



JAVA RESTFUL WEB SERVICE

LAB ACTIVITY-3



JUNE 15, 2023

**DEEKSHITH REDDY B. U
20MIC0058**

ASSESSMENT-3

ANY PROGRAM USING JAVA RESTFUL WEB SERVICE

CODE:

GenericResource

```
package INLAB3 ;

import jakarta.ws.rs.Consumes; import
jakarta.ws.rs.Produces; import
jakarta.ws.rs.GET; import
jakarta.ws.rs.Path; import
jakarta.ws.rs.PUT; import
jakarta.ws.rs.core.MediaType; import
java.util.Arrays;

/**
 * REST Web Service
```

```
*
```

```
*/
```

```
@Path("generic") public class
```

```
GenericResource {    private
```

```
static int[] Res;
```

```
/**
```

```
* Creates a new instance of GenericResource    */
```

```
    public GenericResource() {
```

```
    }
```

```
/**
```

```
* Retrieves representation of an instance of  
  REST_Join.GenericResource
```

```
* @return an instance of java.lang.String
```

```
    */
```

```
    @GET
```

```
    @Produces(MediaType.TEXT_HTML)
```

```
    public String getSortedArray() {    if
```

```
(Res == null) {        return "Array has not  
been sorted yet.";
```

```
    } else {
```

```

        String sortedArray = Arrays.toString(Res);

        String html = "<html><head><title>Sorted
Array</title></head><body>"

        + "<h1>My Sorted Array </h1>"

        + "<p>" + sortedArray + "</p>"

+ "</body></html>";        return html;

    }

}

```

```

/**
 * PUT method for updating or creating an instance of
GenericResource
 * @param arrayString
 */

@PUT
@Consumes(MediaType.TEXT_PLAIN)
public void sortArray(String arrayString) {

    String[] array = arrayString.split(",");
    Res = new int[array.length];    for (int i
= 0; i < array.length; i++) {

        Res[i] = Integer.parseInt(array[i]);

    }

    Arrays.sort(Res);

```

```
}  
}
```

ApplicationConfig

```
/*
```

```
* Click
```

```
nbfs://nbhost/SystemFileSystem/Templates/Licenses/licensedefault.  
txt to change this license
```

```
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java  
to edit  
this template
```

```
*/
```

```
package INLAB3;
```

```
import java.util.Set;
```

```
/**
```

```
*
```

```
* @author Deekshith
```

```
*/
```

```
@jakarta.ws.rs.ApplicationPath("webresources") public class
```

```
ApplicationConfig extends jakarta.ws.rs.core.Application {
```

```
    @Override
```

```
    public Set<Class<?>> getClasses() {
```

```
        Set<Class<?>> resources = new java.util.HashSet<>();
```

```
        addRestResourceClasses(resources);    return resources;
```

```
    }
```

```
    /**
```

```
    * Do not modify addRestResourceClasses() method.
```

```
    * It is automatically populated with
```

```
    * all resources defined in the project.
```

```
    * If required, comment out calling this method in getClasses().
```

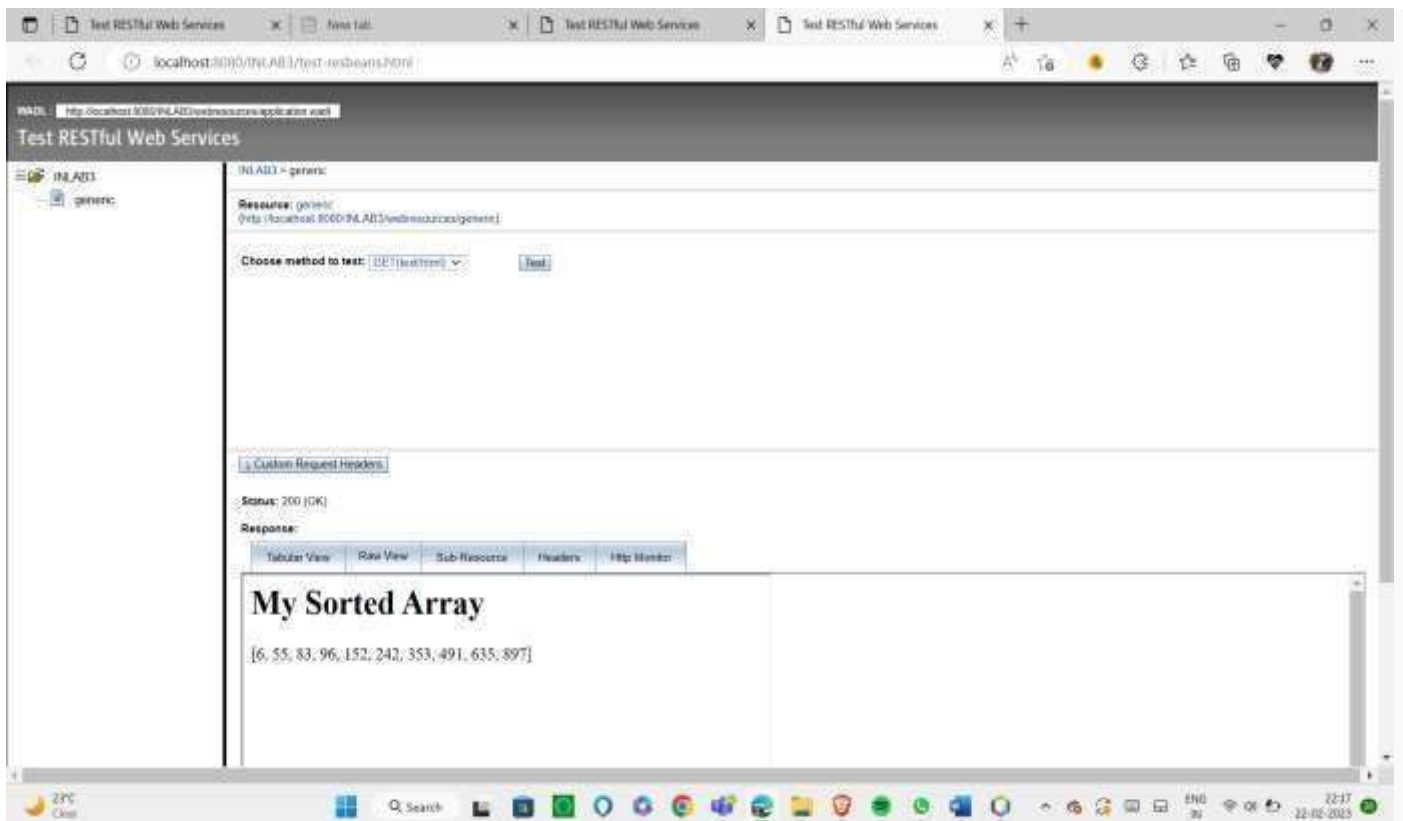
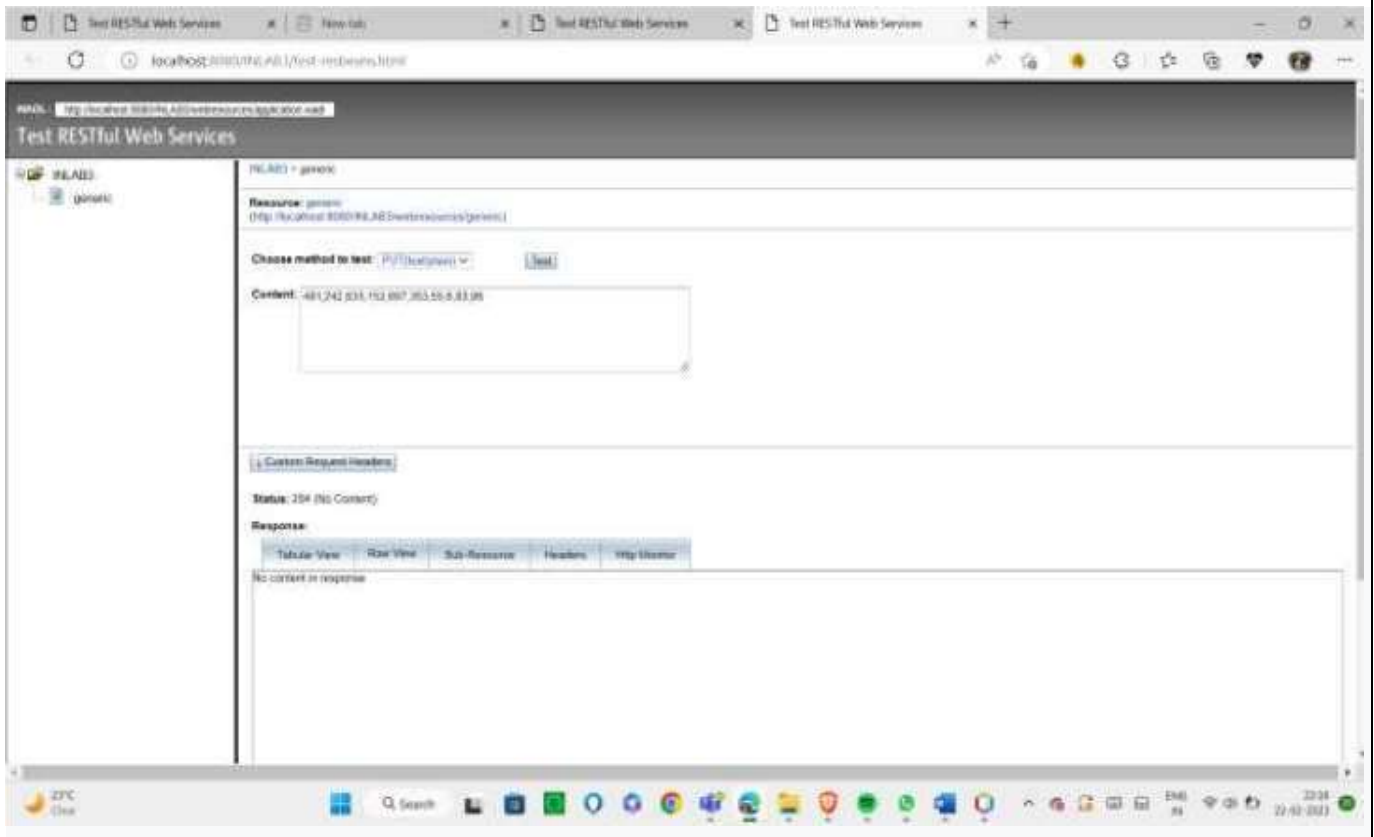
```
    */
```

```
    private void addRestResourceClasses(Set<Class<?>> resources) {
```

```
    }
```

```
}
```

Output:



INLAB3 > generic

Resource: generic
(http://localhost:8080/INLAB3/webresources/generic)

Choose method to test: PUT(text/plain) ▾

Test

Content: 2,6,26,15,8,18,16,462,74,144,21,34,63,99

Custom Request Headers

Status: 200 (OK)

Response:

Tabular View

Raw View

Sub-Resource

Headers

Http Monitor

My Sorted Array

[2, 6, 8, 15, 16, 18, 21, 26, 34, 63, 74, 99, 144, 462]

3(b).

Consume Java RESTful web service(3a) using python.

CODE:

```
# this is the python client for the 'SortService' web service import  
requests
```

```
ws_url = "http://localhost:8080/INLAB3/webresources/generic"
```

```
flag = 0
```

```
st = input("\nEnter the numbers that you want to sort, seperated by a  
comma : ") response = requests.put(ws_url, st)
```

```
if response.status_code!=204:    print("\nThe PUT request to the  
web service did not succeed !!")
```

```
else:
```

```
    print("\nThe PUT request to the web service succeeded !!")
```

```
flag = 1
```

```

if flag:    response =
requests.get(ws_url)

    if response.status_code==200:
        print("\nThe GET request to the web service succeeded !!")
print("The response (sorted array as text) from the webservice is
:")
print(response.text)    else:    print("The GET request
to the web service failed !!")

```

Output:-

Enter the numbers that you want to sort, seperated by a comma : 131,782,90,84,77,54,78,13

The PUT request to the web service succeeded !!

The GET request to the web service succeeded !!

The response (sorted array as text) from the webservice is :

```

<html><head><title>Sorted Array</title></head><body><h1>My Sorted Array </h1><p>[13, 54, 77, 78, 84, 90, 131, 782]</p></body></html>

```

Not entering value

Error:-

Enter the numbers that you want to sort, seperated by a comma :

The PUT request to the web service did not succeed !!

```
In [1]: # this is the python client for the 'SortService' web service
import requests

ws_url = 'http://localhost:8080/INLAB3/webresources/generic'
flag = 0

st = input("\nEnter the numbers that you want to sort, seperated by a comma : ")
response = requests.put(ws_url, st)

if response.status_code != 204:
    print("\nThe PUT request to the web service did not succeed !!")
else:
    print("\nThe PUT request to the web service succeeded !!")
    flag = 1

if flag:
    response = requests.get(ws_url)

    if response.status_code == 200:
        print("\nThe GET request to the web service succeeded !!")
        print("The response (sorted array as text) from the webservice is :")
        print(response.text)
    else:
        print("The GET request to the web service failed !!")
```

Enter the numbers that you want to sort, seperated by a comma : 131,782,90,84,77,54,78,13

The PUT request to the web service succeeded !!

The GET request to the web service succeeded !!

The response (sorted array as text) from the webservice is :

```
<html><head><title>Sorted Array</title></head><body><h1>My Sorted Array </h1><p>[13, 54, 77, 78, 84, 90, 131, 782]</p></body></html>
```

In []:

Enter the numbers that you want to sort, seperated by a comma : 131,782,90,84,77,54,70,13

The PUT request to the web service succeeded !!

The GET request to the web service succeeded !!

The response (sorted array as text) from the webservice is :

```
<html><head><title>Sorted Array</title></head><body><h1>My Sorted Array </h1><p>[13, 34, 77, 78, 84, 90, 131, 782]</p></body></html>
```