



## **Session 2**

# **Controllers, Expressions, Sharing Data, and Two Way Data Binding**





## Session Overview

---

In this session, you will be able to:

- Describe a simple AngularJS application
- List the core components of AngularJS
- Describe how data is shared between model and view
- Identify the data binding

For Aptech Centre Use Only



# Introduction to a Simple AngularJS App

Steps for writing and running Web application using AngularJS

Step 1 -> Form a basic HTML template.

```
1. <!DOCTYPE html>
2. <html lang="en">
3. <head>
4. <meta charset="UTF-8">
5. <title>Demo for a Simple AngularJS App</title>
6. </head>
7. <body>
8. </body>
9. </html>
```

## Introduction to a Simple AngularJS App

Steps for writing and running Web application using AngularJS

Step 2 -> Add the angular.js file to the basic HTML template.

```
1. <!DOCTYPE html>
2. <html lang="en">
3. <head>
4. <meta charset="UTF-8">
5. <title>Demo for a Simple AngularJS App</title>
6. <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.7/angular.
min.js"></script>
7. </head>
8. <body>
9. </body>
10.</html>
```

## Introduction to a Simple AngularJS App

Steps for writing and running Web application using AngularJS

Step 3 -> Inform the angular, which section of the html will be controlled by AngularJS by 'ng-app' directive.

1. <!DOCTYPE html>
2. <html lang="en" ng-app="myApp">
3. <head>
4. <meta charset="UTF-8">
5. <title>Demo for a Simple AngularJS App</title>
6. <script  
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.7/angular.  
min.js"></script>
7. </head>
8. <body>
9. </body>
- 10.</html>

## Introduction to a Simple AngularJS App

Steps for writing and running Web application using AngularJS  
Step 4 -> Define the app modules and controllers.

```
1. <!DOCTYPE html>
2. <html lang="en" ng-app="myApp">
3. <head>
4. <meta charset="UTF-8">
5. <title>Demo for a Simple AngularJS App</title>
6. <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.7/angular.
min.js"></script>
</head>
7. <body>
8. <script>
9. var app = angular.module("myApp",[]);
10. </script>
11. </body>
12. </html>
```

## Introduction to a Simple AngularJS App

Steps for writing and running Web application using AngularJS

Step 5 -> Add the controller of the application with the name 'myController'.

```
1. <!DOCTYPE html>
2. <html lang="en" ng-app="myApp">
3. <head>
4. <meta charset="UTF-8">
5. <title>Demo for a Simple AngularJS App</title>
6. <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.7/angular.min.js"></script>
7. </head>
8. <bodyng-controller="myController">
9. <script>
10. var app = angular.module("myApp",[]);
11. app.controller("myController",function($scope){
12. $scope.name = "";
13. });
14. </script>
15. </body>
16. </html>
```

## Introduction to a Simple AngularJS App

Steps for writing and running Web application using AngularJS

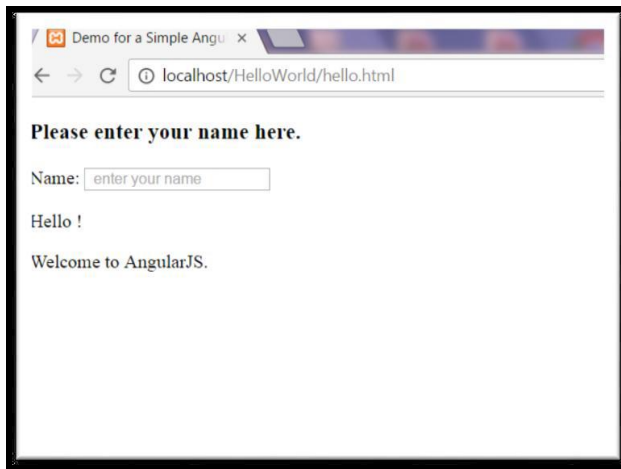
Step 6 -> Add the required elements in the HTML page.

```
1. <!DOCTYPE html>
2. <html lang="en" ng-app="myApp">
3. <head>
4. <meta charset="UTF-8">
5. <title>Demo for a Simple AngularJS App</title>
6. <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.7/angular.min.js"> </script>
7. </head>
8. <bodyng-controller="myController">
9. <script>
10. var app = angular.module("myApp",[]);
11. app.controller("myController",function($scope){
12. $scope.name = "";
13. });
14. </script>
15. </body>
16. </html>
```

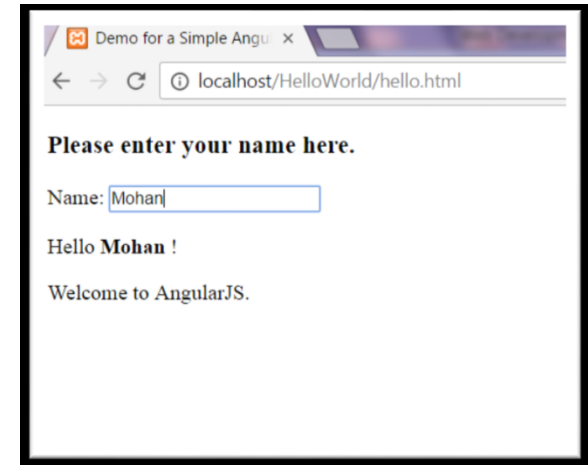


# Introduction to a Simple AngularJS App

Steps for writing and running Web application using AngularJS  
Step 7 -> Run the app in a modern browser.



***Hello App When Loaded in a Browser***



***Hello App with User Input***

# Modules

- It is a container used to hold other parts of an application.
- It has the option to define its own controllers, services, filter, directives, and so on.
- It is used by AngularJS to start an application.

```
<html lang="en" ng-app="myApp">
```

- We define or call a module using 'angular.module' function.

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



- AngularJS applications depend on controllers to control the flow of data in the application.
- We add 'myController' to the app using the app.controller() method.

```
app.controller("myController",function($scope)
{
    $scope.name = "";
});
```

- Controllers are JavaScript objects which have properties and functions.
- We use a controller in an application by using "ng-controller" directive.

```
<body ng-controller="myController">
```

# Controllers

2-2

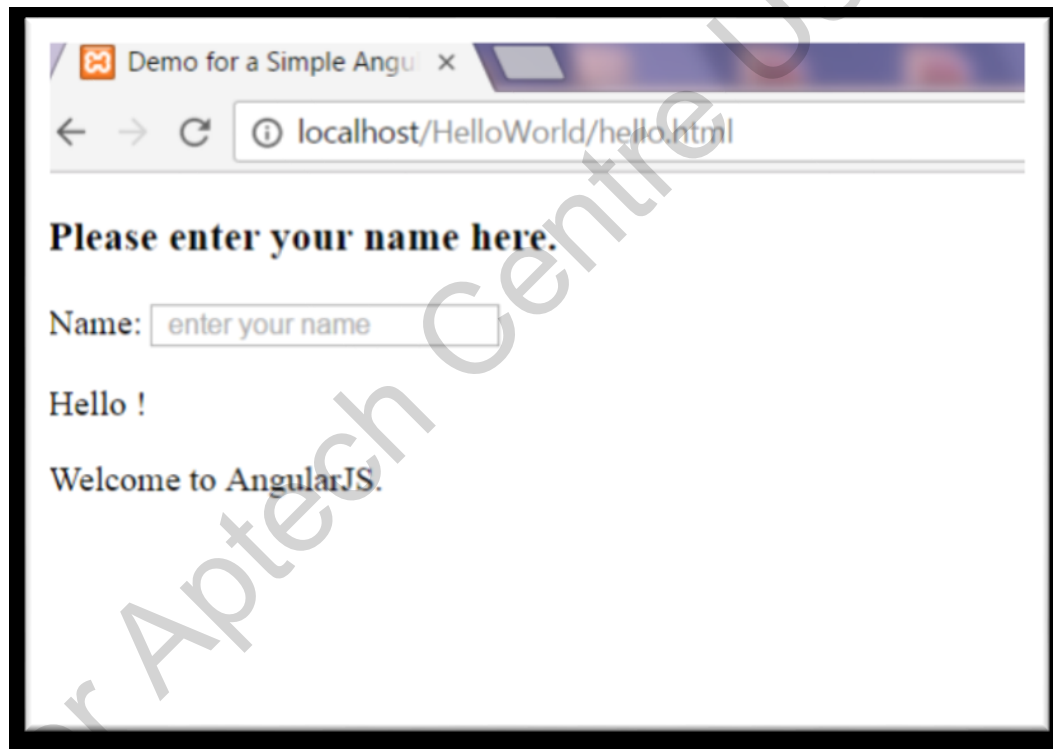
## Responsibilities of Controllers

- Making available Data to UI
- Managing presentation
- Handling user inputs
- Processing data



## Views

The HTML code which gets rendered by the browser and is seen by the user is also sometimes referred to as view.



***View of the Hello App When Loaded in a Browser Initially***



# Expressions

- AngularJS expression is similar to JavaScript code snippets.

- It works with numbers and strings.

`{{5+6}}`

`{{"Hello Aptech Student!"}}`

- It can also work with JavaScript objects and arrays.

`{{ user.name }}`

`{{ items[index] }}`



# Data Binding

What is data binding?

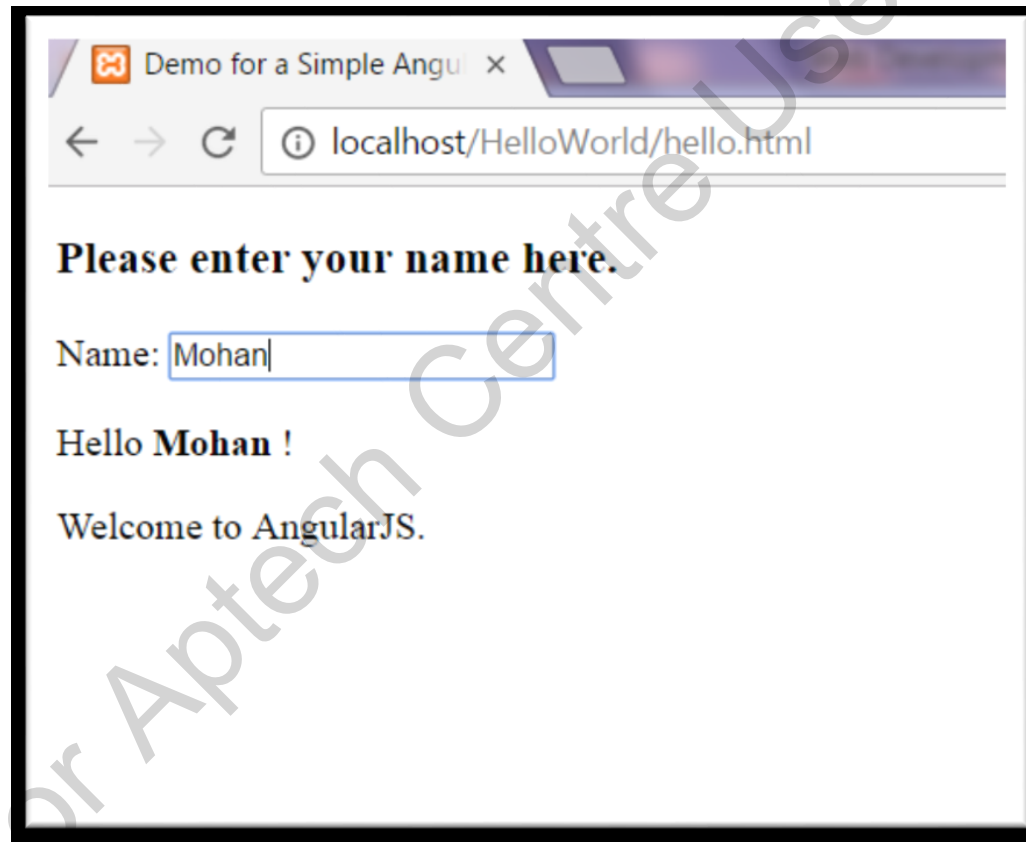
Data binding is a process of combining data between the model and the view.

```
1. <!DOCTYPE html>
2. <html lang="en" ng-app="myApp">
3. <head>
4. <meta charset="UTF-8">
5. <title>Demo for a Simple AngularJS App</title>
6. <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.7/angular.min.js"> </script>
7. </head>
8. <body>
9. <script>
10. var app = angular.module("myApp",[]);
11. app.controller("myController",function($scope){
12. $scope.name = "";
13. });
14. </script>
15. </body>
16. </html>
```

**Data Binding with \$scope**

# Two Way Data Binding

An example of two way binding



***Name; with two way data binding***





## Event Handling

Some common AngularJS event listener directives

ng-click

ng-change

ng-dblclick

ng-mouseleave

ng-keydown

ng-mouseenter

ng-keypress

ng-mousedown



## Summary

1-2

- In AngularJS, modules are the containers used to hold other parts of an application.
- AngularJS applications depend on controllers to control the flow of data in the application.
- Controllers are JavaScript objects which have properties and functions.
- Views are what the user gets to see in an application.
- AngularJS expressions are similar to JavaScript code snippets.
- Expressions can work with numbers, strings, JavaScript objects and arrays.
- Data binding in AngularJS is the bringing together of data between the model and the view.





## Summary

2-2

➤ Some common AngularJS event listener directives for DOM events are ng-click

- ng-dblclick
- ng-keydown
- ng-keypress
- ng-keyup
- ng-mousedown
- ng-mouseenter
- ng-mouseleave
- ng-change

For Aptech Centre Use Only

