免費電子書

學習

AngularJS

Free unaffiliated eBook created from
Stack Overflow contributors.

#angularjs

1
1: AngularJS 2
2
2
Examples 9
9
Angular 10
11
Hello World 12
NG- 12
13
Angular 13
AngularJS 14
2: $ http 17
Examples 17
$ http 17
$ http 17
$ http 18
3: Angular $ 20
20
Examples 20
$ scope 20
20
21
$ scope 21
$ scope 22
23
4: AngularJS`=``@``` 24
24
Examples 24
@ 24

=....24
....24
....25
....25
5: angularjs....26
....26
Examples....26
Angularjs....26
6: AngularJS....27
Examples....27
....27
....27
html5Mode....27
7 AngularJS....29
7: Angular$ q....32
Examples....32
$ q.allpromise....32
$ qpromise....32
$ q.defer....33
$ q....34
Promise....34
....35
$ q.whenpromise....36
$ q.when$ q.resolve....36
$ q....36
....36
8: HTTP....38
....38
Examples....38
....38
httpInterceptor....38
httpFlash....39

39
39
40
9: ng-class 41
Examples 41
ng-ng 41
1. 41
2. 41
3. 41
10: NG- 43
43
Examples 43
NG- 43
43
11: NG- 45
45
45
45
45
Examples 45
45
45
ng-repeat-start + ng-repeat-end 46
12: NG- 47
47
47
Examples 47
ng 47
13: SignalRAngularJs 48
48
Examples 48

SignalRAngularJs [ChatProject] 48
14: UI 52
52
Examples 52
52
53
resolve 54
/ 55
15: ES6 57
Examples 57
FileSizeES6 57
16: ngModelController 59
Examples 59
59
60
17: ngRoute 64
64
Examples 64
64
65
66
18: 68
Examples 68
/HTML 68
19: 69
69
69
Examples 69
69
69
70
70

71
20: 72
72
72
Examples 72
72
72
$ inject 73
vanilla JavaScriptAngularJS 73
21: 74
Examples 74
- 74
ngRepeat 74
ngShowngHide 77
ngOptions 78
ngModel 80
ngClass 80
ngIf 80
JavaScript 80
81
DOMcurrentUser 81
DOMcurrentUser 81
81
ngMouseenterngMouseleave 82
ngDisabled 82
ngDblclick 82
83
ngClick 84
ngRequired 85
NG- 85
ngCloak 86

ngInclude 86
ngSrc 87
ngPattern 87
ngValue 87
ngCopy 87
88
ngPaste 88
ngHref 88
ngList 88
22: 90
Examples 90
angular.equals 90
angular.isString 90
angular.isArray 90
angular.merge 91
angular.isDefinedangular.isUndefined 91
angular.isDate 91
angular.isNumber 91
angular.isFunction 92
angular.toJson 92
angular.fromJson 92
angular.noop 93
angular.isObject 93
angular.isElement 94
angular.copy 94
angular.identity 94
angular.forEach 95
23: 96
96
Examples 96
ngStorage 96
97

24: 98
Examples 98
7 98
1ng-repeat 98
2 98
3 99
4 99
5ng-if / ng-show 100
6 100
7 101
..... 101
..... 101
..... 102
..... 102
ng-if vs ng-show 103
NG- 103
NG- 103
..... 104
..... 104
..... 104
..... 104
25: 106
Examples 106
VS 106
26: 108
Examples 108
..... 108
27: 111
..... 111
Examples 111
..... 111

1.5+ 111
112
113
113
28: 115
Examples 115
115
example.js 115
example.html 115
115
115
115
29: AngularJSTypeScript 117
117
Examples 117
117
ControllerControllerAs 118
/ 118
ControllerAs 119
119
ControllerAs 120
120
30: ES6 121
Examples 121
121
31: 122
122
Examples 122
122
122
32: 124

124

Examples....124

....124

....124

....124

UI....124

ngRoute....125

....125

....125

33: 126

Examples....126

....126

34: 128

....128

Examples....128

....128

35: 130

....130

Examples....130

....130

....131

Minification....131

....132

Angular JSControllerAs....132

Minification-Safe....133

....134

36: SelfThis....135

....135

Examples....135

....135

37: 137

....137

Examples....137
....137
38: 139
Examples....139
angularjs....139
....139
....139
39: 140
Examples....140
....140
....140
angular.factory....140
$ sce - 141
"....141
....142
....142
40: 146
Examples....146
....146
....146
41: 148
....148
Examples....148
....148
$$....148
$$....148
....149
AngularJS....149
....150
$ destory$ rootScope$....151
42: 152
....

152

Examples....152

....152

$ digest$ watch....152

$ scope....153

43: - 155

Examples....155

....155

....156

44: 158

....158

....158

Examples....158

LifeCycle....158

....158

....159

....159

“require”....159

JS....160

45: 161

....161

....161

Examples....162

....162

....163

....164

....165

....166

....167

....168

....169

46: 170

Examples....170
....170
....170
CSS....171
ngMessages....171
....171
....171
....172
....172
....173
47: 174
....174
....174
Examples....174
....174
....174
....175
48: MVC....177
....177
Examples....177
....177
mvc....177
....177
....177
49: - 178
Examples....178
....178
....178
....178
50: 180
Examples....180
....

180

ng-inspect chrome 180

..... 184

51: 186

Examples 186

..... 186

Javascript 186

HTML 186

..... 187

..... 187

..... 187

..... 188

ng-repeat 189

52: Angular 2+ 190

..... 190

Examples 190

AngularJS 190

..... 190

..... 191

..... 191

..... 192

WebpackES6 192

..... 193

You can share this PDF with anyone you feel could benefit from it, downloaded the latest version from: angularjs

It is an unofficial and free AngularJS ebook created for educational purposes. All the content is extracted from Stack Overflow Documentation, which is written by many hardworking individuals at Stack Overflow. It is neither affiliated with Stack Overflow nor official AngularJS.

The content is released under Creative Commons BY-SA, and the list of contributors to each chapter are provided in the credits section at the end of this book. Images may be copyright of their respective owners unless otherwise specified. All trademarks and registered trademarks are the property of their respective company owners.

Use the content presented in this book at your own risk; it is not guaranteed to be correct nor accurate, please send your feedback and corrections to info@zzzprojects.com

1: AngularJS

AngularJSWeb。 Angular 1.x Angular 2Angular 2Stack Overflow 。

1.6.5	201773
1.6.4	2017331
1.6.3	201738
1.6.2	201727
1.5.11	2017113
1.6.1	20161223
1.5.10	○
1.6.0	2016128
1.6.0-rc.2	20161124
1.5.9	20161124
1.6.0-RC.1	20161121
1.6.0-rc.0	20161026
1.2.32	20161011
1.4.13	20161010
1.2.31	20161010
1.5.8	2016722
1.2.30	2016721
1.5.7	2016615
1.4.12	2016615
1.5.6	2016527
1.4.11	2016527
1.5.5	2016418

1.5.4	2016414
1.5.3	2016325
1.5.2	2016319
1.4.10	2016316
1.5.1	2016316
1.5.0	201625
1.5.0 rc.2	2016128
1.4.9	2016121
1.5.0 RC.1	2016116
1.5.0 rc.0	2015129
1.4.8	
1.5.0 beta.2	
1.4.7	2015930
1.3.20	2015930
1.2.29	2015930
1.5.0 beta.1	2015930
1.5.0 beta.0	2015917
1.4.6	2015917
1.3.19	2015917
1.4.5	2015828
1.3.18	2015819
1.4.4	2015813
1.4.3	2015715
1.3.17	201577
1.4.2	201577
1.4.1	2015616

1.3.16	201566
1.4.0	2015527
1.4.0-rc.2	2015512
1.4.0-RC.1	2015424
1.4.0-rc.0	2015410
1.3.15	2015317
1.4.0-beta.6	2015317
1.4.0-beta.5	2015-02-24
1.3.14	2015-02-24
1.4.0-beta.4	201529
1.3.13	201529
1.3.12	201523
1.4.0-beta.3	201523
1.3.11	2015127
1.4.0-beta.2	2015127
1.4.0-beta.1	2015120
1.3.10	2015120
1.3.9	2015115
1.4.0-beta.0	2015114
1.3.8	
1.2.28	
1.3.7	
1.3.6	2014129
1.3.5	2014122
1.3.4	
1.2.27	20141121

1.3.3	
1.3.2	2014117
1.3.1	20141031
1.3.0	20141014
1.3.0 rc.5	2014109
1.2.26	2014103
1.3.0 rc.4	2014102
1.3.0 rc.3	2014924
1.2.25	2014917
1.3.0 rc.2	2014917
1.2.24	2014910
1.3.0 RC.1	2014910
1.3.0 rc.0	2014830
1.2.23	2014823
1.3.0 beta.19	2014823
1.2.22	2014812
1.3.0 beta.18	2014812
1.2.21	2014-07-25
1.3.0 beta.17	2014-07-25
1.3.0 beta.16	2014718
1.2.20	2014711
1.3.0 beta.15	2014711
1.2.19	201471
1.3.0 beta.14	201471
1.3.0 beta.13	2014616
1.3.0 beta.12	2014614

1.2.18	2014614
1.3.0 beta.11	201466
1.2.17	201466
1.3.0 beta.10	2014524
1.3.0 beta.9	2014517
1.3.0 beta.8	201459
1.3.0 beta.7	2014426
1.3.0 beta.6	2014422
1.2.16	201444
1.3.0 beta.5	201444
1.3.0 beta.4	2014328
1.2.15	2014322
1.3.0 beta.3	2014321
1.3.0 beta.2	2014-03-15
1.3.0 beta.1	201438
1.2.14	201431
1.2.13	2014215
1.2.12	201428
1.2.11	201423
1.2.10	2014125
1.2.9	2014115
1.2.8	2014-01-10
1.2.7	201413
1.2.6	○
1.2.5	20131213
1.2.4	2013126

1.2.3	20131127
1.2.2	20131122
1.2.1	20131115
1.2.0	2013118
1.2.0-rc.3	
1.2.0-rc.2	201394
1.0.8	2013822
1.2.0rc1	2013813
1.0.7	2013522
1.1.5	2013522
1.0.6	201344
1.1.4	201344
1.0.5	2013220
1.1.3	2013220
1.0.4	2013123
1.1.2	2013123
1.1.1	20121127
1.0.3	20121127
1.1.0	201294
1.0.2	201294
1.0.1	2012-06-25
1.0.0	2012-06-14
v1.0.0rc12	2012-06-12
v1.0.0rc11	2012-06-11
v1.0.0rc10	2012-05-24
v1.0.0rc9	2012-05-15

v1.0.0rc8	2012-05-07
v1.0.0rc7	2012-05-01
v1.0.0rc6	2012-04-21
v1.0.0rc5	2012-04-12
v1.0.0rc4	2012-04-05
v1.0.0rc3	2012-03-30
v1.0.0rc2	2012-03-21
G3-v1.0.0rc1	2012-03-14
G3-V1.0.0-RC2	2012-03-16
1.0.0rc1	2012-03-14
0.10.6	2012-01-17
0.10.5	2011-11-08
0.10.4	2011-10-23
0.10.3	2011-10-14
0.10.2	2011-10-08
0.10.1	2011-09-09
0.10.0	2011-09-02
0.9.19	2011-08-21
0.9.18	2011-07-30
0.9.17	2011-06-30
0.9.16	2011-06-08
0.9.15	2011-04-12
0.9.14	2011-04-01
0.9.13	2011-03-14
0.9.12	2011-03-04
0.9.11	2011-02-09

0.9.10	2011-01-27
0.9.9	2011-01-14
0.9.7	2010-12-11
0.9.6	2010-12-07
0.9.5	2010-11-25
0.9.4	2010-11-19
0.9.3	2010-11-11
0.9.2	2010-11-03
0.9.1	2010-10-27
0.9.0	2010-10-21

Examples

HTML

```
<!DOCTYPE html>
<html ng-app>
<head>
  <title>Hello, Angular</title>
  <script src="https://code.angularjs.org/1.5.8/angular.min.js"></script>
</head>
<body ng-init="name='World'">
  <label>Name</label>
  <input ng-model="name" />
  <span>Hello, {{ name }}!</span>
  <p ng-bind="name"></p>
</body>
</html>
```

```
Hello, World! ◦ ◦
```

---

1. Content Delivery NetworkAngular。

   ```
   <script src="https://code.angularjs.org/1.5.8/angular.min.js"></script>
   ```

2. `ng-app`HTMLAngular`ng-app`

   ```
   <html ng-app>
   ```

3. `ng-init`name

```
<body ng-init=" name = 'World' ">
```

ng-init。 。

4. HTML。 ng-model<input>name

```
<input ng-model="name" />
```

5. {{ }}

```
<span>Hello, {{ name }}</span>
```

6. nameng-bind"{{ }}"

```
 <span ng-bind="name"></span>
```

。 。

ng-bind。 Hello, {{name}}ng-bind 。 ng-cloak。

Angular

AngularJS

```
<!DOCTYPE html>
<html ng-app="myDemoApp">
  <head>
    <style>.started { background: gold; }</style>
    <script src="https://code.angularjs.org/1.5.8/angular.min.js"></script>
    <script>
      function MyDataService() {
        return {
          getWorlds: function getWorlds() {
            return ["this world", "another world"];
          }
        };
      }

      function DemoController(worldsService) {
        var vm = this;
        vm.messages = worldsService.getWorlds().map(function(w) {
          return "Hello, " + w + "!";
        });
      }

      function startup($rootScope, $window) {
        $window.alert("Hello, user! Loading worlds...");
        $rootScope.hasStarted = true;
      }

      angular.module("myDemoApp", [/* module dependencies go here */])
        .service("worldsService", [MyDataService])
        .controller("demoController", ["worldsService", DemoController])
        .config(function() {
```

```
          console.log('configuring application');
        })
        .run(["$rootScope", "$window", startup]);
    </script>
  </head>
  <body ng-class="{ 'started': hasStarted }" ng-cloak>
    <div ng-controller="demoController as vm">
      <ul>
        <li ng-repeat="msg in vm.messages">{{ msg }}</li>
      </ul>
    </div>
  </body>
</html>
```

1. `ng-app="myDemoApp"` ngApp DOM`"myDemoApp"angular.module`;
2. `<script src="angular.min.js">`AngularJS;

`MyDataService DemoControllerstartup`◦

3. `angular.module(...)`◦ ◦ `module(...)`;
4. `.service(...)`Angular Service;
5. `.controller(...)`Angular Controller;
6. `.config(...)`◦
7. `.run(...)`◦ ◦
   - Angular`startup``$rootScope`;
   - Angular`startup``$window`;
   - `startup` ;
8. `ng-classclass` ngClass `$rootScopehasStarted`
9. `ng-cloak`AngularAngular html“ `{{ msg }}` ”◦
10. `ng-controller` AngularDOM;
11. `ng-repeat`AngularDOM ;
12. `{{ msg }}` ;

AngularHTMLJavascript**ng-app ng-controllerng-if ng-repeat**◦ Angular`$scope` ◦

`$scope`◦ ◦

◦

```
<div ng-app="myApp">
 <h1>Hello {{ name }}</h1>
</div>
```

Angular`$rootScope`。 Javascript**name**`$rootScope`

```
angular.module("myApp", [])
  .run(function($rootScope) {
    $rootScope.name = "World!";
  });
```

Javascript`$rootScope`。

。 Angular`$scope`。 。

```
<div ng-app="myApp">
  <div ng-controller="MyController">
    <h1>Hello {{ name }}</h1>
  </div>
</div>
```

`$scope`。

```
angular.module("myApp", [])
  .controller("MyController", function($scope) {
    $scope.name = "Mr Local!";
  });
```

`$scope`。 **controllerAs** 。

`$scope`JavaScriptAngular`$rootScope` 。 。 `$scope.model`。

`$scope.model`。

Angular。 `$scope`Angular。

Hello World。

Angular 1DOM。 HTML。

Angular`{{ }}` 。

```
{{ 'Hello' + 'World' }}
```

```
HelloWorld
```

NG-

Angular`ng-app` DOM。 Angular。 ng-app

```
<html>
  <head>
    <script src="/angular.js"></script>
```

```
  </head>
  <body ng-app>
    {{ 'Hello' + 'World' }}
  </body>
</html>
```

body。。

。Angular DOM。**MisularMisko**Angular

“WebWeb。

HTMLAngular。 `ng-app`。

- `ng-click`
- `ng-hide`
- `<form>` HTML。

Angular100。。

AngularHTML。

Angular

。

。

```
var app = angular.module('mainApp', []);
app.controller('FirstController', function($scope) {
    $scope.name= 'Hello World !';
});
```

。

```
var app=angular.module("mainApp",[]);app.controller("FirstController",function(e){e.name=
'Hello World !'})
```

minification$ scope。。$ scope'e'。'e'。

```
var app = angular.module('mainApp', []);
app.controller('FirstController', ['$scope', function($scope) {
    $scope.message = 'Hello World !';
}]);
```

$ inject

```
FirstController.$inject = ['$scope'];
var FirstController = function($scope) {
    $scope.message = 'Hello World !';
```

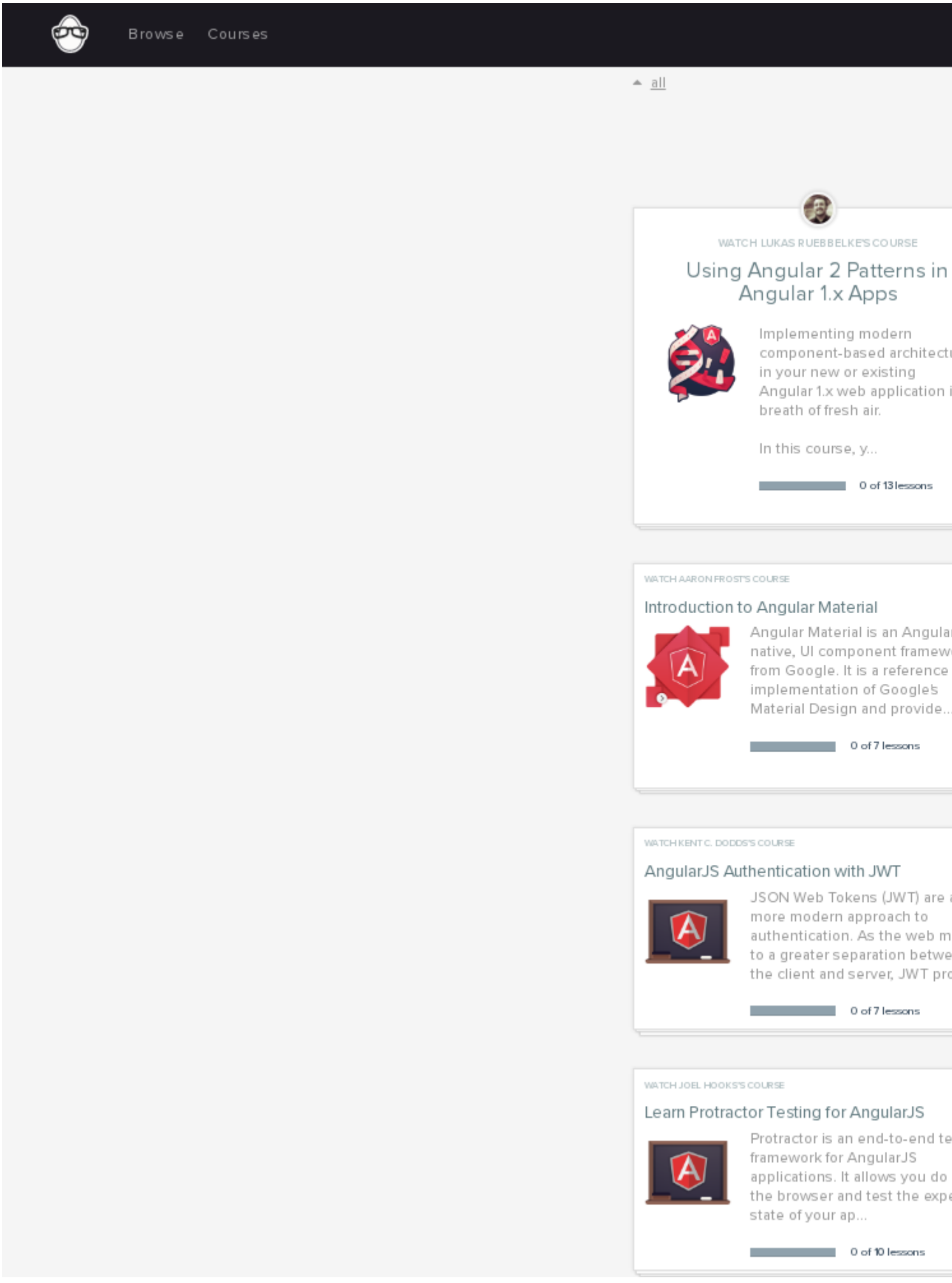
```
}

var app = angular.module('mainApp', []);
app.controller('FirstController', FirstController);
```

```
var
app=angular.module("mainApp",[]);app.controller("FirstController",["$scope",function(a){a.message="Hel
World !"}]);
```

angular'a'$ scope'Hello World'。

AngularJS

egghead.ioAngularJS



- https://egghead.io/courses/angularjs-app-from-scratch-getting-started

- https://egghead.io/courses/angularjs-application-architecture
- https://egghead.io/courses/angular-material-introduction
- https://egghead.io/courses/building-an-angular-1-x-ionic-application
- https://egghead.io/courses/angular-and-webpack-for-modular-applications
- https://egghead.io/courses/angularjs-authentication-with-jwt
- https://egghead.io/courses/angularjs-data-modeling
- https://egghead.io/courses/angular-automation-with-gulp
- https://egghead.io/courses/learn-protractor-testing-for-angularjs
- https://egghead.io/courses/ionic-quickstart-for-windows
- https://egghead.io/courses/build-angular-1-x-apps-with-redux
- https://egghead.io/courses/using-angular-2-patterns-in-angular-1-x-apps

AngularJS https://riptutorial.com/zh-TW/angularjs/topic/295/angularjs

2: $ http

Examples

$ http

`$http`HTTPpromise。

```
// Simple GET request example:
$http({
  method: 'GET',
  url: '/someUrl'
}).then(function successCallback(response) {
    // this callback will be called asynchronously
    // when the response is available
  }, function errorCallback(response) {
    // called asynchronously if an error occurs
    // or server returns response with an error status.
  });
```

```
appName.controller('controllerName',
    ['$http', function($http){

    // Simple GET request example:
    $http({
        method: 'GET',
        url: '/someUrl'
    }).then(function successCallback(response) {
        // this callback will be called asynchronously
        // when the response is available
    }, function errorCallback(response) {
        // called asynchronously if an error occurs
        // or server returns response with an error status.
    });
}])
```

`$http`。 http

```
$http.get('/someUrl', config).then(successCallback, errorCallback);
$http.post('/someUrl', data, config).then(successCallback, errorCallback);
```

- $ http.get
- $ http.head
- $ http.post
- $ http.put
- $ http.delete
- $ http.jsonp
- $ http.patch

$ http

HTTPWeb。

`httpRequestsService.js`

httpRequestsService.js

```
appName.service('httpRequestsService', function($q, $http){

    return {
        // function that performs a basic get request
        getName: function(){
            // make sure $http is injected
            return $http.get("/someAPI/names")
                .then(function(response) {
                    // return the result as a promise
                    return response;
                }, function(response) {
                    // defer the promise
                    return $q.reject(response.data);
                });
        },

        // add functions for other requests made by your app
        addName: function(){
            // some code...
        }
    }
})
```

get。。

```
appName.controller('controllerName',
    ['httpRequestsService', function(httpRequestsService){

        // we injected httpRequestsService service on this controller
        // that made the getName() function available to use.
        httpRequestsService.getName()
            .then(function(response){
                // success
            }, function(error){
                // do something with the error
            })
    }])
```

httpRequestsService.js。

$ http

$ http。。

```
$scope.names = [];

$http({
    method: 'GET',
    url: '/someURL'
}).then(function successCallback(response) {
```

```
            $scope.names = response.data;
        },
        function errorCallback(response) {
            alert(response.status);
        });

alert("The first name is: " + $scope.names[0]);
```

`$scope.names[0]` http`$scope.names[0]` - ◦

```
$scope.names = [];

$scope.$watch('names', function(newVal, oldVal) {
    if(!(newVal.length == 0)) {
        alert("The first name is: " + $scope.names[0]);
    }
});

$http({
    method: 'GET',
    url: '/someURL'
}).then(function successCallback(response) {
            $scope.names = response.data;
        },
        function errorCallback(response) {
            alert(response.status);
        });
```

$ watch`$scope.names`◦ `$scope.names` `newVal.length`0◦ - `$scope.names`◦

$ http https://riptutorial.com/zh-TW/angularjs/topic/3620/--http

3: Angular $

AngularAngularJS。 docs.angularjs.org

$ rootScope。 $ scope$ scopeAngular Services。

Examples

$ scope

```
angular.module('app', [])
.controller('myController', ['$scope', function($scope){
    $scope.person = { name: 'John Doe' };
}]);

<div ng-app="app" ng-conroller="myController">
    <input ng-model="person.name" />
    <div ng-repeat="number in [0,1,2,3]">
        {{person.name}} {{number}}
    </div>
</div>
```

ng-repeat。

myControllerperson。

JavaScript。

StringNumberBooleanSymbol

```
var x = 5;
var y = x;
y = 6;
console.log(y === x, x, y); //false, 5, 6
```

```
var x = { name : 'John Doe' };
var y = x;
y.name = 'Jhon';
console.log(x.name === y.name, x.name, y.name); //true, John, John
```

angular。

```
angular.module('app', [])
.controller('myController', ['$scope', function($scope){
    $scope.person = { name: 'John Doe' }; //non-primitive
    $scope.name = 'Jhon Doe'; //primitive
}])
.controller('myController1', ['$scope', function($scope){}]);

<div ng-app="app" ng-controller="myController">
```

```
    binding to input works: {{person.name}}<br/>
    binding to input does not work: {{name}}<br/>
    <div ng-controller="myController1">
        <input ng-model="person.name" />
        <input ng-model="name" />
    </div>
</div>
```

Angular`$scope.$new()`。

。

。 Angular - 。

。

rootScope。 - 。

```
angular.module('app', [])
.run(['$rootScope', function($rootScope){
    var messages = []
    $rootScope.addMessage = function(msg){
        messages.push(msg);
    }
}]);

<div ng-app="app">
    <a ng-click="addMessage('hello world!')">it could be accsessed from here</a>
    <div ng-include="inner.html"></div>
</div>
```

inner.html

```
<div>
    <button ng-click="addMessage('page')">and from here to!</button>
</div>
```

$ scope

HTML$ scopes。 $ scope

```
 $scope.$on('my-event', function(event, args) {
    console.log(args); // { custom: 'data' }
});
```

$ on。

```
var unregisterMyEvent = $scope.$on('my-event', function(event, args) {
    console.log(args); // { custom: 'data' }
    unregisterMyEvent();
});
```

$ scope**$ broadcast$ emit** 。 **$ emit**

```
$scope.$emit('my-event', { custom: 'data' });
```

`my-event`**$ rootScope**`stopPropagationstopPropagation` 。 **$ emit**`stopPropagation`

$ emit$ broadcast $ broadcast。

```
$scope.$broadcast('my-event', { custom: 'data' });
```

$ broadcast。

$ scope

$ rootscope$ scope$ scope。 。

```
myApp.controller('myController', ['$scope', function($scope){
    $scope.myFunction = function () {
        alert("You are in myFunction!");
    };
}]);
```

```
$scope.myfunction();
```

HTML

```
<div ng-controller="myController">
    <button ng-click="myFunction()"> Click me! </button>
</div>
```

```
myApp.directive('triggerFunction', function() {
    return {
        scope: {
            triggerFunction: '&'
        },
        link: function(scope, element) {
            element.bind('mouseover', function() {
                scope.triggerFunction();
            });
        }
    };
});
```

HTML

```
<div ng-controller="myController">
    <button trigger-function="myFunction()"> Hover over me! </button>
</div>
```

ngMouseover。 $ scope

Scope“”。AngularJSrootScope。rootScope。

。 。

1.
2.
3. {}

。 。 。 。

```
var app = angular.module("test",[]);

app.controller("Ctrl1",function($scope){
    $scope.name = "Prateek";
    $scope.reverseName = function(){
        $scope.name = $scope.name.split('').reverse().join('');
    };
});
app.directive("myDirective", function(){
    return {
        restrict: "EA",
        scope: {},
        template: "<div>Your name is : {{name}}</div>"+
        "Change your name : <input type='text' ng-model='name'/>"
    };
});
```

AngularJS3

1. “@”/
2. “=”/
3. “”/

```
<div my-directive
  class="directive"
  name="{{name}}"
  reverse="reverseName()"
  color="color" >
</div>
```

Angular $ https://riptutorial.com/zh-TW/angularjs/topic/3157/angular--

4: AngularJS`=``@```

plunker。

Examples

@。

。

parens。 。 。

```
<one-way text="Simple text." <!-- 'Simple text.' -->
         simple-value="123" <!-- '123' Note, is actually a string object. -->
         interpolated-value="{{parentScopeValue}}" <!-- Some value from parent scope. You
can't change parent scope value, only child scope value. Note, is actually a string object. --
>
         interpolated-function-value="{{parentScopeFunction()}}" <!-- Executes parent scope
function and takes a value. -->

         <!-- Unexpected usage. -->
         object-item="{{objectItem}}" <!-- Converts object|date to string. Result might be:
'{"a":5,"b":"text"}'. -->
         function-item="{{parentScopeFunction}}"> <!-- Will be an empty string. -->
</one-way>
```

=。

。 {{...}}。

```
<two-way text="'Simple text.'" <!-- 'Simple text.' -->
         simple-value="123" <!-- 123 Note, is actually a number now. -->
         interpolated-value="parentScopeValue" <!-- Some value from parent scope. You may
change it in one scope and have updated value in another. -->
         object-item="objectItem" <!-- Some object from parent scope. You may change object
properties in one scope and have updated properties in another. -->

         <!-- Unexpected usage. -->
         interpolated-function-value="parentScopeFunction()" <!-- Will raise an error. -->
         function-item="incrementInterpolated"> <!-- Pass the function by reference and you
may use it in child scope. -->
</two-way>
```

。

。

。 。 。 {{...}}。 。

```
<expression-binding interpolated-function-value="incrementInterpolated(param)" <!--
```

```
interpolatedFunctionValue({param: 'Hey'}) will call passed function with an argument. -->
                    function-item="incrementInterpolated" <!-- functionItem({param: 'Hey'})()
will call passed function, but with no possibility set up a parameter. -->
                    text="'Simple text.'"  <!-- text() == 'Simple text.'-->
                    simple-value="123" <!-- simpleValue() == 123 -->
                    interpolated-value="parentScopeValue" <!-- interpolatedValue() == Some
value from parent scope. -->
                    object-item="objectItem"> <!-- objectItem() == Object item from parent
scope. -->
</expression-binding>
```

。

```
angular.component("SampleComponent", {
  bindings: {
     title: '@',
     movies: '<',
     reservation: "=",
     processReservation: "&"
  }
});
```

。

@。。

<。。

=。。

。。

```
bindings: {
   mandatory: '='
   optional: '=?',
   foo: '=?bar'
}
```

=?=?bar。 ($compile:nonassign)。

AngularJS`=``@``` https://riptutorial.com/zh-TW/angularjs/topic/6149/angularjs----------

5: angularjs

Angularjs。

Examples

Angularjs

```
<div ng-app="MainApp" ng-controller="SampleController">
    <input ng-model="dishName" id="search" class="form-control" placeholder="Filter text">
    <ul>
        <li dir-paginate="dish in dishes |  filter : dishName | itemsPerPage: pageSize"
pagination-id="flights">{{dish}}</li>
    </ul>
    <dir-pagination-controls boundary-links="true" on-page-
change="changeHandler(newPageNumber)" pagination-id="flights"></dir-pagination-controls>
</div>
<script type="text/javascript" src="angular.min.js"></script>
<script type="text/javascript" src="pagination.js"></script>
<script type="text/javascript">

var MainApp = angular.module('MainApp', ['angularUtils.directives.dirPagination'])
MainApp.controller('SampleController', ['$scope', '$filter', function ($scope, $filter) {

    $scope.pageSize = 5;

    $scope.dishes = [
    'noodles',
    'sausage',
    'beans on toast',
    'cheeseburger',
    'battered mars bar',
    'crisp butty',
    'yorkshire pudding',
    'wiener schnitzel',
    'sauerkraut mit ei',
    'salad',
    'onion soup',
    'bak choi',
    'avacado maki'
    ];

    $scope.changeHandler = function (newPage) { };
}]);
</script>
```

angularjs https://riptutorial.com/zh-TW/angularjs/topic/10821/angularjs-

6: AngularJS

Examples

1. AngularJavaScript ◦
2. ◦ ◦
3. `ng-repeat ng-switch ng-view ng-if ng-controller ng-include`◦

◦ “” AngularJS◦

1. ”◦ ”HTML
2. `controllerAs`“”
3. $ parent`scope`◦ `ng-ifng-model="$parent.foo"` ..

`ngModel`getter / setter◦ getter / setter`ng-model-options="{ getterSetter: true }"ngModal`getter ◦

```
<div ng-app="myApp" ng-controller="MainCtrl">
    <input type="text" ng-model="foo" ng-model-options="{ getterSetter: true }">
    <div ng-if="truthyValue">
        <!-- I'm a child scope (inside ng-if), but i'm synced with changes from the outside
scope -->
        <input type="text" ng-model="foo">
    </div>
    <div>$scope.foo: {{ foo() }}</div>
</div>
```

```
angular.module('myApp', []).controller('MainCtrl', ['$scope', function($scope) {
    $scope.truthyValue = true;

    var _foo = 'hello'; // this will be used to cache/represent the value of the 'foo' model

    $scope.foo = function(val) {
        // the function return the the internal '_foo' varibale when called with zero
arguments,
        // and update the internal `_foo` when called with an argument
        return arguments.length ? (_foo = val) : _foo;
    };
}]);
```

Angular ◦

html5Mode

`html5Mode([mode])`

1. `index.html`URL`<base href="">` ◦

2. `base`url◦ - `"Resource interpreted as stylesheet but transferred with MIME type text/html"` ◦

```
<head>
    <meta charset="utf-8">
    <title>Job Seeker</title>

    <base href="/">

    <link rel="stylesheet" href="bower_components/bootstrap/dist/css/bootstrap.css" />
    <link rel="stylesheet" href="/styles/main.css">
</head>
```

3. `base$locationProvider$locationProviderbaserequireBase:falserequireBase:false $locationProvider.html5Mode()`

```
$locationProvider.html5Mode({
    enabled: true,
    requireBase: false
});
```

4. HTML5 URLURL。AngularJS //$ location

    URL`index.html` 。 `<base>`Angularurl。

ui-routerHTTP- html5Mode 。 Apache

```
 RewriteEngine on

 # Don't rewrite files or directories
 RewriteCond %{REQUEST_FILENAME} -f [OR]
 RewriteCond %{REQUEST_FILENAME} -d
 RewriteRule ^ - [L]

 # Rewrite everything else to index.html to allow html5 state links
 RewriteRule ^ index.html [L]
```

nginx

```
 server {
     server_name my-app;

     root /path/to/app;

     location / {
         try_files $uri $uri/ /index.html;
     }
 }
```

```
 var express = require('express');
 var app = express();

 app.use('/js', express.static(__dirname + '/js'));
 app.use('/dist', express.static(__dirname + '/../dist'));
 app.use('/css', express.static(__dirname + '/css'));
 app.use('/partials', express.static(__dirname + '/partials'));

 app.all('/*', function(req, res, next) {
```

```
    // Just send the index.html for other files to support HTML5Mode
    res.sendFile('index.html', { root: __dirname });
});

app.listen(3006); //the port you want to use
```

7 AngularJS

AngularJS。

1.DOM

。 。 DOM。 。 。 DOM。 。

```
link: function($scope, element, attrs) {
    //The best place to manipulate DOM
}
```

DOM`element` `angular.element()` Javascript。

2.

AngularJS。 。 AngularJS。 。

```
<my-dir>
    <my-transclusion>
    </my-transclusion>
</my-dir>
```

。

```
<my-dir>
    <my-transclusion>
        <input ng-model="name">
    </my-transclusion>
</my-dir>
```

。 transclusionname。 **$ parent.name** 。 。 。

```
$scope.data = {
    name: 'someName'
}
```

'data'

```
<input ng-model="data.name">
```

。

3.

。。myDirAmyDirBisoletedmyDirC

```
<input my-dir-a my-dirc>
```

```
<input my-dir-a my-dir-b>
```

。

4.$ emit

$ emit$ broadcast$ on -。。A'someEvent'B。

```
$scope.$emit('someEvent', args);
```

'someEvent'

```
$scope.$on('someEvent', function(){});
```

B。$ emit。

5.$ scope。$ watch

$ scope。$ watch。。$ scope。$ watch。$ digest。

```
$scope.$watch('myCtrl.myVariable', function(newVal) {
    this.myVariable++;
});
```

myVariablenewVal。

6.

。AngularJS。。ng-clickng-blurng-on-changeparemeter。

```
<input ng-disabled="myCtrl.isDisabled()" ng-model="myCtrl.name">
```

isDisabled。myCtrl

```
vm.isDisabled = function(){
    if(someCondition)
        return true;
    else
        return false;
}
```

。。

```
vm.isDisabled
```

```
if(someCondition)
    vm.isDisabled = true
else
    vm.isDisabled = false
```

。

```
<input ng-disabled="myCtrl.isDisabled" ng-model="myCtrl.name">
```

。

7.Angular

AngularJS。

1. **angular.forEach** for the loops“”。
2. DOM**angular.element**
3. **angular.copy**
4. 。 。
5. Chrome。
6. **Batarang** 。 Chrome
   。

AngularJS https://riptutorial.com/zh-TW/angularjs/topic/3208/angularjs

7: Angular$ q

Examples

$ q.allpromise

promise.then$q.all$q.all。

JS

```
$scope.data = []

$q.all([
   $http.get("data.json"),
   $http.get("more-data.json"),
   ]).then(function(responses) {
     $scope.data = responses.map((resp) => resp.data);
   });
```

json$http.get 2getpromisespromise .thenresponsespromises。

HTML

```
<ul>
   <li ng-repeat="d in data">
      <ul>
         <li ng-repeat="item in d">{{item.name}}: {{item.occupation}}</li>
      </ul>
   </li>
</ul>
```

JSON

```
[{
  "name": "alice",
  "occupation": "manager"
}, {
  "name": "bob",
  "occupation": "developer"
}]
```

$ qpromise

$qAPIpromise。

$ q{...}

resolvereject promise。

1

```
function $timeout(fn, delay) {
    return = $q(function(resolve, reject) {
         setTimeout(function() {
              try {
                 let r = fn();
                 resolve(r);
              }
              catch (e) {
                 reject(e);
              }
         }, delay);
     };
}
```

WindowTimers.setTimeout APIpromise。 AngularJS。AngularJS $ timeoutAPI 。

2

```
$scope.divide = function(a, b) {
    return $q(function(resolve, reject) {
      if (b===0) {
        return reject("Cannot devide by 0")
      } else {
        return resolve(a/b);
      }
    });
}
```

promisifiedpromise。

`.then`

```
$scope.divide(7, 2).then(function(result) {
    // will return 3.5
}, function(err) {
    // will not run
})

$scope.divide(2, 0).then(function(result) {
    // will not run as the calculation will fail on a divide by 0
}, function(err) {
    // will return the error string.
})
```

$ q.defer

`$q`promise`$q.defer`promise。

`$q``$q.defer`promise。

```
var runAnimation = function(animation, duration) {
    var deferred = $q.defer();
    try {
        ...
```

```
        // run some animation for a given duration
        deferred.resolve("done");
    } catch (err) {
        // in case of error we would want to run the error hander of .then
        deferred.reject(err);
    }
    return deferred.promise;
}

// and then
runAnimation.then(function(status) {}, function(error) {})
```

1. `deferred.promise.then`
2. `.then`

$ q

`$q`。

`$q` `$rootScope.Scope` UI。

`getMyData` promise。 `resolved` 。 `rejected` 2。

Angular

```
function getMyData($timeout, $q) {
  return function() {
    // simulated async function
    var promise = $timeout(function() {
      if(Math.round(Math.random())) {
        return 'data received!'
      } else {
        return $q.reject('oh no an error! try again')
      }
    }, 2000);
    return promise;
  }
}
```

Promise

```
angular.module('app', [])
.factory('getMyData', getMyData)
.run(function(getData) {
  var promise = getData()
    .then(function(string) {
      console.log(string)
    }, function(error) {
      console.error(error)
    })
    .finally(function() {
      console.log('Finished at:', new Date())
    })
```

```
})
```

promises`$q` `getMyData$q`

```
var defer = $q.defer();
```

`$q.defer()`deferred

promisepromise `$q.deferred()` `resolve()` `reject()`notify()

- `resolve(value)` - promise
- `reject(reason)` -
- `notify(value)` - promise

promisepromise `promise` - {Promise} - promise

promise`deferred.promise`

`promise`

-

- `then(successCallback, [errorCallback], [notifyCallback])` -
- `catch(errorCallback)` - `catch(errorCallback)`nullerrorCallback
- `finally(callback, notifyCallback)` -

1

```
// Creates a promise that when resolved, returns 4.
function getNumbers() {

  var promise = $timeout(function() {
    return 4;
  }, 1000);

  return promise;
}

// Resolve getNumbers() and chain subsequent then() calls to decrement
// initial number from 4 to 0 and then output a string.
getNumbers()
  .then(function(num) {
      // 4
      console.log(num);
      return --num;
  })
  .then(function (num) {
      // 3
      console.log(num);
```

```
    return --num;
})
 .then(function (num) {
    // 2
    console.log(num);
    return --num;
})
.then(function (num) {
    // 1
    console.log(num);
    return --num;
})
.then(function (num) {
    // 0
    console.log(num);
    return 'And we are done!';
})
.then(function (text) {
    // "And we are done!"
    console.log(text);
});
```

$ q.whenpromise

promise

```
//OVERLY VERBOSE
var defer;
defer = $q.defer();
defer.resolve(['one', 'two']);
return defer.promise;
```

```
//BETTER
return $q.when(['one', 'two']);
```

$ q.when$ q.resolve

$ q。 promisepromise。

- AngularJS $ qAPI - $ q.when

AngularJS v1.4.1

ES6`resolve`

```
//ABSOLUTELY THE SAME AS when
return $q.resolve(['one', 'two'])
```

$ q

```
var myDeferred = $q.defer();
```

```
$http(config).then(function(res) {
   myDeferred.resolve(res);
}, function(error) {
   myDeferred.reject(error);
});

return myDeferred.promise;
```

$ http`$q.defer`。

```
//INSTEAD
return $http(config);
```

$ http。

Angular$ q https://riptutorial.com/zh-TW/angularjs/topic/4379/angular--q

8: HTTP

AngularJS$ httpHTTP。。。 http。。

Examples

Angular$httpHTTP。。

httpInterceptor

HTML

```
<!DOCTYPE html>
<html>
<head>
  <title>Angular Interceptor Sample</title>
  <script src="https://code.angularjs.org/1.5.8/angular.min.js"></script>
  <script src="app.js"></script>
  <script src="appController.js"></script>
  <script src="genericInterceptor.js"></script>
</head>
<body ng-app="interceptorApp">
    <div ng-controller="appController as vm">
        <button ng-click="vm.sendRequest()">Send a request</button>
    </div>
</body>
</html>
```

“app.js”JavaScript

```
var interceptorApp = angular.module('interceptorApp', []);

interceptorApp.config(function($httpProvider) {
        $httpProvider.interceptors.push('genericInterceptor');
});
```

'appController.js'

```
(function() {
    'use strict';

    function appController($http) {
        var vm = this;

        vm.sendRequest = function(){
            $http.get('http://google.com').then(function(response){
                console.log(response);
            });
        };
    }

    angular.module('interceptorApp').controller('appController',['$http', appController]);
```

```
})();
```

'genericInterceptor.js'

```
(function() {
    "use strict";

    function genericInterceptor($q) {
        this.responseError = function (response) {
            return $q.reject(response);
        };

        this.requestError = function(request){
            if (canRecover(rejection)) {
                return responseOrNewPromise
            }
            return $q.reject(rejection);
        };

        this.response = function(response){
            return response;
        };

        this.request = function(config){
            return config;
        }
    }

    angular.module('interceptorApp').service('genericInterceptor', genericInterceptor);
})();
```

'genericInterceptor'。

httpFlash

htmlhtmlindex.htmldivflashdiv

```
<div class="flashmessage" ng-if="isVisible">
    {{flashMessage}}
</div>
```

angularconfighttpProviderhttpProviderrootScope。

```
var interceptorTest = angular.module('interceptorTest', []);

    interceptorTest.config(['$httpProvider',function ($httpProvider) {

        $httpProvider.interceptors.push(["$rootScope",function ($rootScope) {
            return {     //intercept only the response
                        'response': function (response)
                                    {

$rootScope.showFeedBack(response.status,response.data.message);

                                      return response;
                                    }
```

```
                    };
        }]);

    }])
```

httpProviderrootcoperunrootscope。

$ timeoutflash。3000。

```
interceptorTest.run(["$rootScope","$timeout",function($rootScope,$timeout){
     $rootScope.showFeedBack = function(status,message){

        $rootScope.isVisible = true;
        $rootScope.flashMessage = message;
        $timeout(function(){$rootScope.isVisible = false },3000)
    }
}]);
```

$ rootScope 。

HTTP https://riptutorial.com/zh-TW/angularjs/topic/6484/http

9: ng-class

Examples

ng-ng

Angular`ng-class`。

1.

```
<span ng-class="MyClass">Sample Text</span>
```

Angular$ scope。 Angular$ scope“MyClass”。 “MyClass”`<span>`。 。

```
$scope.MyClass = "bold-red deleted error";
```

Angular`MyClass`$ scope。 “bold-red”“deleted”“error”`<span>`。

。 。 `$scope`。 HTML`ng-class`。

2.

`ng-class`。

。 true。

```
<style>
    .red { color: red; font-weight: bold; }
    .blue { color: blue; }
    .green { color: green; }
    .highlighted { background-color: yellow; color: black; }
</style>

<span ng-class="{ red: ShowRed, blue: ShowBlue, green: ShowGreen, highlighted: IsHighlighted
}">Sample Text</span>

<div>Red: <input type="checkbox" ng-model="ShowRed"></div>
<div>Green: <input type="checkbox" ng-model="ShowGreen"></div>
<div>Blue: <input type="checkbox" ng-model="ShowBlue"></div>
<div>Highlight: <input type="checkbox" ng-model="IsHighlighted"></div>
```

3.

1 2。

```
<style>
    .bold { font-weight: bold; }
    .strike { text-decoration: line-through; }
    .orange { color: orange; }
</style>

<p ng-class="[ UserStyle, {orange: warning} ]">Array of Both Expression Types</p>
<input ng-model="UserStyle" placeholder="Type 'bold' and/or 'strike'"><br>
<label><input type="checkbox" ng-model="warning"> warning (apply "orange" class)</label>
```

UserStyle◦ <p>◦ warning◦ <p>◦

ng-class https://riptutorial.com/zh-TW/angularjs/topic/2395/ng-class

10: NG-

ng-viewangular。 {info} ngRouteangular.jsjavascriptangular-route.js。$ routeProvider“when”。templateUrlcontroller。

Examples

NG-

`ng-view$route`。 Index.html“/”templateURL home.htmlIndex.html`ng-view` 。

```
angular.module('ngApp', ['ngRoute'])

.config(function($routeProvider){
  $routeProvider.when("/",
    {
      templateUrl: "home.html",
      controller: "homeCtrl"
    }
  );
});

angular.module('ngApp').controller('homeCtrl',['$scope', function($scope) {
  $scope.welcome= "Welcome to stackoverflow!";
}]);

//Index.html
<body ng-app="ngApp">
    <div ng-view></div>
</body>

//Home Template URL or home.html
<div><h2>{{welcome}}</h2></div>
```

1.

```
  var Registration=angular.module("myApp",["ngRoute"]);
```

2. “ngRoute”$ routeProvider

```
    Registration.config(function($routeProvider) {

});
```

3. “/ add”“/ add”regi.htm

```
 Registration.config(function($routeProvider) {
    $routeProvider
    .when("/add", {
        templateUrl : "regi.htm"
    })
```

```
});
```

NG- https://riptutorial.com/zh-TW/angularjs/topic/8833/ng-

11: NG-

ngRepeat。 。 $index。

- <element ng-repeat="expression"></element>
- ...
- ...

$index	0..length-1
$first	*boolean*true。
$middle	*boolean*true。
$last	*boolean*true。
$even	*boolean*$index $index truefalse。
$odd	*boolean*$index $index truefalse。

AngularJSng-repeatng-repeatHTML。

Examples

```
<div ng-repeat="(key, value) in myObj"> ... </div>
```

```
<div ng-repeat="n in [42, 42, 43, 43]">
  {{n}}
</div>
```

ngRepeat$ watchCollection。 ngRepeat DOM

- DOM。
- DOM。
- DOM。

- track by。
- track by。
- track by [ngRepeat:dupes]

```
$scope.numbers = ['1','1','2','3','4'];

<ul>
  <li ng-repeat="n in numbers track by $index">
    {{n}}
```

```
  </li>
</ul>
```

ng-repeat-start + ng-repeat-end

AngularJS 1.2 `ng-repeatng-repeat-startng-repeat-end`

```
// table items
$scope.tableItems = [
    {
        row1: 'Item 1: Row 1',
        row2: 'Item 1: Row 2'
    },
    {
        row1: 'Item 2: Row 1',
        row2: 'Item 2: Row 2'
    }
];

// template
<table>
    <th>
        <td>Items</td>
    </th>
    <tr ng-repeat-start="item in tableItems">
        <td ng-bind="item.row1"></td>
    </tr>
    <tr ng-repeat-end>
        <td ng-bind="item.row2"></td>
    </tr>
</table>
```

11
12
21
22

NG- https://riptutorial.com/zh-TW/angularjs/topic/8118/ng-

12: NG-

'ngStyle'HTMLCSS。 AngularJSHTML*style*angularjs`ng-style`。

- `<ANY ng-style="expression"></ANY >`
- `<ANY class="ng-style: expression;"> ... </ANY>`

Examples

ng

“status”。

```
<img class="img-responsive"  ng-src="{{imagesrc}}"
    ng-style="{'opacity' : (status == 2) ? 1 : 0.5}">
```

NG- https://riptutorial.com/zh-TW/angularjs/topic/8773/ng-

13: SignalRAngularJs

“AngularJsSignalR”“angularjs”“/”SignalR“https://www.codeproject.com/Tips/590660/Introduction-to-SignalR 。

Examples

SignalRAngularJs [ChatProject]

1

```
- Application
    - app.js
    - Controllers
        - appController.js
    - Factories
        - SignalR-factory.js
- index.html
- Scripts
    - angular.js
    - jquery.js
    - jquery.signalR.min.js
- Hubs
```

SignalRsignalR-2.2.1

2Startup.csChatHub.cs

“/ Hubs”2[Startup.csChatHub.cs]

Startup.cs

```
using Microsoft.Owin;
using Owin;
[assembly: OwinStartup(typeof(SignalR.Hubs.Startup))]

namespace SignalR.Hubs
{
    public class Startup
    {
        public void Configuration(IAppBuilder app)
        {
            app.MapSignalR();
        }
    }
}
```

ChatHub.cs

```
using Microsoft.AspNet.SignalR;

namespace SignalR.Hubs
```

```
{
    public class ChatHub : Hub
    {
        public void Send(string name, string message, string time)
        {
            Clients.All.broadcastMessage(name, message, time);
        }
    }
}
```

3

"/ Application"[app.js]

app.js

```
var app = angular.module("app", []);
```

4SignalR

"/ Application / Factories"[SignalR-factory.js]

SignalR-factory.js

```
app.factory("signalR", function () {
    var factory = {};

    factory.url = function (url) {
        $.connection.hub.url = url;
    }

    factory.setHubName = function (hubName) {
        factory.hub = hubName;
    }

    factory.connectToHub = function () {
        return $.connection[factory.hub];
    }

    factory.client = function () {
        var hub = factory.connectToHub();
        return hub.client;
    }

    factory.server = function () {
        var hub = factory.connectToHub();
        return hub.server;
    }

    factory.start = function (fn) {
        return $.connection.hub.start().done(fn);
    }

    return factory;
});
```

5app.js.

```
var app = angular.module("app", []);

app.run(function(signalR) {
    signalR.url("http://localhost:21991/signalr");
});
```

localhost21991 / signalr | **SignalR Hubs Urls**

6

"/ Application / Controllers"[appController.js]

```
app.controller("ctrl", function ($scope, signalR) {
    $scope.messages = [];
    $scope.user = {};

    signalR.setHubName("chatHub");

    signalR.client().broadcastMessage = function (name, message, time) {
        var newChat = { name: name, message: message, time: time };

        $scope.$apply(function() {
            $scope.messages.push(newChat);
        });
    };

    signalR.start(function () {
        $scope.send = function () {
            var dt = new Date();
            var time = dt.getHours() + ":" + dt.getMinutes() + ":" + dt.getSeconds();

            signalR.server().send($scope.user.name, $scope.user.message, time);
        }
    });
});
```

signalR.setHubName"chatHub"| **[ChatHub]>** *ChatHub.cs*

HubName Case。

signalR.client |"chatHub""broadcastMessage";

7index.html

index.html

```
<!DOCTYPE html>
<html ng-app="app" ng-controller="ctrl">
<head>
    <meta charset="utf-8" />
    <title>SignalR Simple Chat</title>
</head>
<body>
    <form>
        <input type="text" placeholder="name" ng-model="user.name" />
        <input type="text" placeholder="message" ng-model="user.message" />
        <button ng-click="send()">send</button>
```

```
        <ul>
            <li ng-repeat="item in messages">
                <b ng-bind="item.name"></b> <small ng-bind="item.time"></small> :
{{item.message}}
            </li>
        </ul>
    </form>

    <script src="Scripts/angular.min.js"></script>
    <script src="Scripts/jquery-1.6.4.min.js"></script>
    <script src="Scripts/jquery.signalR-2.2.1.min.js"></script>
    <script src="signalr/hubs"></script>
    <script src="app.js"></script>
    <script src="SignalR-factory.js"></script>
</body>
</html
```

1

2

SignalRAngularJs https://riptutorial.com/zh-TW/angularjs/topic/9964/signalrangularjs

14: UI

ui-router

Angular UI-RouterAngularJS。

SPAURL。URLSPA。

UI-Router。UI-Router。

API。`ui-router` VS `ng-router`。`ng-router``ngNewRouter`ng-routerAngular 1.5 + / 2.0ui-router。`ngNewRouter`。

Examples

app.js

```
angular.module('myApp', ['ui.router'])
  .controller('controllerOne', function() {
    this.message = 'Hello world from Controller One!';
  })
  .controller('controllerTwo', function() {
    this.message = 'Hello world from Controller Two!';
  })
  .controller('controllerThree', function() {
    this.message = 'Hello world from Controller Three!';
  })
  .config(function($stateProvider, $urlRouterProvider) {
    $stateProvider
      .state('one', {
        url: "/one",
        templateUrl: "view-one.html",
        controller: 'controllerOne',
        controllerAs: 'ctrlOne'
      })
      .state('two', {
        url: "/two",
        templateUrl: "view-two.html",
        controller: 'controllerTwo',
        controllerAs: 'ctrlTwo'
      })
      .state('three', {
        url: "/three",
        templateUrl: "view-three.html",
        controller: 'controllerThree',
        controllerAs: 'ctrlThree'
      });

      $urlRouterProvider.otherwise('/one');
  });
```

index.html

```
<div ng-app="myApp">
  <nav>
    <!-- links to switch routes -->
    <a ui-sref="one">View One</a>
    <a ui-sref="two">View Two</a>
    <a ui-sref="three">View Three</a>
  </nav>
  <!-- views will be injected here -->
  <div ui-view></div>
  <!-- templates can live in normal html files -->
  <script type="text/ng-template" id="view-one.html">
    <h1>{{ctrlOne.message}}</h1>
  </script>

  <script type="text/ng-template" id="view-two.html">
    <h1>{{ctrlTwo.message}}</h1>
  </script>

  <script type="text/ng-template" id="view-three.html">
    <h1>{{ctrlThree.message}}</h1>
  </script>
</div>
```

app.js

```
angular.module('myApp', ['ui.router'])
  .controller('controllerOne', function() {
    this.message = 'Hello world from Controller One!';
  })
  .controller('controllerTwo', function() {
    this.message = 'Hello world from Controller Two!';
  })
  .controller('controllerThree', function() {
    this.message = 'Hello world from Controller Three!';
  })
  .controller('controllerFour', function() {
    this.message = 'Hello world from Controller Four!';
  })
  .config(function($stateProvider, $urlRouterProvider) {
    $stateProvider
      .state('one', {
        url: "/one",
        views: {
          "viewA": {
            templateUrl: "view-one.html",
            controller: 'controllerOne',
            controllerAs: 'ctrlOne'
          },
          "viewB": {
            templateUrl: "view-two.html",
            controller: 'controllerTwo',
            controllerAs: 'ctrlTwo'
          }
        }
      })
      .state('two', {
        url: "/two",
        views: {
          "viewA": {
            templateUrl: "view-three.html",
```

```
            controller: 'controllerThree',
            controllerAs: 'ctrlThree'
          },
          "viewB": {
            templateUrl: "view-four.html",
            controller: 'controllerFour',
            controllerAs: 'ctrlFour'
          }
        }
      });

    $urlRouterProvider.otherwise('/one');
  });
```

index.html

```
<div ng-app="myApp">
  <nav>
    <!-- links to switch routes -->
    <a ui-sref="one">Route One</a>
    <a ui-sref="two">Route Two</a>
  </nav>
  <!-- views will be injected here -->
  <div ui-view="viewA"></div>
  <div ui-view="viewB"></div>
  <!-- templates can live in normal html files -->
  <script type="text/ng-template" id="view-one.html">
    <h1>{{ctrlOne.message}}</h1>
  </script>

  <script type="text/ng-template" id="view-two.html">
    <h1>{{ctrlTwo.message}}</h1>
  </script>

  <script type="text/ng-template" id="view-three.html">
    <h1>{{ctrlThree.message}}</h1>
  </script>

  <script type="text/ng-template" id="view-four.html">
    <h1>{{ctrlFour.message}}</h1>
  </script>
</div>
```

resolve

app.js

```
angular.module('myApp', ['ui.router'])
  .service('User', ['$http', function User ($http) {
    this.getProfile = function (id) {
      return $http.get(...) // method to load data from API
    };
  }])
  .controller('profileCtrl', ['profile', function profileCtrl (profile) {
    // inject resolved data under the name of the resolve function
    // data will already be returned and processed
    this.profile = profile;
  }])
```

```
  .config(['$stateProvider', '$urlRouterProvider', function ($stateProvider,
$urlRouterProvider) {
    $stateProvider
      .state('profile', {
        url: "/profile/:userId",
        templateUrl: "profile.html",
        controller: 'profileCtrl',
        controllerAs: 'vm',
        resolve: {
          profile: ['$stateParams', 'User', function ($stateParams, User) {
            // $stateParams will contain any parameter defined in your url
            return User.getProfile($stateParams.userId)
              // .then is only necessary if you need to process returned data
              .then(function (data) {
                return doSomeProcessing(data);
              });
          }]
        }
      }]);

      $urlRouterProvider.otherwise('/');
  });
```

profile.html

```
<ul>
  <li>Name: {{vm.profile.name}}</li>
  <li>Age: {{vm.profile.age}}</li>
  <li>Sex: {{vm.profile.sex}}</li>
</ul>
```

UI-Router Wiki 。

`$stateChangeSuccess`ResolveUI。 UI。 UI。

/

app.js

```
var app = angular.module('myApp',['ui.router']);

app.config(function($stateProvider,$urlRouterProvider) {

    $stateProvider

    .state('home', {
        url: '/home',
        templateUrl: 'home.html',
        controller: function($scope){
            $scope.text = 'This is the Home'
        }
    })

    .state('home.nested1',{
        url: '/nested1',
        templateUrl:'nested1.html',
        controller: function($scope){
```

```
            $scope.text1 = 'This is the nested view 1'
        }
    })

    .state('home.nested2',{
        url: '/nested2',
        templateUrl:'nested2.html',
        controller: function($scope){
            $scope.fruits = ['apple','mango','oranges'];
        }
    });

    $urlRouterProvider.otherwise('/home');

});
```

index.html

```
  <div ui-view></div>
   <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.8/angular.min.js"></script>
   <script src="angular-ui-router.min.js"></script>
   <script src="app.js"></script>
```

home.html

```
<div>
<h1> {{text}} </h1>
<br>
    <a ui-sref="home.nested1">Show nested1</a>
    <br>
    <a ui-sref="home.nested2">Show nested2</a>
    <br>

    <div ui-view></div>
</div>
```

nested1.html

```
<div>
<h1> {{text1}} </h1>
</div>
```

nested2.html

```
<div>
    <ul>
      <li ng-repeat="fruit in fruits">{{ fruit }}</li>
    </ul>
</div>
```

UI https://riptutorial.com/zh-TW/angularjs/topic/2545/ui

15: ES6

Examples

FileSizeES6

costum

```
let fileSize=function (size,unit,fixedDigit) {
return size.toFixed(fixedDigit) + ' '+unit;
};

  let fileSizeFilter=function () {
        return function (size) {
            if (isNaN(size))
                size = 0;

            if (size < 1024)
                return size + ' octets';

            size /= 1024;

            if (size < 1024)
               return fileSize(size,'Ko',2);

            size /= 1024;

            if (size < 1024)
               return  fileSize(size,'Mo',2);

            size /= 1024;

            if (size < 1024)
               return  fileSize(size,'Go',2);

            size /= 1024;
            return  fileSize(size,'To',2);
        };
    };
export default fileSizeFilter;
```

```
import fileSizeFilter from 'path...';
let myMainModule =
    angular.module('mainApp', [])
   .filter('fileSize', fileSizeFilter);
```

html

```
<div ng-app="mainApp">

    <div>
        <input type="text" ng-model="size" />
    </div>
    <div>
```

```
        <h3>Output:</h3>
        <p>{{size| Filesize}}</p>
    </div>
</div>
```

ES6 https://riptutorial.com/zh-TW/angularjs/topic/9421/es6

16: ngModelController

Examples

```
<rating min="0" max="5" nullifier="true" ng-model="data.rating"></rating>
```

CSS;

```
0 1 2 3 4 5 x
```

;“x”null。

```
app.directive('rating', function() {

    function RatingController() {
        this._ngModel = null;
        this.rating = null;
        this.options = null;
        this.min = typeof this.min === 'number' ? this.min : 1;
        this.max = typeof this.max === 'number' ? this.max : 5;
    }

    RatingController.prototype.setNgModel = function(ngModel) {
        this._ngModel = ngModel;

        if( ngModel ) {
            // KEY POINT 1
            ngModel.$render = this._render.bind(this);
        }
    };

    RatingController.prototype._render = function() {
        this.rating = this._ngModel.$viewValue != null ? this._ngModel.$viewValue : -
Number.MAX_VALUE;
    };

    RatingController.prototype._calculateOptions = function() {
        if( this.min == null || this.max == null ) {
            this.options = [];
        }
        else {
            this.options = new Array(this.max - this.min + 1);
            for( var i=0; i < this.options.length; i++ ) {
                this.options[i] = this.min + i;
            }
        }
    };

    RatingController.prototype.setValue = function(val) {
        this.rating = val;
        // KEY POINT 2
        this._ngModel.$setViewValue(val);
    };

    // KEY POINT 3
```

```
    Object.defineProperty(RatingController.prototype, 'min', {
        get: function() {
            return this._min;
        },
        set: function(val) {
            this._min = val;
            this._calculateOptions();
        }
    });

    Object.defineProperty(RatingController.prototype, 'max', {
        get: function() {
            return this._max;
        },
        set: function(val) {
            this._max = val;
            this._calculateOptions();
        }
    });

    return {
        restrict: 'E',
        scope: {
            // KEY POINT 3
            min: '<?',
            max: '<?',
            nullifier: '<?'
        },
        bindToController: true,
        controllerAs: 'ctrl',
        controller: RatingController,
        require: ['rating', 'ngModel'],
        link: function(scope, elem, attrs, ctrls) {
            ctrls[0].setNgModel(ctrls[1]);
        },
        template:
            '<span ng-repeat="o in ctrl.options" href="#" class="rating-option" ng-
class="{\'rating-option-active\': o <= ctrl.rating}" ng-click="ctrl.setValue(o)">{{ o
}}</span>' +
            '<span ng-if="ctrl.nullifier" ng-click="ctrl.setValue(null)" class="rating-
nullifier">&#10006;</span>'
    };
});
```

1. `ngModel.$render`。
2. `ngModel.$setViewValue()` 。
3. ;'<'Angular> = 1.5 -。 JavaScript`Object.defineProperty()` `Object.defineProperty()` 。

1`ctrl.options`。 ;DOM`min` / `max`/。

2'<'Angular <1.5。 Angular> = 1.5`$onInit()` `minmax`。

https //jsfiddle.net/h81mgxma/

;。 。 。

```
<input-person ng-model="data.thePerson"></input-person>
```

```
<input-address ng-model="data.thePerson.address"></input-address>
```

```
function Person(data) {
  data = data || {};
  this.name = data.name;
  this.address = data.address ? new Address(data.address) : null;
}

function Address(data) {
  data = data || {};
  this.street = data.street;
  this.number = data.number;
}
```

```
app.directive('inputAddress', function() {

    InputAddressController.$inject = ['$scope'];
    function InputAddressController($scope) {
        this.$scope = $scope;
        this._ngModel = null;
        this.value = null;
        this._unwatch = angular.noop;
    }

    InputAddressController.prototype.setNgModel = function(ngModel) {
        this._ngModel = ngModel;

        if( ngModel ) {
            // KEY POINT 3
            ngModel.$render = this._render.bind(this);
        }
    };

    InputAddressController.prototype._makeWatch = function() {
        // KEY POINT 1
        this._unwatch = this.$scope.$watchCollection(
            (function() {
                return this.value;
            }).bind(this),
            (function(newval, oldval) {
                if( newval !== oldval ) { // skip the initial trigger
                    this._ngModel.$setViewValue(newval !== null ? new Address(newval) : null);
                }
            }).bind(this)
        );
    };

    InputAddressController.prototype._render = function() {
        // KEY POINT 2
        this._unwatch();
        this.value = this._ngModel.$viewValue ? new Address(this._ngModel.$viewValue) : null;
        this._makeWatch();
    };

    return {
        restrict: 'E',
        scope: {},
        bindToController: true,
        controllerAs: 'ctrl',
```

```
        controller: InputAddressController,
        require: ['inputAddress', 'ngModel'],
        link: function(scope, elem, attrs, ctrls) {
            ctrls[0].setNgModel(ctrls[1]);
        },
        template:
            '<div>' +
                '<label><span>Street:</span><input type="text" ng-model="ctrl.value.street"
/></label>' +
                '<label><span>Number:</span><input type="text" ng-model="ctrl.value.number"
/></label>' +
            '</div>'
    };
});
```

1. ;◦ $setViewValue()◦ ◦
2. ◦ ◦ this_unwatch();this._makeWatch();◦ UI◦
3. ngModel.$render()ngModel.$setViewValue()◦

◦ <input-address>◦ ◦

```
app.directive('inputPerson', function() {

    InputPersonController.$inject = ['$scope'];
    function InputPersonController($scope) {
        this.$scope = $scope;
        this._ngModel = null;
        this.value = null;
        this._unwatch = angular.noop;
    }

    InputPersonController.prototype.setNgModel = function(ngModel) {
        this._ngModel = ngModel;

        if( ngModel ) {
            ngModel.$render = this._render.bind(this);
        }
    };

    InputPersonController.prototype._makeWatch = function() {
        this._unwatch = this.$scope.$watchCollection(
            (function() {
                return this.value;
            }).bind(this),
            (function(newval, oldval) {
                if( newval !== oldval ) { // skip the initial trigger
                    this._ngModel.$setViewValue(newval !== null ? new Person(newval) : null);
                }
            }).bind(this)
        );
    };

    InputPersonController.prototype._render = function() {
        this._unwatch();
        this.value = this._ngModel.$viewValue ? new Person(this._ngModel.$viewValue) : null;
        this._makeWatch();
    };

    return {
```

```
        restrict: 'E',
        scope: {},
        bindToController: true,
        controllerAs: 'ctrl',
        controller: InputPersonController,
        require: ['inputPerson', 'ngModel'],
        link: function(scope, elem, attrs, ctrls) {
            ctrls[0].setNgModel(ctrls[1]);
        },
        template:
            '<div>' +
                '<label><span>Name:</span><input type="text" ng-model="ctrl.value.name"
/></label>' +
                '<input-address ng-model="ctrl.value.address"></input-address>' +
            '</div>'
    };
});
```

◦ ;JSON◦ `angular.copy()`◦ ◦

https //jsfiddle.net/3tzyqfko/2/

https //jsfiddle.net/agj4cp0e/https://jsfiddle.net/ugb6Lw8b/

ngModelController https://riptutorial.com/zh-TW/angularjs/topic/2438/ngmodelcontroller

17: ngRoute

ngRoute◦

ngRoutehttps://docs.angularjs.org/api/ngRoute

Examples

controllerAs3◦

angular .config

1. $routeProvider.config
2. .when◦
3. .whentemplatetemplateUrl controllercontrollerAs

app.js

```
angular.module('myApp', ['ngRoute'])
  .controller('controllerOne', function() {
    this.message = 'Hello world from Controller One!';
  })
  .controller('controllerTwo', function() {
    this.message = 'Hello world from Controller Two!';
  })
  .controller('controllerThree', function() {
    this.message = 'Hello world from Controller Three!';
  })
  .config(function($routeProvider) {
    $routeProvider
    .when('/one', {
      templateUrl: 'view-one.html',
      controller: 'controllerOne',
      controllerAs: 'ctrlOne'
    })
    .when('/two', {
      templateUrl: 'view-two.html',
      controller: 'controllerTwo',
      controllerAs: 'ctrlTwo'
    })
    .when('/three', {
      templateUrl: 'view-three.html',
      controller: 'controllerThree',
      controllerAs: 'ctrlThree'
    })
    // redirect to here if no other routes match
    .otherwise({
      redirectTo: '/one'
    });
  });
```

HTMLhref <a>helloRouteMy route

`ng-view`。

index.html

```
<div ng-app="myApp">
  <nav>
    <!-- links to switch routes -->
    <a href="#/one">View One</a>
    <a href="#/two">View Two</a>
    <a href="#/three">View Three</a>
  </nav>
  <!-- views will be injected here -->
  <div ng-view></div>
  <!-- templates can live in normal html files -->
  <script type="text/ng-template" id="view-one.html">
    <h1>{{ctrlOne.message}}</h1>
  </script>

  <script type="text/ng-template" id="view-two.html">
    <h1>{{ctrlTwo.message}}</h1>
  </script>

  <script type="text/ng-template" id="view-three.html">
    <h1>{{ctrlThree.message}}</h1>
  </script>
</div>
```

1.
2. Controller`$routeParams`

app.js

```
angular.module('myApp', ['ngRoute'])
  .controller('controllerOne', function() {
    this.message = 'Hello world from Controller One!';
  })
  .controller('controllerTwo', function() {
    this.message = 'Hello world from Controller Two!';
  })
  .controller('controllerThree', ['$routeParams', function($routeParams) {
    var routeParam = $routeParams.paramName

    if ($routeParams.message) {
        // If a param called 'message' exists, we show it's value as the message
        this.message = $routeParams.message;
    } else {
        // If it doesn't exist, we show a default message
        this.message = 'Hello world from Controller Three!';
    }
  }])
  .config(function($routeProvider) {
    $routeProvider
    .when('/one', {
      templateUrl: 'view-one.html',
      controller: 'controllerOne',
      controllerAs: 'ctrlOne'
    })
    .when('/two', {
```

```
      templateUrl: 'view-two.html',
      controller: 'controllerTwo',
      controllerAs: 'ctrlTwo'
    })
    .when('/three', {
      templateUrl: 'view-three.html',
      controller: 'controllerThree',
      controllerAs: 'ctrlThree'
    })
    .when('/three/:message', { // We will pass a param called 'message' with this route
      templateUrl: 'view-three.html',
      controller: 'controllerThree',
      controllerAs: 'ctrlThree'
    })
    // redirect to here if no other routes match
    .otherwise({
      redirectTo: '/one'
    });
  });
```

。

index.html

```
<div ng-app="myApp">
  <nav>
    <!-- links to switch routes -->
    <a href="#/one">View One</a>
    <a href="#/two">View Two</a>
    <a href="#/three">View Three</a>
    <!-- New link with custom message -->
    <a href="#/three/This-is-a-message">View Three with "This-is-a-message" custom message</a>
  </nav>
  <!-- views will be injected here -->
  <div ng-view></div>
  <!-- templates can live in normal html files -->
  <script type="text/ng-template" id="view-one.html">
    <h1>{{ctrlOne.message}}</h1>
  </script>

  <script type="text/ng-template" id="view-two.html">
    <h1>{{ctrlTwo.message}}</h1>
  </script>

  <script type="text/ng-template" id="view-three.html">
    <h1>{{ctrlThree.message}}</h1>
  </script>
</div>
```

。

1 routes.js requireAuth

```
angular.module('yourApp').config(['$routeProvider', function($routeProvider) {
    $routeProvider
        .when('/home', {
            templateUrl: 'templates/home.html',
            requireAuth: true
```

```
        })
        .when('/login', {
            templateUrl: 'templates/login.html',
        })
        .otherwise({
            redirectTo: '/home'
        });
}])
```

2ng-viewangular $routeProvidernewUrlrequireAuth

```
angular.module('YourApp').controller('YourController', ['$scope', 'session', '$location',
    function($scope, session, $location) {

        $scope.$on('$routeChangeStart', function(angularEvent, newUrl) {

            if (newUrl.requireAuth && !session.user) {
                // User isn't authenticated
                $location.path("/login");
            }

        });
    }
]);
```

ngRoute https://riptutorial.com/zh-TW/angularjs/topic/2391/ngroute

18:

Examples

/HTML

html。

```
<!DOCTYPE html>
<html ng-app="myDemoApp">
  <head>
    <script src="https://code.angularjs.org/1.5.8/angular.min.js"></script>
    <script>

      function HideShowController() {
        var vm = this;
        vm.show=false;
        vm.toggle= function() {
          vm.show=!vm.show;
        }
      }

      angular.module("myDemoApp", [/* module dependencies go here */])
        .controller("hideShowController", [HideShowController]);
    </script>
  </head>
  <body ng-cloak>
    <div ng-controller="hideShowController as vm">
      <a style="cursor: pointer;" ng-show="vm.show" ng-click="vm.toggle()">Show Me!</a>
      <a style="cursor: pointer;" ng-hide="vm.show" ng-click="vm.toggle()">Hide Me!</a>
    </div>
  </body>
</html>
```

1. `ng-app="myDemoApp"` ngApp angularDOM“myDemoApp”angular.module。
2. `<script src="[//angular include]">`js。
3. `HideShowControllertoggle`。
4. `angular.module(...)`。
5. `.controller(...)` Angular Controller;
6. `ng-controller` - -。
7. true`ng-show` HTML。
8. true`ng-hide` HTML。
9. `ng-click`

https://riptutorial.com/zh-TW/angularjs/topic/7644/

19:

- ;
- ;
- $ getFn;
- ;
- ;

◦ “”Provider◦

-
-
-
-
-

◦

◦ ◦

Examples

Constant◦

```
angular.module('app',[])
  .constant('endpoint', 'http://some.rest.endpoint') // define
  .config(function(endpoint) {
    // do something with endpoint
    // available in both config- and run phases
  })
  .controller('MainCtrl', function(endpoint) {       // inject
    var vm = this;
    vm.endpoint = endpoint;                          // usage
  });
```

```
<body ng-controller="MainCtrl as vm">
  <div>endpoint = {{ ::vm.endpoint }}</div>
</body>
```

---

endpoint = http//some.rest.endpoint

Value◦

```
angular.module('app',[])
  .value('endpoint', 'http://some.rest.endpoint') // define
  .run(function(endpoint) {
    // do something with endpoint
    // only available in run phase
  })
```

```
  .controller('MainCtrl', function(endpoint) {    // inject
    var vm = this;
    vm.endpoint = endpoint;                       // usage
  });
```

```
<body ng-controller="MainCtrl as vm">
  <div>endpoint = {{ ::vm.endpoint }}</div>
</body>
```

---

endpoint = http//some.rest.endpoint

Factory。

Factory。 。

Factory。

```
angular.module('app',[])
  .factory('endpointFactory', function() {
    return {
      get: function() {
        return 'http://some.rest.endpoint';
      }
    };
  })
  .controller('MainCtrl', function(endpointFactory) {
    var vm = this;
    vm.endpoint = endpointFactory.get();
  });
```

```
<body ng-controller="MainCtrl as vm">
  <div>endpoint = {{::vm.endpoint }}</div>
</body>
```

---

endpoint = http//some.rest.endpoint

Service。

ServiceValueFactory*new* 。 。

```
angular.module('app',[])
  .service('endpointService', function() {
    this.get = function() {
      return 'http://some.rest.endpoint';
    };
  })
  .controller('MainCtrl', function(endpointService) {
    var vm = this;
    vm.endpoint = endpointService.get();
  });
```

```
<body ng-controller="MainCtrl as vm">
  <div>endpoint = {{::vm.endpoint }}</div>
</body>
```

---

endpoint = http//some.rest.endpoint

`Provider`。

Provider`$get`。

APIProviderAPI。 。

```
angular.module('app',[])
  .provider('endpointProvider', function() {
    var uri = 'n/a';

    this.set = function(value) {
      uri = value;
    };

    this.$get = function() {
      return {
        get: function() {
          return uri;
        }
      };
    };
  })
  .config(function(endpointProviderProvider) {
    endpointProviderProvider.set('http://some.rest.endpoint');
  })
  .controller('MainCtrl', function(endpointProvider) {
    var vm = this;
    vm.endpoint = endpointProvider.get();
  });
```

```
<body ng-controller="MainCtrl as vm">
  <div>endpoint = {{::vm.endpoint }}</div>
</body>
```

---

endpoint = http//some.rest.endpoint

`config`

endpoint = n / a

https://riptutorial.com/zh-TW/angularjs/topic/5169/

20:

- myApp.controller'MyController'function$ scope{...}; //
- myApp.controller'MyController'['$ scope'function$ scope{...}]; //
- function MyController{}

  MyController。 $ inject = ['$ scope'];

  myApp.controller'MyController'MyController; // $
- $ injector.get''; ///

run。

config。

。

Examples

Angular - Angular `Controller$scope`

```
angular.module('myModule', [])
.controller('myController', ['$scope', function($scope) {
    $scope.members = ['Alice', 'Bob'];
    ...
}])
```

`$scopecontroller。 。`

Angular。 。

DI - - 。

“”。 。 。 。 Angular。

- 。

。

。 `$injector`

```
myModule.controller('myController', ['$injector', function($injector) {
    var myService = $injector.get('myService');
}]);
```

。 。

$ inject

`$inject`

```
var MyController = function($scope) {
  // ...
}
MyController.$inject = ['$scope'];
myModule.controller('MyController', MyController);
```

vanilla JavaScriptAngularJS

AngularJS `injector()`vanilla JavaScriptAngularJS。 `angular.element()` jqLite`injector()` 。

```
var service;
var serviceName = 'myService';

var ngAppElement = angular.element(document.querySelector('[ng-app],[data-ng-app]') ||
document);
var injector = ngAppElement.injector();

if(injector && injector.has(serviceNameToInject)) {
    service = injector.get(serviceNameToInject);
}
```

AngularJS `ngAppElement` jqLite。 `angular.element()`ng-appdata-ng-appDOM`document`。 `ngAppElement` `ngAppElement.injector()` 。 `injector.has()` `service`injector.get()` 。

https://riptutorial.com/zh-TW/angularjs/topic/1582/

21:

Examples

-

`type="text"type="number"`Angular。

```
 var app = angular.module('app', []);

 app.controller('ctrl', function($scope) {
     $scope.textInput = {
         value: '5'
     };
     $scope.numberInput = {
         value: 5
     };
 });
```

```
<div ng-app="app" ng-controller="ctrl">
    <input type="text" ng-model="textInput.value">
    {{ textInput.value + 5 }}
    <input type="number" ng-model="numberInput.value">
    {{ numberInput.value + 5 }}
</div>
```

- +55 * 。
- + 10 * 。

* - 。

ngRepeat

`ng-repeat`Angular。

ng-

```
<ul>
    <li ng-repeat="item in itemCollection">
       {{item.Name}}
    </li>
</ul>
```

item =
itemCollection =

ng-

```
<ul>
    <li ng-repeat="(key, value) in myObject">
       {{key}} : {{value}}
    </li>
</ul>
```

key =
value =
myObject =

ng-repeat

```
<input type="text" ng-model="searchText">
<ul>
    <li ng-repeat="string in stringArray | filter:searchText">
       {{string}}
    </li>
</ul>
```

searchText =
stringArray =`['string', 'array']`

`as aliasName`

```
<input type="text" ng-model="searchText">
<ul>
    <li ng-repeat="string in stringArray | filter:searchText as filteredStrings">
       {{string}}
    </li>
</ul>
<p>There are {{filteredStrings.length}} matching results</p>
```

ng-repeat-startng-repeat-end

DOM`ng-repeat-startng-repeat-end`◦

```
<ul>
    <li ng-repeat-start="item in [{a: 1, b: 2}, {a: 3, b:4}]">
        {{item.a}}
    </li>
    <li ng-repeat-end>
        {{item.b}}
    </li>
</ul>
```

- 1
- 2
- 3
- 4

ng-repeat-endng-repeat-start◦

ng-repeat

$index		$ index === 0true;$first
$first		true
$last		true
$middle		$first$lasttrue
$even		true$index%2===0
$odd		true$index%2===1

ngRepeat◦

track bytrack by◦ $index◦

```
<div ng-repeat="item in itemCollection track by item.id">
<div ng-repeat="item in itemCollection track by $index">
```

ngRepeat

ngRepeatrepeat◦

ngRepeat◦

```
scope val:  {{val}}<br/>
ctrlAs val: {{ctrl.val}}
<ul>
    <li ng-repeat="item in itemCollection">
        <a href="#" ng-click="$parent.val=item.value; ctrl.val=item.value;">
            {{item.label}} {{item.value}}
        </a>
    </li>
</ul>

$scope.val = 0;
this.val = 0;

$scope.itemCollection = [{
    id: 0,
    value: 4.99,
    label: 'Football'
},
```

```
{
    id: 1,
    value: 6.99,
    label: 'Baseball'
},
{
    id: 2,
    value: 9.99,
    label: 'Basketball'
}];
```

`ng-clickval = item.value val ◦ $parentcontrollerAsng-controller="mainController as ctrl" ◦`

ng-repeat

ng-repeat◦

```
<div ng-repeat="values in test">
    <div ng-repeat="i in values">
      [{{$parent.$index}},{{$index}}] {{i}}
    </div>
</div>

var app = angular.module("myApp", []);
app.controller("ctrl", function($scope) {
  $scope.test = [
    ['a', 'b', 'c'],
    ['d', 'e', 'f']
  ];
});
```

ng-repeatng-repeat`$parent.$index` ◦

ngShowngHide

`ng-show`truefalseHTML◦ ◦ ◦

`ng-hide`◦ falsyHTML◦ ◦

JSBin

```
var app = angular.module('app', []);

angular.module('app')
  .controller('ExampleController', ExampleController);

function ExampleController() {

  var vm = this;

  //Binding the username to HTML element
  vm.username = '';

  //A taken username
  vm.taken_username = 'StackOverflow';
```

```
}
```

```
<section ng-controller="ExampleController as main">

    <p>Enter Password</p>
    <input ng-model="main.username" type="text">

    <hr>

    <!-- Will always show as long as StackOverflow is not typed in -->
    <!-- The expression is always true when it is not StackOverflow -->
    <div style="color:green;" ng-show="main.username != main.taken_username">
      Your username is free to use!
    </div>

    <!-- Will only show when StackOverflow is typed in -->
    <!-- The expression value becomes falsy -->
    <div style="color:red;" ng-hide="main.username != main.taken_username">
      Your username is taken!
    </div>

    <p>Enter 'StackOverflow' in username field to show ngHide directive.</p>

 </section>
```

ngOptions

ngOptionshtml。 ngOptionsngOptions<select><option>。

ng-options select

```
<select ng-model="selectedFruitNgOptions"
        ng-options="curFruit as curFruit.label for curFruit in fruit">
</select>
```

ng-repeatselectng-repeatforEach。 ng-optionsselect。

ng-repeat

```
<select ng-model="selectedFruit">
    <option ng-repeat="curFruit in fruit" value="{{curFruit}}">
        {{curFruit.label}}
    </option>
</select>
```

。

```
$scope.fruit = [
    { label: "Apples", value: 4, id: 2 },
    { label: "Oranges", value: 2, id: 1 },
    { label: "Limes", value: 4, id: 4 },
    { label: "Lemons", value: 5, id: 3 }
];
```

```
<!-- label for value in array -->
<select ng-options="f.label for f in fruit" ng-model="selectedFruit"></select>
```

```
 <option value="{ label: "Apples", value: 4, id: 2 }"> Apples </option>
```

f.label<option>◦

```
<!-- select as label for value in array -->
<select ng-options="f.value as f.label for f in fruit" ng-model="selectedFruit"></select>
```

```
 <option value="4"> Apples </option>
```

f.value 4◦

```
<!-- label group by group for value in array -->
<select ng-options="f.label group by f.value for f in fruit" ng-
model="selectedFruit"></select>
```

```
<option value="{ label: "Apples", value: 4, id: 2 }"> Apples </option>
```

value◦ value

```
<!-- label disable when disable for value in array -->
<select ng-options="f.label disable when f.value == 4 for f in fruit" ng-
model="selectedFruit"></select>
```

```
<option disabled="" value="{ label: "Apples", value: 4, id: 2 }"> Apples </option>
```

disable when f.value==4“Apples”“Limes”◦ value=4

```
<!-- label group by group for value in array track by trackexpr -->
<select ng-options="f.value as f.label group by f.value for f in fruit track by f.id" ng-
model="selectedFruit"></select>
```

```
<option value="4"> Apples </option>
```

trackByAngularid◦

```
<!-- label for value in array | orderBy:orderexpr track by trackexpr -->
<select ng-options="f.label for f in fruit | orderBy:'id' track by f.id" ng-
model="selectedFruit"></select>
```

```
<option disabled="" value="{ label: "Apples", value: 4, id: 2 }"> Apples </option>
```

`orderBy`AngularJS“Oranges”1st`id` = 1。

---

ng-options <select>ng-model 。

ngModel

ng-model。 `{{myAge}}` 。

```
<input type="text" ng-model="myName">
<p>{{myName}}</p>
```

。

ng-model`$scope.myName` 。 `controllerAs`

```
<div ng-controller="myCtrl as mc">
    <input type="text" ng-model="mc.myName">
    <p>{{mc.myName}}</p>
</div>
```

ng-controllerng-model。 `$scope`ng-model`this.myName`。

ngClass

CSS。 Angular。 Angular。

/。 true。

```
<style>
    .active { background-color: green; color: white; }
    .inactive { background-color: gray; color: white; }
    .adminUser { font-weight: bold; color: yellow; }
    .regularUser { color: white; }
</style>

<span ng-class="{
    active: user.active,
    inactive: !user.active,
    adminUser: user.level === 1,
    regularUser: user.level === 2
}">John Smith</span>
```

Angular`$scope.useractivelevel`。 Angular`<span>` 。

ngIf

`ng-if``ng-show`DOM。 Angular 1.1.5ng-If。 1.1.5ng-if。 Angular`ng-if`Angular。

`ng-show` `ng-if`。 。 `$parent`。

JavaScript

```
angular.module('MyApp', []);

angular.module('MyApp').controller('myController', ['$scope', '$window', function
myController($scope, $window) {
    $scope.currentUser= $window.localStorage.getItem('userName');
}]);
```

```
<div ng-controller="myController">
    <div ng-if="currentUser">
        Hello, {{currentUser}}
    </div>
    <div ng-if="!currentUser">
        <a href="/login">Log In</a>
        <a href="/register">Register</a>
    </div>
</div>
```

DOM currentUser

```
<div ng-controller="myController">
    <div ng-if="currentUser">
        Hello, {{currentUser}}
    </div>
    <!-- ng-if: !currentUser -->
</div>
```

DOM currentUser

```
<div ng-controller="myController">
    <!-- ng-if: currentUser -->
    <div ng-if="!currentUser">
        <a href="/login">Log In</a>
        <a href="/register">Register</a>
    </div>
</div>
```

---

ngIftruefalse。

```
<div ng-if="myFunction()">
    <span>Span text</span>
</div>
```

true。

```
$scope.myFunction = function() {
    var result = false;
    // Code to determine the boolean value of result
    return result;
};
```

Angular。

ngMouseenterngMouseleave

DOM `ng-mouseenterng-mouseleave`CSS。

`ng-mouseenter`DOM

HTML

```
<div ng-mouseenter="applyStyle = true" ng-class="{'active': applyStyle}">
```

`div applyStyletrue ng-class.active` CSS `ng-class` 。

`ng-mouseleave`DOM

HTML

```
<div ng-mouseenter="applyStyle = true" ng-mouseleaver="applyStyle = false" ng-
class="{'active': applyStyle}">
```

div `.active`。

ngDisabled

。

`ng-disabled`truthyfalsy。

`ng-disabledinputdisabled`。

HTML

```
<input type="text" ng-model="vm.name">

<button ng-disabled="vm.name.length===0" ng-click="vm.submitMe">Submit</button>
```

`input`0`vm.name.length===0`true`ng-click`click

ngDblclick

DOM `ng-dblclick`。

HTML

```
<input type="number" ng-model="num = num + 1" ng-init="num=0">

<button ng-dblclick="num++">Double click me</button>
```

`input`。

`ng-app`AngularJS。

`ng-init`。

`ng-bind`{{}}。

`ng-bind-template`。

`ng-non-bindable` 。

`ng-bind-html`HTMLHTML。

`ng-change`。

`ng-checked`。

`ng-class` classcss。

`ng-cloak`AngularJS。

`ng-click`。

`ng-controller`。

`ng-disabled`disabled

`ng-form`

`ng-href`AngularJShref。

`ng-include`HTML。

`ng-if`DOM

`ng-switch`。

`ng-model`modelinputselecttextarea。

`ng-readonly`readonly。

`ng-repeat`。

`ng-selected`。

`ng-show/ng-hide`/◦

`ng-src`AngularJSsrc◦

`ng-submit`onsubmit◦

`ng-value`◦

`ng-required`onsubmit◦

`ng-style`HTMLCSS◦

`ng-pattern`ngModel◦

`ng-maxlength`maxlengthngModel◦

`ng-minlength` minlengthminlengthngModel◦

`ng-classeven`ngRepeat◦

`ng-classodd`ngRepeat◦

`ng-cut`◦

`ng-copy`◦

`ng-paste`◦

`ng-options`◦

`ng-list`◦

`ng-open`openngOpen◦

ngClick

`ng-click`clickDOM◦

`ng-click`DOM◦

◦

events`$event`

HTML

```
<input ng-click="onClick($event)">Click me</input>
```

```
.controller("ctrl", function($scope) {
    $scope.onClick = function(evt) {
```

```
        console.debug("Hello click event: %o ",evt);
    }
})
```

HTML

```
<button ng-click="count = count + 1" ng-init="count=0">
  Increment
</button>
<span>
  count: {{count}}
</span>
```

HTML

```
<button ng-click="count()" ng-init="count=0">
  Increment
</button>
<span>
  count: {{count}}
</span>
```

```
...

$scope.count = function(){
    $scope.count = $scope.count + 1;
}
...
```

`onClick`“Hello click event”。

ngRequired

`ng-required`required`input`require。

`input`。 HTML。

HTML

```
<input type="checkbox" ng-model="someBooleanValue">
<input type="text" ng-model="username" ng-required="someBooleanValue">
```

NG-

`ng-model-options`ng-model`ng-model`ng-model。

。

```
<input type="text" ng-model="myValue" ng-model-options="{'debounce': 500}">
```

`myValue`500`input` `myValue`500。

1. `updateOn`

```
ng-model-options="{ updateOn: 'blur'}" // will update on blur
```

2. `debounce`

```
ng-model-options="{'debounce': 500}" // will update the model after 1/2 second
```

3. `allowInvalid` `undefined` 。

4. `getterSetter` `ng-model`getter / setter。 。

```
<input type="text" ng-model="myFunc" ng-model-options="{'getterSetter': true}">

$scope.myFunc = function() {return "value";}
```

5. `timezone` `datetime` 。

ngCloak

`ngCloak`Angular html。 -

HTML

```
<div ng-cloak>
  <h1>Hello {{ name }}</h1>
</div>
```

`ngCloak`bodyngCloak。

`ngCloak`。

ngInclude

ng-include。 。

```
  <div ng-include
       src="'/gridview'"
       ng-controller='gridController as gc'>
  </div>
```

`/gridview`WebURL。

`src` -attributeAngular。 。 **URL** 。 。

`/gridview` html`gridController`

```
<div class="row">
  <button type="button" class="btn btn-default" ng-click="gc.doSomething()"></button>
```

```
</div>
```

ngSrc

src{{hash}}Angular。 {{hash}}URLAngular{{hash}}。 ng-srcimagesrc

```
<div ng-init="pic = 'pic_angular.jpg'">
    <h1>Angular</h1>
    <img ng-src="{{pic}}">
</div>
```

ngPattern

ng-pattern。

<input>ng-modelIP。

```
<input type="text" ng-model="ipAddr" ng-pattern="ipRegex" name="ip" required>
```

```
$scope.ipRegex = /\b(?:(?:25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\.){3}(?:25[0-5]|2[0-4][0-
9]|[01]?[0-9][0-9]?)\b/;
```

ngValue

ngRepeatng-repeat ngValue

```
<script>
   angular.module('valueExample', [])
     .controller('ExampleController', ['$scope', function($scope) {
       $scope.names = ['pizza', 'unicorns', 'robots'];
       $scope.my = { favorite: 'unicorns' };
     }]);
</script>
 <form ng-controller="ExampleController">
   <h2>Which is your favorite?</h2>
     <label ng-repeat="name in names" for="{{name}}">
       {{name}}
       <input type="radio"
              ng-model="my.favorite"
              ng-value="name"
              id="{{name}}"
              name="favorite">
     </label>
   <div>You chose {{my.favorite}}</div>
 </form>
```

plnkr

ngCopy

ngCopy。

```
<p ng-copy="blockCopy($event)">This paragraph cannot be copied</p>
```

```
$scope.blockCopy = function(event) {
    event.preventDefault();
    console.log("Copying won't work");
}
```

ngPaste

ngPaste

```
<input ng-paste="paste=true" ng-init="paste=false" placeholder='paste here'>
pasted: {{paste}}
```

ngHref

hrefngHrefhref。 ngHrefhrefhtmlhref。

AngularJSngHref。

1

```
<div ng-init="linkValue = 'http://stackoverflow.com'">
    <p>Go to <a ng-href="{{linkValue}}">{{linkValue}}</a>!</p>
</div>
```

2hrefhref。

```
<input ng-model="value" />
<a id="link" ng-href="{{value}}">link</a>
```

3

```
<script>
angular.module('angularDoc', [])
.controller('myController', function($scope) {
  // Set some scope value.
  // Here we set bootstrap version.
  $scope.bootstrap_version = '3.3.7';

  // Set the default layout value
  $scope.layout = 'normal';
});
</script>
<!-- Insert it into Angular Code -->
<link rel="stylesheet" ng-href="//maxcdn.bootstrapcdn.com/bootstrap/{{ bootstrap_version
}}/css/bootstrap.min.css">
<link rel="stylesheet" ng-href="layout-{{ layout }}.css">
```

ngList

ng-list。

ng-list", " 。

ng-listng-list="; "。

。

ng-listng-trim true。 ng-trim false。 ng-trim="false"ng-list。

```
angular.module('test', [])
  .controller('ngListExample', ['$scope', function($scope) {
    $scope.list = ['angular', 'is', 'cool!'];
}]);
```

; 。 。

```
  <body ng-app="test" ng-controller="ngListExample">
    <input ng-model="list" ng-list="; " ng-trim="false">
  </body>
```

angular; is; cool!

https://riptutorial.com/zh-TW/angularjs/topic/706/

22:

Examples

angular.equals

`angular.equals`2 `angular.equals`true。

angular.equalsvalue1value2

1. `===`
2. `angular.equals`
3. `NaN`
4. 。

。

```
angular.equals(1, 1) // true
angular.equals(1, 2) // false
angular.equals({}, {}) // true, note that {}==={} is false
angular.equals({a: 1}, {a: 1}) // true
angular.equals({a: 1}, {a: 2}) // false
angular.equals(NaN, NaN) // true
```

angular.isString

`string` `angular.isString`true

angular.isString

```
angular.isString("hello") // true
angular.isString([1, 2]) // false
angular.isString(42) // false
```

```
typeof someValue === "string"
```

angular.isArray

`Array` `angular.isArray`true。

angular.isArray

```
angular.isArray([]) // true
angular.isArray([2, 3]) // true
angular.isArray({}) // false
angular.isArray(17) // false
```

```
Array.isArray(someValue)
```

angular.merge

angular.merge。

angular.merge

```
angular.merge({}, {}) // {}
angular.merge({name: "king roland"}, {password: "12345"})
// {name: "king roland", password: "12345"}
angular.merge({a: 1}, [4, 5, 6]) // {0: 4, 1: 5, 2: 6, a: 1}
angular.merge({a: 1}, {b: {c: {d: 2}}}) // {"a":1,"b":{"c":{"d":2}}}
```

angular.isDefinedangular.isUndefined

`angular.isDefinedangular.isDefined`

angular.isDefinedsomeValue

```
value !== undefined; // will evaluate to true is value is defined
```

```
angular.isDefined(42) // true
angular.isDefined([1, 2]) // true
angular.isDefined(undefined) // false
angular.isDefined(null) // true
```

`angular.isUndefinedangular.isDefined`

angular.isUndefinedsomeValue

```
value === undefined; // will evaluate to true is value is undefined
```

```
!angular.isDefined(value)
```

```
angular.isUndefined(42) // false
angular.isUndefined(undefined) // true
```

angular.isDate

Date `angular.isDate`true。

angular.isDate

```
angular.isDate("lone star") // false
angular.isDate(new Date()) // true
```

angular.isNumber

Number `angular.isNumber`true+ Infinity-InfinityNaN

angular.isNumber

```
"23" == 23 // true
```

```
angular.isNumber("23") // false
angular.isNumber(23) // true
angular.isNumber(NaN) // true
angular.isNumber(Infinity) // true
```

```
"23" == 23 // true
```

angular.isFunction

`angular.isFunction`true。

angular.isFunctionFN

```
var onClick = function(e) {return e};
angular.isFunction(onClick); // true

var someArray = ["pizza", "the", "hut"];
angular.isFunction(someArray ); // false
```

angular.toJson

`angular.toJson`JSON。

`JSON.stringify $$ $$`

```
angular.toJson(object)
```

JSON。

`.toString`。

```
angular.toJson({name: "barf", occupation: "mog", $$somebizzareproperty: 42})
// "{"name":"barf","occupation":"mog"}"
angular.toJson(42)
// "42"
angular.toJson([1, "2", 3, "4"])
// "[1,"2",3,"4"]"
var fn = function(value) {return value}
angular.toJson(fn)
// undefined, functions have no representation in JSON
```

angular.fromJson

`angular.fromJson`JSONObjectArray。

angular.fromJson|

。

```
angular.fromJson("{\"yogurt\": \"strawberries\"}")
// Object {yogurt: "strawberries"}
angular.fromJson('{jam: "raspberries"}')
// will throw an exception as the string is not a valid JSON
angular.fromJson(this)
// Window {external: Object, chrome: Object, _gaq: Y, angular: Object, ng339: 3…}
angular.fromJson([1, 2])
// [1, 2]
typeof angular.fromJson(new Date())
// "object"
```

angular.noop

angular.noopangular.noop ◦

angular.noop

angular.noop◦

```
$scope.onSomeChange = function(model, callback) {
    updateTheModel(model);
    if (angular.isFunction(callback)) {
        callback();
    } else {
        throw new Error("error: callback is not a function!");
    }
};

$scope.onSomeChange(42, function() {console.log("hello callback")});
// will update the model and print 'hello callback'
$scope.onSomeChange(42, angular.noop);
// will update the model
```

```
angular.noop() // undefined
angular.isFunction(angular.noop) // true
```

angular.isObject

angular.isObjectfalsenull typeof nullobject ◦

angular.isObject

。

```
angular.isObject({name: "skroob", job: "president"})
// true
angular.isObject(null)
// false
angular.isObject([null])
```

```
// true
angular.isObject(new Date())
// true
angular.isObject(undefined)
// false
```

angular.isElement

DOMjQueryElement`angular.isElement`true。

angular.isElementELEM

。

```
angular.isElement(document.querySelector("body"))
// true
angular.isElement(document.querySelector("#some_id"))
// false if "some_id" is not using as an id inside the selected DOM
angular.isElement("<div></div>")
// false
```

angular.copy

`angular.copy`。

angular.copy

```
let obj = {name: "vespa", occupation: "princess"};
let cpy = angular.copy(obj);
cpy.name = "yogurt"
// obj = {name: "vespa", occupation: "princess"}
// cpy = {name: "yogurt", occupation: "princess"}
```

```
var w = [a, [b, [c, [d]]]];
var q = angular.copy(w);
// q = [a, [b, [c, [d]]]]
```

`angular.equals(w, q)`true.`equals`。 `w === q`false。

angular.identity

`angular.identity`。

angular.identity

。

```
angular.identity(42) // 42
```

```
var mutate = function(fn, num) {
```

```
    return angular.isFunction(fn) ? fn(num) : angular.identity(num)
}

mutate(function(value) {return value-7}, 42) // 35
mutate(null, 42) // 42
mutate("mount. rushmore", 42) // 42
```

angular.forEach

angular.forEach◦ /◦ ◦

Array.prototype.forEachJSnullundefined◦

angular.forEachobjectfunctionvaluekey{// function};

```
angular.forEach({"a": 12, "b": 34}, (value, key) => console.log("key: " + key + ", value: " +
value))
// key: a, value: 12
// key: b, value: 34
angular.forEach([2, 4, 6, 8, 10], (value, key) => console.log(key))
// will print the array indices: 1, 2, 3, 4, 5
angular.forEach([2, 4, 6, 8, 10], (value, key) => console.log(value))
// will print the array values: 2, 4, 6, 7, 10
angular.forEach(undefined, (value, key) => console.log("key: " + key + ", value: " + value))
// undefined
```

https://riptutorial.com/zh-TW/angularjs/topic/3032/

23:

Angular。。。。

Examples

ngStorage

index.htmlngStorage。

ngStorage src

```
<head>
    <title>Angular JS ngStorage</title>
    <script src =
"http://ajax.googleapis.com/ajax/libs/angularjs/1.3.14/angular.min.js"></script>
    <script src="https://rawgithub.com/gsklee/ngStorage/master/ngStorage.js"></script>
</head>
```

ngStorage2 $localStorage$sessionStorage。 ngStorageInject。

ng-app="myApp" ngStorage

```
var app = angular.module('myApp', ['ngStorage']);
        app.controller('controllerOne', function($localStorage,$sessionStorage) {
        // an object to share
        var sampleObject = {
            name: 'angularjs',
            value: 1
        };
       $localStorage.valueToShare = sampleObject;
       $sessionStorage.valueToShare = sampleObject;
    })
.controller('controllerTwo', function($localStorage,$sessionStorage) {
    console.log('localStorage: '+ $localStorage +'sessionStorage: '+$sessionStorage);
})
```

$localStorage$sessionStorage。

HTML5localStoragesessionStorage。 HTML5 localStorage。

```
var myObj = {
    firstname: "Nic",
    lastname: "Raboy",
    website: "https://www.google.com"
}
//if you wanted to save into localStorage, serialize it
window.localStorage.set("saved", JSON.stringify(myObj));

//unserialize to get object
var myObj = JSON.parse(window.localStorage.get("saved"));
```

servicesetget controllers◦

```
app.service('setGetData', function() {
  var data = '';
    getData: function() { return data; },
    setData: function(requestData) { data = requestData; }
});
```

```
app.controller('myCtrl1', ['setGetData',function(setGetData) {

  // To set the data from the one controller
  var data = 'Hello World !!';
  setGetData.setData(data);

}]);

app.controller('myCtrl2', ['setGetData',function(setGetData) {

  // To get the data from the another controller
  var res = setGetData.getData();
  console.log(res); // Hello World !!

}]);
```

myCtrl1setting myCtrl2getting◦ ◦

https://riptutorial.com/zh-TW/angularjs/topic/1923/

24:

Examples

7

1ng-repeat

ng-repeatng-repeat ◦

```
<div ng-repeat="user in userCollection">
  <div ng-repeat="details in user">
    {{details}}
  </div>
</div>
```

◦ ng-repeattrack by $index id◦ ng-repeat◦ track by Angular$indexobject id◦

```
<div ng-repeat="user in userCollection track by $index">
  {{user.data}}
</div>
```

◦

2

Angular◦ ◦

```
<!-- Default data binding has a performance cost -->
<div>{{ my.data }}</div>
```

AngularJS> = 1.3

```
<!-- Bind once is much faster -->
<div>{{ ::my.data }}</div>

<div ng-bind="::my.data"></div>

<!-- Use single binding notation in ng-repeat where only list display is needed  -->
<div ng-repeat="user in ::userCollection">
  {{::user.data}}
</div>
```

“bind once”Angular◦ AngularDOM◦

{{}}◦

ng-bind◦ ng-bind◦

$digest◦

3

AngularJS◦ ◦ ◦

```
<div ng-controller="bigCalulations as calc">
  <p>{{calc.calculateMe()}}</p>
  <p>{{calc.data | heavyFilter}}</p>
</div>
```

```
<div ng-controller="bigCalulations as calc">
  <p>{{calc.preCalculatedValue}}</p>
  <p>{{calc.data | lightFilter}}</p>
</div>
```

```
app.controller('bigCalulations', function(valueService) {
    // bad, because this is called in every digest loop
    this.calculateMe = function() {
        var t = 0;
        for(i = 0; i < 1000; i++) {
            t += i;
        }
        return t;
    }
    // good, because this is executed just once and logic is separated in service to    keep
the controller light
    this.preCalulatedValue = valueService.valueCalculation(); // returns 499500
});
```

4

◦ UI◦ ◦

Angular◦

$watch() - $watch()

$watchCollection() - $watch$watch

$watch(..., true) - “”watchCollection

- {{::variable}}◦

◦ @WordsJared

```
(function() {
```

```
    var root = angular.element(document.getElementsByTagName('body')),
        watchers = [],
        f = function(element) {
        angular.forEach(['$scope', '$isolateScope'], function(scopeProperty) {
            if(element.data() && element.data().hasOwnProperty(scopeProperty)) {
                angular.forEach(element.data()[scopeProperty].$$watchers, function(watcher) {
                watchers.push(watcher);
                });
            }
        });

        angular.forEach(element.children(), function(childElement) {
            f(angular.element(childElement));
        });
    };

    f(root);

    // Remove duplicate watchers
    var watchersWithoutDuplicates = [];
    angular.forEach(watchers, function(item) {
        if(watchersWithoutDuplicates.indexOf(item) < 0) {
            watchersWithoutDuplicates.push(item);
        }
    });
    console.log(watchersWithoutDuplicates.length);
})();
```

5ng-if / ng-show

◦ **ng-if**DOM**ng-show**◦ ng-if ◦

◦

- ng-if
- /ng-show/ng-hide

```
<div ng-repeat="user in userCollection">
  <p ng-if="user.hasTreeLegs">I am special<!-- some complicated DOM --></p>
  <p ng-show="user.hasSubscribed">I am awesome<!-- switch this setting on and off --></p>
</div>
```

- ng-iftest

6

◦ ◦

```
angular.module('exampleApp', []).config(['$compileProvider', function ($compileProvider) {
    $compileProvider.debugInfoEnabled(false);
}]);
```

7

。 。

。 Angular$ inject。 。

PRO TIP$ inject。 annotateif$ inject = fn。 $ inject。 $ inject

```
var app = angular.module('DemoApp', []);

var DemoController = function (s, h) {
    h.get('https://api.github.com/users/angular/repos').success(function (repos) {
        s.repos = repos;
    });
}
// $inject property annotation
DemoController['$inject'] = ['$scope', '$http'];

app.controller('DemoController', DemoController);
```

2ng-appng-strict-diDI。

```
<html ng-app="DemoApp" ng-strict-di>
```

```
angular.bootstrap(document, ['DemoApp'], {
    strictDi: true
});
```

Angular。 Angular。

。

```
{{my.data}}
```

::。 my.data。 。 Angular。

```
{{::my.data}}
<span ng-bind="::my.data"></span>
<span ng-if="::my.data"></span>
<span ng-repeat="item in ::my.data">{{item}}</span>
<span ng-class="::{ 'my-class': my.data }"></div>
```

my.data。 。

AngularJS。 。

```
<div ng-controller="bigCalulations as calc">
  <p>{{calc.calculateMe()}}</p>
  <p>{{calc.data | heavyFilter}}</p>
</div>
```

```
<div ng-controller="bigCalulations as calc">
  <p>{{calc.preCalculatedValue}}</p>
  <p>{{calc.data | lightFilter}}</p>
</div>
```

```
.controller("bigCalulations", function(valueService) {
  // bad, because this is called in every digest loop
  this.calculateMe = function() {
    var t = 0;
    for(i = 0; i < 1000; i++) {
      t = t + i;
    }
    return t;
  }
  //good, because it is executed just once and logic is separated in service to    keep the
controller light
  this.preCalulatedValue = valueService.caluclateSumm(); // returns 499500
});
```

。

`$watch()$watchCollection`。

Watcher。 Angular - `$watch()$watchCollection`。

```
(function() {
  angular.module("app", []).controller("ctrl", function($scope) {
    $scope.value = 10;
    $scope.$watch(
      function() { return $scope.value; },
      function() { console.log("value changed"); }
    );
  }
})();
```

。 UI。

Angular。

`$watch()` -

`$watchCollection()` - $ watch

`$watch(..., true)` - “”watchCollection

- `{{::variable}}`

。 @Words Like Jared -

```
(function() {
  var root = angular.element(document.getElementsByTagName("body")),
      watchers = [];
```

```
  var f = function(element) {

    angular.forEach(["$scope", "$isolateScope"], function(scopeProperty) {
      if(element.data() && element.data().hasOwnProperty(scopeProperty)) {
        angular.forEach(element.data()[scopeProperty].$$watchers, function(watcher) {
          watchers.push(watcher);
        });
      }
    });

    angular.forEach(element.children(), function(childElement) {
      f(angular.element(childElement));
    });

  };

  f(root);

  // Remove duplicate watchers
  var watchersWithoutDuplicates = [];
  angular.forEach(watchers, function(item) {
    if(watchersWithoutDuplicates.indexOf(item) < 0) {
      watchersWithoutDuplicates.push(item);
    }
  });

  console.log(watchersWithoutDuplicates.length);

})();
```

ng-statsAngular。 showAngularStats。

```
showAngularStats({
  "position": "topleft",
  "digestTimeThreshold": 16,
  "autoload": true,
  "logDigest": true,
  "logWatches": true
});
```

。

ng-if vs ng-show

。 ng-ifDOM。 ng-if。 ng-show。

NG-

ngIfDOM。 ngIffalseDOMDOM。

NG-

ngShowngShowHTML。 ng-hide CSS。

```
<div ng-repeat="user in userCollection">
  <p ng-if="user.hasTreeLegs">I am special
    <!-- some complicated DOM -->
  </p>
  <p ng-show="user.hasSubscribed">I am aweosme
    <!-- switch this setting on and off -->
  </p>
</div>
```

95ng-if ;DOMng-show 。

ng-if

ng-ifng-showng-hide。 $parent.property 。

```
<div ng-controller="ExampleController">
    <form name="userForm">
        Name:
        <input type="text" name="userName"
           ng-model="user.name"
           ng-model-options="{ debounce: 1000 }" />
            <button ng-click="userForm.userName.$rollbackViewValue();
user.name=''">Clear</button><br />
    </form>
    <pre>user.name = </pre>
</div>
```

10001。 ng-model$digest。

Angular。 。 ng-model。

```
//always deregister these
$rootScope.$on(...);
$scope.$parent.$on(...);
```

angular

```
//no need to deregister this
$scope.$on(...);
```

$rootScope.$on。 。

```
angular.module('app').controller('badExampleController', badExample);
badExample.$inject = ['$scope', '$rootScope'];
```

```
function badExample($scope, $rootScope) {
    $rootScope.$on('post:created', function postCreated(event, data) {});
}
```

```
angular.module('app').controller('goodExampleController', goodExample);
goodExample.$inject = ['$scope', '$rootScope'];

function goodExample($scope, $rootScope) {
    var deregister = $rootScope.$on('post:created', function postCreated(event, data) {});

    $scope.$on('$destroy', function destroyScope() {
        deregister();
    });
}
```

https://riptutorial.com/zh-TW/angularjs/topic/1921/

25:

Examples

VS

。 'this'。

。

。

。

。

。 。

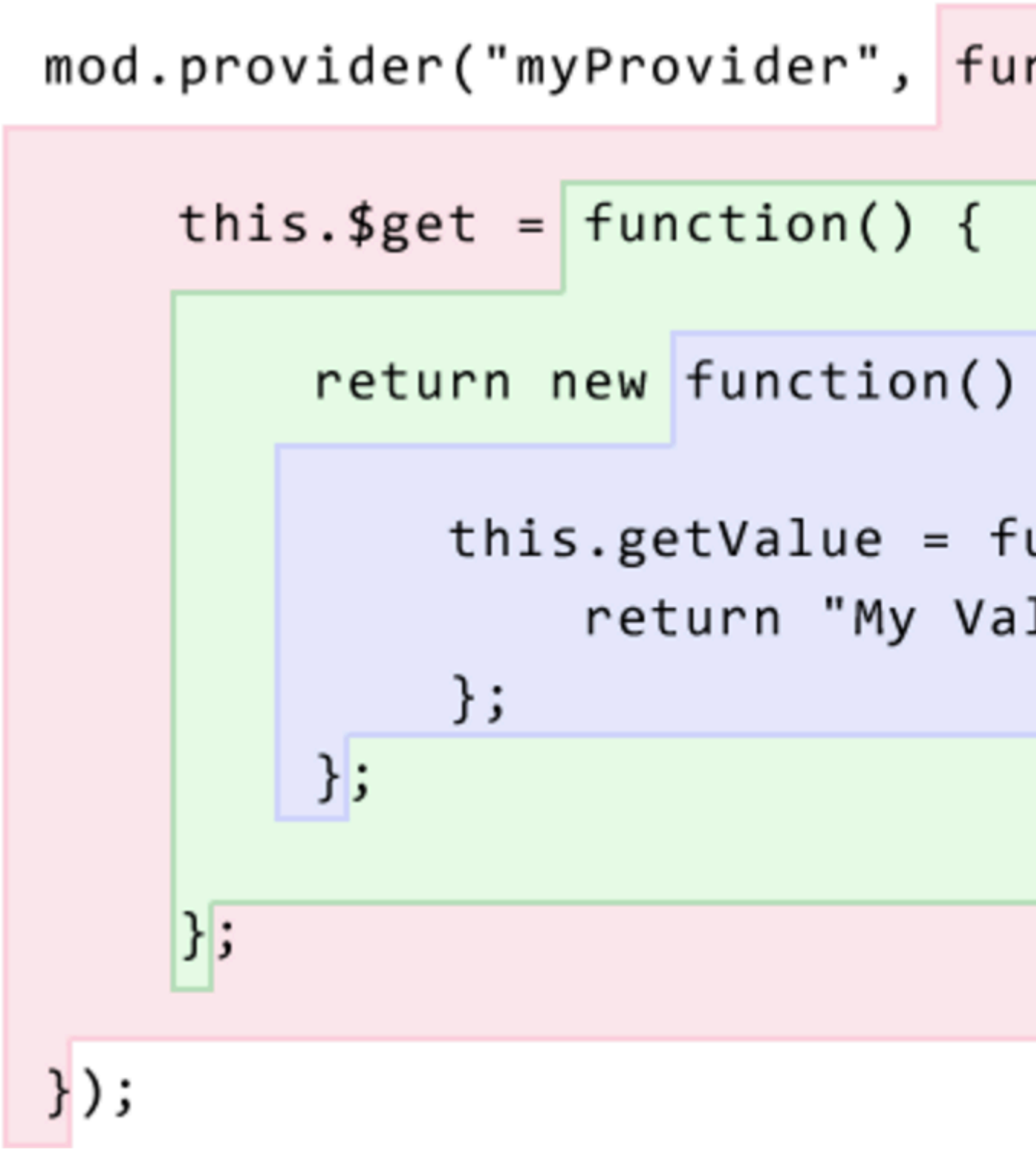
JavaScript。

ES6。 。

。

$ get。 。

。



https://riptutorial.com/zh-TW/angularjs/topic/7099/

26:

Examples

node.jsnpm。
GitHub @ https://github.com/mikkoviitala/angular-grunt-run-local

Web。

grunt javascript npm bower 。

。 **root** 3。

- package.jsonnpm
- bower.json
- gruntfile.jsgrunt

---

package.json

grunt matchdep grunt-expressgruntWeb **grunt-open**grunturl /。

“”。

```
{
  "name": "app",
  "version": "1.0.0",
  "dependencies": {},
  "devDependencies": {
    "grunt": "~0.4.1",
    "matchdep": "~0.1.2",
    "grunt-express": "~1.0.0-beta2",
    "grunt-open": "~0.2.1"
  },
  "scripts": {
    "postinstall": "bower install"
  }
}
```

bower.json

Bower 。

```
{
```

```
  "name": "app",
  "version": "1.0.0",
  "dependencies": {
    "angular": "~1.3.x"
  },
  "devDependencies": {}
}
```

gruntfile.js

gruntfile.js“”http// localhost9000 /

```
'use strict';

// see http://rhumaric.com/2013/07/renewing-the-grunt-livereload-magic/

module.exports = function(grunt) {
  require('matchdep').filterDev('grunt-*').forEach(grunt.loadNpmTasks);

  grunt.initConfig({
    express: {
      all: {
        options: {
          port: 9000,
          hostname: 'localhost',
          bases: [__dirname]
        }
      }
    },

    open: {
      all: {
        path: 'http://localhost:<%= express.all.options.port%>'
      }
    }
  });

  grunt.registerTask('app', [
    'express',
    'open',
    'express-keepalive'
  ]);
};
```

。 /。

```
npm install -g grunt-cli bower
npm install
```

```
grunt app
```

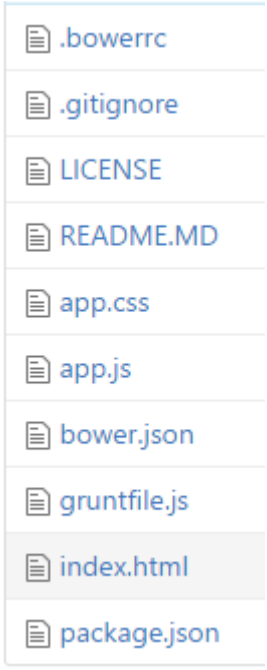
。

GitHub 。

。 `index.html` `app.jsapp.css`。 Git。

AngularJS application

Hello Stack Overflow Documentation (beta)



https://riptutorial.com/zh-TW/angularjs/topic/6077/

27:

AngularJS。Jasmine Jasmine。ngMock。

Examples

```
angular.module('myModule', []).filter('multiplier', function() {
  return function(number, multiplier) {
    if (!angular.isNumber(number)) {
      throw new Error(number + " is not a number!");
    }
    if (!multiplier) {
      multiplier = 2;
    }
    return number * multiplier;
  }
});
```

```
describe('multiplierFilter', function() {
  var filter;

  beforeEach(function() {
    module('myModule');
    inject(function(multiplierFilter) {
      filter = multiplierFilter;
    });
  });

  it('multiply by 2 by default', function() {
    expect(filter(2)).toBe(4);
    expect(filter(3)).toBe(6);
  });

  it('allow to specify custom multiplier', function() {
    expect(filter(2, 4)).toBe(8);
  });

  it('throws error on invalid input', function() {
    expect(function() {
      filter(null);
    }).toThrow();
  });
});
```

`inject`+ *Filter* 。 `Filter`。

1.5+

```
angular.module('myModule', []).component('myComponent', {
  bindings: {
    myValue: '<'
  },
  controller: function(MyService) {
    this.service = MyService;
```

```
    this.componentMethod = function() {
      return 2;
    };
  }
});
```

```
describe('myComponent', function() {
  var component;

  var MyServiceFake = jasmine.createSpyObj(['serviceMethod']);

  beforeEach(function() {
    module('myModule');
    inject(function($componentController) {
      // 1st - component name, 2nd - controller injections, 3rd - bindings
      component = $componentController('myComponent', {
        MyService: MyServiceFake
      }, {
        myValue: 3
      });
    });
  });

  /** Here you test the injector. Useless. */

  it('injects the binding', function() {
    expect(component.myValue).toBe(3);
  });

  it('has some cool behavior', function() {
    expect(component.componentMethod()).toBe(2);
  });
});
```

```
angular.module('myModule', [])
  .controller('myController', function($scope) {
    $scope.num = 2;
    $scope.doSomething = function() {
      $scope.num += 2;
    }
  });
```

```
describe('myController', function() {
  var $scope;
  beforeEach(function() {
    module('myModule');
    inject(function($controller, $rootScope) {
      $scope = $rootScope.$new();
      $controller('myController', {
        '$scope': $scope
      })
    });
  });
  it('should increment `num` by 2', function() {
    expect($scope.num).toEqual(2);
    $scope.doSomething();
    expect($scope.num).toEqual(4);
  });
```

```
});
```

```
angular.module('myModule', [])
  .service('myService', function() {
    this.doSomething = function(someNumber) {
      return someNumber + 2;
    }
  });
```

```
describe('myService', function() {
  var myService;
  beforeEach(function() {
    module('myModule');
    inject(function(_myService_) {
      myService = _myService_;
    });
  });
  it('should increment `num` by 2', function() {
    var result = myService.doSomething(4);
    expect(result).toEqual(6);
  });
});
```

```
angular.module('myModule', [])
  .directive('myDirective', function() {
    return {
      template: '<div>{{greeting}} {{name}}!</div>',
      scope: {
        name: '=',
        greeting: '@'
      }
    };
  });
```

```
describe('myDirective', function() {
  var element, scope;
  beforeEach(function() {
    module('myModule');
    inject(function($compile, $rootScope) {
      scope = $rootScope.$new();
      element = angular.element("<my-directive name='name' greeting='Hello'></my-directive>");
      $compile(element)(scope);
      /* PLEASE NEVER USE scope.$digest(). scope.$apply use a protection to avoid to run a
digest loop when there is already one, so, use scope.$apply() instead. */
      scope.$apply();
    })
  });

  it('has the text attribute injected', function() {
    expect(element.html()).toContain('Hello');
  });

  it('should have proper message after scope change', function() {
    scope.name = 'John';
    scope.$apply();
    expect(element.html()).toContain("John");
    scope.name = 'Alice';
```

```
    expect(element.html()).toContain("John");
    scope.$apply();
    expect(element.html()).toContain("Alice");
  });
});
```

https://riptutorial.com/zh-TW/angularjs/topic/1689/

28:

Examples

◦ ◦ addZ ◦ “Z”◦

example.js

```
angular.module('main', [])
    .filter('addZ', function() {
            return function(value) {
                return value + "Z";
            }
     })
    .controller('MyController', ['$scope', function($scope) {
        $scope.sample = "hello";
    }])
```

example.html

{ variable | filter} ◦ sampleaddZ◦

```
<div ng-controller="MyController">
   <span>{{sample | addZ}}</span>
</div>
```

```
helloZ
```

$filter

```
angular
  .module('filters', [])
  .filter('percentage', function($filter) {
    return function (input) {
      return $filter('number')(input * 100) + ' %';
    };
  });
```

◦

```
angular
  .module('app', [])
  .controller('MyController', function($scope) {
    $scope.example = 0.098152;
  })
  .filter('percentage', function($filter) {
    return function (input, decimals) {
      return $filter('number')(input * 100, decimals) + ' %';
```

```
    };
  });
```

percentage

```
<span ng-controller="MyController">{{ example | percentage: 2 }}</span>
=> "9.81 %"
```

...

```
<span ng-controller="MyController">{{ example | percentage }}</span>
=> "9.8152 %"
```

https://riptutorial.com/zh-TW/angularjs/topic/2552/

29: AngularJSTypeScript

- $ scopeng.IScope - typescript。

Examples

AngularJS

Controllerng-controllerDOMAngularControllerController。 $ scopeController。

typescript。

```
module App.Controllers {
    class Address {
        line1: string;
        line2: string;
        city: string;
        state: string;
    }
    export class SampleController {
        firstName: string;
        lastName: string;
        age: number;
        address: Address;
        setUpWatches($scope: ng.IScope): void {
            $scope.$watch(() => this.firstName, (n, o) => {
                //n is string and so is o
            });
        };
        constructor($scope: ng.IScope) {
            this.setUpWatches($scope);
        }
    }
}
```

Javascript

```
var App;
(function (App) {
    var Controllers;
    (function (Controllers) {
        var Address = (function () {
            function Address() {
            }
            return Address;
        }());
        var SampleController = (function () {
            function SampleController($scope) {
                this.setUpWatches($scope);
            }
            SampleController.prototype.setUpWatches = function ($scope) {
                var _this = this;
                $scope.$watch(function () { return _this.firstName; }, function (n, o) {
                    //n is string and so is o
```

```
                });
            };
            ;
            return SampleController;
        }());
        Controllers.SampleController = SampleController;
    })(Controllers = App.Controllers || (App.Controllers = {}));
})(App || (App = {}));
//# sourceMappingURL=ExampleController.js.map
```

js

```
app
 .module('app')
 .controller('exampleController', App.Controller.SampleController)
```

ControllerControllerAs

Controller`controller as` `$scope`

`controller as someName``$scope` $ scope

```
// we are using $scope object.
app.controller('MyCtrl', function ($scope) {
  $scope.name = 'John';
});

<div ng-controller="MyCtrl">
  {{name}}
</div>
```

`controller as`

```
// we are using the "this" Object instead of "$scope"
app.controller('MyCtrl', function() {
  this.name = 'John';
});

<div ng-controller="MyCtrl as info">
  {{info.name}}
</div>
```

JavaScript“”

```
var jsClass = function () {
  this.name = 'John';
}
var jsObj = new jsClass();
```

`jsObj``jsClass`

angular

/

$ scope。 anguar。 ExampleController。

```
function n(n){this.setUpWatches(n)
```

`$scopen`

$ inject `string[]` 。 DI。

```
module App.Controllers {
    class Address {
        line1: string;
        line2: string;
        city: string;
        state: string;
    }
    export class SampleController {
        firstName: string;
        lastName: string;
        age: number;
        address: Address;
        setUpWatches($scope: ng.IScope): void {
            $scope.$watch(() => this.firstName, (n, o) => {
                //n is string and so is o
            });
        };
        static $inject : string[] = ['$scope'];
        constructor($scope: ng.IScope) {
            this.setUpWatches($scope);
        }
    }
}
```

ControllerAs

ControllerJavaScript。 `function context` **`this`** 。

1

```
this.constFunction = function() { ... }
```

`controller object$scope` 。 。

```
<a href="#123" ng-click="constFunction()"></a> // It will not work
```

2

```
$scope.scopeFunction = function() { ... }
```

`$scope objectcontroller object` 。 `$scope`。

```
<a href="#123" ng-click="scopeFunction()"></a> // It will work
```

ControllerAs

- **ControllerAs**oneCtrl.name。 oneCtrl.nameanotherCtrl.namename$scope.nameHTML**{{name}}**。
- $scopeintermediary object。 this.* 。

```
  <div ng-controller="FirstCtrl">
      {{ name }}
      <div ng-controller="SecondCtrl">
          {{ name }}
          <div ng-controller="ThirdCtrl">
              {{ name }}
          </div>
      </div>
  </div>
```

{{ name }}。

```
<div ng-controller="FirstCtrl as first">
    {{ first.name }}
    <div ng-controller="SecondCtrl as second">
        {{ second.name }}
        <div ng-controller="ThirdCtrl as third">
            {{ third.name }}
        </div>
    </div>
</div>
```

- $scope$ scope$watch $digest $emit $http。
- /$scope $scope 。

AngularJSTypeScript https://riptutorial.com/zh-TW/angularjs/topic/3477/angularjstypescript

30: ES6

Examples

ES6angularJS

```
class exampleContoller{

       constructor(service1,service2,...serviceN){
          let ctrl=this;
              ctrl.service1=service1;
              ctrl.service2=service2;
               .
               .
               .
              ctrl.service1=service1;
              ctrl.controllerName = 'Example Controller';
              ctrl.method1(controllerName)

       }

       method1(param){
          let ctrl=this;
               ctrl.service1.serviceFunction();
              .
              .
              ctrl.scopeName=param;
       }
       .
       .
       .
       methodN(param){
          let ctrl=this;
               ctrl.service1.serviceFunction();
              .
              .
       }


   }
   exampleContoller.$inject = ['service1','service2',...,'serviceN'];
   export default exampleContoller;
```

ES6 https://riptutorial.com/zh-TW/angularjs/topic/9419/es6

31:

。

```
.controller('MyController', function($scope, Profile, EVENT))
```

- `$scope`
- `Profile`
- `EVENT`

Examples

```
angular
  .module('MyApp', [])
  .constant('VERSION', 1.0);
```

```
angular
  .module('MyApp')
  .controller('FooterController', function(VERSION) {
    this.version = VERSION;
  });
```

```
<footer ng-controller="FooterController as Footer">{{ Footer.version }}</footer>
```

/.....

- 。 。 。 .....

  ```
  angular
    .module('MyApp')
    .constant('EVENTS', {
      LOGIN_VALIDATE_FORM: 'login::click-validate',
      LOGIN_FORGOT_PASSWORD: 'login::click-forgot',
      LOGIN_ERROR: 'login::notify-error',
      ...
    });
  ```

  ```
  angular
    .module('MyApp')
    .controller('LoginController', function($scope, EVENT) {
      $scope.$on(EVENT.LOGIN_VALIDATE_FORM, function() {
        ...
      });
    })
  ```

...

- 。

```
angular
  .module('MyApp')
  .constant('CONFIG', {
    BASE_URL: {
      APP: 'http://localhost:3000',
      API: 'http://localhost:3001'
    },
    STORAGE: 'S3',
    ...
  });
```

- ◦ ...◦

```
angular
  .module('MyApp')
  .constant('HARDCODED', {
    KEY: 'KEY',
    RELATION: 'has_many',
    VAT: 19.6
  });
```

.....

```
$scope.settings = {
  username: Profile.username,
  relation: 'has_many',
  vat: 19.6
}
```

```
$scope.settings = {
  username: Profile.username,
  relation: HARDCODED.RELATION,
  vat: HARDCODED.VAT
}
```

https://riptutorial.com/zh-TW/angularjs/topic/3967/

32:

1.

```
angular.module('lazy', [
 'alreadyLoadedDependency1',
 'alreadyLoadedDependency2',
 ...
 {
  files: [
  'path/to/lazily/loaded/dependency1.js',
  'path/to/lazily/loaded/dependency2.js', //<--- requires lazily loaded dependency1
  'path/to/lazily/loaded/dependency.css'
  ],
  serie: true //Sequential load instead of parallel
 }
]);
```

Examples

oclazyload.jsocLazyLoadapp.js

```
//Make sure you put the correct dependency! it is spelled different than the service!
angular.module('app', [
 'oc.lazyLoad',
 'ui-router'
])
```

$ocLazyLoad

```
.controller('someCtrl', function($ocLazyLoad) {
 $ocLazyLoad.load('path/to/file.js').then(...);
});
```

。

```
$ocLazyLoad.load([
  'bower_components/bootstrap/dist/js/bootstrap.js',
  'bower_components/bootstrap/dist/css/bootstrap.css',
  'partials/template1.html'
]);
```

UI

```
.state('profile', {
 url: '/profile',
 controller: 'profileCtrl as vm'
 resolve: {
  module: function($ocLazyLoad) {
   return $ocLazyLoad.load([
    'path/to/profile/module.js',
```

```
    'path/to/profile/style.css'
   ]);
  }
 }
});
```

ngRoute

```
.when('/profile', {
     controller: 'profileCtrl as vm'
     resolve: {
      module: function($ocLazyLoad) {
       return $ocLazyLoad.load([
        'path/to/profile/module.js',
        'path/to/profile/style.css'
       ]);
      }
     }
    });
```

module.jsmodule.js

```
//lazy_module.js
angular.module('lazy', [
 'alreadyLoadedDependency1',
 'alreadyLoadedDependency2',
 ...
 [
  'path/to/lazily/loaded/dependency.js',
  'path/to/lazily/loaded/dependency.css'
 ]
]);
```

```
<div oc-lazy-load="['path/to/lazy/loaded/directive.js',
'path/to/lazy/loaded/directive.html']">

<!-- myDirective available here -->
<my-directive></my-directive>

</div>
```

https://riptutorial.com/zh-TW/angularjs/topic/6400/

33:

Examples

。

。 。

1. Chrome
   - javascriptcsscpu。
   - JS ProfilerJS。 ...
2. FireBug Firefox
3. Dynatrace IE
4. Batarang Chrome

   Chrome。 。 。
5. Watcher Chrome

   AngularUI。
6. @Words Jared

```
(function() {
    var root = angular.element(document.getElementsByTagName('body')),
        watchers = [],
        f = function(element) {
        angular.forEach(['$scope', '$isolateScope'], function(scopeProperty) {
            if(element.data() && element.data().hasOwnProperty(scopeProperty)) {
                angular.forEach(element.data()[scopeProperty].$$watchers, function(watcher) {
                watchers.push(watcher);
                });
            }
        });

        angular.forEach(element.children(), function(childElement) {
            f(angular.element(childElement));
        });
    };

    f(root);

    // Remove duplicate watchers
    var watchersWithoutDuplicates = [];
    angular.forEach(watchers, function(item) {
        if(watchersWithoutDuplicates.indexOf(item) < 0) {
            watchersWithoutDuplicates.push(item);
        }
```

```
    });
    console.log(watchersWithoutDuplicates.length);
})();
```

7. /。

   https //www.webpagetest.org/

   IEChrome。 。

。 。 。 。

:)

https://riptutorial.com/zh-TW/angularjs/topic/7033/

34:

cssng-hide。ng-show / hide。

Examples

```
angular.module('core').factory('print_service', ['$rootScope', '$compile', '$http',
'$timeout','$q',
    function($rootScope, $compile, $http, $timeout,$q) {

        var printHtml = function (html) {
            var deferred = $q.defer();
            var hiddenFrame = $('<iframe style="display:
none"></iframe>').appendTo('body')[0];

            hiddenFrame.contentWindow.printAndRemove = function() {
                hiddenFrame.contentWindow.print();
                $(hiddenFrame).remove();
                deferred.resolve();
            };

            var htmlContent =   "<!doctype html>"+
                                "<html>"+
                                    '<head><link rel="stylesheet" type="text/css"
href="/style/css/print.css"/></head>'+
                                    '<body onload="printAndRemove();">' +
                                        html +
                                    '</body>'+
                                "</html>";

            var doc = hiddenFrame.contentWindow.document.open("text/html", "replace");
            doc.write(htmlContent);
            doc.close();
            return deferred.promise;
        };

        var openNewWindow = function (html) {
            var newWindow = window.open("debugPrint.html");
            newWindow.addEventListener('load', function(){
                $(newWindow.document.body).html(html);
            }, false);
        };

        var print = function (templateUrl, data) {

            $rootScope.isBeingPrinted = true;

            $http.get(templateUrl).success(function(template){
                var printScope = $rootScope.$new()
                angular.extend(printScope, data);
                var element = $compile($('<div>' + template + '</div>'))(printScope);
                var waitForRenderAndPrint = function() {
                    if(printScope.$$phase || $http.pendingRequests.length) {
                        $timeout(waitForRenderAndPrint, 1000);
                    } else {
                        // Replace printHtml with openNewWindow for debugging
                        printHtml(element.html());
```

```
                        printScope.$destroy();
                    }
                };
                waitForRenderAndPrint();
            });
        };

        var printFromScope = function (templateUrl, scope, afterPrint) {
            $rootScope.isBeingPrinted = true;
            $http.get(templateUrl).then(function(response){
                var template = response.data;
                var printScope = scope;
                var element = $compile($('<div>' + template + '</div>'))(printScope);
                var waitForRenderAndPrint = function() {
                    if (printScope.$$phase || $http.pendingRequests.length) {
                        $timeout(waitForRenderAndPrint);
                    } else {
                        // Replace printHtml with openNewWindow for debugging
                        printHtml(element.html()).then(function() {
                            $rootScope.isBeingPrinted = false;
                            if (afterPrint) {
                                afterPrint();
                            }
                        });
                    }
                };
                waitForRenderAndPrint();
            });
        };

        return {
            print : print,
            printFromScope : printFromScope
        }
    }
]);
```

```
var template_url = '/views/print.client.view.html';
print_service.printFromScope(template_url,$scope,function(){
      // Print Completed
});
```

https://riptutorial.com/zh-TW/angularjs/topic/6750/

35:

- <htmlElement ng-controller =“controllerName”> ... </ htmlElement>
- <script> app.controller'controllerName'controllerFunction; </ SCRIPT>

Examples

Angular。HTML。

Angular

```
<!DOCTYPE html>

<html lang="en" ng-app='MyFirstApp'>
    <head>
        <title>My First App</title>

        <!-- angular source -->
        <script src="https://code.angularjs.org/1.5.3/angular.min.js"></script>

        <!-- Your custom controller code -->
        <script src="js/controllers.js"></script>
    </head>
    <body>
        <div ng-controller="MyController as mc">
            <h1>{{ mc.title }}</h1>
            <p>{{ mc.description }}</p>
            <button ng-click="mc.clicked()">
                Click Me!
            </button>
        </div>
    </body>
</html>
```

```
<html ng-app='MyFirstApp'>
```

`ng-app`Javascript。

```
<script src="js/controllers.js"></script>
```

Javascript/。

```
<div ng-controller="MyController as mc">
```

`ng-controller`DOM。

`... as mc` `MyController` 。

```
<h1>{{ mc.title }}</h1>
```

{{ ... }}Angular。 <h1>mc.title。

Angularmc.title。

。 Angular{{ 1 + 2 }}{{ "Hello " + "World" }} 。

```
<button ng-click="mc.clicked()">
```

ng-clickAngularclickMyControllerclicked()。

MyController。 js/controller.js。

JavascriptAngular。

```
var app = angular.module("MyFirstApp", []);
```

ng-appHTML。

app。

```
app.controller('MyController', function(){
    var ctrl = this;

    ctrl.title = "My First Angular App";
    ctrl.description = "This is my first Angular app!";

    ctrl.clicked = function(){
        alert("MyController.clicked()");
    };
});
```

this。

。

```
angular
    .module('app')
    .controller('SampleController', SampleController)

SampleController.$inject = ['$log', '$scope'];
function SampleController($log, $scope){
    $log.debug('*****SampleController******');

    /* Your code below */
}
```

.$inject。 。

Minification

◦

◦

```
var app = angular.module('app');
app.controller('sampleController', ['$scope', '$http', function(a, b){
    //logic here
}]);
```

◦ $scope$http a$scope b$http ◦ ◦

$inject◦

```
var app = angular.module('app');
app.controller('sampleController', sampleController);
sampleController.$inject = ['$scope', '$http'];
function sampleController(a, b) {
    //logic here
}
```

◦

◦

$scope$http◦ ◦

```
// Intentional Bug: injected dependencies are reversed which will cause a problem
app.controller('sampleController', ['$scope', '$http',function($http, $scope) {
    $http.get('sample.json');
}]);
```

Angular JSControllerAs

Angular `$scope`ControllerView◦ ◦ Angular$ scopeController As◦

Controller As -

controllerAs

```
<div ng-controller="CustomerController as customer">
    {{ customer.name }}
</div>
```

controllerAs

```
function CustomerController() {
    this.name = {};
    this.sendMessage = function() { };
}
```

controllervm

```
function CustomerController() {
    /*jshint validthis: true */
    var vm = this;
    vm.name = {};
    vm.sendMessage = function() { };
}
```

controllerAs$scope。 View$scope。 controllerAs。 -

- $scope。 this.*。 JavaScript。
- controllerAs$parent。
- “”customer.namename“”。
- Views$parent。
- controllerAs。 vm ViewModel。 this。 。

controllerAscontrollerAs

```
<div ng-controller="Controller as vm>...</div>
```

vm$scope.vm 。

Minification-Safe

controller。

module.controller 。

; 。

```
var app = angular.module('myApp');
```

```
app.controller('ctrlInject',
    [
        /* Injected Parameters */
        '$Injectable1',
        '$Injectable2',
        /* Controller Function */
        function($injectable1Instance, $injectable2Instance) {
            /* Controller Content */
        }
    ]
);
```

。

```
var
a=angular.module('myApp');a.controller('ctrlInject',['$Injectable1','$Injectable2',function(b,c){/*
Controller Content */}]);
```

$Injectable1Instancebapp a$Injectable2Instance c$Injectable1Instance◦

$scope ◦ $scope$scope◦

```
.controller('parentController', function ($scope) {
    $scope.parentVariable = "I'm the parent";
});

.controller('childController', function ($scope) {
    $scope.childVariable = "I'm the child";

    $scope.childFunction = function () {
        $scope.parentVariable = "I'm overriding you";
    };
});
```

◦

```
<body ng-controller="parentController">
    What controller am I? {{parentVariable}}
    <div ng-controller="childController">
        What controller am I? {{childVariable}}
        <button ng-click="childFunction()"> Click me to override! </button>
    </div>
</body>
```

◦ ngController - ◦

https://riptutorial.com/zh-TW/angularjs/topic/601/

36: SelfThis

AngularJS。

Examples

“”ng-controller。

```
<div ng-controller="MainCtrl as main">
</div>
```

。 ***greeting***

```
<div ng-controller="MainCtrl as main">
    {{ main.greeting }}
</div>
```

greeting$ scope

```
angular
.module('ngNjOrg')
.controller('ForgotPasswordController',function ($log) {
  var self = this;

  self.greeting = "Hello World";
})
```

HTML。 ***self***。

```
angular
.module('ngNjOrg')
.controller('ForgotPasswordController',function ($log) {
  var self = this;

  self.greeting = "Hello World";

  function itsLate () {
    this.greeting = "Goodnight";
  }

})
```

itsLate。 JavaScriptitsLate“this”“this”。

```
 angular
.module('ngNjOrg')
.controller('ForgotPasswordController',function ($log) {
  var self = this;

  self.greeting = "Hello World";
```

```
  function itsLate () {
    self.greeting = "Goodnight";
  }

})
```

“” - 。

SelfThis https://riptutorial.com/zh-TW/angularjs/topic/8867/selfthis

37:

Angular。Scope

Examples

```
<p ng-bind="message"></p>
```

“”。

```
$scope.message = "Hello World";
```

HTML。“Hello World”innerHTML。 Angular。Digest CycleWatchersDOM。

Scope。。**$$ WatchersArray** 。$ digestScopeWatchersArray。

AngularWatchersArray

1. {{}} - ng-model。
2. $ scope。$ watch'expression / function' - JavaScript。

$ watch

1. 。
2. 。 DOM。
3. 。。 $ watch

```
Scope.prototype.$watch = function(watchFn, listenerFn) {
   var watcher = {
       watchFn: watchFn,
       listenerFn: listenerFn || function() { },
       last: initWatchVal  // initWatchVal is typically undefined
   };
   this.$$watchers.push(watcher); // pushing the Watcher Object to Watchers
};
```

AngularDigest Cycle。 $ digest$ scope。$ digest。ng-click$ scope。AngularJS$ digest$ digest。ng-click/ng-model$ timeout$ digest。 $ digest。

```
Scope.prototype.$digest = function() {
      var dirty;
      do {
          dirty = this.$$digestOnce();
      } while (dirty);
}
Scope.prototype.$$digestOnce = function() {
   var self = this;
```

```
   var newValue, oldValue, dirty;
   _.forEach(this.$$watchers, function(watcher) {
          newValue = watcher.watchFn(self);
          oldValue = watcher.last;   // It just remembers the last value for dirty checking
          if (newValue !== oldValue) { //Dirty checking of References
   // For Deep checking the object , code of Value
   // based checking of Object should be implemented here
             watcher.last = newValue;
             watcher.listenerFn(newValue,
                  (oldValue === initWatchVal ? newValue : oldValue),
                   self);
          dirty = true;
          }
     });
   return dirty;
 };
```

JavaScript**setTimeout**Angular。$ apply$ digest。DOM$ apply。 $ applyAngular。$ apply$ digest。 $ apply。

```
Scope.prototype.$apply = function(expr) {
       try {
         return this.$eval(expr); //Evaluating code in the context of Scope
       } finally {
         this.$digest();
       }
};
```

https://riptutorial.com/zh-TW/angularjs/topic/2342/

38:

Examples

angularjs

。

```
 'use strict';

/**
 * @ngdoc factory
 * @name app.factory:storageService
 * @description This function will communicate with HTML5 sessionStorage via Factory Service.
 */

app.factory('storageService', ['$rootScope', function($rootScope) {

    return {
        get: function(key) {
            return sessionStorage.getItem(key);
        },
        save: function(key, data) {
            sessionStorage.setItem(key, data);
        }
    };
}]);
```

storageService。

```
app.controller('myCtrl',['storageService',function(storageService) {

  // Save session data to storageService
  storageService.save('key', 'value');

  // Get saved session data from storageService
  var sessionData = storageService.get('key');

});
```

https://riptutorial.com/zh-TW/angularjs/topic/8201/

39:

Examples

```
angular.module("app")
  .service("counterService", function(){

    var service = {
        number: 0
    };

    return service;
   });
```

```
    angular.module("app")

        // Custom services are injected just like Angular's built-in services
        .controller("step1Controller", ['counterService', '$scope', function(counterService,
$scope) {
            counterService.number++;
            // bind to object (by reference), not to value, for automatic sync
            $scope.counter = counterService;
        })
```

```
// editable
<input ng-model="counter.number" />
```

```
// read-only
<span ng-bind="counter.number"></span>
```

。 。

Angularjs

$ injector。

    - 。

angular.factory

```
.factory('dataService', function() {
    var dataObject = {};
    var service = {
        // define the getter method
        get data() {
            return dataObject;
        },
        // define the setter method
        set data(value) {
            dataObject = value || {};
```

```
        }
    };
    // return the "service" object to expose the getter/setter
    return service;
})
```

```
.controller('controllerOne', function(dataService) {
    // create a local reference to the dataService
    this.dataService = dataService;
    // create an object to store
    var someObject = {
        name: 'SomeObject',
        value: 1
    };
    // store the object
    this.dataService.data = someObject;
})

.controller('controllerTwo', function(dataService) {
    // create a local reference to the dataService
    this.dataService = dataService;
    // this will automatically update with any changes to the shared data object
    this.objectFromControllerOne = this.dataService.data;
})
```

$ sce -

$ sce “Strict Contextual Escaping”。

HTML`$sce`。

$ sce `。

```
.filter('sanitizer', ['$sce', [function($sce) {
     return function(content) {
          return $sce.trustAsResourceUrl(content);
      };
}]);
```

```
<div ng-repeat="item in items">

    // Sanitize external sources
    <ifrmae ng-src="{{item.youtube_url | sanitizer}}">

    // Sanitaize and render HTML
    <div ng-bind-html="{{item.raw_html_content| sanitizer}}"></div>

</div>
```

"

```
angular.module("app")
  .service("counterService", ["fooService", "barService", function(anotherService,
barService){
```

```
    var service = {
        number: 0,
        foo: function () {
            return fooService.bazMethod(); // Use of 'fooService'
        },
        bar: function () {
            return barService.bazMethod(); // Use of 'barService'
        }
    };

    return service;
   }]);
```

angular.module API

```
angular.module('myApp.services', []).factory('githubService', function() {
   var serviceInstance = {};
   // Our first service
   return serviceInstance;
});
```

```
// Creating the factory through using the
// bracket notation
angular.module('myApp.services', [])
.factory('githubService', [function($http) {
}]);
```

。

```
angular.module('myApp.services', [])
    .factory('githubService', function($http) {
        var githubUrl = 'https://api.github.com';
        var runUserRequest = function(username, path) {
        // Return the promise from the $http service
        // that calls the Github API using JSONP
        return $http({
            method: 'JSONP',
            url: githubUrl + '/users/' +
            username + '/' +
            path + '?callback=JSON_CALLBACK'
        });
    }
// Return the service object with a single function
// events
return {
    events: function(username) {
    return runUserRequest(username, 'events');
    }
};
```

1

constructornewjavascriptAngularJsnew 。

1. new

$http

```
function StudentDetailsService($http) {
  this.getStudentDetails = function getStudentDetails() {
    return $http.get('/details');
  };
}

angular.module('myapp').service('StudentDetailsService', StudentDetailsService);
```

```
function StudentController(StudentDetailsService) {
  StudentDetailsService.getStudentDetails().then(function (response) {
      // handle response
    });
}
angular.module('app').controller('StudentController', StudentController);
```

.service() ◦ APIgetStudentDetails() ◦ API.service()◦

2

.factory().services() .factory() “” .service()◦ .service()

.factory()◦

1.
2.

.factory()

Revealing

```
function StudentDetailsService($http) {
  function getStudentDetails() {
    return $http.get('/details');
  }
  return {
    getStudentDetails: getStudentDetails
  };
}

angular.module('myapp').factory('StudentDetailsService', StudentDetailsService);
```

```
function StudentController(StudentDetailsService) {
  StudentDetailsService.getStudentDetails().then(function (response) {
      // handle response
    });
}
angular.module('app').controller('StudentController', StudentController);
```

◦

```
function closureFunction(name) {
  function innerClosureFunction(age) { // innerClosureFunction() is the inner function, a
closure
```

```
    // Here you can manipulate 'age' AND 'name' variables both
  };
};
```

“”name ◦

.factory()

```
function StudentDetailsService($http) {
  function closureFunction(name) {
  function innerClosureFunction(age) {
    // Here you can manipulate 'age' AND 'name' variables
    };
  };
};

angular.module('myapp').factory('StudentDetailsService', StudentDetailsService);
```

```
function StudentController(StudentDetailsService) {
  var myClosure = StudentDetailsService('Student Name'); // This now HAS the
innerClosureFunction()
  var callMyClosure = myClosure(24); // This calls the innerClosureFunction()
};

angular.module('app').controller('StudentController', StudentController);
```

/

.service()new◦ .factory()new

```
function StudentDetailsService($http) {
  function Student() {
    this.age = function () {
        return 'This is my age';
    };
  }
  Student.prototype.address = function () {
        return 'This is my address';
  };
  return Student;
};

angular.module('myapp').factory('StudentDetailsService', StudentDetailsService);
```

```
function StudentController(StudentDetailsService) {
  var newStudent = new StudentDetailsService();

  //Now the instance has been created. Its properties can be accessed.

 newStudent.age();
 newStudent.address();

};

angular.module('app').controller('StudentController', StudentController);
```

https://riptutorial.com/zh-TW/angularjs/topic/1486/

40:

Examples

◦ Angular◦

```
angular
    .module('app', []);
```

Array `[]app` Empty Array`[]` ◦

```
angular.module('app', [
    'app.auth',
    'app.dashboard'
]);
```

```
angular
    .module('app');
```

- ◦

◦

Angular◦

AngularJs◦

◦

```
var app = angular.module('myApp', []);
// Empty array is list of modules myApp is depends on.
// if there are any required dependancies,
// then you can add in module, Like ['ngAnimate']

app.controller('myController', function() {

  // write your business logic here
});
```

1. - ◦

   ```
   angular.module('myModule', []).
   config(function(injectables) {
     // here you can only inject providers in to config blocks.
   });
   ```

2. - ◦

   ```
   angular.module('myModule', []).
   run(function(injectables) {
   ```

```
  // here you can only inject instances in to config blocks.
});
```

https://riptutorial.com/zh-TW/angularjs/topic/844/

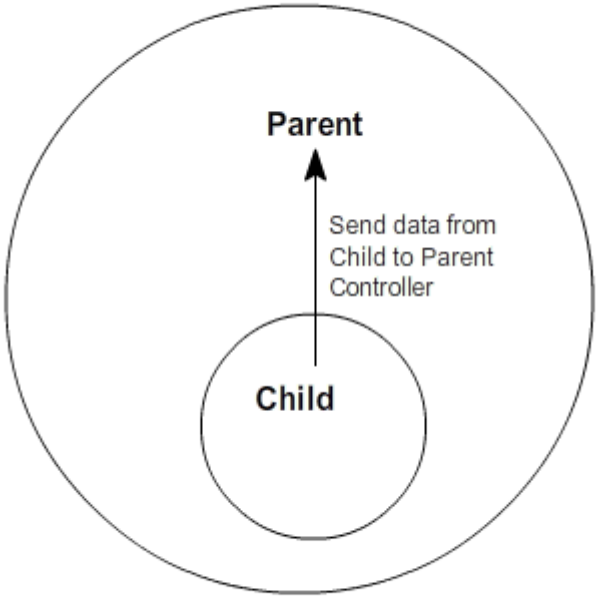
41:

	Object {name“eventName”targetScopeScopedefaultPreventedfalsecurrentScope ChildScope}
ARGS	

Examples

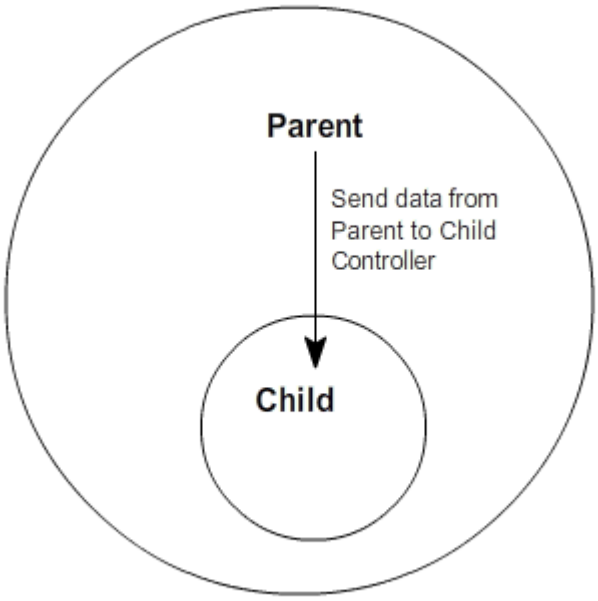
$◦ $

`$scope.$emit$scope ◦ $emit◦`



$◦ $

`$scope.$broadcast$scope◦ $scope.$on`




```
// firing an event upwards
$scope.$emit('myCustomEvent', 'Data to send');

// firing an event downwards
$scope.$broadcast('myCustomEvent', {
  someProp: 'some value'
});

// listen for the event in the relevant $scope
$scope.$on('myCustomEvent', function (event, data) {
  console.log(data); // 'Data from the event'
});
```

$rootScope$scope

AngularJS

◦ ◦

```
// firing an event upwards
$rootScope.$emit('myEvent', 'Data to send');

// listening an event
var listenerEventHandler = $rootScope.$on('myEvent', function(){
    //handle code
});

$scope.$on('$destroy', function() {
    listenerEventHandler();
});
```

2。

$emit$broadcast。 。

---

1. 。 $scope

---

2. 。 $rootScope

ProductListController CartController 。 CartController /。 $rootScope。

$scope.$emit

```
<html>
  <head>
    <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.4.4/angular.js"></script>
    <script>
        var app = angular.module('app', []);

        app.controller("FirstController", function ($scope) {
            $scope.$on('eventName', function (event, args) {
                $scope.message = args.message;
            });
        });

        app.controller("SecondController", function ($scope) {
            $scope.handleClick = function (msg) {
                $scope.$emit('eventName', {message: msg});
            };
        });

    </script>
  </head>
  <body ng-app="app">
    <div ng-controller="FirstController" style="border:2px ;padding:5px;">
        <h1>Parent Controller</h1>
        <p>Emit Message : {{message}}</p>
        <br />
        <div ng-controller="SecondController" style="border:2px;padding:5px;">
            <h1>Child Controller</h1>
            <input ng-model="msg">
            <button ng-click="handleClick(msg);">Emit</button>
        </div>
    </div>
  </body>
</html>
```

$scope.$broadcast

```
<html>
  <head>
    <title>Broadcasting</title>
    <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.4.4/angular.js"></script>
    <script>
        var app = angular.module('app', []);
```

```
        app.controller("FirstController", function ($scope) {
            $scope.handleClick = function (msg) {
                $scope.$broadcast('eventName', {message: msg});
            };

        });

        app.controller("SecondController", function ($scope) {
            $scope.$on('eventName', function (event, args) {
                $scope.message = args.message;
            });
        });

    </script>
  </head>
  <body ng-app="app">
    <div ng-controller="FirstController" style="border:2px solid ; padding:5px;">
        <h1>Parent Controller</h1>
        <input ng-model="msg">
        <button ng-click="handleClick(msg);">Broadcast</button>
        <br /><br />
        <div ng-controller="SecondController" style="border:2px solid ;padding:5px;">
            <h1>Child Controller</h1>
            <p>Broadcast Message : {{message}}</p>
        </div>
    </div>
  </body>
</html>
```

$ destory$ rootScope。$

$ rootScope。$ on。。

```
angular.module('app').controller('badExampleController', badExample);

badExample.$inject = ['$scope', '$rootScope'];
function badExample($scope, $rootScope) {

    $rootScope.$on('post:created', function postCreated(event, data) {});

}
```

```
angular.module('app').controller('goodExampleController', goodExample);

goodExample.$inject = ['$scope', '$rootScope'];
function goodExample($scope, $rootScope) {

    var deregister = $rootScope.$on('post:created', function postCreated(event, data) {});

    $scope.$on('$destroy', function destroyScope() {
        deregister();
    });

}
```

https://riptutorial.com/zh-TW/angularjs/topic/1922/

42:

- $ scope。$ watchwatchExpressioncallback[deep compare]
- $。$
- $。$[]

Examples

Angular。DOMjs。

Angular“ *digest loop* ” - DOM。

`ng-modelkeyup` eventListener

```
<input ng-model="variable" />
```

`keyup` 。

```
<span>{{variable}}</span>
```

::

1. html
   - `ng-modelkeyup`
   - span`expression`
2. - `keyup`
   -
   -

$ digest$ watch

- **$ digest** DOM =>
- **$ watch**=> DOM

```
<input id="input"/>
<span id="span"></span>
```

```
var $watches = [];
function $digest(){
    $watches.forEach(function($w){
        var val = $w.val();
        if($w.prevVal !== val){
            $w.callback(val, $w.prevVal);
            $w.prevVal = val;
        }
    })
}
function $watch(val, callback){
```

```
    $watches.push({val:val, callback:callback, prevVal: val() })
}
```

DOMangular

```
var realVar;
//this is usually done by ng-model directive
input1.addEventListener('keyup',function(e){
    realVar=e.target.value;
    $digest()
}, true);

//this is usually done with {{expressions}} or ng-bind directive
$watch(function(){return realVar},function(val){
    span1.innerHTML = val;
});
```

https //jsfiddle.net/azofxd4j/

$ scope

html。

-

```
<span ng-repeat="number in [1,2,3,4,5]">{{number}}</span>
```

`ng-repeat`55`number`

---

angular。 。

DOM `$digest$watch`。

DOM

```
<div>
    <input ng-model="person.name" />
    <span ng-repeat="number in [1,2,3,4,5]">{{number}} {{person.name}}</span>
</div>
```

`ng-repeat`。 - angular。

`$digest$digest$digest`。

- - div`$digest` 5 `$digest$digest` - 。

```
function $scope(){
    this.$children = [];
    this.$watches = [];
}
```

```
$scope.prototype.$digest = function(){
    this.$watches.forEach(function($w){
        var val = $w.val();
        if($w.prevVal !== val){
            $w.callback(val, $w.prevVal);
          $w.prevVal = val;
        }
    });
    this.$children.forEach(function(c){
        c.$digest();
    });
}

$scope.prototype.$watch = function(val, callback){
    this.$watches.push({val:val, callback:callback, prevVal: val() })
}
```

https://riptutorial.com/zh-TW/angularjs/topic/3156/

43: -

Examples

AngularXHR。 。

。 。 GruntGulp。

$templateCache。 angular。

html2jshtml2js。 。

```
module.exports = function (grunt) {
 //set up the location of your views here
 var viewLocation = ['app/views/**.html'];

 grunt.initConfig({
        pkg: require('./package.json'),
            //section that sets up the settings for concatenation of the html files into one
file
            html2js: {
                        options: {
                            base: '',
                            module: 'app.templates', //new module name
                            singleModule: true,
                            useStrict: true,
                            htmlmin: {
                                collapseBooleanAttributes: true,
                                collapseWhitespace: true
                            }
                        },
                        main: {
                            src: viewLocation,
                            dest: 'build/app.templates.js'
                        }
                    },
            //this section is watching for changes in view files, and if there was a change,
it will regenerate the production file. This task can be handy during development.
            watch: {
                views:{
                    files: viewLocation,
                    tasks: ['buildHTML']
                },
            }
        });

        //to automatically generate one view file
        grunt.loadNpmTasks('grunt-html2js');

        //to watch for changes and if the file has been changed, regenerate the file
        grunt.loadNpmTasks('grunt-contrib-watch');

        //just a task with friendly name to reference in watch
        grunt.registerTask('buildHTML', ['html2js']);
};
```

2index.html

```
<script src="build/app.templates.js"></script>
```

```
angular.module('app', ['app.templates'])
```

ui-router

```
    .state('home', {
        url: '/home',
        views: {
            "@": {
                controller: 'homeController',
                //this will be picked up from $templateCache
                templateUrl: 'app/views/home.html'
            },
        }

    })
```

JS 。JS。

。Angularminificaiton。 。

minificaiton `$scope` `myService`。

```
.controller('myController', function($scope, myService){
})
```

Angular。

```
.controller('myController', ['$scope','myService', function($scope, myService){
}])
```

- 。
- `ng-annotate`
- `uglify`。

module.exports = functiongrunt{//= ['app / scripts / * .js'];

```
 grunt.initConfig({
        pkg: require('./package.json'),
            //add necessary annotations for safe minification
         ngAnnotate: {
            angular: {
                src: ['staging/concatenated.js'],
                dest: 'staging/anotated.js'
            }
        },
        //combines all the files into one file
        concat: {
                js: {
```

```
                    src: scriptLocation,
                    dest: 'staging/concatenated.js'
                }
            },
        //final uglifying
        uglify: {
            options: {
                report: 'min',
                mangle: false,
                sourceMap:true
            },
            my_target: {
                files: {
                    'build/app.min.js': ['staging/anotated.js']
                }
            }
        },

        //this section is watching for changes in JS files, and if there was a change, it will
regenerate the production file. You can choose not to do it, but I like to keep concatenated
version up to date
        watch: {
            scripts: {
                files: scriptLocation,
                tasks: ['buildJS']
            }
        }

});

    //module to make files less readable
    grunt.loadNpmTasks('grunt-contrib-uglify');

    //mdule to concatenate files together
    grunt.loadNpmTasks('grunt-contrib-concat');

    //module to make angularJS files ready for minification
    grunt.loadNpmTasks('grunt-ng-annotate');

    //to watch for changes and if the file has been changed, regenerate the file
    grunt.loadNpmTasks('grunt-contrib-watch');

    //task that sequentially executes all steps to prepare JS file for production
    //concatinate all JS files
    //annotate JS file (prepare for minification
    //uglify file
     grunt.registerTask('buildJS', ['concat:js', 'ngAnnotate', 'uglify']);
};
```

- https://riptutorial.com/zh-TW/angularjs/topic/4434/---

44:

=	。。
<	。
@	。
	。
-	-
LifeCycle Hooks	angular.version> = 1.5.3
$OnInit	。。
$ onChangeschangesObj	。 changesObj{ currentValue, previousValue, isFirstChange() }。
$onDestroy	。。
$ postLink	。Angular 2ngAfterViewInitngAfterContentInit。
$ doCheck	。。;$ onChanges。

Component。Angular 1.5AngularJS。

https://docs.angularjs.org/guide/component

Examples

LifeCycle

- Angular 2。WebHTML。

```
angular.module('myApp', [])
    .component('helloWorld', {
        template: '<span>Hello World!</span>'
    });
```

```
<div ng-app="myApp">
  <hello-world> </hello-world>
</div>
```

```
angular.module("myApp", [])
  .component("helloWorld",{
    template: '<span>Hello {{$ctrl.name}}!</span>',
    bindings: { name: '@' }
  });
```

```
<div ng-app="myApp">
  <hello-world name="'John'" > </hello-world>
</div>
```

。

```
angular.module("myApp", [])
  .component("helloWorld",{
      template: "Hello {{$ctrl.name}}, I'm {{$ctrl.myName}}!",
      bindings: { name: '@' },
      controller: function(){
        this.myName = 'Alain';
      }
  });
```

```
<div ng-app="myApp">
  <hello-world name="John"> </hello-world>
</div>
```

CodePen

Angular`$onInit`。

```
angular.module("myApp", [])
  .component("helloWorld",{
      template: "Hello {{$ctrl.name}}, I'm {{$ctrl.myName}}!",
      bindings: { name: '@' },
      controller: function(){
        this.$onInit = function() {
          this.myName = "Mac" + this.name;
        }
      }
  });
```

“Hello JohnMacJohn”。

`$ctrl`controller`As`Angular。

“require”

。

require

$ onInit。

```
angular.module("myApp", [])
  .component("helloWorld",{
      template: "Hello {{$ctrl.name}}, I'm {{$ctrl.myName}}!",
      bindings: { name: '@' },
      require: {
        parent: '^parentComponent'
      },
      controller: function () {
        // here this.parent might not be initiated yet

        this.$onInit = function() {
           // after $onInit, use this.parent to access required controller
           this.parent.foo();
        }

      }
  });
```

。

JS

angularJSHTML<html><ANYTHING>。。。angular。。

```
angular.module("myApp",[]).component("customer", {})
```

。。

```
angular.module("myApp",[]).component("customer", {
    templateUrl : "customer.html", // your view here
    controller: customerController, //your controller here
    controllerAs: "cust"        //alternate name for your controller
})
```

“myApp”customer。html

```
<customer></customer>
```

。

。

https://riptutorial.com/zh-TW/angularjs/topic/892/

45:

AngularJSDirectives。。

	。falsetrue{@=<}。
falsy	。。
	。。
{ @ }	DOM。。
{=}	。
{<}	DOM。。。
{ }	。
	DOM。`tElement tAttr`。。`post-linkprepostpre-linkpost-link`。
/	link。scopeiElementDOMiAttrsDOMcontrollertranscludeFn。DOMDOM。。。
	。。。
	。。
restrict	DOM。`demoDirective` `E` - `<demo-directive></demo-directive>` `A` - `<div demo-directive></div>` `C` - `<div class="demo-directive"></div>` `M` - `<!-- directive: demo-directive -->`。 `restrict` - `restrict: "AC"` *Attribute* OR *Class*。`"EA"`。
'demoDirective'	demoDirective。。
'demoDirective'	demoDirectivenullfn。
'^ demoDirective'	demoDirective。。
'^^ demoDirective'	demoDirective。。
'^ demoDirective'	demoDirectivenullfn。
'^^	demoDirectivenullfn。

demoDirective'	

Examples

angularjs。angularjshtmlhtmlhtml。

directive.js

```
// Create the App module if you haven't created it yet
var demoApp= angular.module("demoApp", []);

// If you already have the app module created, comment the above line and create a reference
of the app module
var demoApp = angular.module("demoApp");


// Create a directive using the below syntax
// Directives are used to extend the capabilities of html element
// You can either create it as an Element/Attribute/class
// We are creating a directive named demoDirective. Notice it is in CamelCase when we are
defining the directive just like ngModel
// This directive will be activated as soon as any this element is encountered in html

demoApp.directive('demoDirective', function () {

  // This returns a directive definition object
  // A directive definition object is a simple JavaScript object used for configuring the
directive’s behaviour,template..etc
  return {
    // restrict: 'AE', signifies that directive is Element/Attribute directive,
    // "E" is for element, "A" is for attribute, "C" is for class, and "M" is for comment.
    // Attributes are going to be the main ones as far as adding behaviors that get used the
most.
    // If you don't specify the restrict property it will default to "A"
    restrict :'AE',

    // The values of scope property decides how the actual scope is created and used inside a
directive. These values can be either “false”, “true” or “{}”. This creates an isolate scope
for the directive.
    // '@' binding is for passing strings. These strings support {{}} expressions for
interpolated values.
    // '=' binding is for two-way model binding. The model in parent scope is linked to the
model in the directive's isolated scope.
    // '&' binding is for passing a method into your directive's scope so that it can be
called within your directive.
    // The method is pre-bound to the directive's parent scope, and supports arguments.
    scope: {
      name: "@",  // Always use small casing here even if it's a mix of 2-3 words
    },

    // template replaces the complete element with its text.
    template: "<div>Hello {{name}}!</div>",

    // compile is called during application initialization. AngularJS calls it once when html
page is loaded.
    compile: function(element, attributes) {
      element.css("border", "1px solid #cccccc");
```

```
      // linkFunction is linked with each element with scope to get the element specific data.
      var linkFunction = function($scope, element, attributes) {
        element.html("Name: <b>"+$scope.name +"</b>");
        element.css("background-color", "#ff00ff");
      };
      return linkFunction;
    }
  };
});
```

App

```
<html>

   <head>
      <title>Angular JS Directives</title>
   </head>
   <body>
   <script src =
"http://ajax.googleapis.com/ajax/libs/angularjs/1.3.14/angular.min.js"></script>
   <script src="directive.js"></script>
    <div ng-app = "demoApp">
       <!-- Notice we are using Spinal Casing here -->
       <demo-directive name="World"></demo-directive>

      </div>
   </body>
</html>
```

```
demoApp.directive('demoDirective', function () {
  var directiveDefinitionObject = {
    multiElement:
    priority:
    terminal:
    scope: {},
    bindToController: {},
    controller:
    controllerAs:
    require:
    restrict:
    templateNamespace:
    template:
    templateUrl:
    transclude:
    compile:
    link: function(){}
  };
  return directiveDefinitionObject;
});
```

1. **`multiElement`** - trueDOM
2. **`priority`** - DOM。。
3. **`terminal`** - true
4. **`scope`** -
5. **`bind to controller`** -

6. **controller** -
7. **require** -
8. **controllerAs** - **controllerAs**。
9. **restrict** - ElementAttributeClassComment
10. **templateNameSpace** - htmlsvgmath。 html
11. **template** - htmltranscludetrue
12. **templateUrl** - url
13. **transclude** - 。 。
14. **compile** - DOM
15. **link** - compile。 linkDOMDOM。 。

directive.js

```
angular.module('myApp', [])
  .directive('superman', function() {
    return {
      // restricts how the directive can be used
      restrict: 'E',
      templateUrl: 'superman-template.html',
      controller: function() {
        this.message = "I'm superman!"
      },
      controllerAs: 'supermanCtrl',
      // Executed after Angular's initialization. Use commonly
      // for adding event handlers and DOM manipulation
      link: function(scope, element, attributes) {
        element.on('click', function() {
          alert('I am superman!')
        });
      }
    }
  });
```

template.html

```
<h2>{{supermanCtrl.message}}</h2>
```

index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Document</title>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.0/angular.js"></script>
  <script src="superman-directive.js"><script/>
</head>
<body>
<div ng-app="myApp">
  <superman></superman>
</div>
</body>
</html>
```

AngularJSDirectives`restrictlink`

AngularJSAngularJSHTML。Html。DOMHTML。ng-modelng-hideng-if。

。Custom。/angularjsangular.js。/。。

appresuableComponentsreusableModuleApp.js

reusableModuleApp.js

```
(function(){

 var reusableModuleApp = angular.module('resuableModuleApp', ['ngSanitize']);

 //Remember whatever dependencies you have in here should be injected in the app module where
it is intended to be used or it's scripts should be included in your main app
                               //We will be injecting ng-sanitize

 resubaleModuleApp.directive('toolbar', toolbar)

 toolbar.$inject=['$sce'];

 function toolbar($sce){

     return{
     restrict :'AE',
        //Defining below isolate scope actually provides window for the directive to take data
from app that will be using this.
        scope : {
                value1: '=',
                value2: '=',
                },

         }
     template : '<ul>  <li><a ng-click="Add()" href="">{{value1}}</a></li>  <li><a ng-
click="Edit()" href="#">{{value2}}</a></li> </ul> ',
         link : function(scope, element, attrs){

              //Handle's Add function
              scope.Add = function(){


              };

              //Handle's Edit function
              scope.Edit = function(){

              };
     }
  }

});
```

mainApp.js

```
(function(){
   var mainApp = angular.module('mainApp', ['reusableModuleApp']); //Inject resuableModuleApp
in your application where you want to use toolbar component
```

```
   mainApp.controller('mainAppController', function($scope){
      $scope.value1 = "Add";
      $scope.value2 = "Edit";

   });

 });
```

index.html

```
 <!doctype html>
 <html ng-app="mainApp">
 <head>
  <title> Demo Making a reusable component
 <head>
  <body ng-controller="mainAppController">

     <!-- We are providing data to toolbar directive using mainApp'controller -->
     <toolbar value1="value1" value2="value2"></toolbar>

    <!-- We need to add the dependent js files on both apps here -->
     <script src="js/angular.js"></script>
     <script src="js/angular-sanitize.js"></script>

     <!-- your mainApp.js should be added afterwards --->
      <script src="mainApp.js"></script>

     <!-- Add your reusable component js files here -->
      <script src="resuableComponents/reusableModuleApp.js"></script>

  </body>
 </html>
```

◦ angularJs◦ reusableModuleApp.jsreusableModuleAppDDO◦

◦

scope◦

◦ scope

-
- Angular

```
var ProgressBar = function() {
  return {
    scope: { // This is how we define an isolated scope
      current: '=', // Create a REQUIRED bidirectional binding by using the 'current'
attribute
      full: '=?maxValue' // Create an OPTIONAL (Note the '?'): bidirectional binding using
'max-value' attribute to the `full` property in our directive isolated scope
    }
    template: '<div class="progress-back">' +
              '  <div class="progress-bar"' +
              '       ng-style="{width: getProgress()}">' +
```

```
              '  </div>' +
              '</div>',
    link: function(scope, el, attrs) {
      if (scope.full === undefined) {
        scope.full = 100;
      }
      scope.getProgress = function() {
        return (scope.current / scope.size * 100) + '%';
      }
    }
  }
}

ProgressBar.$inject = [];
angular.module('app').directive('progressBar', ProgressBar);
```

```
angular.module('app').controller('myCtrl', function($scope) {
    $scope.currentProgressValue = 39;
    $scope.maxProgressBarValue = 50;
});
```

```
<div ng-controller="myCtrl">
    <progress-bar current="currentProgressValue"></progress-bar>
    <progress-bar current="currentProgressValue" max-value="maxProgressBarValue"></progress-
bar>
</div>
```

◦ “Box”

userBox.js

```
angular.module('simpleDirective', []).directive('userBox', function() {
  return {
    scope: {
        username: '=username',
        reputation: '=reputation'
    },
    templateUrl: '/path/to/app/directives/user-box.html'
  };
});
```

Controller.js

```
var myApp = angular.module('myApp', ['simpleDirective']);

myApp.controller('Controller', function($scope) {

    $scope.user = "John Doe";
    $scope.rep = 1250;

    $scope.user2 = "Andrew";
    $scope.rep2 = 2850;

});
```

myPage.js

```
<html lang="en" ng-app="myApp">
  <head>
    <script src="/path/to/app/angular.min.js"></script>
    <script src="/path/to/app/js/controllers/Controller.js"></script>
    <script src="/path/to/app/js/directives/userBox.js"></script>
  </head>

  <body>

    <div ng-controller="Controller">
        <user-box username="user" reputation="rep"></user-box>
        <user-box username="user2" reputation="rep2"></user-box>
    </div>

  </body>
</html>
```

box.html

```
<div>{{username}}</div>
<div>{{reputation}} reputation</div>
```

```
John Doe
1250 reputation
Andrew
2850 reputation
```

。。

$ inject。

.config。myDirectivemyDirectiveDirective。 []。

templateUrl

```
angular.module('myApp').config(function($provide){
        $provide.decorator('myDirectiveDirective', function($delegate){
             var directive = $delegate[0]; // this is the actual delegated, your directive
             directive.templateUrl = 'newTemplate.html'; // you change the directive template
        return $delegate;
    })
});
```

onClick。

```
angular.module('myApp').config(function ($provide) {
        $provide.decorator('myDirectiveTwoDirective', function ($delegate) {
            var directive = $delegate[0];
            var link = directive.link; // this is directive link phase
            directive.compile = function () { // change the compile of that directive
                return function (scope, element, attrs) {
                    link.apply(this, arguments); // apply this at the link phase
```

```
                    element.on('click', function(){ // when add an onclick that log hello when
the directive is clicked.
                            console.log('hello!');
                    });
                };
            };
            return $delegate;
        });

    });
```

。

Angular js。

AdirBdir$ scopeBdirAdir。

```
angular.module('myApp',[]).directive('Adir', function () {
        return {
            restrict: 'AE',
            controller: ['$scope', function ($scope) {
                    $scope.logFn = function (val) {
                            console.log(val);
                        }
                }]
            }
    })
```

require'^ Adir'^。

```
.directive('Bdir', function () {
        return {
            restrict: 'AE',
            require: '^Adir', // Bdir require Adir
            link: function (scope, elem, attr, Parent) {
            // Parent is Adir but can be an array of required directives.
                elem.on('click', function ($event) {
                    Parent.logFn("Hello!"); // will log "Hello! at parent dir scope
                    scope.$apply(); // apply to parent scope.
                });
            }
        }
    }]);
```

```
<div a-dir><span b-dir></span></div>
<a-dir><b-dir></b-dir> </a-dir>
```

HTML。

https://riptutorial.com/zh-TW/angularjs/topic/965/

46:

Examples

Angular。

jQuery。 Angular。

ng-modelnovalidate。

```
<form name="form" novalidate>
  <label name="email"> Your email </label>
  <input type="email" name="email" ng-model="email" />
</form>
```

Angular**ng-model**。 。

```
<input type="number" name="postalcode" ng-model="zipcode" />
```

ng-submit。 。 。

```
<form name="signup_form" ng-submit="submitFunc()" novalidate>
  <label name="email"> Your email </label>
  <input type="email" name="email" ng-model="email" />
  <button type="submit">Signup</button>
</form>
```

Angular。

Angular**ng-pristine ng-dirty ng-validng-invalid**。 css**/pristine / dirty**。

$touched	
$untouched	
$pristine	
$dirty	
$valid	
$invalid	

truefalse。

。

```
<form name="myForm" novalidate>
```

```
    <input name="myName" ng-model="myName" required>
    <span ng-show="myForm.myName.$touched && myForm.myName.$invalid">This name is
invalid</span>
</form>
```

ng-show◦

CSS

AngularCSS

ng-touched	
ng-untouched	
ng-pristine	
ng-dirty	
ng-valid	
ng-invalid	

```
input.ng-invalid {
  background-color: crimson;
}
input.ng-valid {
  background-color: green;
}
```

ngMessages

ngMessages◦

---

ngMessagesAngularng-class◦ repetitive◦

ngMessages◦

Html

```
<form name="ngMessagesDemo">
  <input name="firstname" type="text" ng-model="firstname" required>
  <div ng-messages="ngMessagesDemo.firstname.$error">
    <div ng-message="required">Firstname is required.</div>
  </div>
</form>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/angular.js/1.3.16/angular.min.js"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/angular.js/1.3.16/angular-
```

```
messages.min.js"></script>
```

JS

```
var app = angular.module('app', ['ngMessages']);

app.controller('mainCtrl', function ($scope) {
    $scope.firstname = "Rohit";
});
```

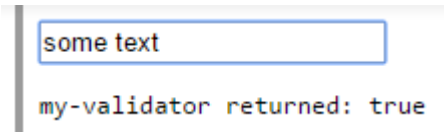
◦ Angular`ngModelController$validators`

```
angular.module('app', [])
  .directive('myValidator', function() {
    return {
      // element must have ng-model attribute
      // or $validators does not work
      require: 'ngModel',
      link: function(scope, elm, attrs, ctrl) {
        ctrl.$validators.myValidator = function(modelValue, viewValue) {
            // validate viewValue with your custom logic
            var valid = (viewValue && viewValue.length > 0) || false;
            return valid;
        };
      }
    };
```

`ngModel`◦

```
<form name="form">
  <input type="text"
         ng-model="model"
         name="model"
         my-validator>
  <pre ng-bind="'my-validator returned: ' + form.model.$valid"></pre>
</form>
```

`my-validator`◦ `ng-model` ◦ ui◦



◦ HTML5◦ Angular`ng-form` ◦

```
<form name="myForm" noValidate>
  <!-- nested form can be referenced via 'myForm.myNestedForm' -->
  <ng-form name="myNestedForm" noValidate>
    <input name="myInput1" ng-minlength="1" ng-model="input1" required />
    <input name="myInput2" ng-minlength="1" ng-model="input2" required />
  </ng-form>

  <!-- show errors for the nested subform here -->
```

```
  <div ng-messages="myForm.myNestedForm.$error">
    <!-- note that this will show if either input does not meet the minimum -->
    <div ng-message="minlength">Length is not at least 1</div>
  </div>
</form>

<!-- status of the form -->
<p>Has any field on my form been edited? {{myForm.$dirty}}</p>
<p>Is my nested form valid? {{myForm.myNestedForm.$valid}}</p>
<p>Is myInput1 valid? {{myForm.myNestedForm.myInput1.$valid}}</p>
```

◦ myInput1$dirty $dirty ◦ myNestedFormmyForm$dirty ◦

$ http◦

users◦

inputng-model$asyncValidators◦

◦ ◦

```
ngModel.$asyncValidators.usernameValidate = function (name) {
     if (name) {
          return AuthenticationService.checkIfNameExists(name); // returns a promise
     } else {
          return $q.reject("This username is already taken!"); // rejected promise
     }
};
```

ng-modelpromise◦

https://riptutorial.com/zh-TW/angularjs/topic/3979/

47:

- ;

  Decorator ◦ Decorator◦ ◦

---

config$provide$provide.decorator◦

  $delegate◦ $delegate◦ ◦

◦ /◦

◦

Examples

null◦

```
angular.module('app', [])
  .config(function($provide) {
    $provide.decorator('myService', function($delegate) {
      $delegate.getDate = function() { // override with actual date object
        return new Date();
      };
      return $delegate;
    });
  })
  .service('myService', function() {
    this.getDate = function() {
      return null; // w/o decoration we'll be returning null
    };
  })
  .controller('myController', function(myService) {
    var vm = this;
    vm.date = myService.getDate();
  });
```

```
<body ng-controller="myController as vm">
  <div ng-bind="vm.date | date:'fullDate'"></div>
</body>
```

> Saturday, August 6, 2016

◦ $ delegate0decoratornameDirective◦

myDate $delegate[0]myDateDirective◦

。 。 。

```
<body>
  <my-date></my-date>
</body>
```

```
angular.module('app', [])
  .config(function($provide) {
    $provide.decorator('myDateDirective', function($delegate, $interval) {
      var directive = $delegate[0]; // access directive

      directive.compile = function() { // modify compile fn
        return function(scope) {
          directive.link.apply(this, arguments);
          $interval(function() {
            scope.date = new Date(); // update date every second
          }, 1000);
        };
      };

      return $delegate;
    });
  })
  .directive('myDate', function() {
    return {
      restrict: 'E',
      template: '<span>Current time is {{ date | date:\'MM:ss\' }}</span>',
      link: function(scope) {
        scope.date = new Date(); // get current date
      }
    };
  });
```

> Current time is 08:33

name`Filter`。 filter`repeat` decorator`repeatFilter`。 *n*。 angular。

```
<body>
  <div ng-bind="'i can haz cheeseburger ' | repeat:2"></div>
</body>

angular.module('app', [])
  .config(function($provide) {
    $provide.decorator('repeatFilter', function($delegate) {
      return function reverse(input, count) {
        // reverse repeated string
        return ($delegate(input, count)).split('').reverse().join('');
      };
    });
  })
  .filter('repeat', function() {
    return function(input, count) {
      // repeat string n times
      return (input || '').repeat(count || 1);
    };
  });
```

> i can haz cheeseburger i can haz cheeseburger

> regrubeseehc zah nac i regrubeseehc zah nac i

https://riptutorial.com/zh-TW/angularjs/topic/5255/

48: MVC

AngularJS **MVC**JavaScriptHTML。HTMLJavaScript。AngularJS。

Examples

mvc

```
var indexController = myApp.controller("indexController", function ($scope) {
    // Application logic goes here
});
```

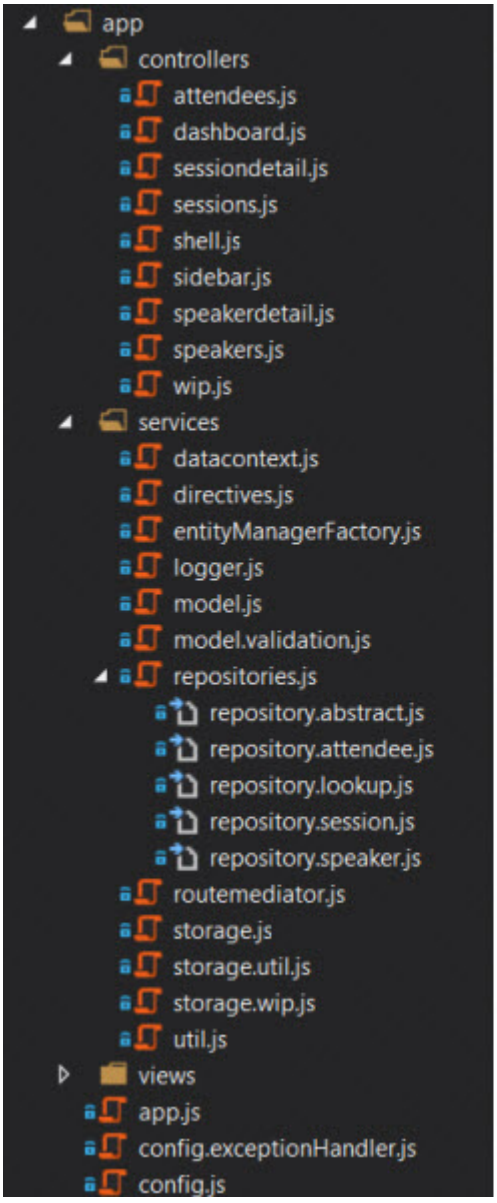
```
var indexController = myApp.controller("indexController", function ($scope) {
    // controller logic goes here
    $scope.message = "Hello Hacking World"
});
```

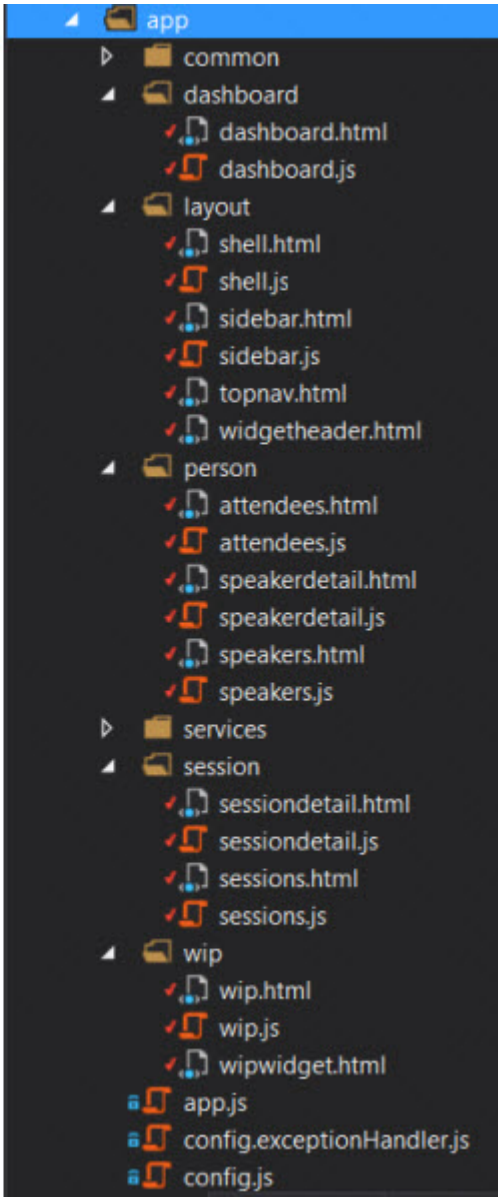
MVC https://riptutorial.com/zh-TW/angularjs/topic/8667/mvc

49: -

Examples

Angular - “”。 。 **Sort By Type Sort By Feature** 。 。





。

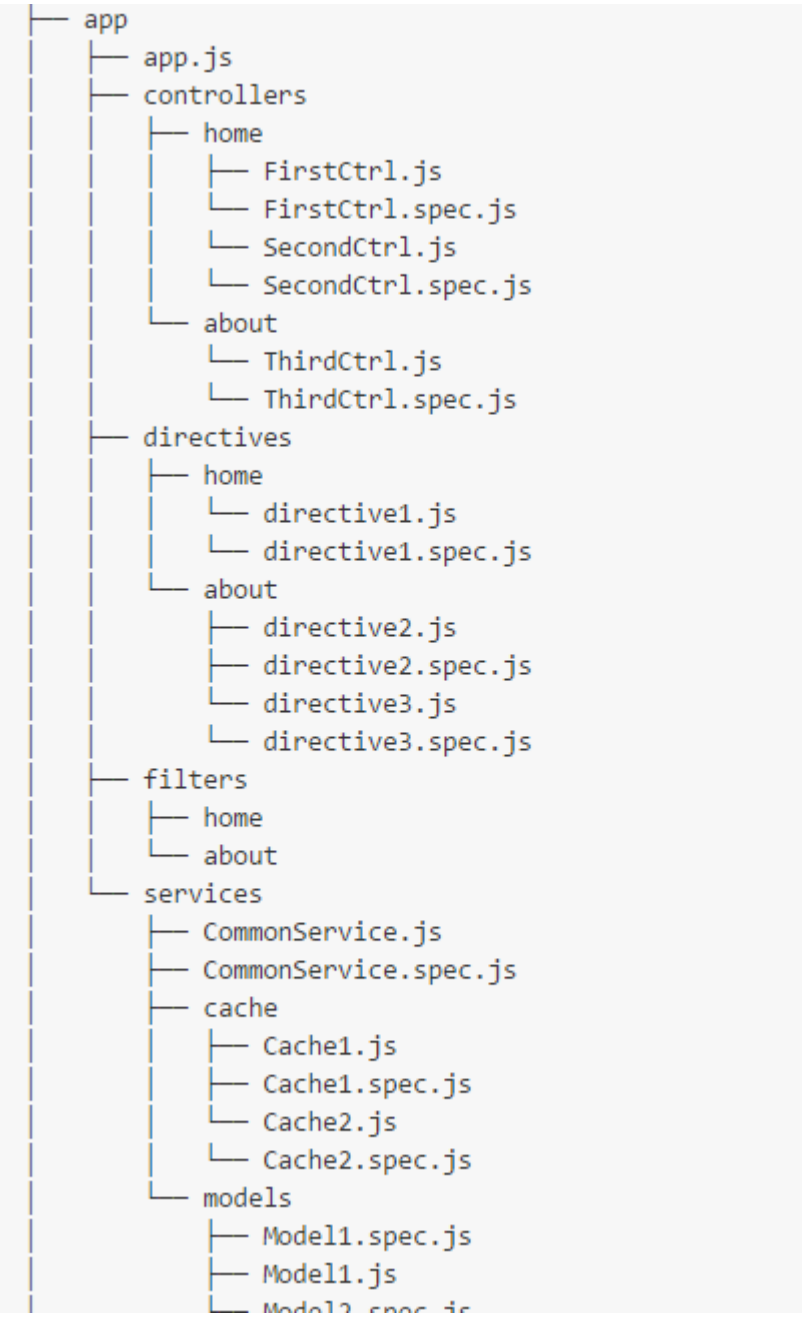
- - Angular。
- - 。 。

。

admin。

- - 。
-

- “”。



- https://riptutorial.com/zh-TW/angularjs/topic/6148/---

50:

Examples

```
<div ng-app="demoApp" ng-controller="mainController as ctrl">
    {{$id}}
    <ul>
        <li ng-repeat="item in ctrl.items">
            {{$id}}<br/>
            {{item.text}}
        </li>
    </ul>
    {{$id}}
    <pre>
       {{ctrl.items | json : 2}}
    </pre>
</div>


angular.module('demoApp', [])
.controller('mainController', MainController);

function MainController() {
    var vm = this;
    vm.items = [{
        id: 0,
        text: 'first'
    },
    {
        id: 1,
        text: 'second'
    },
    {
        id: 2,
        text: 'third'
    }];
}
```

◦ `$scope.$id`$ scope◦

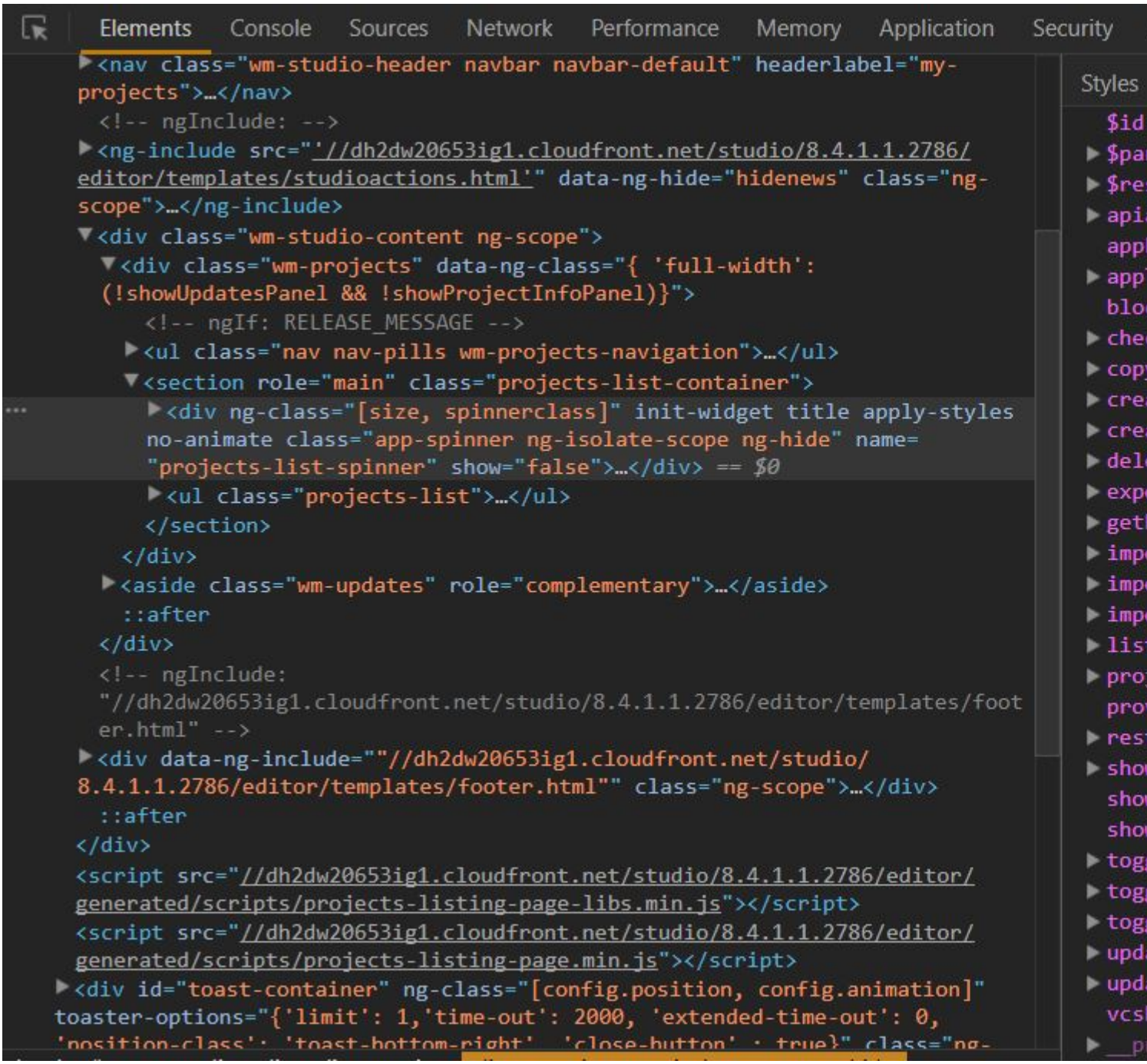
ul-tag$ id = 2`ng-repeat`◦

◦ `json`◦ `\n` ◦

ng-inspect chrome

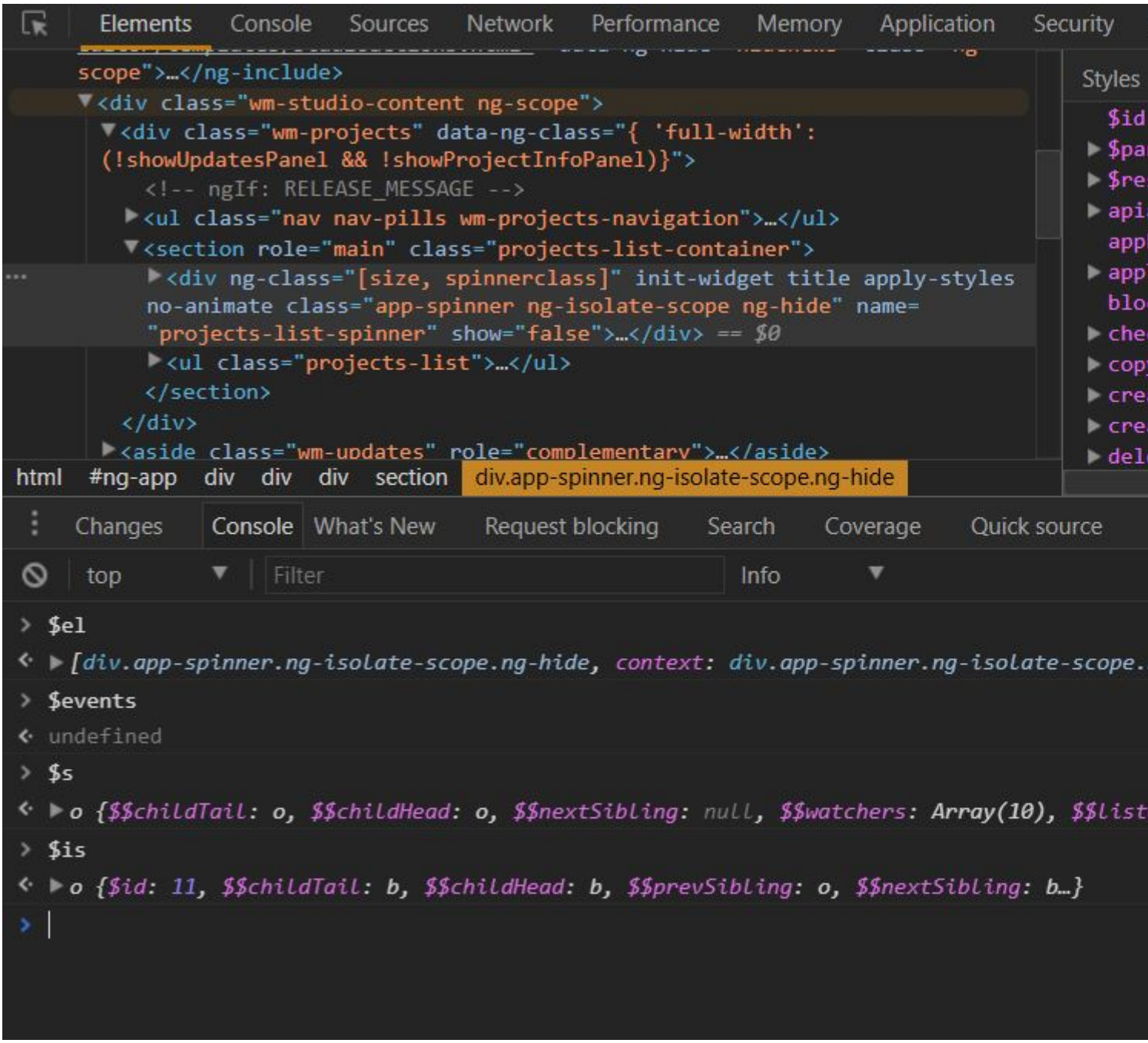
ng-inspectChromeAngularJS◦

ng-inspect◦



scope/isolateScope ◦

```
$s      -- scope of the selected node
$is     -- isolateScope of the selected node
$el     -- jQuery element reference of the selected node (requiers jQuery)
$events -- events present on the selected node (requires jQuery)
```

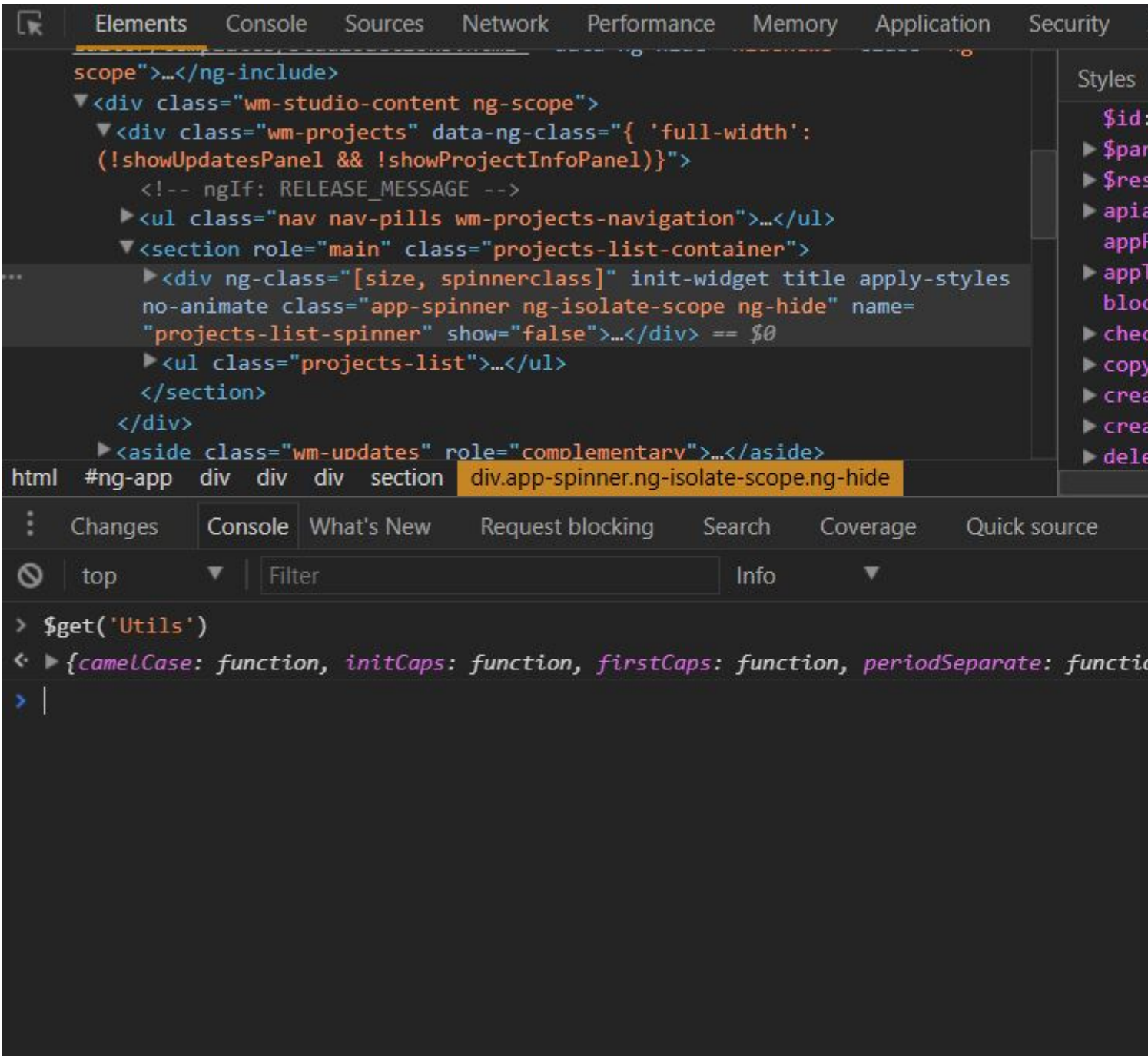

Elements
Console
Sources
Network
Performance
Memory
Application
Security
scope">…</ng-include>

<!-- ngIf: RELEASE_MESSAGE -->
<ul class="nav nav-pills wm-projects-navigation">…
<section role="main" class="projects-list-container">
<div ng-class="[size, spinnerclass]" init-widget title apply-styles no-animate class="app-spinner ng-isolate-scope ng-hide" name="projects-list-spinner" show="false">… == $0
<ul class="projects-list">…
</section>

<aside class="wm-updates" role="complementary">…</aside>
Styles
html
#ng-app
div
div
div
section
div.app-spinner.ng-isolate-scope.ng-hide
Changes
Console
What's New
Request blocking
Search
Coverage
Quick source
top
Filter
Info
$el
[div.app-spinner.ng-isolate-scope.ng-hide, context: div.app-spinner.ng-isolate-scope.
$events
undefined
$s
o {$$childTail: o, $$childHead: o, $$nextSibling: null, $$watchers: Array(10), $$list
$is
o {$id: 11, $$childTail: b, $$childHead: b, $$prevSibling: o, $$nextSibling: b…}

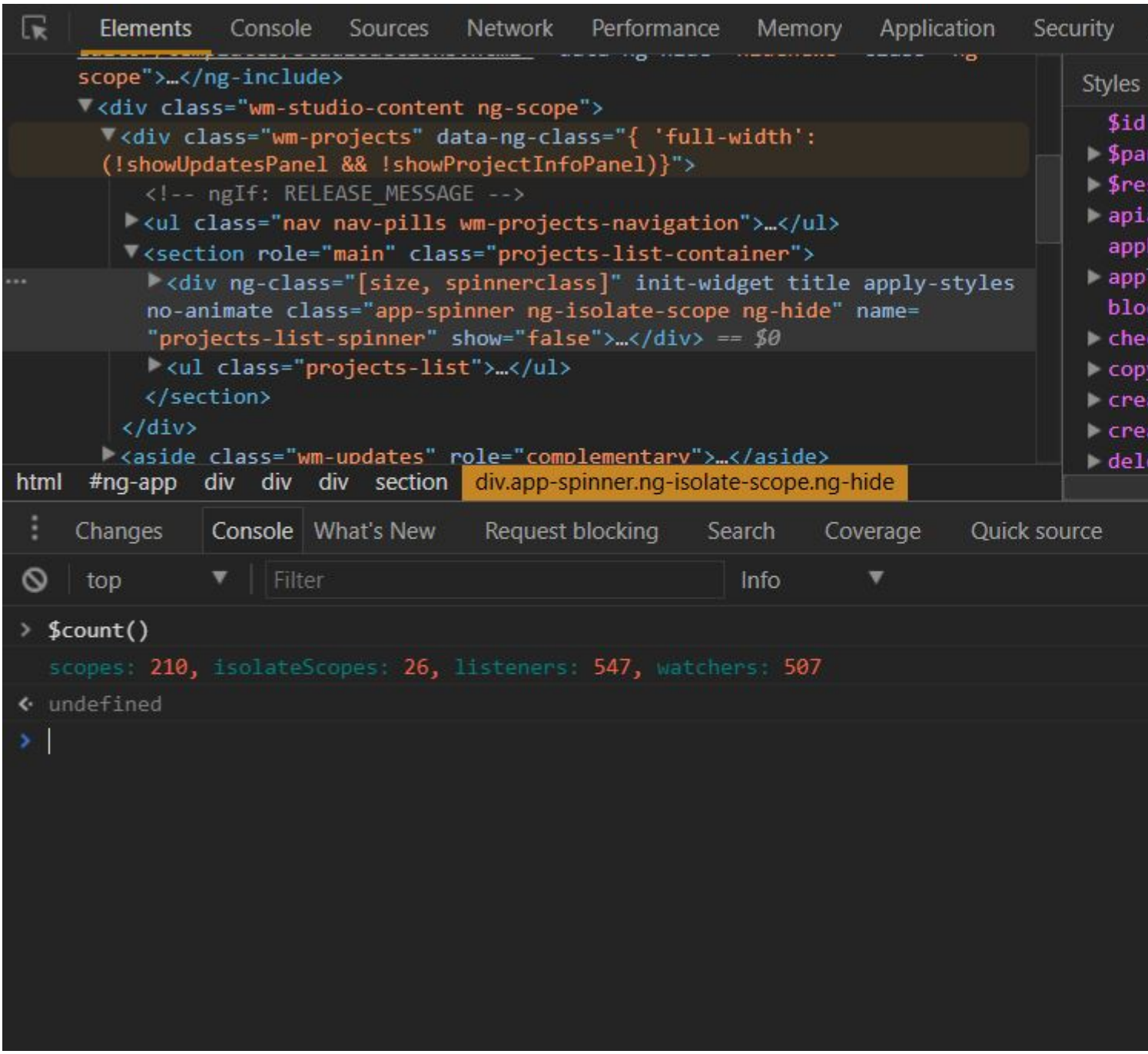
/。

`$get()`/。



no.ofisolateScope。

`$count()`isolateScope。



debugInfo。

ng-inspect

。

```
angular.element(myDomElement).scope();
e.g.
angular.element(document.getElementById('yourElementId')).scope()  //accessing by ID
```

-

```
 angular.element('[ng-controller=ctrl]').scope()
```

DOMjm'elements'$ 0。

```
angular.element($0).scope();
```

https://riptutorial.com/zh-TW/angularjs/topic/4761/

51:

Examples

ng-repeat◦ app.filter()app.filter()◦ ◦

.toUpperCase() javascript

```
var app = angular.module("MyApp", []);

// just like making a controller, you must give the
// filter a unique name, in this case "toUppercase"
app.filter('toUppercase', function(){
    // all the filter does is return a function,
    // which acts as the "filtering" function
    return function(rawString){
        // The filter function takes in the value,
        // which we modify in some way, then return
        // back.
        return rawString.toUpperCase();
    };
});
```

◦

“toUppercase”; app.filter(...)◦ ◦ ◦

◦ ◦

◦ javascriptAngular◦

Javascript

angular $filter◦

```
app.controller("MyController", function($scope, $filter){
    this.rawString = "Foo";
    this.capsString = $filter("toUppercase")(this.rawString);
});
```

HTML

angular | ◦ MyControllerrawString◦

```
<div ng-controller="MyController as ctrl">
    <span>Capital rawString: {{ ctrl.rawString | toUppercase }}</span>
</div>
```

Angular“”“toUppercase”。

。 。

```
function removeNulls() {
    return function(list) {
        for (var i = list.length - 1; i >= 0; i--) {
            if (typeof list[i] === 'undefined' ||
                    list[i] === null) {
                list.splice(i, 1);
            }
        }
        return list;
    };
}
```

HTML

```
{{listOfItems | removeNulls}}
```

```
listOfItems = removeNullsFilter(listOfItems);
```

。 。

```
function convertToBooleanValue() {
    return function(input) {
        if (typeof input !== 'undefined' &&
                input !== null &&
                (input === true || input === 1 || input === '1' || input
                        .toString().toLowerCase() === 'true')) {
            return true;
        }
        return false;
    };
}
```

HTML

```
{{isAvailable | convertToBooleanValue}}
```

```
var available = convertToBooleanValueFilter(isAvailable);
```

。

```
(function() {
  "use strict";
  angular
    .module('app', [])
    .controller('mainCtrl', mainCtrl);

  function mainCtrl() {
    var vm = this;
```

```
    vm.classifications = ["Saloons", "Sedans", "Commercial vehicle", "Sport car"];
    vm.cars = [
       {
          "name":"car1",
          "classifications":[
             {
                "name":"Saloons"
             },
             {
                "name":"Sedans"
             }
          ]
       },
       {
          "name":"car2",
          "classifications":[
             {
                "name":"Saloons"
             },
             {
                "name":"Commercial vehicle"
             }
          ]
       },
       {
          "name":"car3",
          "classifications":[
             {
                "name":"Sport car"
             },
             {
                "name":"Sedans"
             }
          ]
       }
    ];
  }
})();
```

```
<body ng-app="app" ng-controller="mainCtrl as main">
  Filter car by classification:
  <select ng-model="classificationName"
          ng-options="classification for classification in main.classifications"></select>
  <br>
  <ul>
    <li ng-repeat="car in main.cars |
                   filter: { classifications: { name: classificationName } } track by $index"
                  ng-bind-template="{{car.name}} - {{car.classifications | json}}">
    </li>
  </ul>
</body>
```

DEMO 。

`$filter` Angular。

```
angular.module("app")
```

```
  .service("users", usersService)
  .controller("UsersController", UsersController);

function usersService () {
  this.getAll = function () {
    return [{
      id: 1,
      username: "john"
    }, {
      id: 2,
      username: "will"
    }, {
      id: 3,
      username: "jack"
    }];
  };
}

function UsersController ($filter, users) {
  var orderByFilter = $filter("orderBy");

  this.users = orderByFilter(users.getAll(), "username");
  // Now the users are ordered by their usernames: jack, john, will

  this.users = orderByFilter(users.getAll(), "username", true);
  // Now the users are ordered by their usernames, in reverse order: will, john, jack
}
```

ng-repeat

ng-repeat◦ ng-repeatas [variablename]◦

```
<ul>
  <li ng-repeat="item in vm.listItems | filter:vm.myFilter as filtered">
    {{item.name}}
  </li>
</ul>
<span>Showing {{filtered.length}} of {{vm.listItems.length}}</span>
```

https://riptutorial.com/zh-TW/angularjs/topic/1401/

52: Angular 2+

AngularJSTypeScriptAngular。

AngularJS。“”Angular。

Examples

AngularJS

Angular 。 AngularJSAngular。

1.5+AngularJS。 AngularJSAngular 2+。

AngularJS 。

ng-controllerng-controllercomponent。

。 。

UserListController UserListComponent 。

HTML

```
<div ng-controller="UserListController as listctrl">
    <ul>
        <li ng-repeat="user in myUserList">
            {{ user }}
        </li>
    </ul>
</div>
```

JavaScript

```
app.controller("UserListController", function($scope, SomeService) {

    $scope.myUserList = ['Shin', 'Helias', 'Kalhac'];

    this.someFunction = function() {
        // ...
    }

    // ...
}
```

HTML

```
<user-list></user-list>
```

JavaScript

```
app.component("UserList", {
    templateUrl: 'user-list.html',
    controller: UserListController
});

function UserListController(SomeService) {

    this.myUserList = ['Shin', 'Helias', 'Kalhac'];

    this.someFunction = function() {
        // ...
    }

    // ...
}
```

$scopethis.myUserList$scope.myUserList ;

user-list.component.html

```
<ul>
    <li ng-repeat="user in $ctrl.myUserList">
        {{ user }}
    </li>
</ul>
```

myUserList $ctrl.myUserListHTML$scope.myUserList ◦

$ctrl◦

---

ng-controller

```
$stateProvider
  .state('users', {
    url: '/users',
    templateUrl: 'user-list.html',
    controller: 'UserListController'
  })
  // ..
```

```
$stateProvider
    .state('users', {
      url: '/',
      template: '<user-list></user-list>'
    })
    // ..
```

。

-
- `$onInit()` `$onChanges()`...

。

。

AngularJSAngular。

Angular 2+。

WebpackES6

Webpack**ES6** **TypeScript** 。 。

。

Angular 2+ https://riptutorial.com/zh-TW/angularjs/topic/9942/angular-2plus

S. No		Contributors
1	AngularJS	Abhishek Pandey, After Class, Andrés Encarnación, AnonymousNotReally, badzilla, Charlie H, Chirag Bhatia - chirag64, Community, daniellmb, David G., Devid Farinelli, Eugene, fracz, Franck Dernoncourt, Gabriel Pires, Gourav Garg , H. Pauwelyn, Igor Raush, jengeb, Jeroen, John F., Léo Martin, Lotus91, LucyMarieJ, M. Junaid Salaat, Maaz.Musa, Matt, Mikko Viitala, Mistalis, Nemanja Trifunovic, Nhan, Nico, pathe.kiran, Patrick, Pushpendra, Richard Hamilton, Stepan Suvorov, Stephen Leppik, Sunil Lama, superluminary, Syed Priom, timbo, Ven, vincentvanjoe, Yasin Patel, Ze Rubeus, Артем Комаров
2	$ http	CENT1PEDE, jaredsk, Liron Ilayev
3	Angular $	Abhishek Maurya, elliot-j, Eugene, jaredsk, Liron Ilayev, MoLow, Prateek Gupta, RamenChef, ryansstack, Tony
4	AngularJS`=``@```	Alon Eitan, Lucas L, Makarov Sergey, Nico, zucker
5	angularjs	Paresh Maghodiya
6	AngularJS	Alon Eitan, Cosmin Ababei, doctorsherlock, Faruk Yazıcı, ngLover, Phil
7	Angular$ q	Alon Eitan, caiocpricci2, ganqqwerty, georgeawg, John F., Muli Yulzary, Praveen Poonia, Richard Hamilton, Rohit Jindal, svarog
8	HTTP	G Akshay, Istvan Reiter, MeanMan, Mistalis, mnoronha
9	ng-class	Dr. Cool
10	NG-	Aayushi Jain, Manikandan Velayutham, Umesh Shende
11	NG-	Divya Jain, Jim, Sender, zucker
12	NG-	Divya Jain, Jim
13	SignalRAngularJs	Maher
14	UI	George Kagan, H.T, Michael P. Bazos, Ryan Hamley, sgarcia.dev
15	ES6	Bouraoui KACEM

16	ngModelController	Nikos Paraskevopoulos
17	ngRoute	Alon Eitan, Alvaro Vazquez, camabeh, DotBot, sgarcia.dev, svarog
18		Gourav Garg
19		Mikko Viitala
20		Andrea, badzilla, Gavishiddappa Gadagi, George Kagan, MoLow, Omri Aharon
21		Adam Harrison, Alon Eitan, Aron, AWolf, Ayan, Bon Macalindong, CENT1PEDE, Devid Farinelli, DillonChanis, Divya Jain, Dr. Cool, Eric Siebeneich, George Kagan, Grinn, gustavohenke, IncrediApp, kelvinelove, Krupesh Kotecha, Liron Ilayev, m.e.conroy, Maciej Gurban, Mansouri, Mikko Viitala, Mistalis, Mitul, MoLow, Naga2Raja, ngLover, Nishant123, Piet, redunderthebed, Richard Hamilton, svarog, tanmay, theblindprophet, timbo, Tomislav Stankovic, vincentvanjoe, Vishal Singh
22		MoLow, Pranav C Balan, svarog
23		elliot-j, Grundy, Lex, Mikko Viitala, Mistalis, Nix, prit4fun, Rohit Jindal, sgarcia.dev, Sunil Lama
24		Ajeet Lakhani, Alon Eitan, Andrew Piliser, Anfelipe, Anirudha, Ashwin Ramaswami, atul mishra, Braiam, bwoebi, chris, Dania, Daniel Molin, daniellmb, Deepak Bansal, Divya Jain, DotBot, Dr. Cool, Durgpal Singh, fracz, Gabriel Pires, George Kagan, Grundy, JanisP, Jared Hooper, jhampton, John Slegers, jusopi, M22an, Matthew Green, Mistalis, Mudassir Ali, Nhan, Psaniko, Richard Hamilton, RyanDawkins, sgarcia.dev, theblindprophet, user3632710, vincentvanjoe, Yasin Patel, Ze Rubeus
25		Deepak Bansal
26		Mikko Viitala
27		daniellmb, elliot-j, fracz, Gabriel Pires, Nico, ronapelbaum
28		doodhwala, Pat, Sylvain
29	AngularJSTypeScript	Parv Sharma, Rohit Jindal
30	ES6	Bouraoui KACEM
31		Sylvain

32		Muli Yulzary
33		Deepak Bansal
34		ziaulain
35		Adam Harrison, Aeolingamenfel, Alon Eitan, badzilla, Bon Macalindong, Braiam, chatuur, DerekMT12, Dr. Cool, Florian, George Kagan, Grundy, Jared Hooper, Liron Ilayev, M. Junaid Salaat, Mark Cidade, Matthew Green, Mike, Nad Flores, Praveen Poonia, RamenChef, Sébastien Deprez, sgarcia.dev, thegreenpizza, timbo, Und3rTow, WMios
36	SelfThis	It-Z, Jim
37		Lucas L, Sasank Sunkavalli, theblindprophet
38		Rohit Jindal
39		Abdellah Alaoui, Alvaro Vazquez, AnonDCX, DotBot, elliot-j, Flash, Gavishiddappa Gadagi, Hubert Grzeskowiak, Lex, Nishant123
40		Alon Eitan, Ankit, badzilla, Bon Macalindong, Matthew Green, Nad Flores, ojus kulkarni, sgarcia.dev, thegreenpizza
41		CodeWarrior, Nguyen Tran, Rohit Jindal, RyanDawkins, sgarcia.dev, shaN, Shashank Vivek
42		Alon Eitan, chris, MoLow, prit4fun
43	-	JanisP
44		Alon Eitan, Artem K., badzilla, BarakD, Hubert Grzeskowiak, John F., Juri, M. Junaid Salaat, Mansouri, Pankaj Parkar, Ravi Singh, sgarcia.dev, Syed Priom, Yogesh Mangaj
45		Alon Eitan, br3w5, casraf, Cody Stott, Daniel, Everettss, Filipe Amaral, Gaara, Gavishiddappa Gadagi, Jinw, jkris, mnoronha, Pushpendra, Rahul Bhooteshwar, Sajal, sgarcia.dev, Stephan, theblindprophet, TheChetan, Yuri Blanc
46		Alon Eitan, fantarama, garyx, Mikko Viitala, Richard Hamilton, Rohit Jindal, shane, svarog, timbo
47		Mikko Viitala
48	MVC	Ashok choudhary, Gavishiddappa Gadagi, Jim
49	-	jitender, Liron Ilayev

50		Aman, AWolf, Vinay K
51		Aeolingamenfel, developer033, Ed Hinchliffe, fracz, gustavohenke, Matthew Green, Nico
52	Angular 2+	ShinDarth