

Date : 13/03/2021  
Spring boot 9AM  
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POSTMAN Tool:

<https://www.postman.com/downloads/>

\*) ResponseEntity<T> :

Entity(Final Output) Placed inside Response.

This is used as Controller#Method ReturnType

T = Type can be String/Class/Collection

=> If return type is String , then Http Response is 'Text Format'  
(Content-Type : text/plain).

=> If return type is non-String , then Http Response is 'JSON'  
(Content-Type : application/json).

=> \*\*\* Latest Spring Boot version 2.x supports only JSON Format.  
XML Supports default is not present, but we can add additional  
dependency to enable this.

Q) Which is preferred for Object Format in Webservices JSON or XML?

A) JSON.

-> Representation is easy { key:val }

-> Need less memory (compared to XML)

-> Execution/Transfer is very fast.

-> XML is more complex in design if data gets increased

ex:

XML:

```
<employee>
  <eid>10</eid>
  <ename>A</ename>
</employee>
```

JSON:

```
{eid:10,ename:"A"}
```

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MEDIA TYPE ANNOTATIONS

ReST has provided two mediatype annotations.

a. @RequestBody (Input MediaType)

b. @ResponseBody (Output MediaType)

a. @RequestBody : It reads Http Request first.

Checks Header Param 'Content-Type'

If Type is non-string(not text/plain)

ex: application/json , application/xml

then data/Content is converted into Object Format,  
given to Controller#method Param.

=> Spring MVC @ModelAttribute (FORM DATA ) == Spring ReST

@RequestBody

b. @ResponseBody : It will take Controller#method return type first.

If type is non-String Ex: Employee, List<Product>

then data is converted into JSON/XML (based on request type)

and give it to Http Response Body Section and update Content-Type Header Param even.

=> Spring MVC Model == Spring ReST @ResponseBody

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\*) @ResponseBody Annotation is optional to apply over method.  
Bcoz internally @RestController is applying @ResponseBody Annotation.  
It works only for non-String.

\*) JSONView chrome Extension.

\*) We can directly use String/Class/Collection as ReturnType  
ResponseEntity is optional, but recommended in realtime.

-----code-----

Name: SpringBoot2OutputMediaType  
Dep : Spring web, Lombok, Devtools

Model:

```
package in.nareshit.raghu.model;

import lombok.AllArgsConstructor;
import lombok.Data;
import lombok.NoArgsConstructor;
```

```
@Data
@NoArgsConstructor
@AllArgsConstructor
public class Employee {

    private Integer eid;
    private String ename;
    private Double esal;
}
```

RestController

```
package in.nareshit.raghu.rest;

import org.springframework.http.HttpStatus;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.RestController;

import in.nareshit.raghu.model.Employee;
```

@RestController

```
public class EmployeeRestController {

    @GetMapping("/msg")
    public ResponseEntity<String> showDataA() {
        String body = "Welcome to Simple data";
        return new ResponseEntity<String>(body,
        HttpStatus.OK);
    }

    @GetMapping("/obj")
    public ResponseEntity<Employee> showDataB() {
        Employee body = new Employee(106, "SYED", 600.0);
```

```
        return new ResponseEntity<Employee>(body,
HttpStatus.OK);
    }

    @GetMapping("/obja")
    public Employee showDataC() {
        Employee body = new Employee(190, "AHMED SYED",
800.0);
        return body;
    }
}
```

URL:

<http://localhost:8080/obj>

<http://localhost:8080/obja>

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