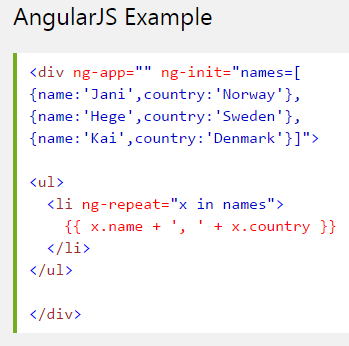
Angular is a client-side JavaScript Framework for adding interactivity to HTML.

A Directive is a marker on HTML tag that tells Angular to run or reference some JavaScript code.

**Directive**

* The **ng-model** directive binds the value of HTML controls (input, select, textarea) to application data.
* The **ng-app** directive defines an AngularJS application.
* The **ng-init** directive initializes application data.
* The **ng-bind** directive binds application data to the HTML view.
* The **ng-repeat** directive repeats an HTML element:



* The **ng-controller** directive defines the application controller.

**Modules**

* Where we write pieces of our Angular application
* Makes our code more maintainable, testable ,and readable
* Where we define dependencies for our app

Create our first module with the file **app.js**

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

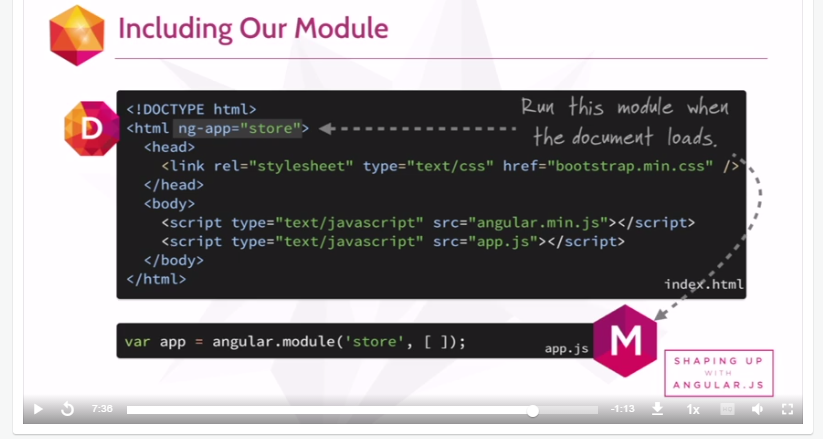
store is an Application Name, [] describe the dependencies

We should include app.js file into the html file ,by using the following line

<script type="text/javascript" src="app.js"></script>

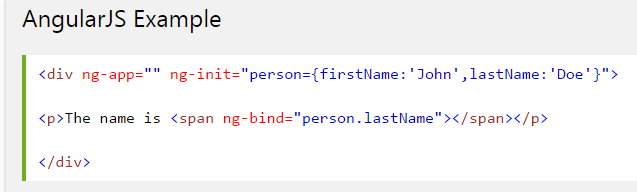
Using the **ng-app** directive to run this module when the document loads

<html ng-app="store">



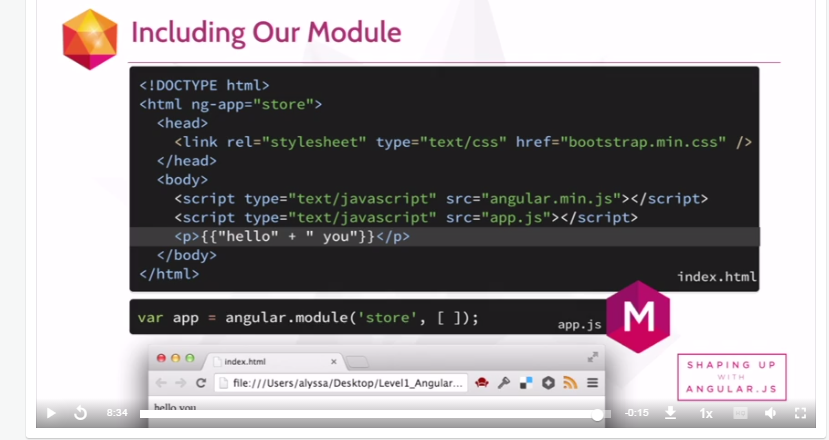
**Expressions**

Allow you to insert dynamic values into your HTML.



More Operations:

http://docs.angularjs.org/guide/expression



**Controllers**

Controllers are where we define our apps behaviour by defining functions and values

AngularJS controllers **control the data** of AngularJS applications.

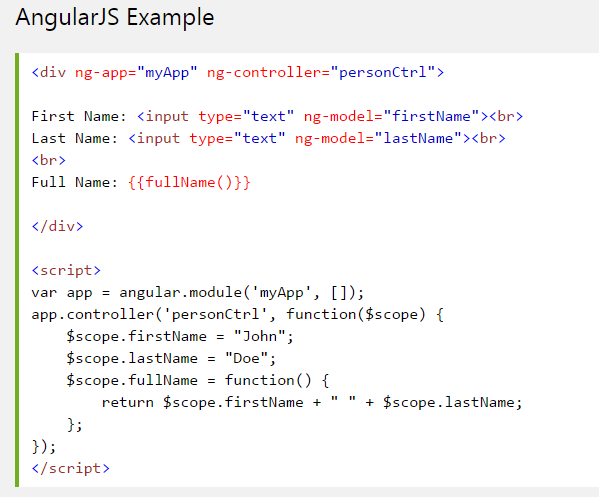
AngularJS controllers are regular **JavaScript Objects**.

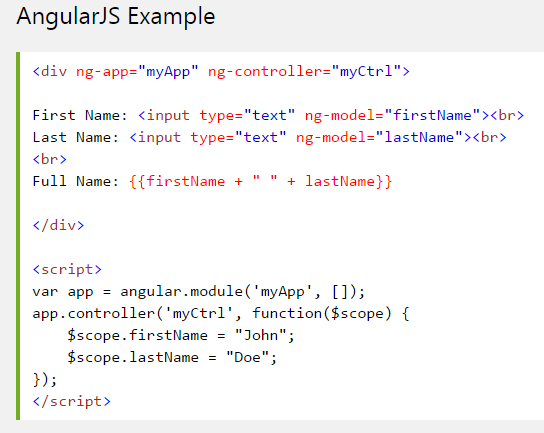
Wrapping your Javascript in a closure is a good habit

Notice that Controller is attached to inside our app.

In AngularJS, **$scope** is the application object (the owner of application variables and functions).

Controller Methods





Application explained:

The AngularJS application is defined by  **ng-app="myApp"**. The application runs inside the <div>.

The **ng-controller="myCtrl"** attribute is an AngularJS directive. It defines a controller.

The **myCtrl** function is a JavaScript function.

AngularJS will invoke the controller with a **$scope** object.

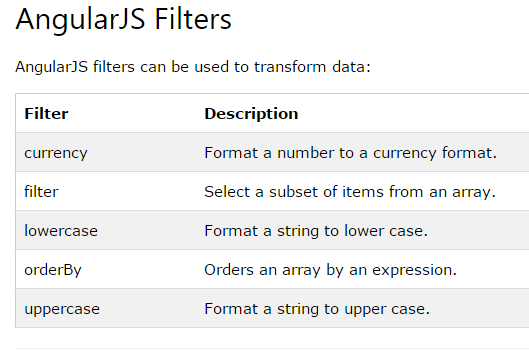
In AngularJS, $scope is the application object (the owner of application variables and functions).

The controller creates two properties (variables) in the scope (**firstName** and **lastName**).

The **ng-model** directives bind the input fields to the controller properties (firstName and lastName).

**Filters**

Filters can be added to expressions and directives using a pipe character.

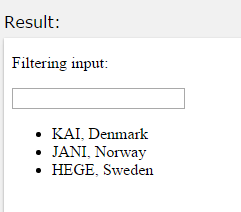


**Filtering Input**

An input filter can be added to a directive with a pipe character (|) and filter followed by a colon and a model name.

The **filter** filter selects a subset of an array:





**Http**

**$http** is an AngularJS service for reading data from remote servers.

Providing Data

The following data can be provided by a web server:

http://www.w3schools.com/angular/customers.php

{  
"records": [  
  {  
    "Name" : "Alfreds Futterkiste",  
    "City" : "Berlin",  
    "Country" : "Germany"  
  },

  {  
    "Name" : "Vaffeljernet",  
    "City" : "Århus",  
    "Country" : "Denmark"  
  },  
  {  
    "Name" : "Wolski Zajazd",  
    "City" : "Warszawa",  
    "Country" : "Poland"  
  }  
]  
}

AngularJS $http

AngularJS **$http** is a core service for reading data from web servers.

$http.get(url) is the function to use for reading server data.

AngularJS Example

<div ng-app="myApp" ng-controller="customersCtrl">   
  
<ul>  
  <li ng-repeat="x in names">  
    {{ x.Name + ', ' + x.Country }}  
  </li>  
</ul>  
  
</div>  
  
<script>  
var app = angular.module('myApp', []);  
app.controller('customersCtrl', function($scope, $http) {  
    $http.get("http://www.w3schools.com/angular/customers.php")  
    .then(function(response) {$scope.names = response.data.records;});  
});  
</script>

[Try it Yourself »](http://www.w3schools.com/angular/tryit.asp?filename=try_ng_customers_json)

Application explained:

The AngularJS application is defined by **ng-app**. The application runs inside a <div>.

The **ng-controller** directive names the **controller object**.

The **customersCtrl** function is a standard JavaScript **object constructor**.

AngularJS will invoke customersCtrl with a **$scope** and **$http** object.

$scope is the **application object** (the owner of application variables and functions).

 $http is an **XMLHttpRequest object** for requesting external data.

**$http.get()** reads **JSON data** from <http://www.w3schools.com/angular/customers.php>.

On success, the controller creates a property (**names**) in the scope, with JSON data from the server.