

CONTROLLERS IN ANGULARJS

- AngularJS controllers is a regular **JavaScript Objects**.
- Controller in angular JS is defined by a JavaScript **constructor function**.
- AngularJS controller is used to **control the data** of the application.
- The **ng-controller** directive specifies the application controller in Angular JS.
- A controller is said to be a **JavaScript object** which contains **attributes/properties and functions**.
- In AngularJS controller **\$scope** is act as a parameter which is used to refer the **application/module** to switch the controller.
- By using specific **Controller's constructor function** angular will initiate a new controller object and A new **child scope** is available as injectable parameter to the Controllers constructor function as **\$scope**.

Syntax for Defining a Controllers in Angular JS:

```
var variablename= angular.module (moduleName, [ ] );  
  
variablename.controller("controllername", function(){ ... });
```

Dos and Don'ts of the Controllers in Angular JS:

Dos of the controllers:

- \$scope object is set to be an initial state of the AngularJS controllers.
- Behavior is added to the \$scope object.
- Use AngularJs form controls for inputs.
- Use AngularJs filters for filter the outputs.
- Use AngularJs services for Share code or state across controllers.

Don'ts of the Controllers:



- Manipulate DOM-controllers contain only trade logic (logical operations). By placing any presentation logic (displaying data's) into the controllers significantly affects its testability.
- We should not use any input controls other than **AngularJs form controls**.
- We should not use any type of Filter other than **AngularJs filters**.
- We should not use any Share code or state across controller other than **AngularJs services**.
- Manage the life cycle of other components.(example: to create service instances)

Sample coding Controllers in Angular JS:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Wikitechy Controllers in Angular JS</title>
  </head>
  <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.6/angular.min.js">
  </script>
  <body>
    <div ng-app="ngApp" ng-controller="ngCtrl">
      Name: <input type="text" ng-model="Name"> <br>
      Email: <input type="text" ng-model="Email"> <br>
      <br>
      Name and Email: {{Name + " " + Email}}
    </div>
    <script>
      var app = angular.module('ngApp', []);
      app.controller('ngCtrl', function($scope) {
        $scope.Name = "WIKITECHY";
        $scope.Email = "learn@wikitechy.com";
      });
```



```
</script>
</body>
</html>
```

Data:

- Collection of data has been defined using array for our AngularJS Application

```
Name = "WIKITECHY";
Email = "learn@wikitechy.com";
```

Logic:

- Controller logic for the AngularJS application.

```
app.controller('ngCtrl', function($scope) {
  $scope.Name = "WIKITECHY";
  $scope.Email = "learn@wikitechy.com";
});
```

HTML:

- Viewable HTML contents in AngularJS Application.

```
<div ng-app="ngApp" ng-controller="ngCtrl">
  Name: <input type="text" ng-model="Name"> <br>
  Email: <input type="text" ng-model="Email"> <br>
  <br>
  Name and Email: {{Name + " " + Email}}
```



```
</div>
```

Code Explanation for Controllers in Angular JS:

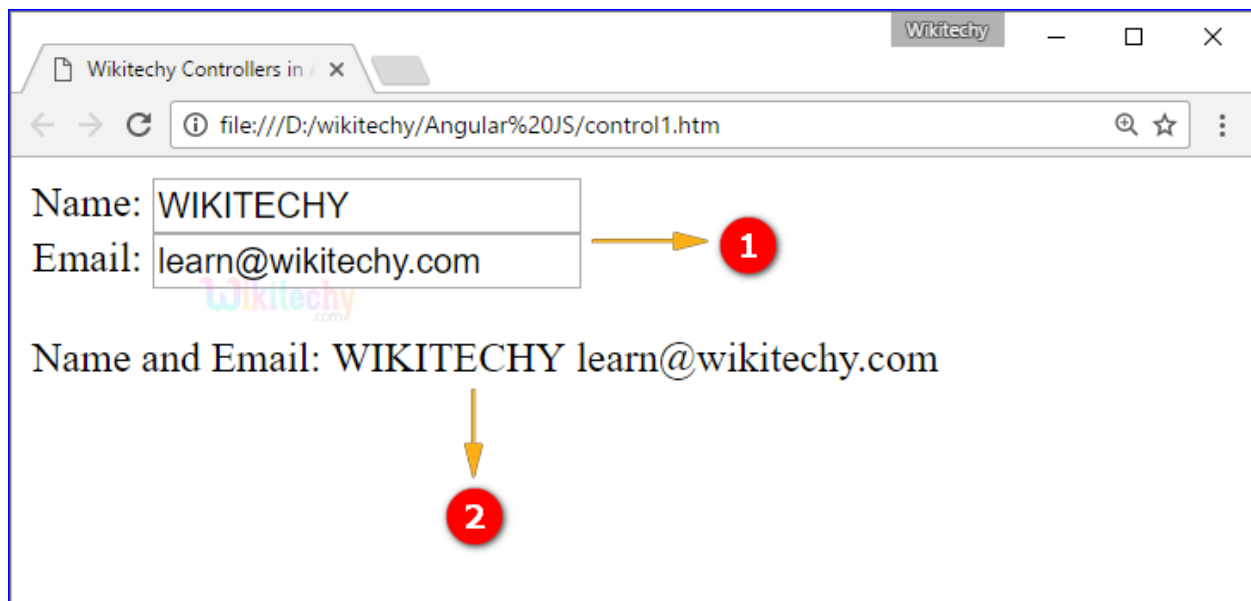
```
<!DOCTYPE html>
<html>
  <head>
    <title>Wikitechy Controllers in Angular JS</title>
  </head>
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.6/angular.min.js">
  </script>
  <body>
    <div ng-app="ngApp" ng-controller="ngCtrl">
      Name: <input type="text" ng-model="Name"><br>
      Email: <input type="text" ng-model="Email"><br>
      <br>
      Name and Email: {{Name + " " + Email}}
    </div>
    <script>
      <!-- 5 --> var app = angular.module('ngApp', []);
      <!-- 6 --> app.controller('ngCtrl', function($scope) {
        $scope.Name = "WIKITECHY";
        $scope.Email = "learn@wikitechy.com";
      });
    </script>
  </body>
</html>
```

1. The AngularJS application is defined by **ng-app="ngApp"**. The application runs inside the **<div>** tag. It's also used to define a **<div>** tag as a root element.
2. The **ng-controller="ngCtrl"** is an AngularJS directive. It is used to assign a controller name as **"ngCtrl"**.
3. **ng-model** is given for the input fields Name and Email to bind the data application.



4. `{{Name + " " + Email}}` is a string concatenation code of the **ngApp** application for AngularJS. The `{{ }}` is used to bind the value of the application variable.
5. Here we create a module by using **angular.module** function. We have passed an empty array to it.
6. Here we have declared a controller **ngCtrl** module using **app.controller ()** function.
7. The value of the controller modules is stored in scope object. In AngularJS, **\$scope** is passed as first argument to **apps.controller** during its constructor definition.
8. Here we have set the value of **\$scope.Name**, **\$scope.Email** and which are to be used to display the `{{Name + " " + Email}}` values in the HTML<div> element.

Sample Output for Controllers in Angular JS:



1. We have bounded Name and Email with two input boxes.

-
2. If we type anything in Name and Email in input boxes we can see the Name and Email combined getting updated automatically. (Here **WIKITECHY** and **learn@wikitechy.com** is updated automatically).

