

AngularJS modules

AngularJS supports modular approach of programming. AngularJS modules are used to divide or separate the logic such as controllers, services, application etc. and keep the code clean. AngularJS module helps to link many components, so it is just a group of related components.

Generally in most of the applications we have a single entry point (**main method**) that instantiate and club together different parts of the application. In angularjs applications we don't have that main method instead we have **modules** that specify how our application will be structured and bootstrapped.

Modules are defined in separate **.js** files and name them as per the **module.js** file, if these are kept in different file. Controllers always belong to a module.

Let us have two modules for an application, and we create them as –

- **Application Module** – used to initialize an application with controller(s). Application module is created by using the AngularJS function **angular.module** .
- **Controller Module** – used to define the controller. These refer to the controller with the **ng-controller** directive.

Application Module and Controller Module in Single File

Lets have an example of having both Application and Controller Module in one single file.

Example

```
<html>
<script
src="http://ajax.googleapis.com/ajax/libs/angularjs/1.3.14/angular.min.js"></script>
<body>
<h2> Application Module and Controller Module in Single File </h2>
```

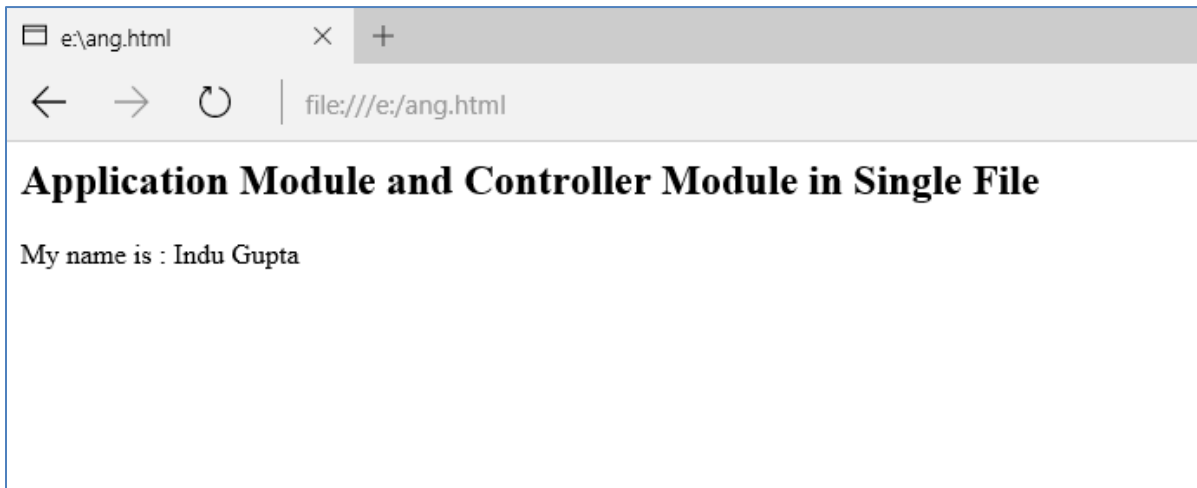
```

<div ng-app="myApp" ng-controller="myController">
  My name is : {{ firstName + " " + lastName }}
</div>
<script>
  var mainapp = angular.module("myApp", []); // Application Module

  mainapp.controller("myController", function($scope) { // Controller Module
    $scope.firstName = "Indu";
    $scope.lastName = "Gupta";
  });
</script>
</body>
</html>

```

Here, a controller named "myController" is created using `mainapp.controller()` method. Here, `mainapp` is an object of a module, and `controller()` method creates a controller inside "myApp" module. Hence, "myController" will not become a global function.



Modules and Controllers in Separate Files (.js files)

In the above example, application module and controller have been created in the same HTML file. However, we may create separate JavaScript (.js) files for each module and then call these JavaScript files them in the HTML file.

1. Application Module (mainapp.js file)

Lets create the Application Module in a file named **mainapp.js** having the following code:

```
var mainapp = angular.module("mainApp", []);
```

Here, **mainapp** is an application module created using angular.module function and pass an empty array to it. This array generally contains dependent modules.

2. Controller Module (myController.js file)

Lets create the Controller Module in a file named **myController.js** having the following code:

```
mainapp.controller("myController", function($scope) {  
  
    $scope.firstName = "Indu";  
  
    $scope.lastName = "Gupta";  
  
});
```

Here, controller module **myController** has been declared using **mainApp.controller** function.

Importing(Using) Module files

We can use application module using **ng-app** directive, and controller using **ng-controller** directive. We import the **mainApp.js** and **myController.js** in the main HTML page.

```
<div ng-app = "mainApp" ng-controller = "myController">  
    <script src = "mainApp.js"></script>  
    <script src = "myController.js"></script>  
</div>
```

Example

The following code shows use of all the above mentioned modules in the final HTML file.

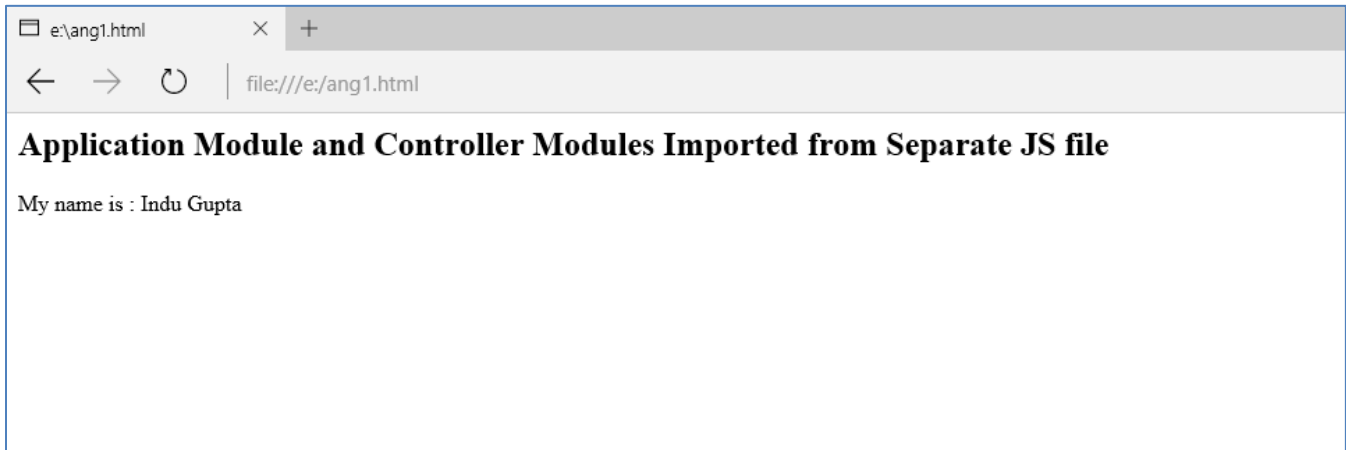
```
<html>  
<script  
src="http://ajax.googleapis.com/ajax/libs/angularjs/1.3.14/angular.min.js"></script>  
<body>  
<h2> Application Module and Controller Modules Imported from Separate JS file </h2>  
  
    <div ng-app="myApp" ng-controller="myController">  
        My name is : {{ firstName + " " + lastName }}  
    </div>  
<script src="mainapp.js"> </script>
```

```
<script src="myController.js" > </script>
```

```
</body>
```

```
</html>
```

Output



Assignment

1. What are AngularJS modules?
2. How to use modules in angular JS application?
3. How Modules files are imported (used) in HTML file?