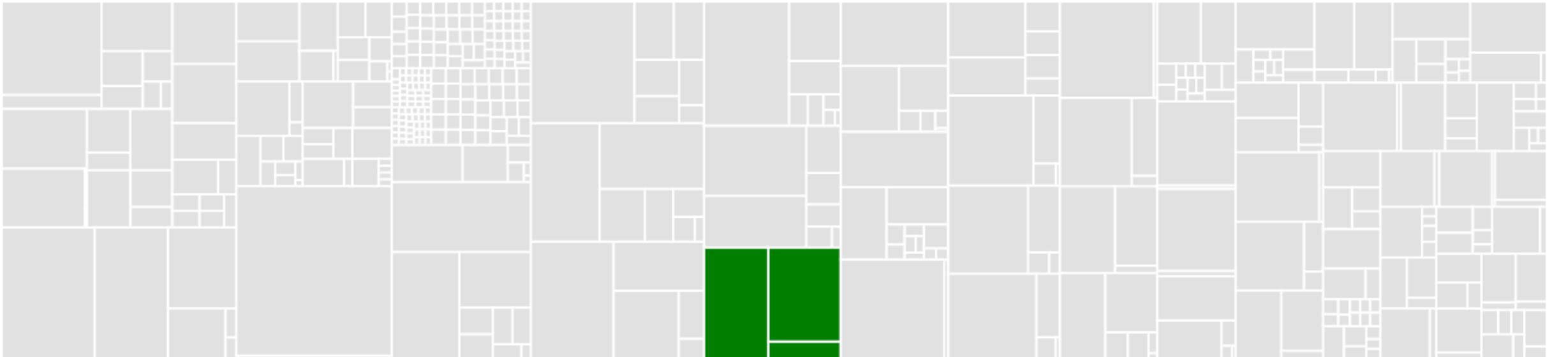
✓ Pull Requests
-o Commit
#2553: re...
Branch n...
卡色

Build

✓ # 2937.1
✓ # 2937.2
✓ # 2937.3
✓ # 2937.4
✓ # 2937.5
✓ # 2937.6

Codecov Report

Merging #2555 into next will decrease coverage by <.01%.
The diff coverage is 100%.



@@ Coverage Diff @@
next #2555 +/ - ##
=====

- Coverage	95.72%	95.71%	-0.01%
Files	491	491	
Lines	12245	12233	-12
Branches	1681	1681	

=====

1273+ Test Cases

95%+ Coverage

规范 / Lint



codelyzer & tslint



Husky & angular commit message

组件库的开发过程

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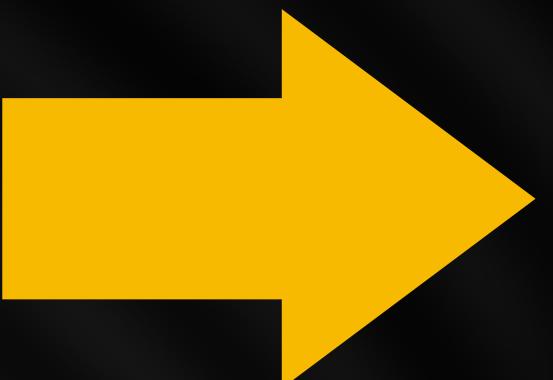
维护

Maintenance

文档编写 / Document

文档生成

Doc Generator



文档部署

Deploy



GitHub Pages



组件库的开发过程

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版本发布 / Release

- Angular Package Format 规范
- 打包工具 ng packagr
- 语义化版本 Semantic Versioning
- 生成更新日志 Generate Release Note

组件库的开发过程

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维护

Maintenance

项目维护 / Maintenance

Mono Repo

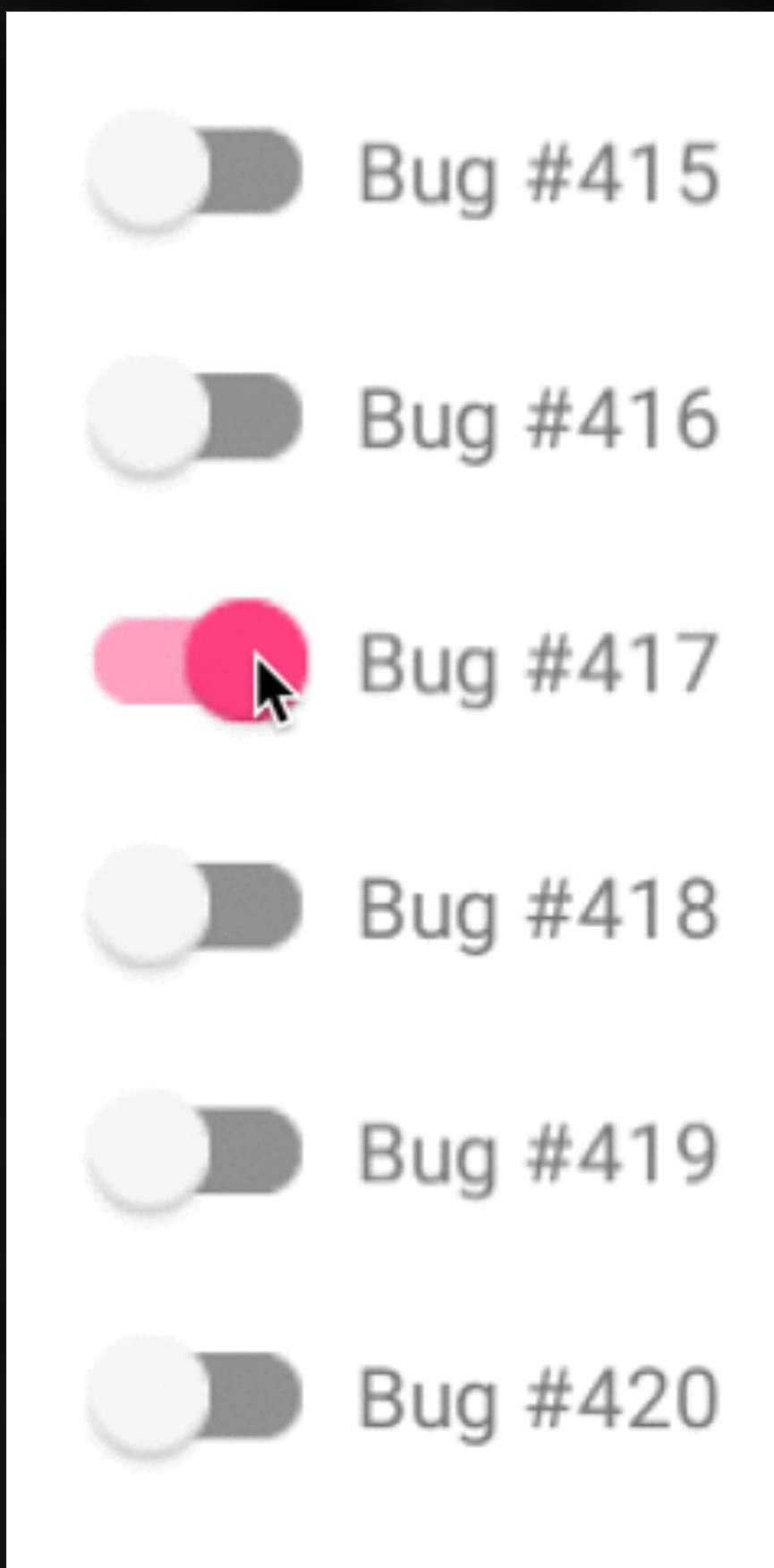
VS

Multiple Repo

- Better Testing
- Code Reviews
- Share Common Modules
- Easy Refactoring

- Clear Ownership
- Better Scale
- Narrow Clones

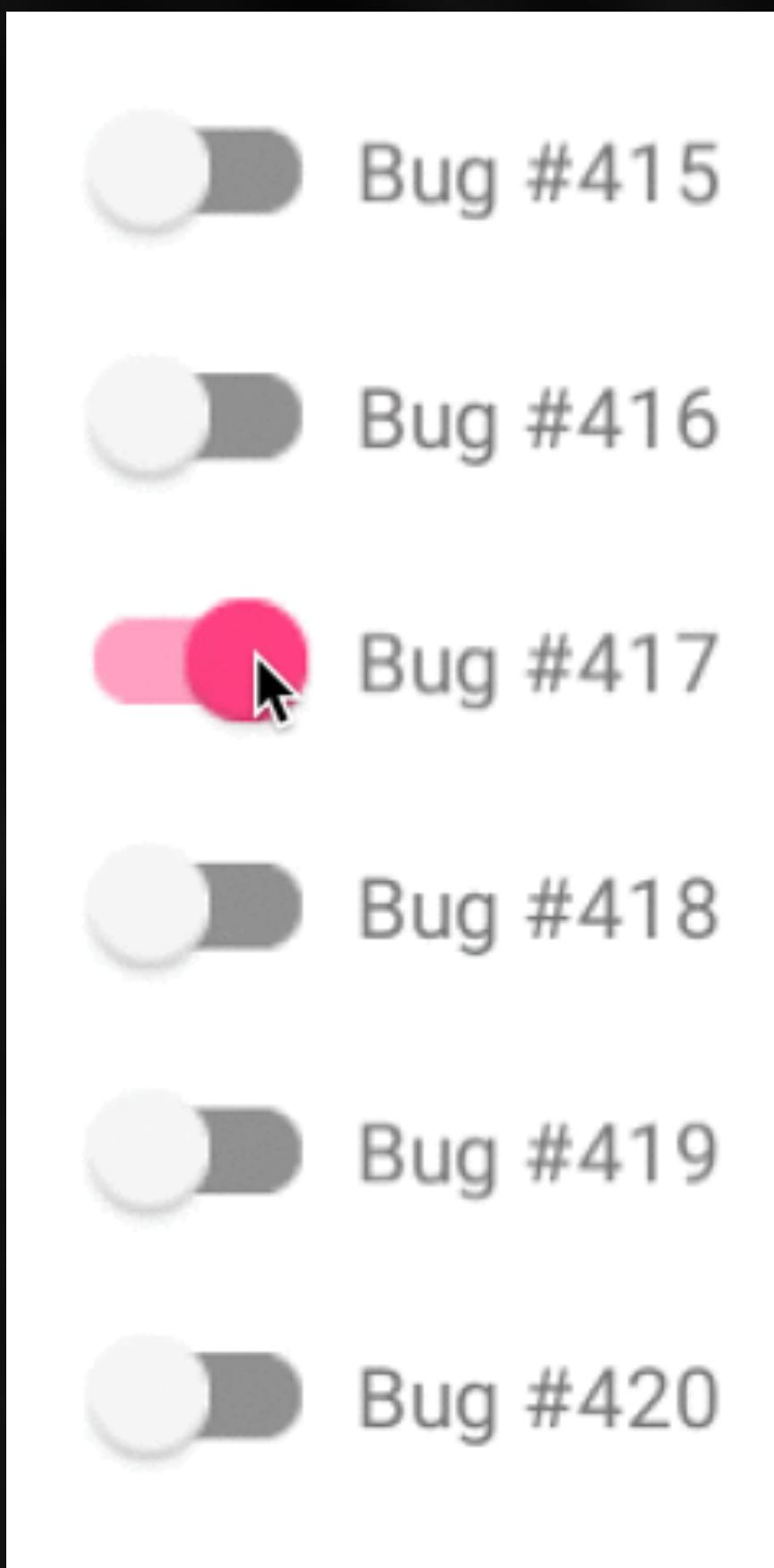
项目维护 / Maintenance



120,000+ Lines Code

- Issue / Pull Request
- Issue Helper
- Now.sh

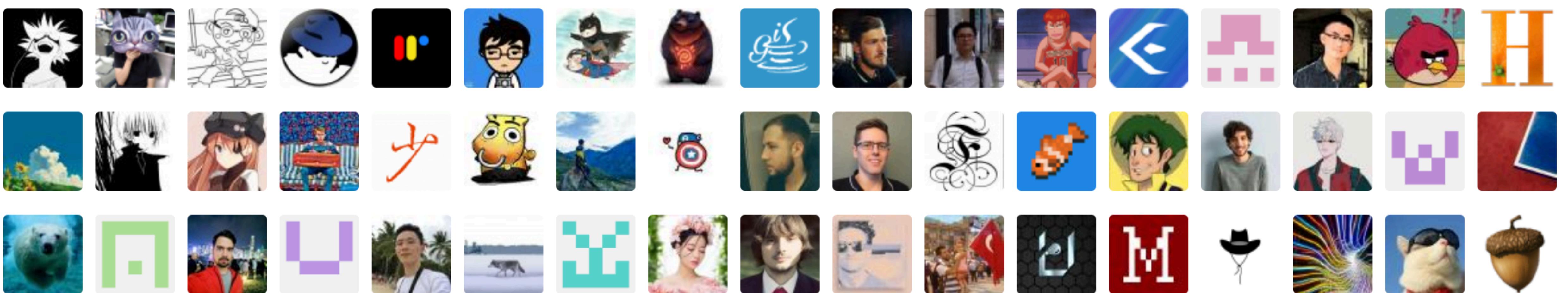
项目维护 / Maintenance



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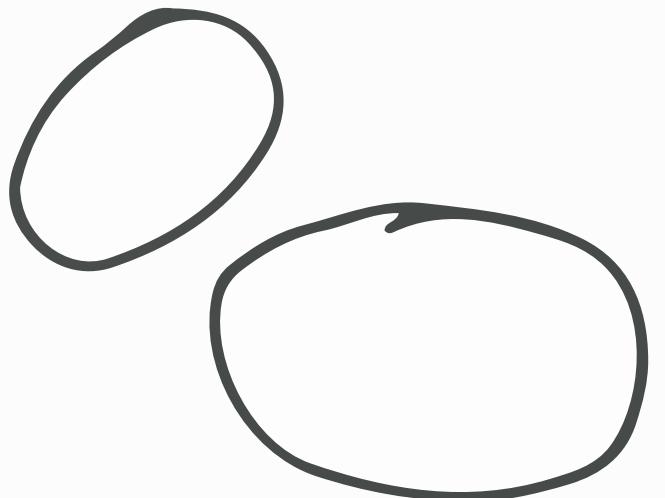
项目维护 / Maintenance



HOW TO:
DRAW A HORSE

BY VAN OKTOP

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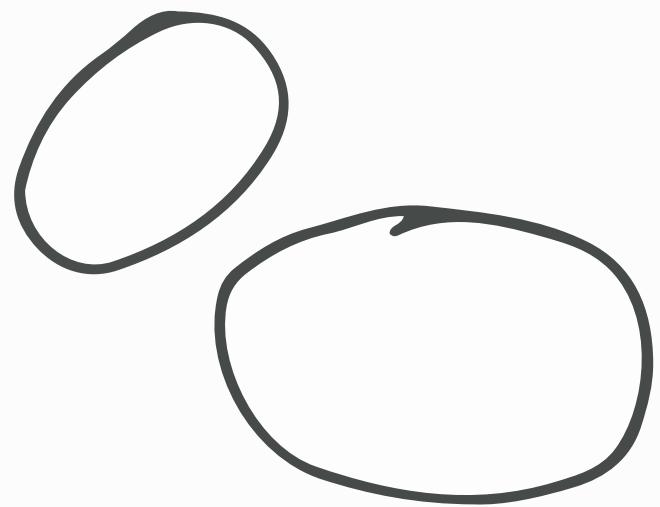


① DRAW 2 CIRCLES

1. 画两个圈

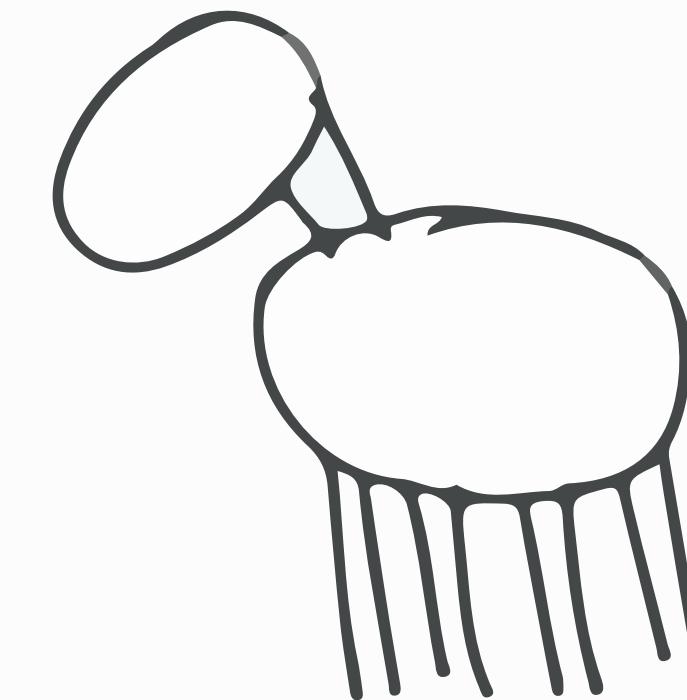
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- ① DRAW 2 CIRCLES

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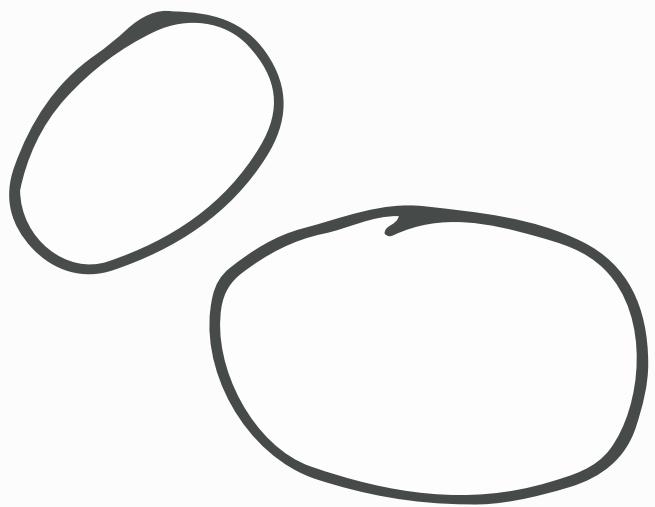


- ② DRAW THE LEGS

2. 画四条腿

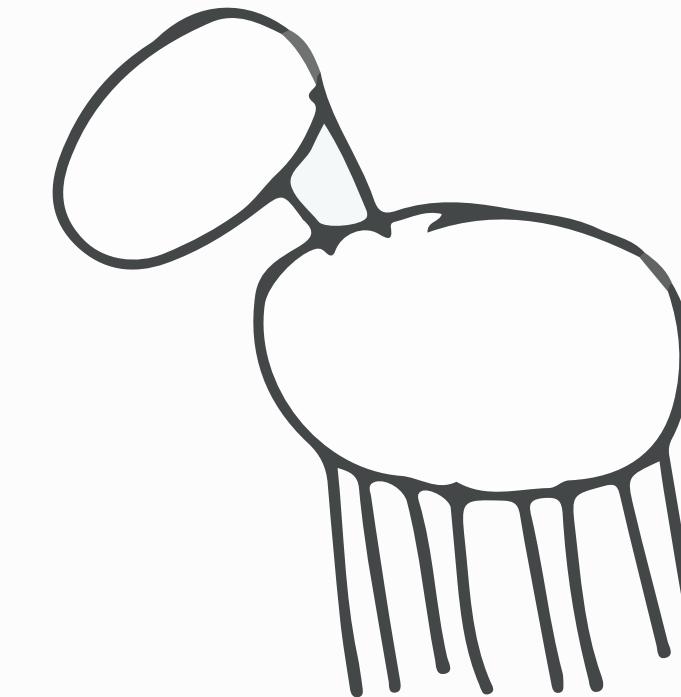
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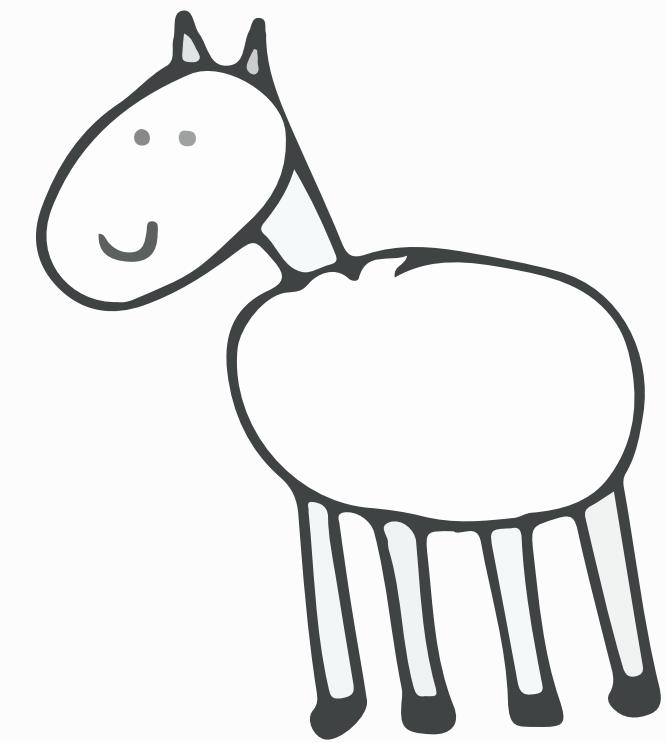
- ① DRAW 2 CIRCLES

1. 画两个圈



- ② DRAW THE LEGS

2. 画四条腿

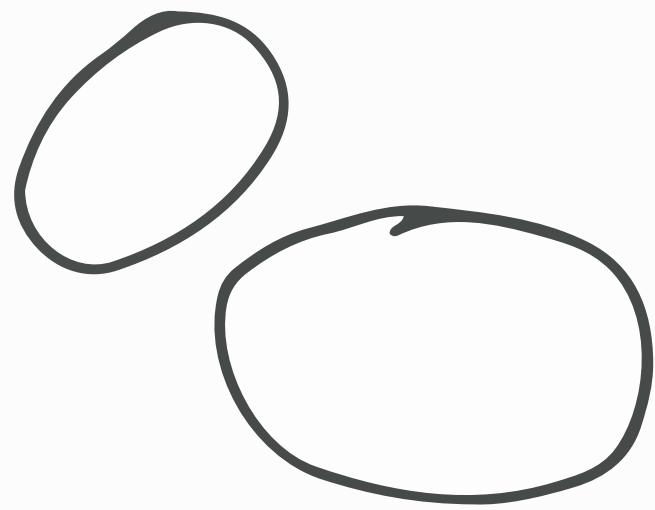


- ③ DRAW THE FACE

3. 画一个头

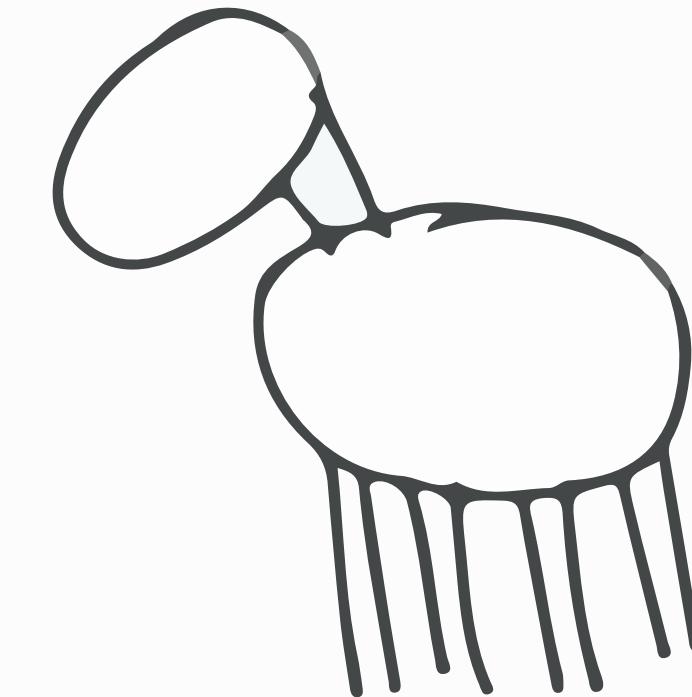
HOW TO: DRAW A HORSE

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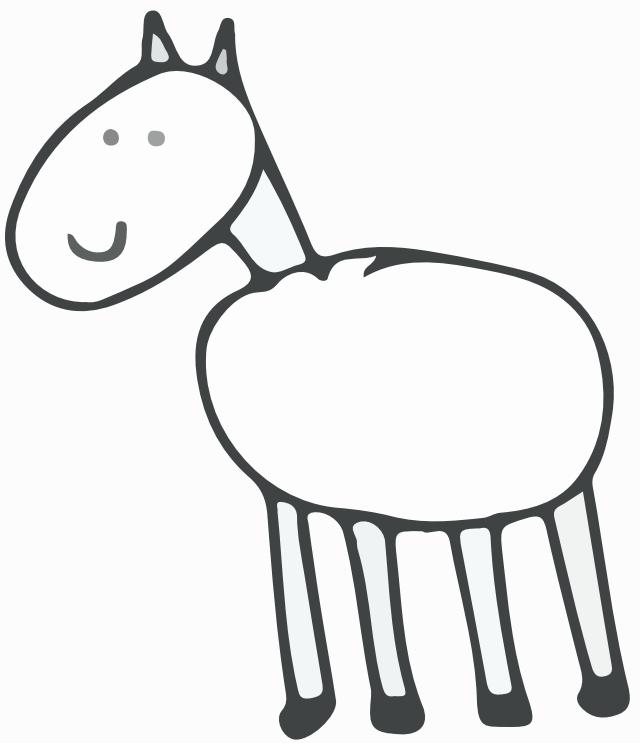
- ① DRAW 2 CIRCLES

1. 画两个圈



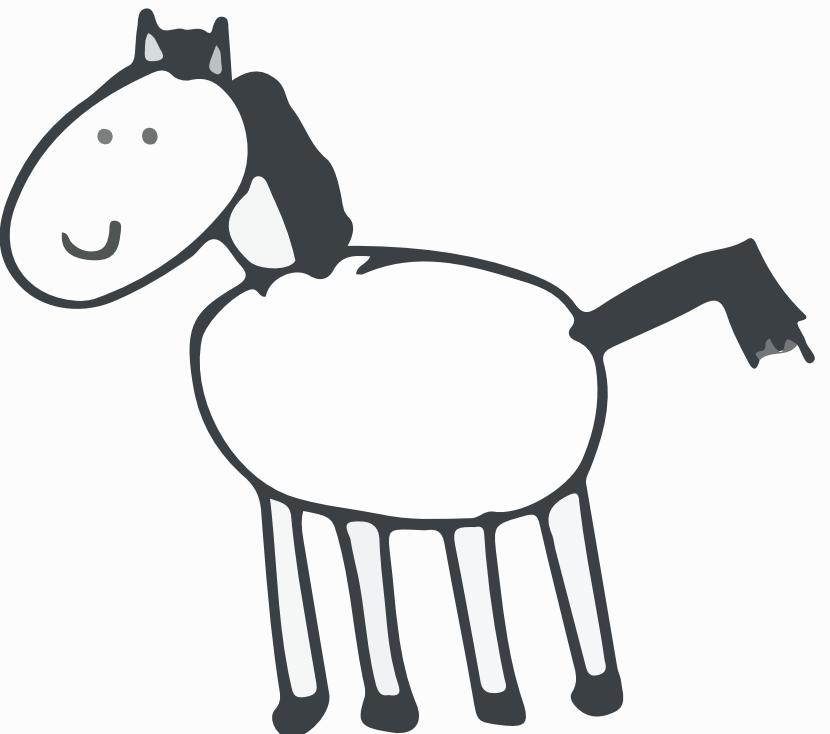
- ② DRAW THE LEGS

2. 画四条腿



- ③ DRAW THE FACE

3. 画一个头



- ④ DRAW THE HAIR

4. 画上毛发

最后再增加一些细节



最后再增加一些细节

THANKS

钉钉扫码

NG-ZORRO 自助服务群

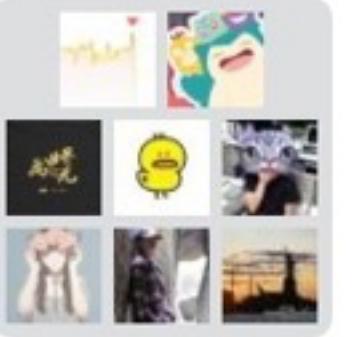
943人



扫一扫群二维码，立刻加入该群。

THANKS

微信扫码



NG-ZORRO线下交流



该二维码7天内(12月8日前)有效，重新进入将更新