AngularJS Custom Directives

DDOs

The $compile service

The link() function

pre vs post link

The $interpolate service

Working with $parse and eval()

Transclusion

Isolate Scope

Using Controllers

About the Author

Dan Wahlin

Blog
http://weblogs.asp.net/dwahlin

AngularJS
Magazine

Twitter
@DanWahlin

Web Weekly
Newsletter

Course Agenda

Getting Started with Directives

Shared and Isolate Scope

The Link Function

Using Controllers

Course Pre-Requisites

Pre-Requisites

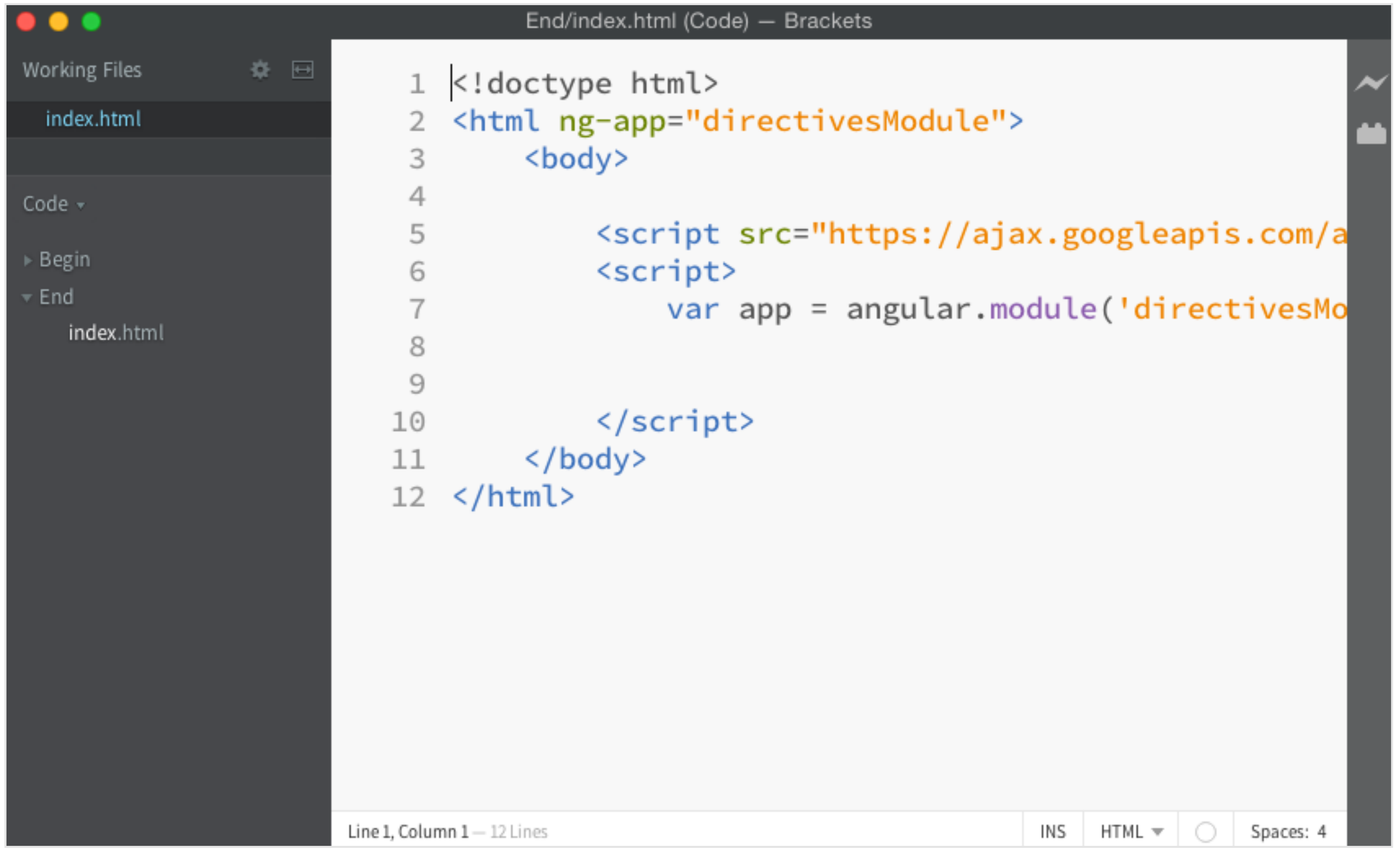
- To get the most out of this course you should have experience with:
  - AngularJS
  - JavaScript
  - HTML
  - CSS

- AngularJS JumpStart course

- Expect to see a lot of JavaScript throughout the course!

Code Editor

Code Editor



http://brackets.io

Getting Started with Directives

The Role of Directives

Creating a Hello World Directive

Directive Categories

Directive Building Blocks

The Role of Directives

What are Directives?

Markers on a DOM element that tell AngularJS's HTML compiler ($compile) to attach a specified behavior to that DOM element…

```
<div my-directive></div>
```

Directives Teach HTML New Tricks!

What can Directives Do?

- Manipulate the DOM
- Modify CSS
- Iterate through Data
- Validate Data
- Handle Events
- Data Binding

Key AngularJS Directives

Forms

ng-maxlength
ng-minlength
ng-pattern
ng-required
ng-submit

Data Binding

ng-bind
ng-href
ng-init
ng-model
ng-src
ng-style

DOM

ng-disabled
ng-cloak
ng-hide
ng-if
ng-repeat
ng-show
ng-switch
ng-view

Behavior

ng-blur
ng-change
ng-checked
ng-click
ng-key*
ng-mouse*

Application

ng-app
ng-controller

3rd Party Directives

UI Bootstrap Directives Getting started

UI Bootstrap

Bootstrap components written in pure **AngularJS** by the **AngularUI Team**

Code on Github | Download | Create a Build

AngularStrap Directives

AngularStrap

AngularJS 1.2+ native directives for Bootstrap 3.

Angular UI Grid

A data grid for **AngularJS**, part of the **AngularUI** suite

- ✓ Native AngularJS implementation, no jQuery
- ✓ Performs well with large data sets; even **10,000+** rows
- ✓ Plugin architecture allows you to use only the features you need

Code on Github | Download | Tutorial

angular translate

i18n for your Angular apps, made easy

Download | View on GitHub

What if there isn’t a directive that meets your needs?

You have some fun and

write a

custom directive!

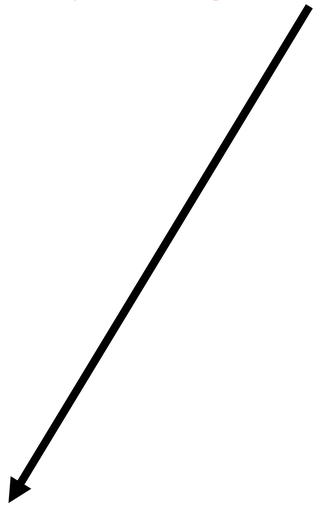
Creating a Hello World Directive

Defining and Using a Directive

```
angular.module('moduleName')
    .directive('simpleDirective', function () {



});
```



```
<div simple-directive></div>
```

Hello World Directive

```
angular.module('moduleName')
    .directive('simpleDirective', function () {
      return {
          template: '<div>Hello World</div>'
      }
});
```

Directive Categories

Directive Categories

DOM-Driven Directives

All about DOM Manipulation

Behavior-Driven Directives

All about handling DOM Events

Data-Driven Directives

All about data, using other directives and a controller

Directive Types

Attribute directives

```
<span my-dir="exp"></span>
```

CSS class directives

```
<span class="my-dir: exp;"></span>
```

Element directives

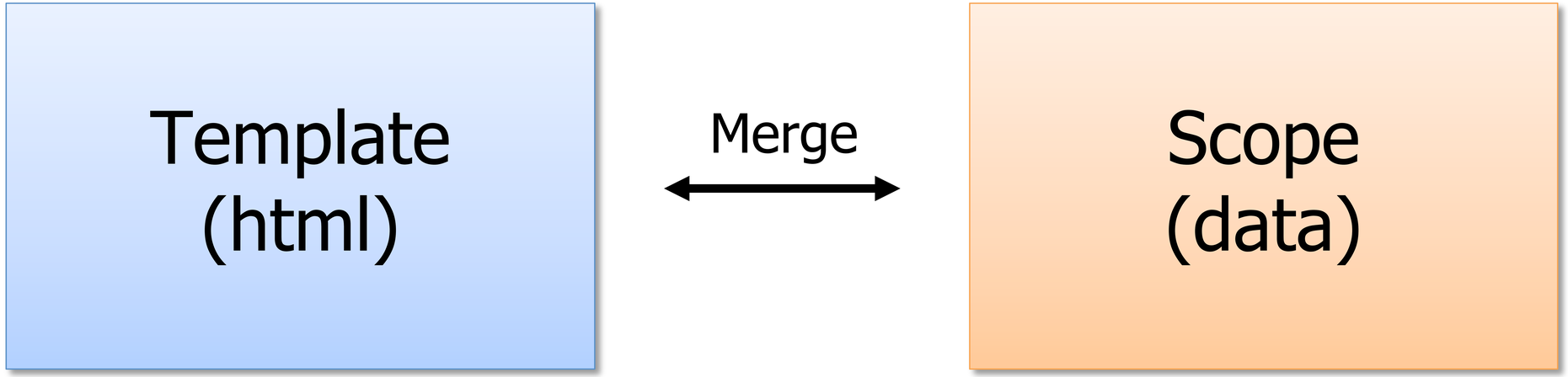
```
<my-dir></my-dir>
```

Comment directives

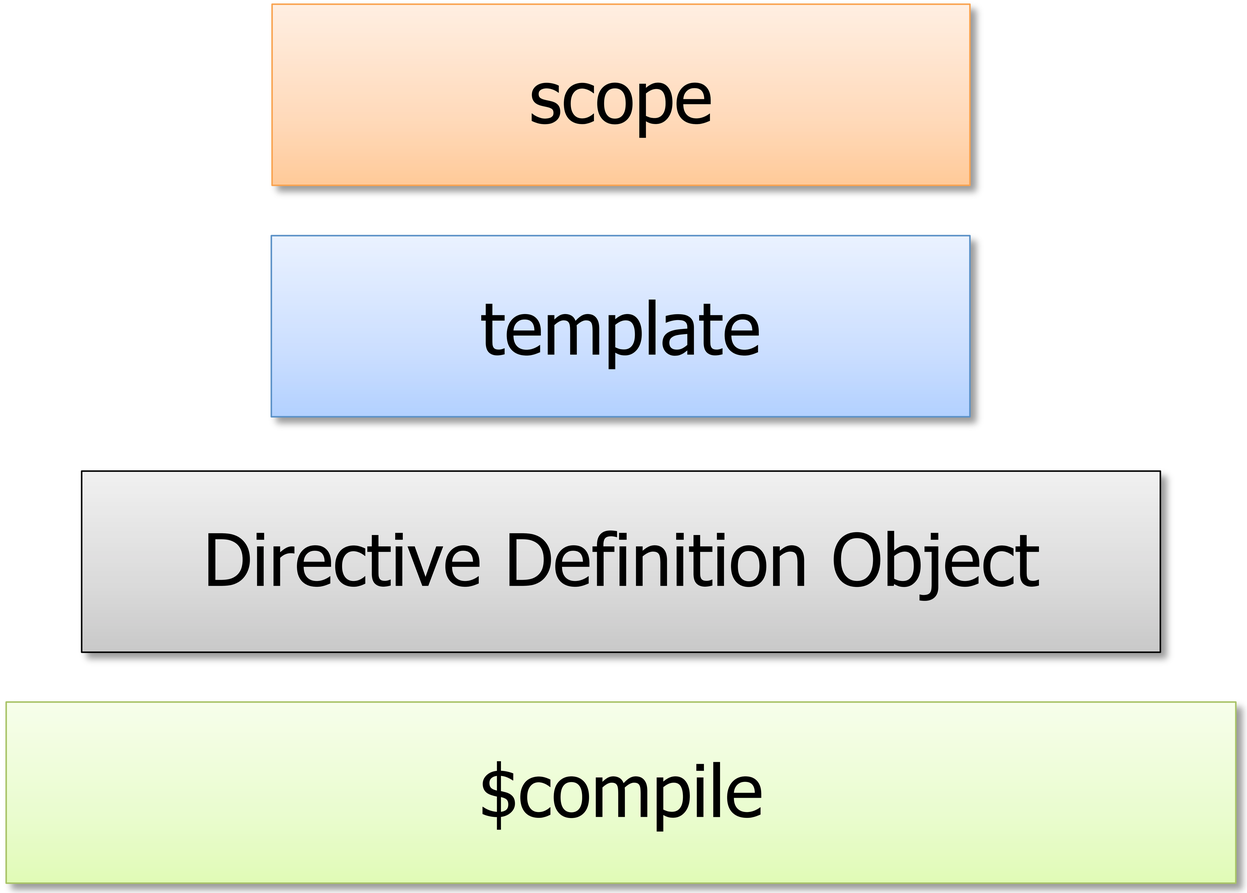
```
<!-- directive: my-dir exp -->
```

Directive Building Blocks

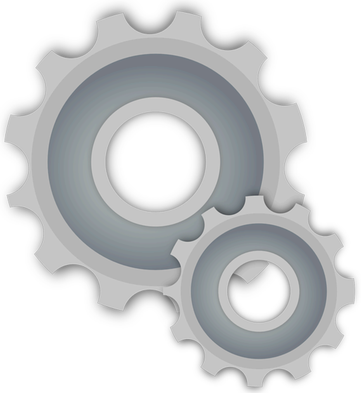
Templates and Scope



Directive Building Blocks



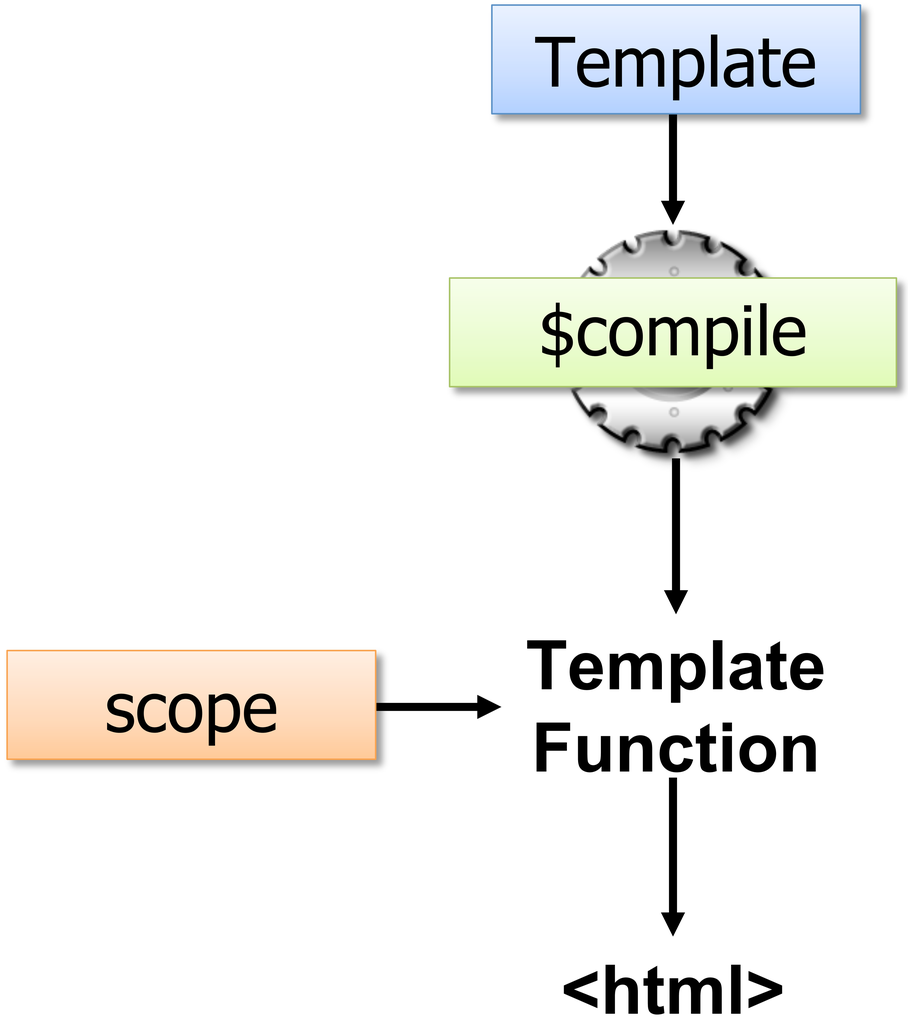
The $compile provider



"Compiles an HTML string or DOM into a template and produces a template function, which can then be used to link scope and the template together."

http://docs.angularjs.org/api/ng/service/$compile

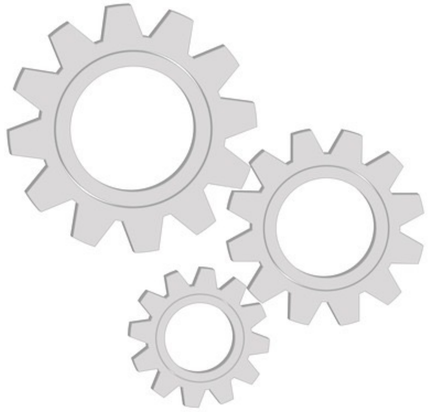
The $compile Process



$compile and the Directive Definition Object (DDO)

- $compile provider relies on a Directive Definition Object (DDO)

- Features of the DDO:
  - Defines the template for the directive
  - Can include DOM manipulation code
  - Can define a controller for the directive
  - Controls the directive's scope
  - Defines how the directive can be used
  - More…



Key DDO Properties

restrict

template

templateUrl

scope

controller

link

Key DDO Properties

```
angular.module('moduleName')
    .directive('myDirective', function () {
    return {
        restrict: 'EA',
        scope: {},
        template: '<div>{{ myVal }}</div>',
        controller: controller,
        link: function (scope, element, attrs) { }
    }
});
```

Summary

Summary

- Directives play a critical role in AngularJS applications
  - Render HTML
  - Manipulate the DOM
  - Handle Events
  - Much more

- Directives can be defined and used in many ways

- The Directive Definition Object (DDO) is the building block of custom directives

© Wahlin Consulting – All Rights Reserved