



Angular 2.0 Lab Book



Document Revision History

Date	Revision No.	Author	Summary of Changes
March 2018	1	Rahul Vikash	Created new lab book as per course contents



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Getting Started

Overview

This lab book is a guided tour for learning Angular 2.0 For JEE version and above. It comprises 'To Do' assignments. Follow the steps provided to work out the 'To Do' assignments given.

Setup Checklist for Angular 2.0

Here's what is expected on your machine for the lab to work.

Minimum System Requirements

- Intel Pentium 90 or higher (P166 recommended)
- Microsoft Windows XP, Windows 7 or Windows 8
- Memory: 2GB of RAM (1GB or more recommended)
- Google Chrome 36.0 or Mozilla Firefox 31.0 or Internet Explorer 10 or above

Please ensure that the following is done:

- A text editor like Notepad or Notepad++ or Eclipse Luna is installed.
- Node.js install with node module

Instructions

- Create a directory by your name in drive <drive>. In this directory, create a subdirectory angular_assgn. For each lab exercise create a directory as lab <lab number>.
- You may also look up the on-line help provided in <https://v2.angular.io/docs/ts/latest/guide/setup.html>

Lab 1 : Typescript Angular Components & Data Binding

Goals	▪ Understand the typescript & Angular data binding components
Time	60 minutes

1.1 Create Typescript class, as per below mentioned diagram

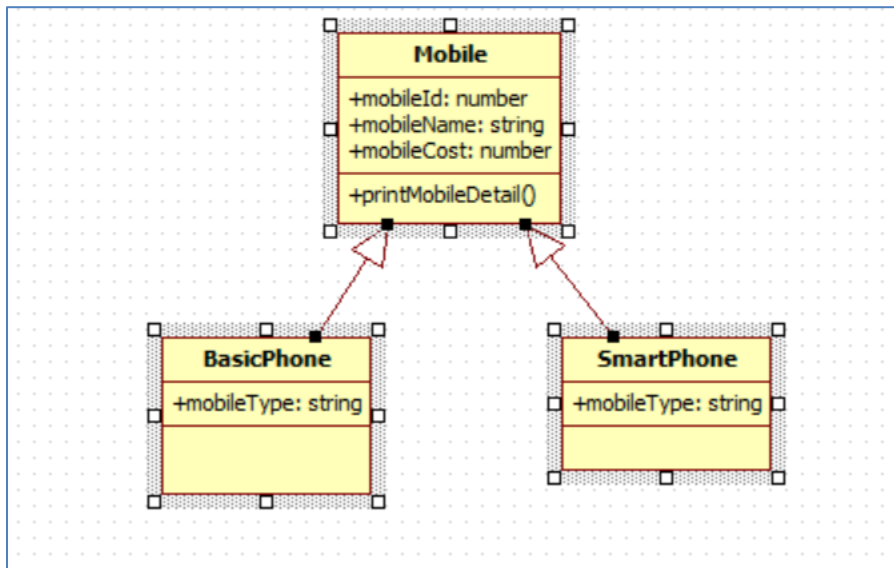
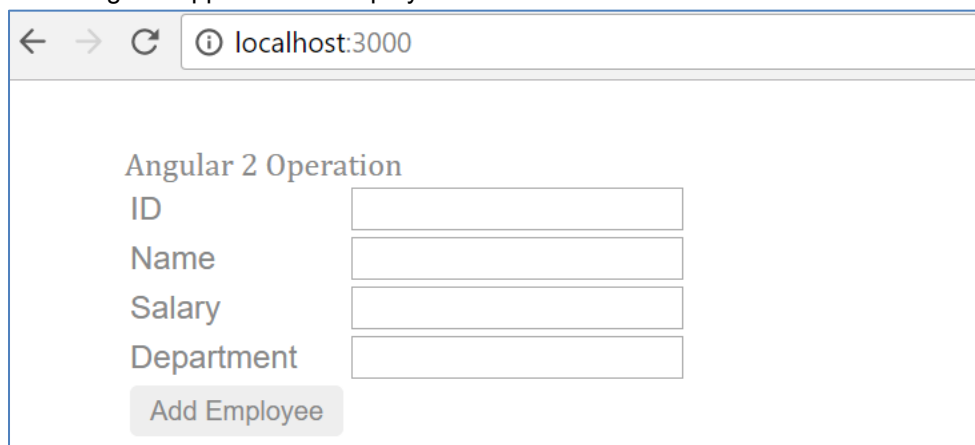


Figure 1

All 3 classes are in separate file. We must add mobile details such as id, name, cost & type from different typescript file & print data in console

a. Get Data from array

1.2: Create an Angular Application & display the result shown below



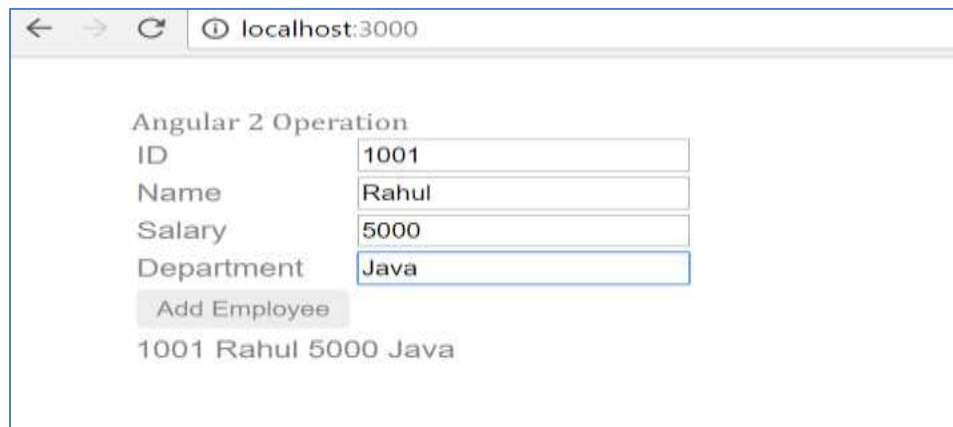
The screenshot shows a web browser window with the address bar displaying `localhost:3000`. The page content is titled "Angular 2 Operation". Below the title, there are four input fields labeled "ID", "Name", "Salary", and "Department". At the bottom of the form is a button labeled "Add Employee".

Figure 2

When we put some data in ID, name, salary, department it will come automatically come below the submit button shown below

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Angular 2 Operation

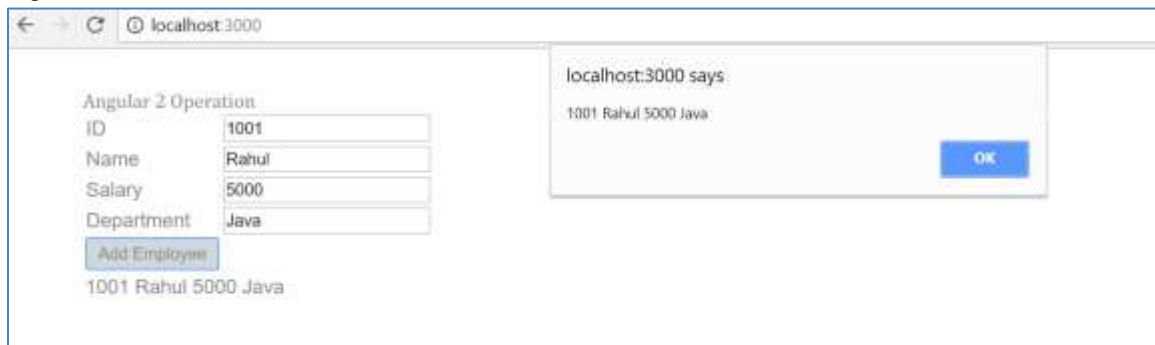
ID	1001
Name	Rahul
Salary	5000
Department	Java

Add Employee

1001 Rahul 5000 Java

Figure 3

When we click on Add employee alert box will open & display all data inserted as shown in given image



Angular 2 Operation

ID	1001
Name	Rahul
Salary	5000
Department	Java

Add Employee

1001 Rahul 5000 Java

localhost:3000 says:
1001 Rahul 5000 Java
OK

Figure 4

Lab 2: Angular Directives & Data Binding

Goals	<ul style="list-style-type: none"> Understand the Directives & Data Binding
Time	180 minutes

2.1. Creating a webpage to work with angular

Create a web page in Angular & display the results shown below.



Figure 5

Show all data comes from array as below:

```
[
  {empId:1001, empName:"Rahul", empSal:9000, empDep:"Java"},
  {empId:1002, empName:"Sachin", empSal:19000, empDep:"OraApps"},
  {empId:1003, empName:"Vikash", empSal:29000, empDep:"BI"},
];
```

When the user enters Id, name, salary & department in Add Employee & click button Add Employee data will come in Show All Employee & message will display as shown in figure below –example inserted id 1004, name rashi, salary 87000, department BI

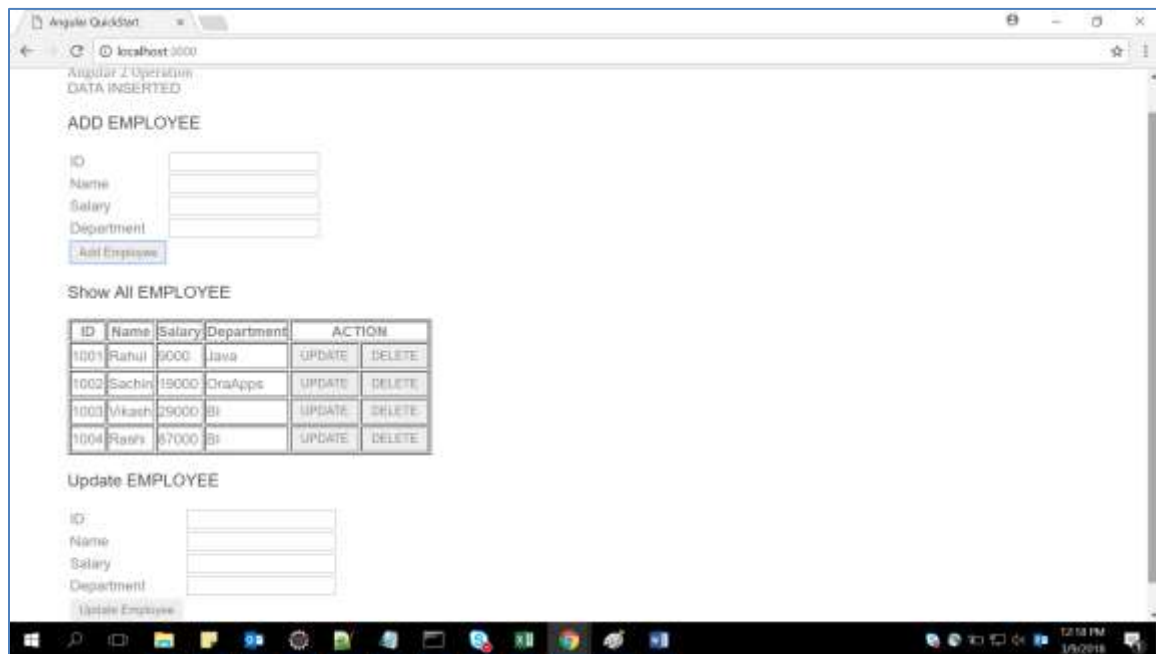


Figure 6

When we click button “Delete” that row will be deleted from Show All Employee & message will come “DATA Deleted” as shown in below figure – Example delete rows 1003 by pressing delete button

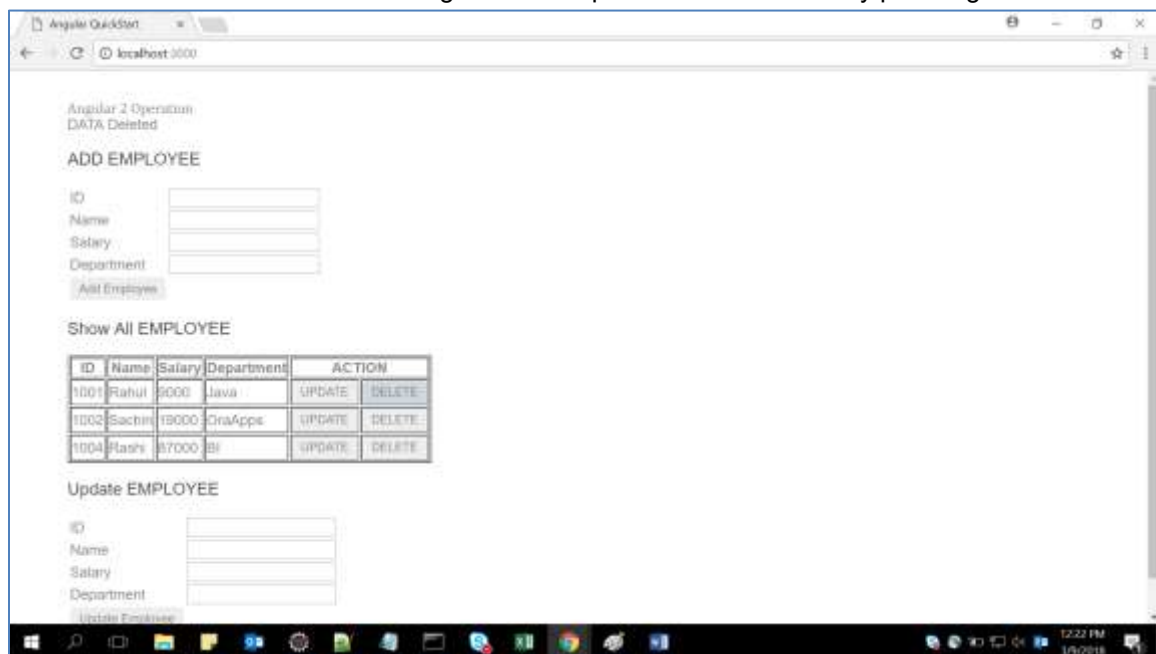


Figure 7

When we click button “Update” that row will be come in Update employee from Show All Employee & as shown in figure & when updated employee button click the data will update in show All employee & message will display

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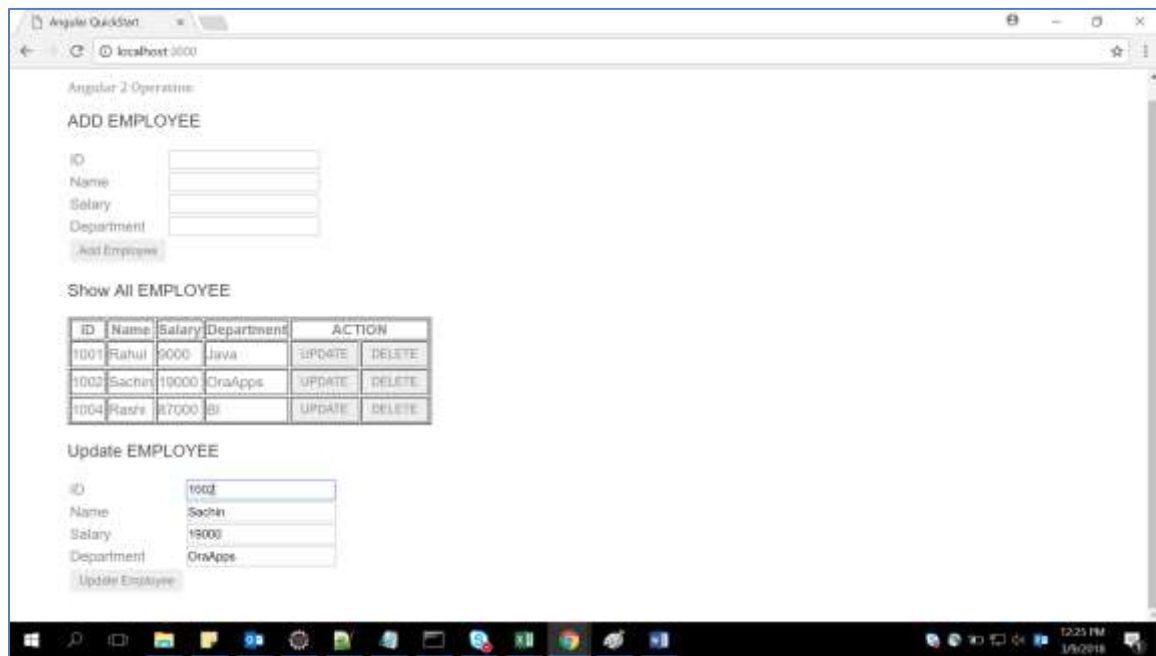


Figure 8

After Update employee button clicked data updated in show all employee & message came

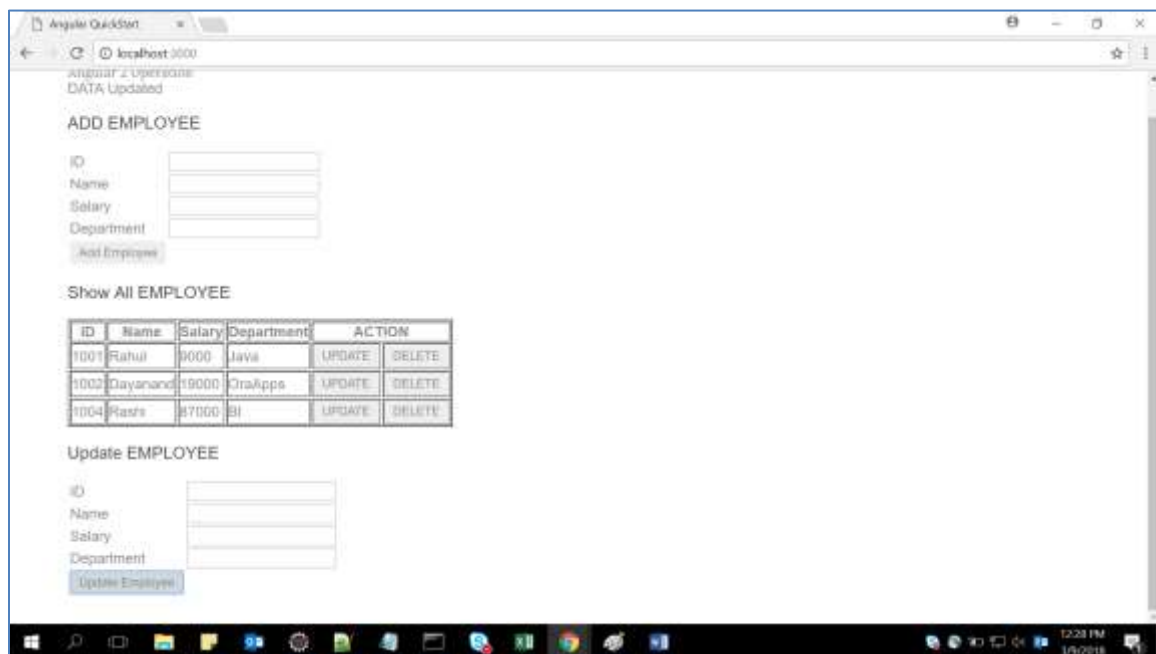


Figure 9

2.2. Creating a webpage to work with angular

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Create a web page and display the results shown below:

ID	NAME	SALARY	DEPARTMENT
1001	Rahul	9000	JAVA
1002	Vikash	11000	ORAAPS
1003	Uma	12000	JAVA
1004	Sachin	11500	ORAAPS
1005	Amol	7000	.NET
1006	Vishal	17000	BI
1007	Rajita	21000	BI
1008	Neelima	81000	TESTING
1009	Daya	1000	TESTING

Figure 10

Click on any header --Id, name, salary, department it will display the list in sorted order of that header. Suppose Clicking on **Name** header so we will get desired output

ID	NAME	SALARY	DEPARTMENT
1005	Amol	7000	.NET
1009	Daya	1000	TESTING
1008	Neelima	81000	TESTING
1001	Rahul	9000	JAVA
1007	Rajita	21000	BI
1004	Sachin	11500	ORAAPS
1003	Uma	12000	JAVA
1002	Vikash	11000	ORAAPS
1006	Vishal	17000	BI

Figure 11

So, by clicking any header data will come in sorted order.

Internal Array: [

```
{empId:1001, empName:'Rahul', empSal:9000, empDep:'JAVA', empjoiningdate:'6/12/2014'},
{empId:1002, empName:'Vikash', empSal:11000, empDep:'ORAAPS', empjoiningdate:'6/12/2017'},
{empId:1003, empName:'Uma', empSal:12000, empDep:'JAVA', empjoiningdate:'6/12/2010'},
{empId:1004, empName:'Sachin', empSal:11500, empDep:'ORAAPS', empjoiningdate:'11/12/2017'},
{empId:1005, empName:'Amol', empSal:7000, empDep:'.NET', empjoiningdate:'1/1/2018'},
{empId:1006, empName:'Vishal', empSal:17000, empDep:'BI', empjoiningdate:'9/12/2012'},
{empId:1007, empName:'Rajita', empSal:21000, empDep:'BI', empjoiningdate:'6/7/2014'},
{empId:1008, empName:'Neelima', empSal:81000, empDep:'TESTING', empjoiningdate:'6/17/2015'},
{empId:1009, empName:'Daya', empSal:1000, empDep:'TESTING', empjoiningdate:'6/17/2016'} ];
```

Lab 3: Angular with Form

Goals	▪ Understand the Angular form
Time	40 minutes

3. Create a registration form and perform validations on the data entered in the fields. [**Can make use of Angular Template Driven Forms or Model Driven Forms**]

Product ID

Product Name

Product Cost

Product Online

☐ Yes
☐ No

Product Category

Available in Store

☐ Big Bazar
☐ DMart
☐ Reliance
☐ Mega store

Add Product

Figure 12

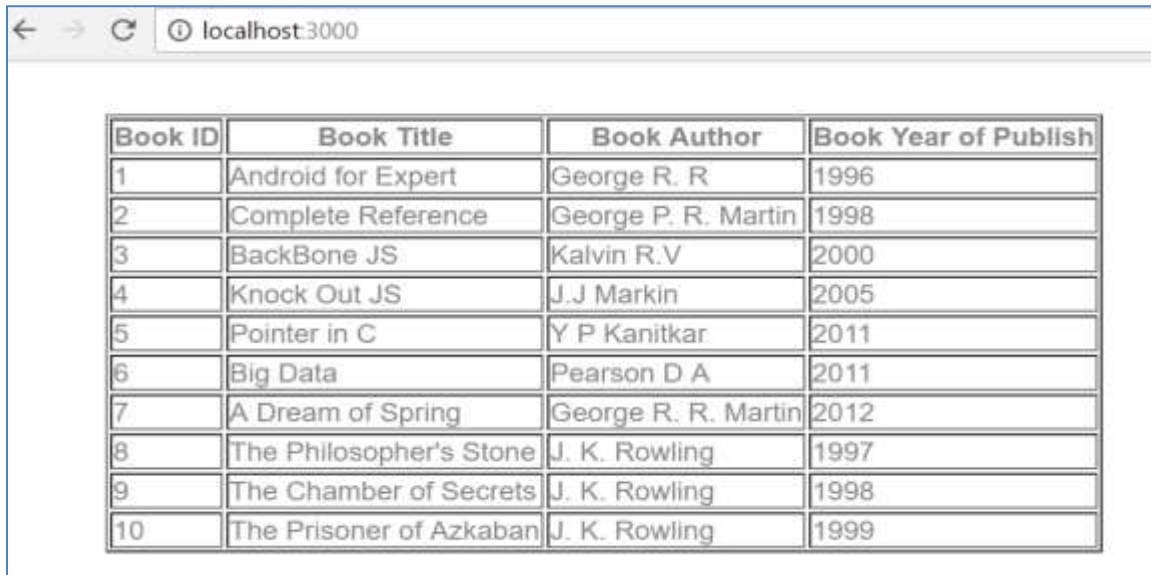
Note:

- Make use of Angular 2 Forms-Model Driven or template driven.
- All fields are mandatory
- Product category will be –Grocery, Mobile, Electronics & Cloths
- When click on Add Product if all fields are validated the output will come on console
- We can select multiple store in Available list

Lab 4: Angular with Service & pipes

Goals	Working with angular http services & pipes
Time	120 minutes

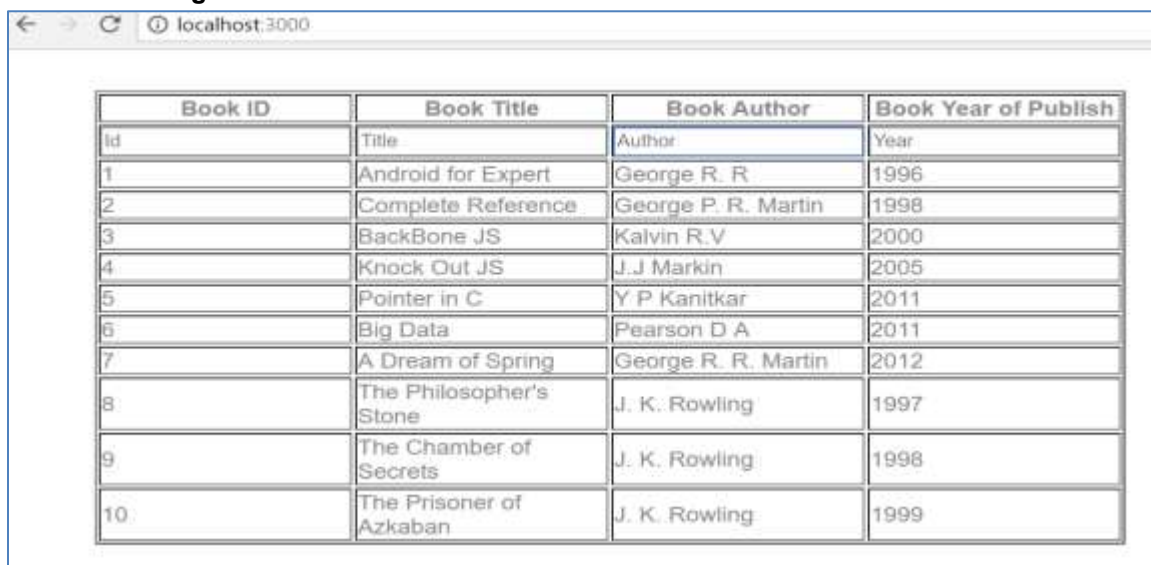
4.1 Read the booklist.json file with the help of Angular service & display the images shown below;
Use [booklist.json](#)



Book ID	Book Title	Book Author	Book Year of Publish
1	Android for Expert	George R. R	1996
2	Complete Reference	George P. R. Martin	1998
3	BackBone JS	Kalvin R.V	2000
4	Knock Out JS	J.J Markin	2005
5	Pointer in C	Y P Kanitkar	2011
6	Big Data	Pearson D A	2011
7	A Dream of Spring	George R. R. Martin	2012
8	The Philosopher's Stone	J. K. Rowling	1997
9	The Chamber of Secrets	J. K. Rowling	1998
10	The Prisoner of Azkaban	J. K. Rowling	1999

Figure 13

4.2: Extended assignment 4.1 read booklist.json & apply search filter on id, title, year & author ,as shown in diagram



Book ID	Book Title	Book Author	Book Year of Publish
Id	Title	Author	Year
1	Android for Expert	George R. R	1996
2	Complete Reference	George P. R. Martin	1998
3	BackBone JS	Kalvin R.V	2000
4	Knock Out JS	J.J Markin	2005
5	Pointer in C	Y P Kanitkar	2011
6	Big Data	Pearson D A	2011
7	A Dream of Spring	George R. R. Martin	2012
8	The Philosopher's Stone	J. K. Rowling	1997
9	The Chamber of Secrets	J. K. Rowling	1998
10	The Prisoner of Azkaban	J. K. Rowling	1999

Figure 14

If we Search author, id, title, year only searched value will display in outputsearching K in author

Book ID	Book Title	Book Author	Book Year of Publish
Id	Title	K	Year
3	BackBone JS	Kalvin R.V	2000
4	Knock Out JS	J.J Markin	2005
5	Pointer in C	Y P Kanitkar	2011
8	The Philosopher's Stone	J. K. Rowling	1997
9	The Chamber of Secrets	J. K. Rowling	1998
10	The Prisoner of Azkaban	J. K. Rowling	1999

Figure 15

Searching Book TitleA

Book ID	Book Title	Book Author	Book Year of Publish
Id	A	Author	Year
1	Android for Expert	George R. R	1996
3	BackBone JS	Kalvin R.V	2000
6	Big Data	Pearson D A	2011
7	A Dream of Spring	George R. R. Martin	2012
9	The Chamber of Secrets	J. K. Rowling	1998
10	The Prisoner of Azkaban	J. K. Rowling	1999

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