AngularJS Custom Directives

Learning Objectives

Students can explain what a directive is, and when one should be created
Students can create and use directives
Students will create at least 2 directives

Resources

https://docs.angularjs.org/guide/directive
http://www.ng-newsletter.com/posts/directives.html
https://www.codeschool.com/courses/shaping-up-with-angular-js

Directives Basics

What:

- Directives are at their core functions that get run when the DOM is compiled by the compiler

Why:

- Reusable and custom functionality
- Provide DOM manipulation which should not go in a controller

When:

- You need the same chunk of HTML in different parts of your application
- The built in Angular Directives don't quite fit what you want to do

Registering a new directive

Syntax

Javascript

```javascript
app.directive('myDirective', function() {
  return {
    restrict: 'A',
    template: '<div class="prettified">{{model.text}}</div>',
    link: function(scope elem attrs) {
      // code goes here
    }
  }
});
```

HTML

As an attribute:
```html
<span my-directive></span>
```
As a class:
```html
<span class="my-directive: expression;"></span>
```
As an element:
```html
<my-directive></my-directive>
```
As a comment:
```html
<!-- directive: my-directive expression -->
```

Defining a directive

Directive definition object

[Cheat Sheet](#)

Custom templates

Reminder

Templates are the View in AngularJS' powerful MVC design pattern

What can go in them?

These are the types of Angular elements and attributes you can use:

Directive — A reusable DOM component.
Markup — The double curly brace notation {{ }} to bind expressions to elements.
Filter — Formats data for display.
Form controls — Validates user input.

Example

```html
<!-- This template could go inside a directive  -->
    <div ng-if="model.showForm">
      <input ng-model="foo" value="bar">
      <!-- Button tag with ng-click directive, and
           string expression 'buttonText'
           wrapped in "{{ }}" markup -->
      <button ng-click="changeFoo()">{{buttonText}}</button>
    </div>
```

Where do you put them

In-line

```
template: '<div class="sparkle"><h4>{{model.text}}</h4></div>'
```

separate file

```
templateUrl: 'templates/ng-sparkle-template.html'
```

Mini Project

Objective

Create a web page using three reusable directives.

Instructions

Create an html page that will be your main template
Create a javascript file that will contain your source code
Create a module
Create a main controller
Create three directives (eg. header, content, footer)

Optional

If you have know about ui-router or ng-route you are can use it in your content directive
Wire them all up in the html file

Example

Click this link for a working example