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Class: BE-10, P-10

Roll No. 43210

Assignment 5

Code

1. SOAP

```
package org.me.stringmanip;

import javax.jws.WebService;
import javax.jws.WebMethod;
import javax.jws.WebParam;
import javax.ejb.Stateless;

@WebService(serviceName = "Stringop")
@Stateless()
public class Stringop {


    /**
     * Web service operation
     */
    @WebMethod(operationName = "concat")
    public String concat(@WebParam(name = "a") String a, @WebParam(name =
"b") String b) {
        //TODO write your implementation code here:
        String res = a.concat(b);
        return res;
    }

    /**
     * Web service operation
     */
    @WebMethod(operationName = "length")
    public int length(@WebParam(name = "a") String a) {
        //TODO write your implementation code here:
        return a.length();
    }
```

```
    /**
     * Web service operation
     */
    @WebMethod(operationName = "upper")
    public String upper(@WebParam(name = "a") String a) {
        //TODO write your implementation code here:
        return a.toUpperCase();
    }

    /**
     * Web service operation
     */
    @WebMethod(operationName = "lower")
    public String lower(@WebParam(name = "a") String a) {
        //TODO write your implementation code here:
        return a.toLowerCase();
    }

    /**
     * Web service operation
     */
    @WebMethod(operationName = "compare")
    public String compare(@WebParam(name = "a") String a, @WebParam(name =
"b") String b) {
        //TODO write your implementation code here:
        int comp = a.compareTo(b);
        String msg = "";
        if(comp==0)
        {
            msg = "Both are equal";
        }
        else if(comp<0)
        {
            msg = "Second string is lexicographically greater";
        }
        else
        {
            msg = "First string is lexicographically greater";
        }
        return msg;
    }
}
```

2. REST

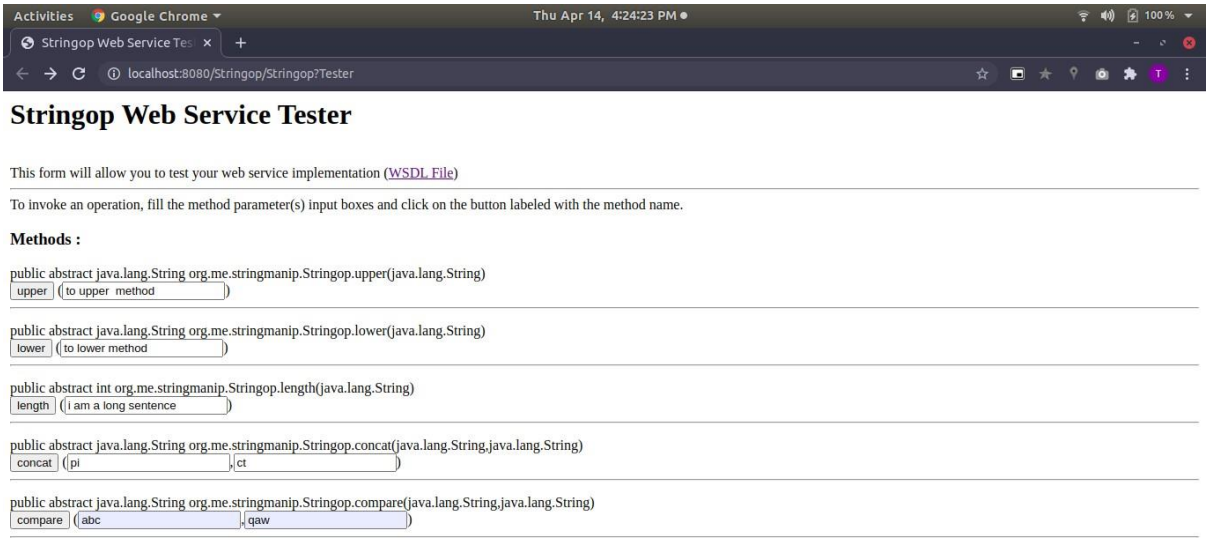
```
/*
```

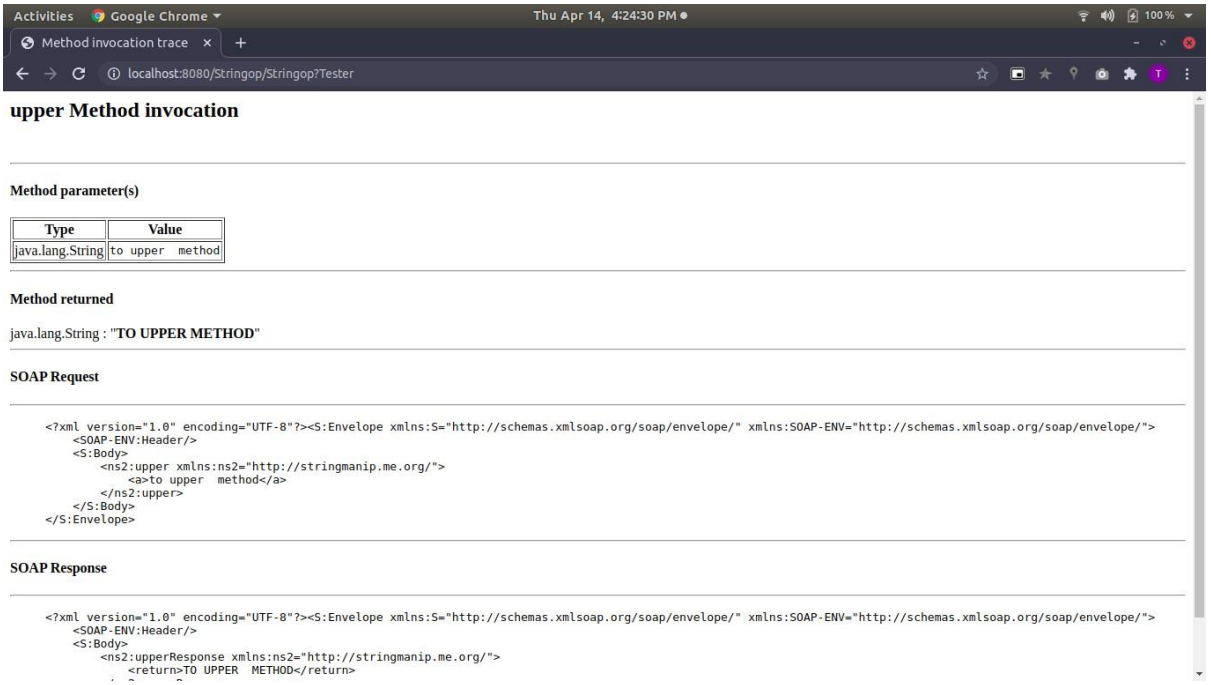
```java
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/WebServices/GenericResource.java to edit this template
 */
package org.me.stringopsrest;

import javax.ws.rs.core.Context;
import javax.ws.rs.core.UriInfo;
import javax.ws.rs.Produces;
import javax.ws.rs.Consumes;
import javax.ws.rs.GET;
import javax.ws.rs.Path;
import javax.ws.rs.PUT;
import javax.ws.rs.PathParam;
import javax.ws.rs.core.MediaType;

/**
 * REST Web Service
 *
 * @author tanay
 */
@Path("generic")
public class GenericResource {

    @Context
    private UriInfo context;

    /**
     * Creates a new instance of GenericResource
     */
    public GenericResource() {
    }

    /**
     * Retrieves representation of an instance of org.me.stringopsrest.GenericResource
     * @return an instance of java.lang.String
     */
    @GET
    @Produces(MediaType.APPLICATION_XML)
    public String getXml() {
        //TODO return proper representation object
        return "<hi>Hello</hi>";
//new UnsupportedOperationException();
    }
```

```java
/**
 * PUT method for updating or creating an instance of GenericResource
 * @param content representation for the resource
 */
@PUT
@Consumes(MediaType.APPLICATION_XML)
public void putXml(String content) {
}

@GET
@Path("/concat/{a},{b}")
public String concat(@PathParam("a") String a,@PathParam("b") String b)
{
    String res = a.concat(b);
    return res;
}

@GET
@Path("/compare/{a},{b}")
public String compare(@PathParam("a") String a,@PathParam("b") String b)
{
    int comp = a.compareTo(b);
    String msg = "";
    if(comp==0)
    {
        msg = "Both are equal";
    }
    else if(comp<0)
    {
        msg = "Second string is lexicographically greater";
    }
    else
    {
        msg = "First string is lexicographically greater";
    }
    return msg;
}

@GET
@Path("/length/{a}")
public int length(@PathParam("a") String a)
{
    return a.length();
}

@GET
@Path("/upper/{a}")
public String upper(@PathParam("a") String a) {
```

```
        //TODO write your implementation code here:
        return a.toUpperCase();
    }

    @GET
    @Path("/lower/{a}")
    public String lower(@PathParam("a") String a) {
        //TODO write your implementation code here:
        return a.toUpperCase();
    }
}
```

Output





upper Method invocation

Method parameter(s)

Type	Value
java.lang.String	`to upper  method`

Method returned

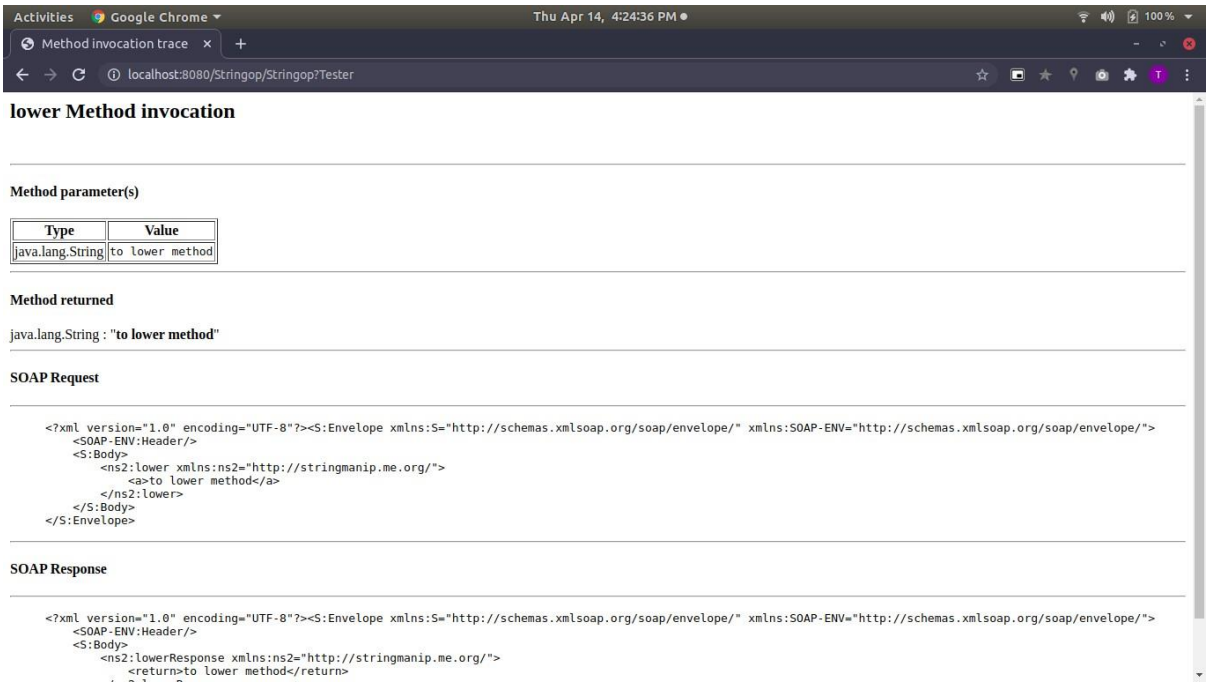
java.lang.String : "**TO UPPER METHOD**"

SOAP Request

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
    <SOAP-ENV:Header/>
    <S:Body>
        <ns2:upper xmlns:ns2="http://stringmanip.me.org/">
            <a>to upper  method</a>
        </ns2:upper>
    </S:Body>
</S:Envelope>
```

SOAP Response

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
    <SOAP-ENV:Header/>
    <S:Body>
        <ns2:upperResponse xmlns:ns2="http://stringmanip.me.org/">
            <return>TO UPPER  METHOD</return>
```



lower Method invocation

Method parameter(s)

Type	Value
java.lang.String	`to lower method`

Method returned

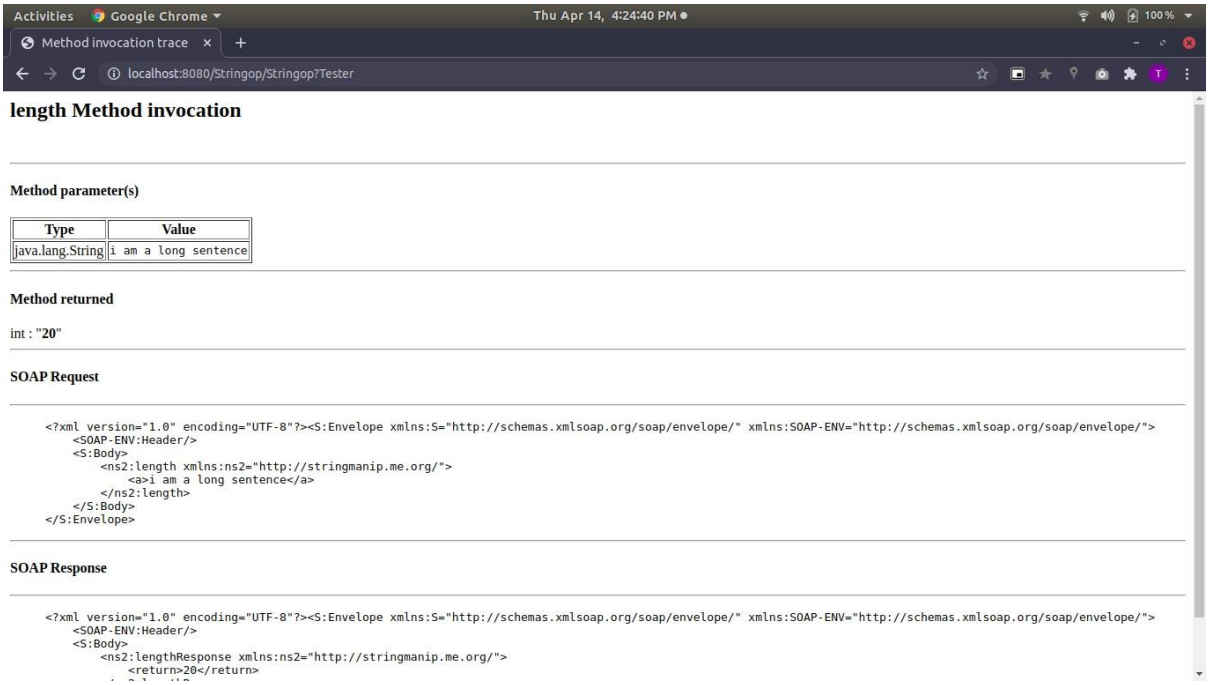
java.lang.String : "**to lower method**"

SOAP Request

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
    <SOAP-ENV:Header/>
    <S:Body>
        <ns2:lower xmlns:ns2="http://stringmanip.me.org/">
            <a>to lower method</a>
        </ns2:lower>
    </S:Body>
</S:Envelope>
```

SOAP Response

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
    <SOAP-ENV:Header/>
    <S:Body>
        <ns2:lowerResponse xmlns:ns2="http://stringmanip.me.org/">
            <return>to lower method</return>
```



length Method invocation

Method parameter(s)

Type	Value
java.lang.String	i am a long sentence

Method returned

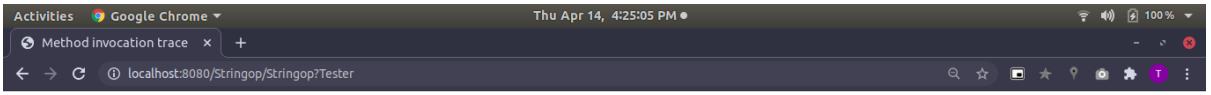
int : "**20**"

SOAP Request

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
    <SOAP-ENV:Header/>
    <S:Body>
        <ns2:length xmlns:ns2="http://stringmanip.me.org/">
            <a>i am a long sentence</a>
        </ns2:length>
    </S:Body>
</S:Envelope>
```

SOAP Response

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
    <SOAP-ENV:Header/>
    <S:Body>
        <ns2:lengthResponse xmlns:ns2="http://stringmanip.me.org/">
            <return>20</return>
```



concat Method invocation

Method parameter(s)

Type	Value
java.lang.String	pi
java.lang.String	ct

Method returned

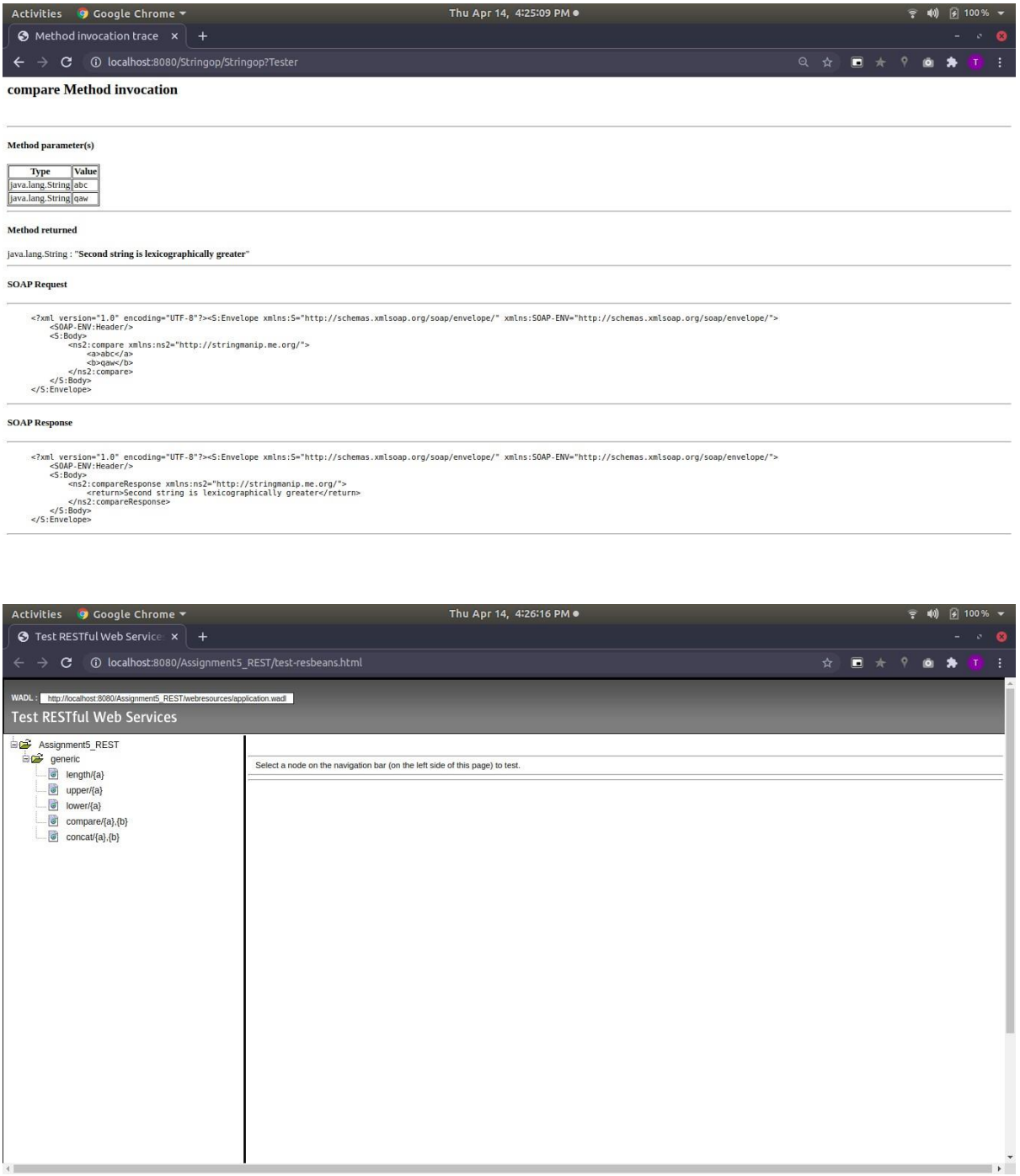
java.lang.String : "**pict**"

SOAP Request

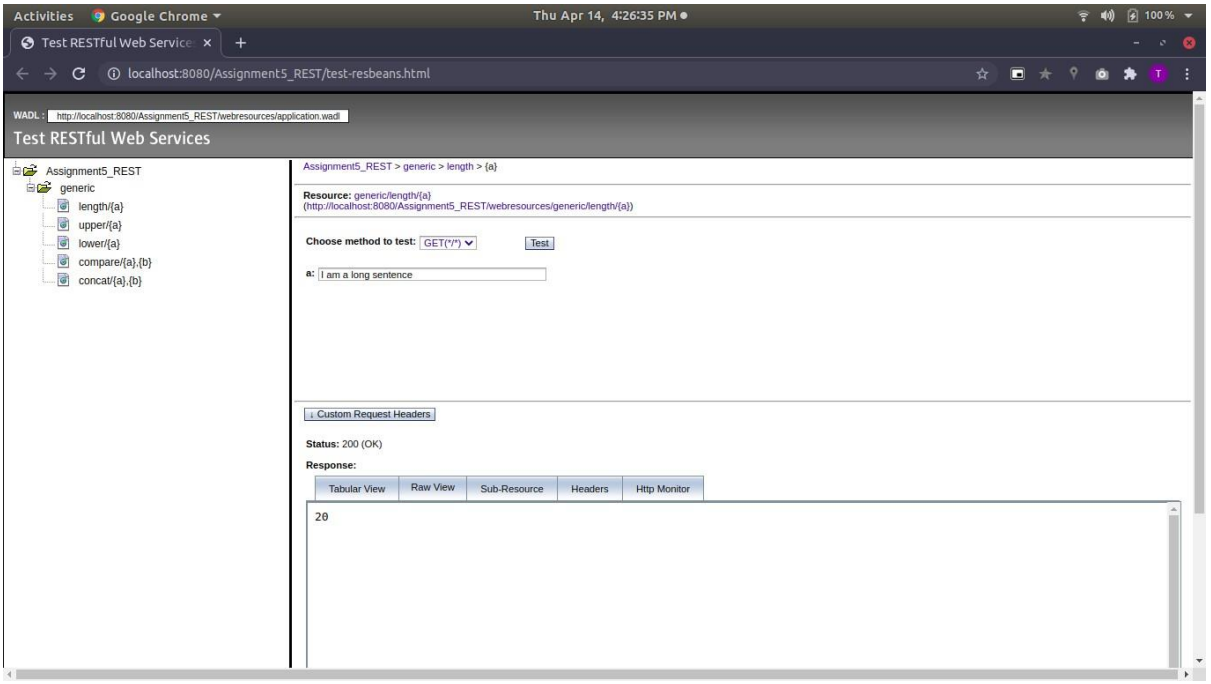
```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
    <SOAP-ENV:Header/>
    <S:Body>
        <ns2:concat xmlns:ns2="http://stringmanip.me.org/">
            <a>pi</a>
            <b>ct</b>
        </ns2:concat>
    </S:Body>
</S:Envelope>
```

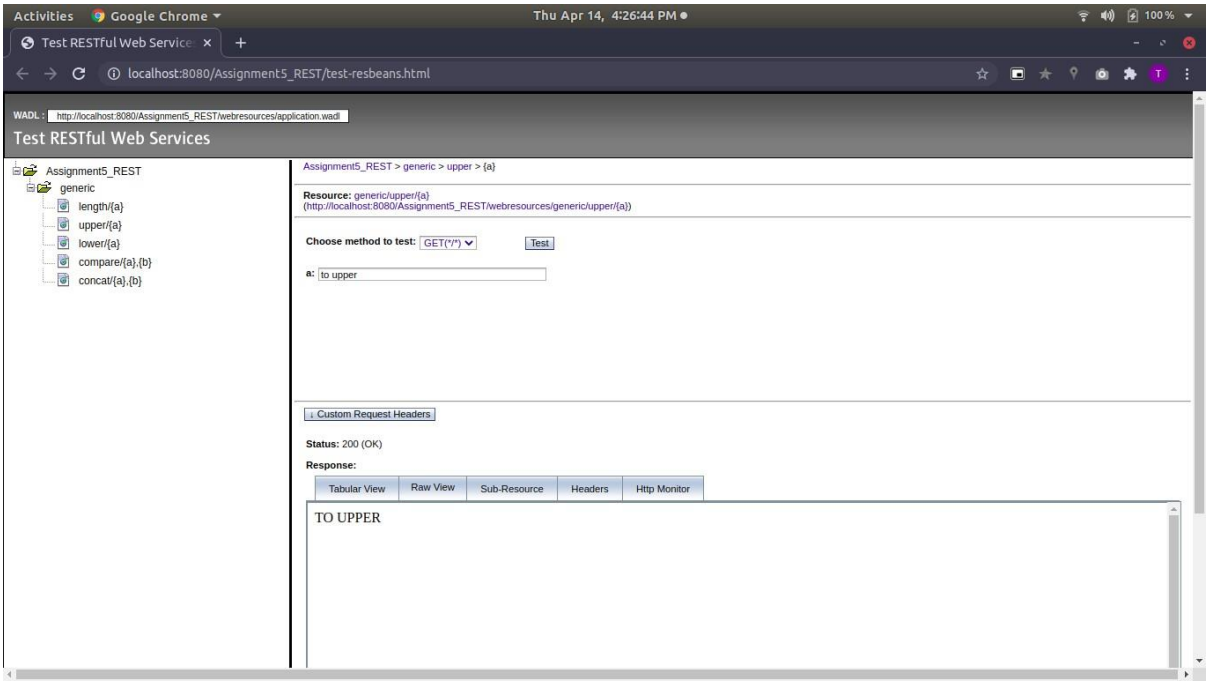
SOAP Response

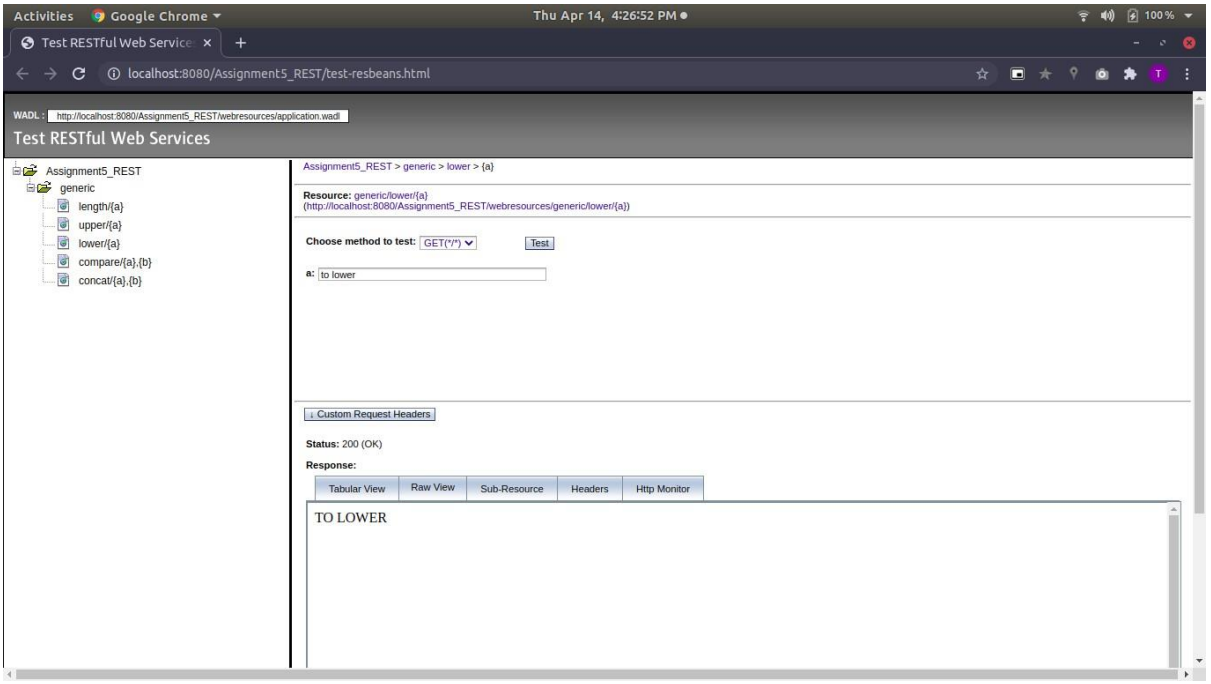
```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
    <SOAP-ENV:Header/>
    <S:Body>
        <ns2:concatResponse xmlns:ns2="http://stringmanip.me.org/">
            <return>pict</return>
        </ns2:concatResponse>
    </S:Body>
</S:Envelope>
```

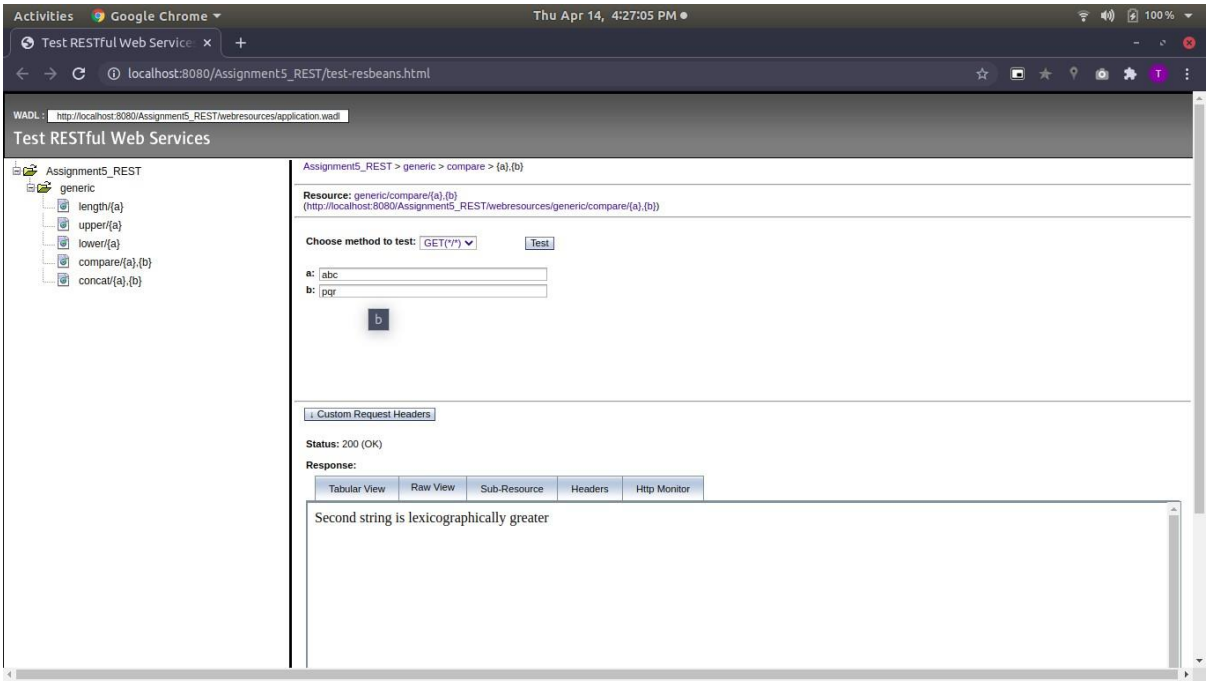

Activities
Google Chrome
Thu Apr 14, 4:25:09 PM
100 %
Method invocation trace
localhost:8080/Stringop/Stringop?Tester
compare Method invocation
Method parameter(s)
Type
Value
java.lang.String
abc
java.lang.String
qaw
Method returned
java.lang.String : "Second string is lexicographically greater"
SOAP Request
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
<SOAP-ENV:Header/>
<S:Body>
<ns2:compare xmlns:ns2="http://stringmanip.me.org/">
<a>abc</a>
qaw
</ns2:compare>
</S:Body>
</S:Envelope>
SOAP Response
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
<SOAP-ENV:Header/>
<S:Body>
<ns2:compareResponse xmlns:ns2="http://stringmanip.me.org/">
<return>Second string is lexicographically greater</return>
</ns2:compareResponse>
</S:Body>
</S:Envelope>

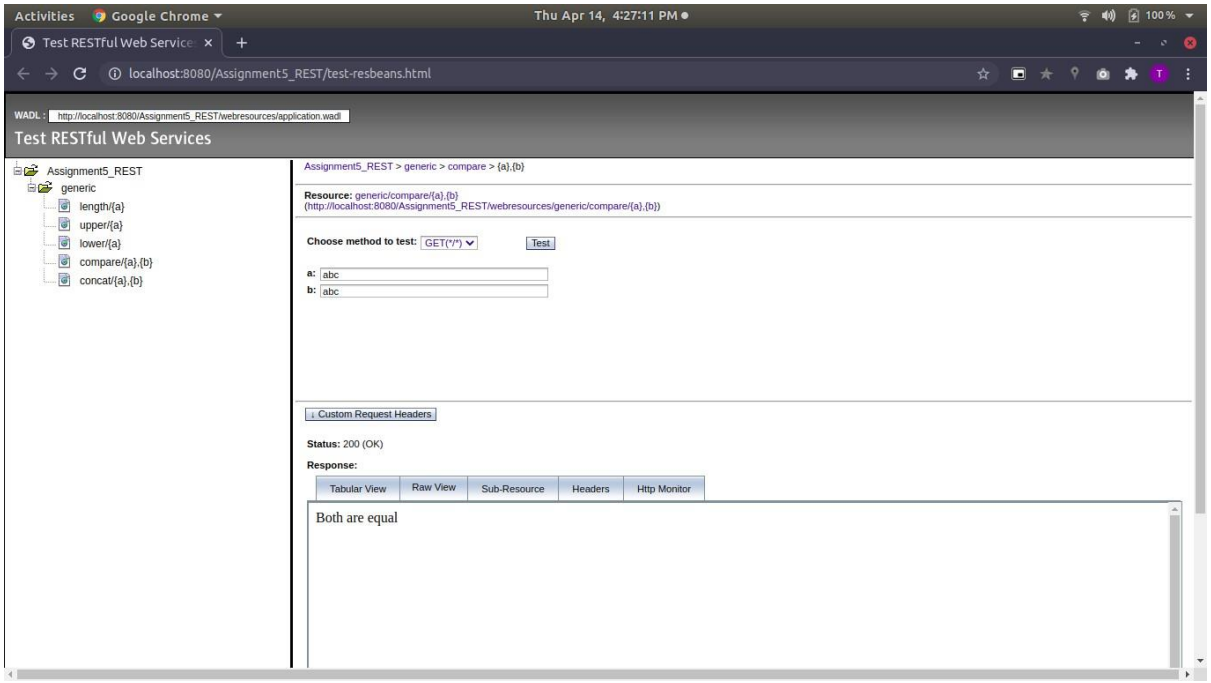
Activities
Google Chrome
Thu Apr 14, 4:26:16 PM
100 %
Test RESTful Web Service
localhost:8080/Assignment5_REST/test-resbeans.html
WADL :
http://localhost:8080/Assignment5_REST/webresources/application.wadl
Test RESTful Web Services
Assignment5_REST
generic
length/{a}
upper/{a}
lower/{a}
compare/{a},{b}
concat/{a},{b}
Select a node on the navigation bar (on the left side of this page) to test.

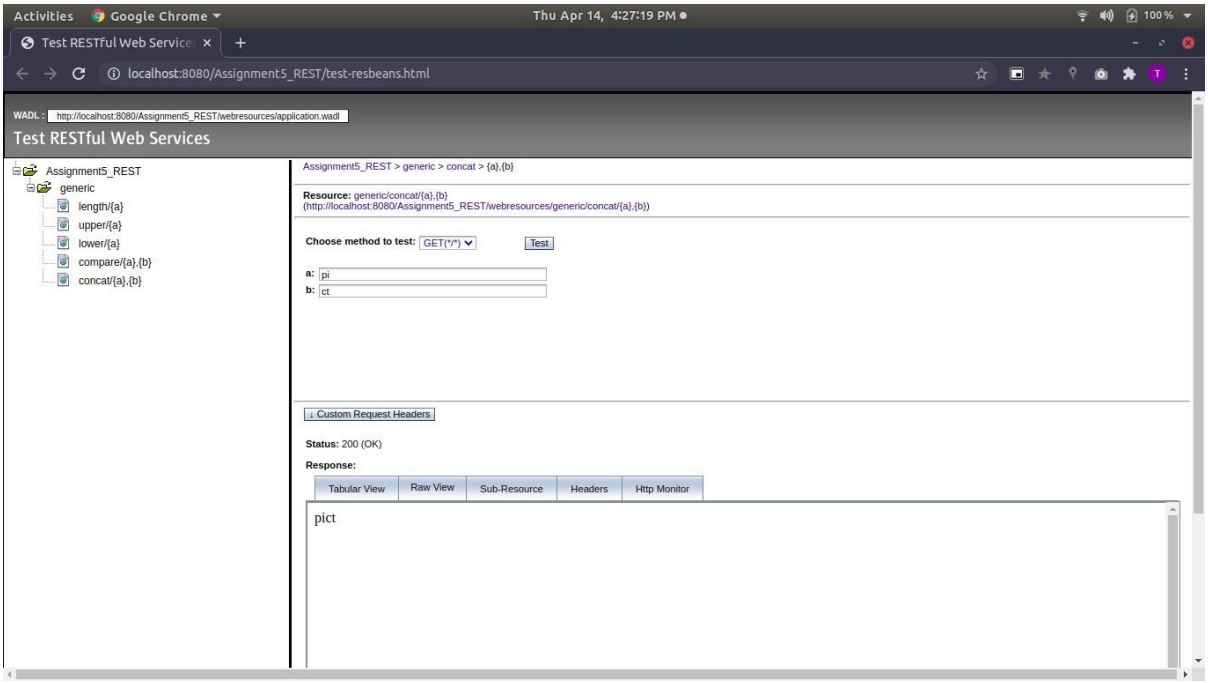

Activities
Google Chrome
Thu Apr 14, 4:26:35 PM
100 %
Test RESTful Web Service
localhost:8080/Assignment5_REST/test-resbeans.html
WADL : http://localhost:8080/Assignment5_REST/webresources/application.wadl
Test RESTful Web Services
Assignment5_REST
generic
length/{a}
upper/{a}
lower/{a}
compare/{a},{b}
concat/{a},{b}
Assignment5_REST > generic > length > {a}
Resource: generic/length/{a}
(http://localhost:8080/Assignment5_REST/webresources/generic/length/{a})
Choose method to test: GET(*/*)
Test
a: I am a long sentence
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
20


Activities
Google Chrome
Thu Apr 14, 4:26:44 PM
100 %
Test RESTful Web Service
localhost:8080/Assignment5_REST/test-resbeans.html
WADL : http://localhost:8080/Assignment5_REST/webresources/application.wadl
Test RESTful Web Services
Assignment5_REST
generic
length/{a}
upper/{a}
lower/{a}
compare/{a},{b}
concat/{a},{b}
Assignment5_REST > generic > upper > {a}
Resource: generic/upper/{a}
(http://localhost:8080/Assignment5_REST/webresources/generic/upper/{a})
Choose method to test: GET(*/*)
Test
a: to upper
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
TO UPPER


Activities
Google Chrome
Thu Apr 14, 4:26:52 PM
100 %
Test RESTful Web Service
localhost:8080/Assignment5_REST/test-resbeans.html
WADL : http://localhost:8080/Assignment5_REST/webresources/application.wadl
Test RESTful Web Services
Assignment5_REST
generic
length/{a}
upper/{a}
lower/{a}
compare/{a},{b}
concat/{a},{b}
Assignment5_REST > generic > lower > {a}
Resource: generic/lower/{a}
(http://localhost:8080/Assignment5_REST/webresources/generic/lower/{a})
Choose method to test: GET(*/*)
Test
a: to lower
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
TO LOWER


Activities
Google Chrome
Thu Apr 14, 4:27:05 PM
100 %
Test RESTful Web Service
localhost:8080/Assignment5_REST/test-resbeans.html
WADL : http://localhost:8080/Assignment5_REST/webresources/application.wadl
Test RESTful Web Services
Assignment5_REST
generic
length/{a}
upper/{a}
lower/{a}
compare/{a},{b}
concat/{a},{b}
Assignment5_REST > generic > compare > {a},{b}
Resource: generic/compare/{a},{b}
(http://localhost:8080/Assignment5_REST/webresources/generic/compare/{a},{b})
Choose method to test: GET(*/*)
Test
a: abc
b: pqr
b
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
Second string is lexicographically greater


Activities
Google Chrome
Thu Apr 14, 4:27:11 PM
100 %
Test RESTful Web Service
localhost:8080/Assignment5_REST/test-resbeans.html
WADL : http://localhost:8080/Assignment5_REST/webresources/application.wadl
Test RESTful Web Services
Assignment5_REST
generic
length/{a}
upper/{a}
lower/{a}
compare/{a},{b}
concat/{a},{b}
Assignment5_REST > generic > compare > {a},{b}
Resource: generic/compare/{a},{b}
(http://localhost:8080/Assignment5_REST/webresources/generic/compare/{a},{b})
Choose method to test: GET(*/*)
Test
a: abc
b: abc
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
Both are equal


Activities
Google Chrome
Thu Apr 14, 4:27:19 PM
100 %
Test RESTful Web Service
localhost:8080/Assignment5_REST/test-resbeans.html
WADL : http://localhost:8080/Assignment5_REST/webresources/application.wadl
Test RESTful Web Services
Assignment5_REST
generic
length/{a}
upper/{a}
lower/{a}
compare/{a},{b}
concat/{a},{b}
Assignment5_REST > generic > concat > {a},{b}
Resource: generic/concat/{a},{b}
(http://localhost:8080/Assignment5_REST/webresources/generic/concat/{a},{b})
Choose method to test: GET(*/*)
Test
a: pi
b: ct
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
pict