LEARNING angularjs-directive

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#angularjsdirective

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Chapter 1: Getting started with angularjsdirective

Remarks

AngularJS Directives are custom elements in HTML (such as an attribute, element name, comment or CSS class) that tell AngularJS to attach a specified behavior to that DOM element, or even to transform the DOM element and its children. In short, when we create a directive, AngularJS will treat that element differently.

Examples

Installation or Setup

Directives comes with the AngularJS library itself. A sample directive can be created as:

```
angular.module('simpleDirective', [])
.directive('helloData', function() {
  return {
    template: 'Hello, {{data}}'
  };
});
```

And can be used as:

JS:

```
angular.module('app', ['simpleDirective'])
.controller('Controller', ['$scope', function($scope) {
   $scope.data = 'World';
}])
```

HTML

```
<div ng-controller="Controller">
<div hello-data></div>
</div>
```

Will be compiled as:

Hello, World

Building a reusable component

Directives can be used to build reusable components. Here is an example of a "user box" component:

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;
});
```

myPage.js

```
<html lang="en" ng-app="myApp">
<head>
<script src="/path/to/app/angular.min.js"></script>
<script src="/path/to/app/controllers/Controller.js"></script>
<script src="/path/to/app/directives/userBox.js"></script>
</head>
<body>
<div ng-controller="Controller">
<user-box username="user" reputation="rep"></user-box>
</div>
</body>
</html>
```

user-box.html

```
<div>{{username}}</div>
<div>{{reputation}} reputation</div>
```

Your first directive

Our first element directive will not do much: it will just calculate 2+2 and will be called in html like this:

```
<my-calculator></my-calculator>
```

Notice the name of the directive is myCalculator (in CamelCase), but in html it's used as mycalculator (in lisp-case). Since we want our directive to be used as html element, we will use restrict: 'E'.

Every directive has the template which will be compiled and inserted. Our directive is very simple, so we will insert our html as string into a template parameter.

```
// directives/my-calculator.js
angular.module('exampleApp', [])
.directive('myCalculator', function() {
  return {
    restrict: 'E',
    template: '<span> My directive can calculate 2+2: {{2+2}} </span>'
  };
});
```

HTML

```
<!DOCTYPE html>
<html ng-app="exampleApp">
<head>
<script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.6/angular.min.js"></script>
<script src="my-calculator.js"></script>
</head>
<body>
Here is my first directive:
<my-calculator></my-calculator>
</body>
```

The result will look like this:

Here is my first directive: My directive can calculate 2+2: 4

If you want to play with the live example, go to plunkr.

Success/Error pop-up message using simple link function

Link function is best way in custom directives to manipulate DOM. It takes three attributes as input (scope, element, attribute) in sequence

scope: its local scope object of directive.

element: html element on which directive is used.

attribute: it gives access to all attributes used in element refered.

```
// on success call or similarly error, warning, info in controller
   $scope.message={
        text: "Saved Successfully",
        type: "SUCCESS"
```

```
<user-info msg="message"> </user-info> //in html
    var mainApp = angular.module("mainApp", []);
    mainApp.directive('userInfo', function() {
       var directive = {};
       directive.restrict = 'E';
       directive.scope = {
          message : "=msg"
        },
        directive.link = function(scope, element, attributes) {
           if(scope.message.type==='SUCCESS')
             scope.message.text = 'SUCCESS: '+scope.message.text+' !';
           else if(scope.message.type==='ERROR')
             scope.message.text = 'ERROR: '+scope.message.text+' !';
            else if(scope.message.type==='WARNING')
             scope.message.text = 'WARNING: '+scope.message.text+' !'
            else if(scope.message.type==='INFO')
             scope.message.text = 'INFO: '+scope.message.text+' !'
           element.on('click', function(event) { //on click of div pop-up will smoothly
close
                      $(this).fadeOut();
                      });
           },
                                                                              // one can
           directive.template = '<div ng-class={{message.type}}>'+
create different bg-color as per type of message and width/height
                                '<div class="message-text">{{message.text}}<div>'+ //message
text will be printed
                                '<div>';
       return directive;
     });
```

Read Getting started with angularjs-directive online: https://riptutorial.com/angularjsdirective/topic/1855/getting-started-with-angularjs-directive

};

Chapter 2: Commonly Used Directives

Examples

ngConfirmClick: Confirm before evaluating expression.

Description:

Evaluate expression after user's confirmation.

Arguments:

- ng-confirm-click:(expression) Expression to evaluate when confirmed.
- ng-confirm-message:(*template*) Message to be shown in confirm dialog.

Code:

```
Directives.directive("ngConfirmClick", ["$parse", "$interpolate", function ($parse, $interpolate)
{
    return {
       restrict:"A",
       priority:-1,
       compile:function(ele,attr) {
           var fn = $parse(attr.ngConfirmClick, null, true);
            return function ngEventHandler(scope, ele) {
                ele.on('click', function (event) {
                    var callback = function () {
                        fn(scope, {$event: "confirm"});
                    };
                    var message = $interpolate(attr.ngConfirmMessage)(scope) || 'Are you
sure?';
                    if(confirm(message)) {
                        if (scope.$root.$$phase) {
                            scope.$evalAsync(callback);
                        } else {
                            scope.$apply(callback);
                        }
                    }
                });
           }
        }
    }
}]);
```

Working Example

Read Commonly Used Directives online: https://riptutorial.com/angularjsdirective/topic/5099/commonly-used-directives

Credits

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