More on Angular

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November 20, 2015

Public

SAP

Agenda

- Digging more into Angular Features like:
  - Talking to Server
  - Includes
  - Services
- MVC Overview
- Getting to know about Bootstrap
  - http://getbootstrap.com/
- This is something cool
  - https://material.angularjs.org/latest/

More on Angular

Talking to Server

- AngularJS provides $http control which works as a service to read data from the server.
- The server makes a database call to get the desired records.
- AngularJS needs data in JSON format.
- Once the data is ready, $http can be used to get the data from server in the following manner

Talking to Server

```
function Hello($scope, $http) {
    $http.get('http://rest-service.guides.spring.io/greeting')
        .success(function(data) {
            $scope.greeting = data;
        });
}
```

- $http service makes an ajax call and sets response to its property greeting.

Talking to Server

```
var res = $http.post('/savecompany_json', dataObj);
res.success(function(data, status, headers, config) {
        $scope.message = data;
});
res.error(function(data, status, headers, config) {
        alert( "failure message: " + JSON.stringify({data: data}));
});
```

Includes

- Using AngularJS, we can embedded HTML pages within a HTML page using ng-include directive.

```
<div ng-app = "" ng-controller = "studentController">
   <div ng-include = "'main.htm'"></div>
   <div ng-include = "'subjects.htm'"></div>
</div>
```

Services

- Services are javascript functions and are responsible to do a specific tasks only.
- There are two ways to create a service:
  - Factory
  - Service

Services : Using Factory

- Using factory method, we first define a factory and then assign method to it.

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

mainApp.factory('MathService', function() {
   var factory = {};
   factory.multiply = function(a, b)  {
      return a * b
   }
   return factory;
});
```

Services : Using Service

- Using service method, we define a service and then assign method to it. We've also injected an already available service to it.

```
mainApp.service('CalcService', function(MathService){
   this.square = function(a) {
      return MathService.multiply(a,a);
   }
});
```

MVC

MVC

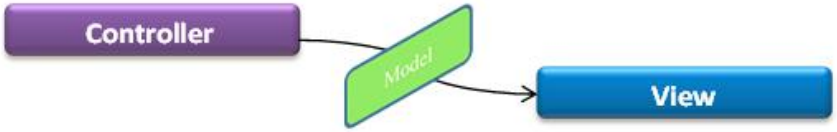
- **M**odel **V**iew **C**ontroller or MVC as it is popularly called, is a software design pattern for developing web applications. A Model View Controller pattern is made up of the following three parts −
- **Model** − It is the lowest level of the pattern responsible for maintaining data.
- **View** − It is responsible for displaying all or a portion of the data to the user.
- **Controller** − It is a software Code that controls the interactions between the Model and View.

MVC

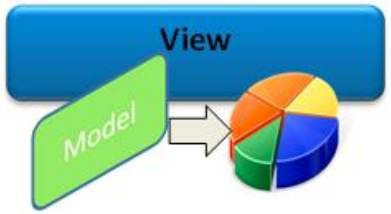
Step 1: Incoming request directed to **Controller.**

Step 2: **Controller** processes request and forms a data **Model.**

Step 3: **Model** is passed to **View.**



Step 4: **View** transforms **Model** into appropriate output format.



Step 5: Response is rendered.

MVVM

MVVM basically includes 3 things:

1. Model
2. View
3. View Model

- **Controller** is actually replaced by **View Model** in **MVVM design pattern**.
- **View Model** is nothing but a **JavaScript function** which is again like a **controller** and is responsible for maintaining relationship between **view** and **model**, but the difference here is, if we update anything in **view**, it gets updated in **model**, change anything in **model**, it shows up in **view**, which is what we call **2-way binding**.

Bootstrap

Angular Material

Thank you

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