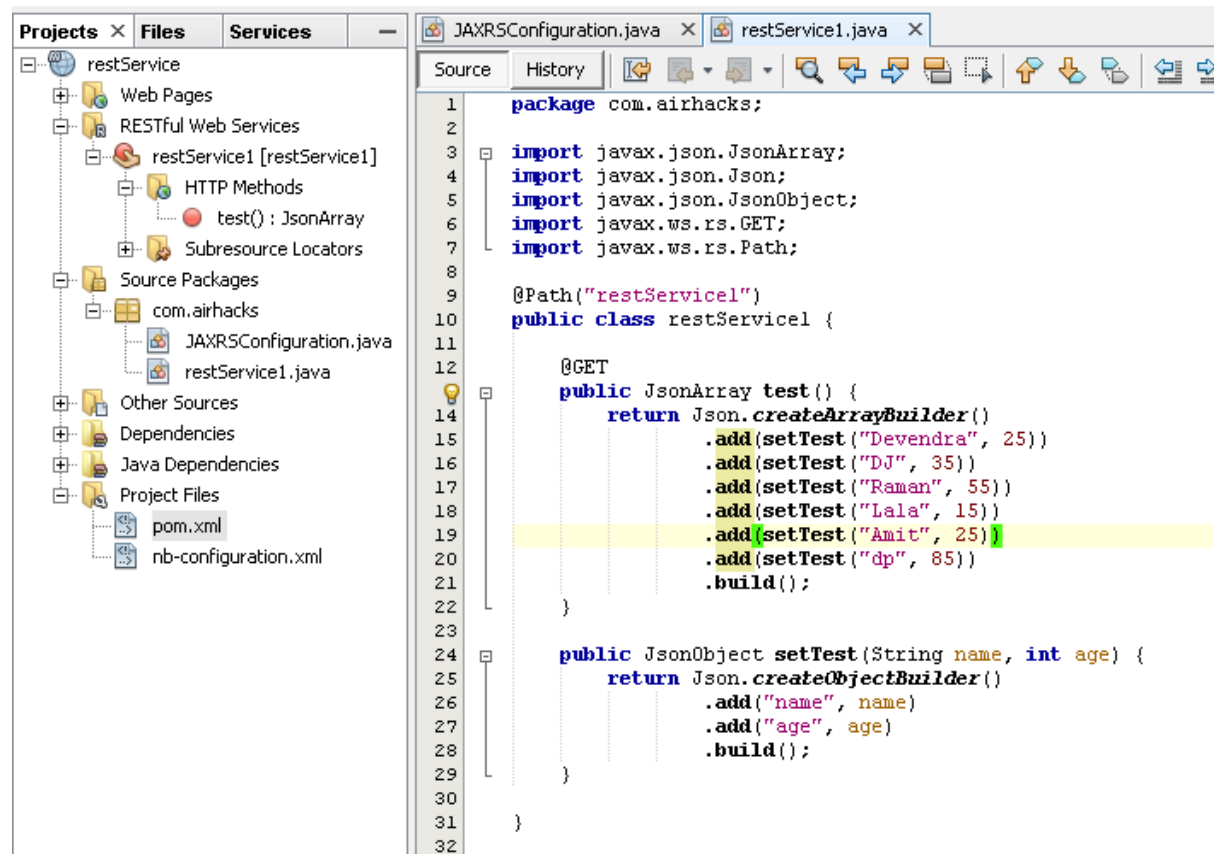Beauty of angular js is the tight coupling to MVC design so that developer always is bound to write the neat and scalable code and keep application flexible and future proof

Java Client

Maven dependencies

```xml
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd
    <modelVersion>4.0.0</modelVersion>
    <groupId>com.dp</groupId>
    <artifactId>restService</artifactId>
    <version>1.0-SNAPSHOT</version>
    <packaging>war</packaging>
    <dependencies>
        <dependency>
            <groupId>com.airhacks</groupId>
            <artifactId>jaxrs-cors</artifactId>
            <version>0.0.2</version>
        </dependency>
        <dependency>
            <groupId>javax</groupId>
            <artifactId>javaee-api</artifactId>
            <version>7.0</version>
            <scope>provided</scope>
        </dependency>
    </dependencies>
    <build>
        <finalName>restService</finalName>
    </build>
    <properties>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
        <failOnMissingWebXml>false</failOnMissingWebXml>
    </properties>
</project>
```

Deployed on GlassFish Server

```
Output
  GlassFish Server  ×  | Run (restService) ×  |
    Info:    visiting unvisited references
    Info:    visiting unvisited references
    Info:    WELD-000900: 2.2.13 (Final)
    WARN:    WELD-001700: Interceptor annotation class javax.ejb.PostActivate not found, interception based on it is not enabled
    WARN:    WELD-001700: Interceptor annotation class javax.ejb.PrePassivate not found, interception based on it is not enabled
    WARN:    WELD-000411: Observer method [BackedAnnotatedMethod] public org.glassfish.jms.injection.JMSCDIExtension.processAnnotated
    WARN:    WELD-000411: Observer method [BackedAnnotatedMethod] private org.glassfish.jersey.ext.cdi1x.internal.CdiComponentProvide
    WARN:    WELD-000411: Observer method [BackedAnnotatedMethod] org.glassfish.sse.impl.ServerSentEventCdiExtension.processAnnotated
    Info:    Loading application [restService] at [/restService]
    Info:    restService was successfully deployed in 2,963 milliseconds.
```

Angular2 UI design

package.json

Inside a JS file

```
//ANGULAR+JS CODE
var app = angular.module('myAjs', []);
var newCars = new Array();
//var demoObj=document.getElementById('demo');

//simple test
app.controller('myName', function ($scope) {
    $scope.firstName = "John";
    $scope.lastName = "Doe";
    $scope.count = 0;
    $scope.getName = function () {
        return $scope.firstName + " " + $scope.lastName;
    }
});
```

ON UI

FirstName : Devendra

LastName : Prasad

Click Me!

4

Welcome, Devendra Prasad

My first expression: 10

Array Test: Devendra, Prasad

Quantity: 1   Costs: 5   Total in dollar: 5

- MAMA, CHINA
- DEVENDRA, INDIA
- RAMAN, INDIA
- PAPA, INDIA
- JYOTI, JAPAN
- KITTU, USA

Inside main call

```
<div ng-view ng-include src="'ajs/readFromPhp.html'">
</div>
```

All call and handling wrt that module is in a separate file or template

```html
<p>Reading from PHP serverside</p>
<div ng-controller="customersCtrl">
    <table>
        <tr ng-repeat="x in names| orderBy:'country'">
            <td>{{x.Name}}</td>
            <td>{{x.City|lowercase}}</td>
            <td>{{x.Country|uppercase}}</td>
        </tr>
    </table>
</div>
```

Inside a JS file (a call to rest service and binding to the angular scope)

```javascript
//read json from php
app.controller('customersCtrl', function ($scope, $http) {
    sUrl = "http://www.w3schools.com/angular/customers.php";
    $http.get(sUrl)
            .success(function (response) {
                $scope.names = response.records;
            });
});
```

Reading from PHP serverside

Blondel père et fils	strasbourg	FRANCE
Alfreds Futterkiste	berlin	GERMANY
Antonio Moreno Taquería	méxico d.f.	MEXICO
Around the Horn	london	UK
B's Beverages	london	UK
Berglunds snabbköp	luleå	SWEDEN
Blauer See Delikatessen	mannheim	GERMANY
Ana Trujillo Emparedados y helados	méxico d.f.	MEXICO
Bólido Comidas preparadas	madrid	SPAIN
Bon app'	marseille	FRANCE
Bottom-Dollar Marketse	tsawassen	CANADA
Cactus Comidas para llevar	buenos aires	ARGENTINA
Centro comercial Moctezuma	méxico d.f.	MEXICO
Chop-suey Chinese	bern	SWITZERLAND
Comércio Mineiro	são paulo	BRAZIL

Users

Edit	Hege	Pege
Edit	Kim	Pim
Edit	Sal	Smith
Edit	Jack	Jones
Edit	John	Doe
Edit	Peter	Pan

My Note

```
hello I am devendra
```

Save Clear

characters left: 81

```html
<!--   <form  ng-controller="validateCtrl" name="myForm" novalidate> -->
<form  ng-controller="validateCtrl" name="myForm">
    <p>Username:<input type="text" name="user" ng-model="user" required>
        <span style="color:red" ng-show="myForm.user.$dirty && myForm.user.$invalid">
            <span ng-show="myForm.user.$error.required">Username is required.</span>
        </span>
    </p>

    <p>Email:<input type="email" name="email" ng-model="email" required>
        <span style="color:red" ng-show="myForm.email.$dirty && myForm.email.$invalid">
            <span ng-show="myForm.email.$error.required">Email is required.</span>
            <span ng-show="myForm.email.$error.email">Invalid email address.</span>
        </span>
    </p>
    <!-- <p><input type="submit" ng-disabled="myForm.user.$dirty && myForm.user.$invalid || myForm.email.$dirty
    <p><input type="submit"></p>
</form>
```

Inside index.html or call any template or html file referenced from HTML

```html
<hr/>
<div class="container">
    <div ng-controller="userCtrl">
        <div ng-include src="'ajs/userList.html'"><br/>
            <div ng-include src="'ajs/userForm.html'">
            </div>
        </div>
    </div>
</div>

<hr/>
<div class="container">
    <div ng-controller="myNoteCtrl">
        <div ng-include src="'ajs/myNoteApp.html'">
        </div>
    </div>
</div>

<hr/>
<div class="container">
    <div ng-view ng-include src="'ajs/readFromPhp.html'">
    </div>
</div>
```

Javascript Array Test

Student Database: Array Project

RowId	Name	Age	English	Hindi	Maths		
	Existing ID						
	Name:	devendra					
	Age:	32					
	English:	65					
	Hindi:	75					
	Maths:	87					
SAVE CLEAR RefreshData							
1	devendra	32	65	75	87	edit	delete
2	devendra	32	65	75	87	edit	delete
3	devendra	32	65	75	87	edit	delete
4	devendra	32	65	75	87	edit	delete
5	devendra	32	65	75	87	edit	delete
6	devendra	32	65	75	87	edit	delete
7	devendra	32	65	75	87	edit	delete
8	devendra	32	65	75	87	edit	delete
9	devendra	32	65	75	87	edit	delete
10	devendra	32	65	75	87	edit	delete
11	devendra	32	65	75	87	edit	delete
12	devendra	32	65	75	87	edit	delete

Html code

```html
<!DOCTYPE html>
<html>
    <head>
        <title>This is array project to store student database</title>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
        <script src="js/jquery2.js"></script>
        <script src="js/arrStu.js"></script>
    </head>
    <body>
        <h1>Student Database: Array Project</h1>
        <div>
            <table border="1" width="100%">
                <tr>
                    <td width="50%" style="vertical-align:top;">
                        <div>
                            <form>
                                <table width="100%">
                                    <tr><td>Existing ID</td><td><input type="text" id="tId" disabled /></td></tr>
                                    <tr><td>Name: </td><td><input type="text" id="tName" /></td></tr>
                                    <tr><td>Age: </td><td><input type="text" id="tAge" /></td></tr>
                                    <tr><td>English: </td><td><input type="text" id="tEng" /></td></tr>
                                    <tr><td>Hindi: </td><td><input type="text" id="tHin" /></td></tr>
                                    <tr><td>Maths: </td><td><input type="text" id="tMath" /></td></tr>
                                    <tr><td colspan="2"><input type="button" id="bSave" value="SAVE" onclick="storeRecords();"/>
                                        <input type="reset" id="bReset" value="CLEAR" onclick="$('#myReport').html('');"/>
                                        <input type="button" id="bRefresh" value="RefreshData" onclick="displayStuRecord();"/>
                                    </td>
                                    </tr>
                                </table>
                            </form>
                        </div>
                    </td>
                    <td width="50%" style="vertical-align:top;">
                        <div id="myReport"></div>
                    </td>
                </tr>
            </table>
        </div>
    </body>
</html>
```

Js code

```javascript
var stuDB = new Array(1000); //init a 2d array
var recCounter = 0;

$(function () {
    initVars();
});

function initVars() {
    for (i = 0; i < stuDB.length; i++) {
        stuDB[i] = new Array(6);
    }
}

function storeRecords() {
    var name, age, eng, hin, math, id;
    name = $("#tName").val();
    age = $("#tAge").val();
    eng = $("#tEng").val();
    hin = $("#tHin").val();
    math = $("#tMath").val();
    id = $("#tId").val();
    if (id == "") {
        stuDB[recCounter][0] = name;
        stuDB[recCounter][1] = age;
        stuDB[recCounter][2] = eng;
        stuDB[recCounter][3] = hin;
        stuDB[recCounter][4] = math;
        stuDB[recCounter][5] = recCounter;
        recCounter += 1;
    } else {
        stuDB[id][0] = name;
        stuDB[id][1] = age;
        stuDB[id][2] = eng;
        stuDB[id][3] = hin;
        stuDB[id][4] = math;
    }
    displayStuRecord();
```

```javascript
function displayStuRecord() {
    //loop over array and display table
    var sData = "";
    sData += "<table width='100%' border=0>";
    sData += "<th>RowId</th><th>Name</th><th>Age</th><th>English</th><th>Hindi</th><th>Maths</th>";
    for (i = 0; i < stuDB.length; i++) {
        if (typeof stuDB[i][0] == 'undefined' || stuDB[i][0] == "")
            break;
        if (stuDB[i][0] != "---") {
            sData += "<tr>";
            sData += "<td>" + (stuDB[i][stuDB[i].length - 1] + 1) + "</td>";
            for (j = 0; j < stuDB[i].length - 1; j++) {
                sData += "<td>" + stuDB[i][j] + "</td>";
            }
            sData += "<td><a href=# onclick='editRecord(" + i + ");'>edit</a></td>"; //edit link or button image
            sData += "<td><a href=# onclick='deleteRecord(" + i + ");'>delete</a></td>"; //delete link or button image
            sData += "</tr>";
        }
    }
    sData += "</table>";
    $("#myReport").html(sData);
}

function editRecord(index) {
    $("#tName").val(stuDB[index][0]);
    $("#tAge").val(stuDB[index][1]);
    $("#tEng").val(stuDB[index][2]);
    $("#tHin").val(stuDB[index][3]);
    $("#tMath").val(stuDB[index][4]);
    $("#tId").val(stuDB[index][5]);
    displayStuRecord();
}
function deleteRecord(index) {
    stuDB[index][0] = "---";
    stuDB[index][1] = "---";
    stuDB[index][2] = "---";
    stuDB[index][3] = "---";
    stuDB[index][4] = "---";
    //permanent deletion method
    //stuDB.splice(index,1);
    displayStuRecord();
```