SIES College of Arts, Science & Commerce
RISE WITH EDUCATION
NAAC REACCREDITED - 'A' GRADE
ISO 9001 : 2008

S.I.E.S College of Arts, Science and Commerce
Sion(W), Mumbai – 400 022.

CERTIFICATE

This is to certify that **Mr. Asher Livingston** Roll No. **TCS2223010** Has successfully completed the necessary course of experiments in the subject of **Web Services** during the academic year **2022 – 2023** complying with the requirements of **University of Mumbai**,

for the course of **T.Y. BSc. Computer Science [Semester-5]**

Prof. In-Charge
Prof. Maya Nair
(Web Services)

Examiner's Signature & Date:

Head of the Department

Prof. Manoj Singh

College Seal And Date

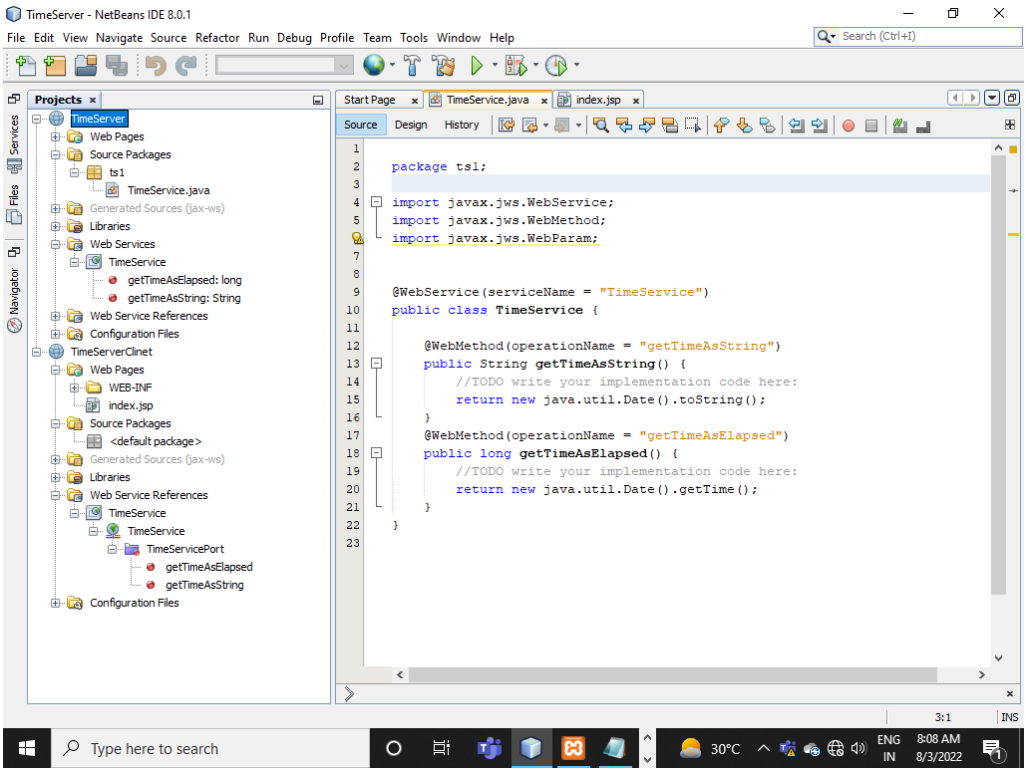
Web service practical no 1
TCS2223010

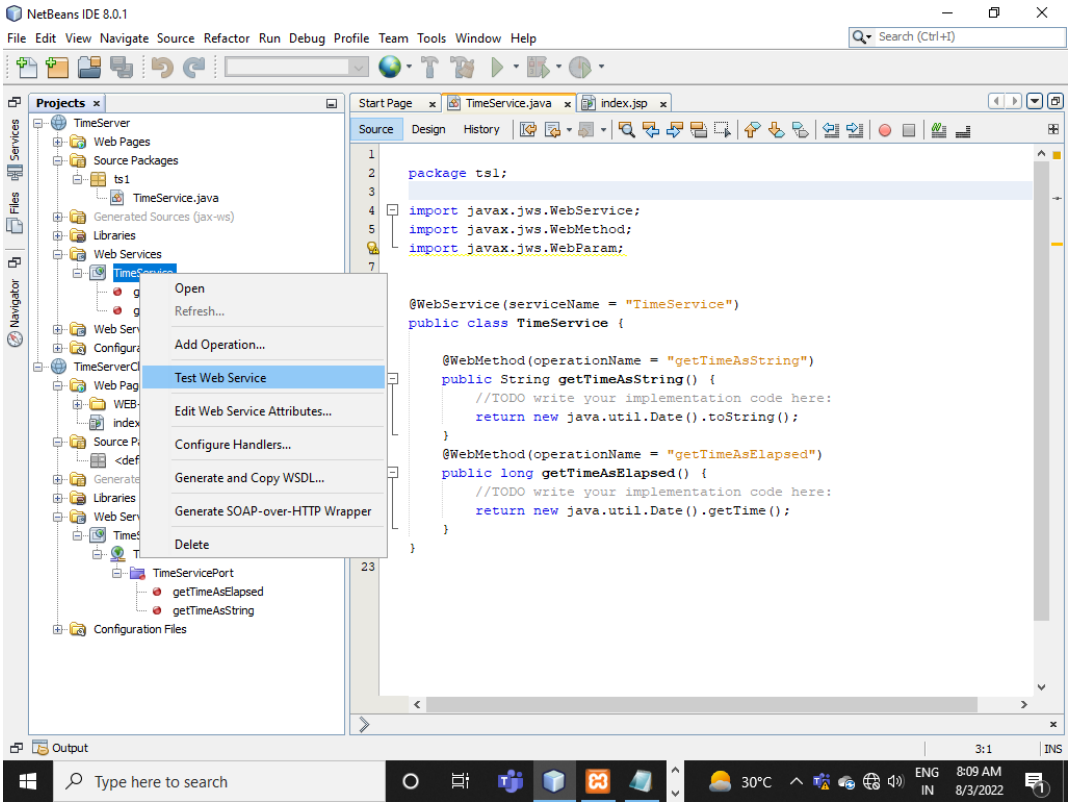
Aim: Create a timeserver web service in java and consume it in other technologies like PHP and .net.

Code:

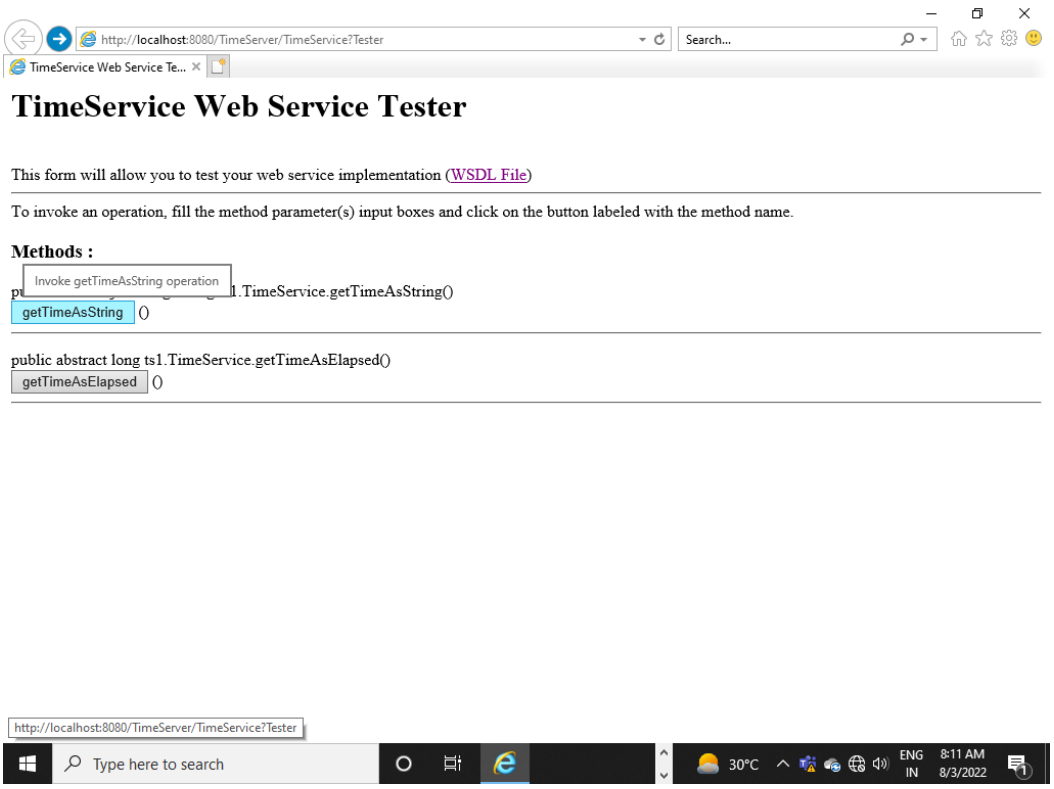
timeservice.java:

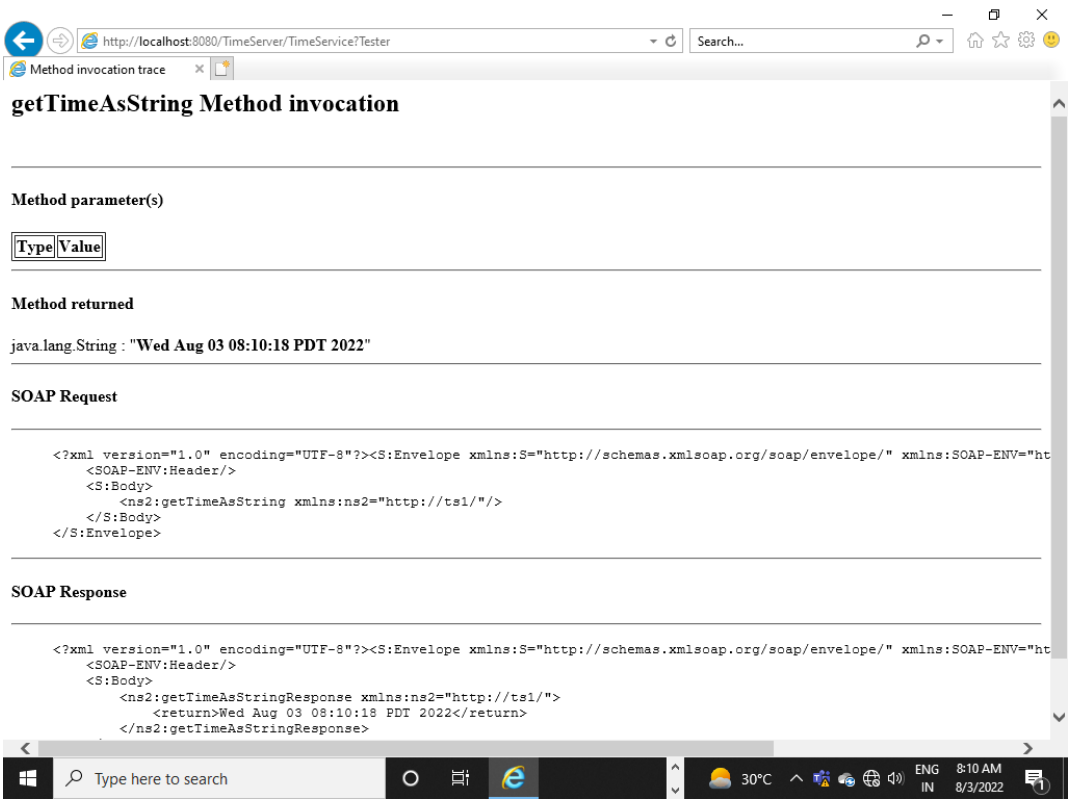
```
package ts1;
import javax.jws.webservice;
import javax.jws.webmethod;
import javax.jws.webparam;

@webservice(servicename = "timeservice")
public class timeservice {

    @webmethod(operationname = "gettimeasstring")
    public string gettimeasstring() {
        //todo write your implementation code here:
        return new java.util.date().tostring();
    }
    @webmethod(operationname = "gettimeaselapsed")
    public long gettimeaselapsed() {
        //todo write your implementation code here:
        return new java.util.date().gettime();
    }
}
```


TimeServer - NetBeans IDE 8.0.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Search (Ctrl+I)
Projects
TimeServer
Web Pages
Source Packages
ts1
TimeService.java
Generated Sources (jax-ws)
Libraries
Web Services
TimeService
getTimeAsElapsed: long
getTimeAsString: String
Web Service References
Configuration Files
TimeServerClinet
Web Pages
WEB-INF
index.jsp
Source Packages
<default package>
Generated Sources (jax-ws)
Libraries
Web Service References
TimeService
TimeService
TimeServicePort
getTimeAsElapsed
getTimeAsString
Configuration Files
Start Page
TimeService.java
index.jsp
Source
Design
History
package ts1;
import javax.jws.WebService;
import javax.jws.WebMethod;
import javax.jws.WebParam;
@WebService(serviceName = "TimeService")
public class TimeService {
@WebMethod(operationName = "getTimeAsString")
public String getTimeAsString() {
//TODO write your implementation code here:
return new java.util.Date().toString();
}
@WebMethod(operationName = "getTimeAsElapsed")
public long getTimeAsElapsed() {
//TODO write your implementation code here:
return new java.util.Date().getTime();
}
}
3:1
INS
Type here to search
30°C
ENG
IN
8:08 AM
8/3/2022

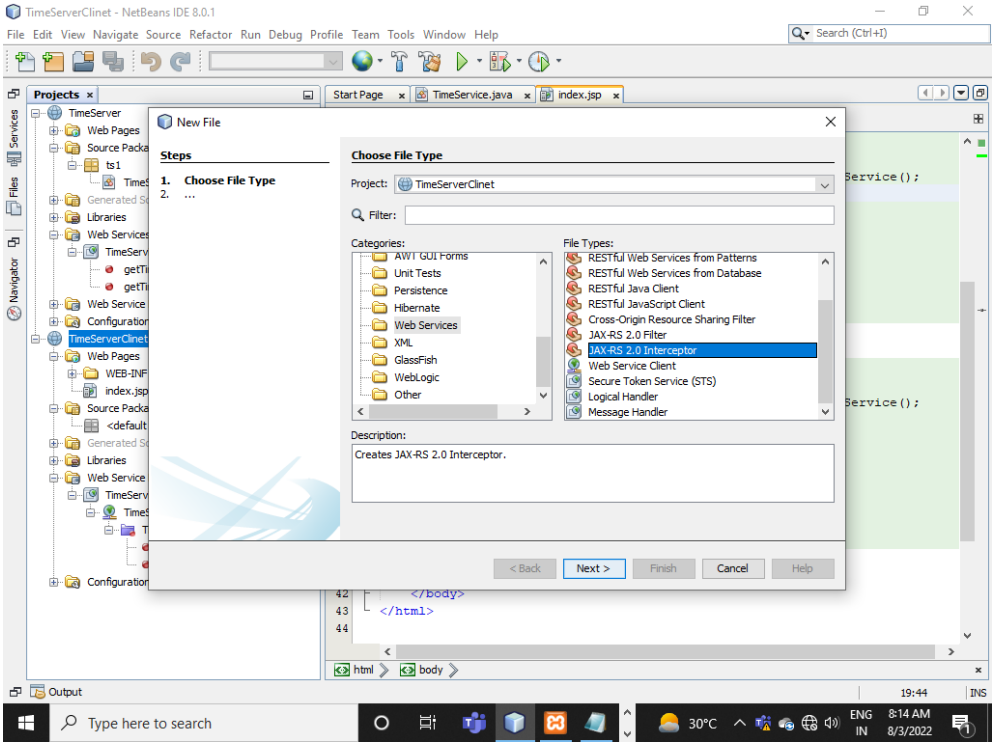

NetBeans IDE 8.0.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Search (Ctrl+I)
Projects
TimeServer
Web Pages
Source Packages
ts1
TimeService.java
Generated Sources (jax-ws)
Libraries
Web Services
Open
Refresh...
Add Operation...
Test Web Service
Edit Web Service Attributes...
Configure Handlers...
Generate and Copy WSDL...
Generate SOAP-over-HTTP Wrapper
Delete
TimeServicePort
getTimeAsElapsed
getTimeAsString
Configuration Files
Start Page
TimeService.java
index.jsp
Source
Design
History
package ts1;
import javax.jws.WebService;
import javax.jws.WebMethod;
import javax.jws.WebParam;
@WebService(serviceName = "TimeService")
public class TimeService {
@WebMethod(operationName = "getTimeAsString")
public String getTimeAsString() {
//TODO write your implementation code here:
return new java.util.Date().toString();
}
@WebMethod(operationName = "getTimeAsElapsed")
public long getTimeAsElapsed() {
//TODO write your implementation code here:
return new java.util.Date().getTime();
}
}
Output
3:1
INS
Type here to search
30°C
ENG
IN
8:09 AM
8/3/2022

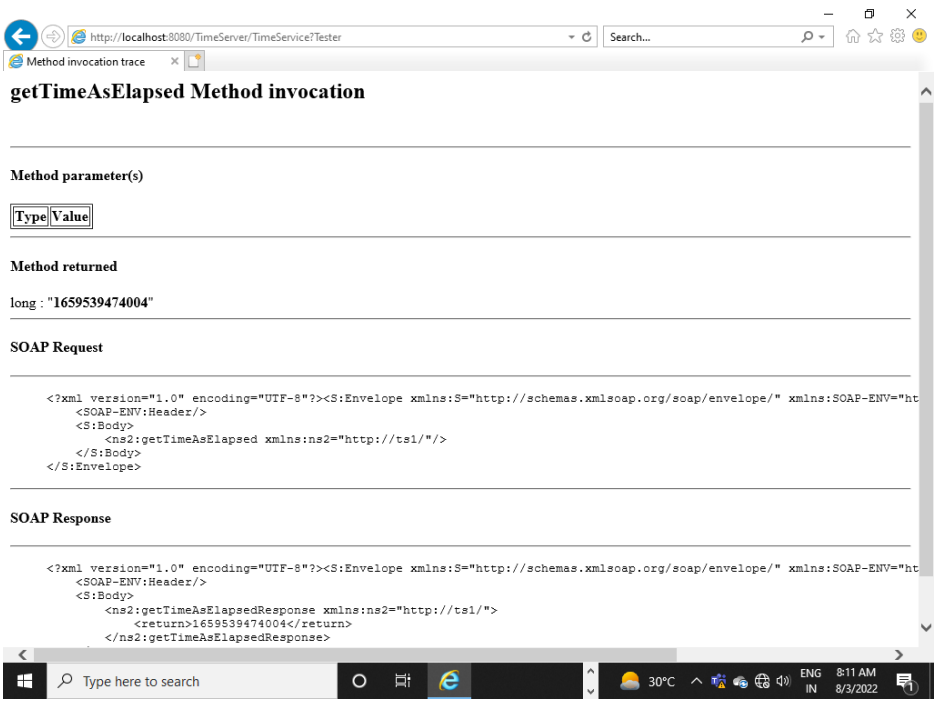
Output:


http://localhost:8080/TimeServer/TimeService?Tester
Search...
TimeService Web Service Te...
TimeService Web Service Tester
This form will allow you to test your web service implementation (WSDL File)
To invoke an operation, fill the method parameter(s) input boxes and click on the button labeled with the method name.
Methods :
Invoke getTimeAsString operation
getTimeAsString
()
public abstract long ts1.TimeService.getTimeAsElapsed()
getTimeAsElapsed
()
http://localhost:8080/TimeServer/TimeService?Tester
Type here to search
30°C
ENG
IN
8:11 AM
8/3/2022


http://localhost:8080/TimeServer/TimeService?Tester
Search...
Method invocation trace
getTimeAsString Method invocation
Method parameter(s)
Type
Value
Method returned
java.lang.String : "Wed Aug 03 08:10:18 PDT 2022"
SOAP Request
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="ht
<SOAP-ENV:Header/>
<S:Body>
<ns2:getTimeAsString xmlns:ns2="http://ts1/"/>
</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="ht
<SOAP-ENV:Header/>
<S:Body>
<ns2:getTimeAsStringResponse xmlns:ns2="http://ts1/">
<return>Wed Aug 03 08:10:18 PDT 2022</return>
</ns2:getTimeAsStringResponse>
Type here to search
30°C
ENG
IN
8:10 AM
8/3/2022

webserver client creation in tserverclient:



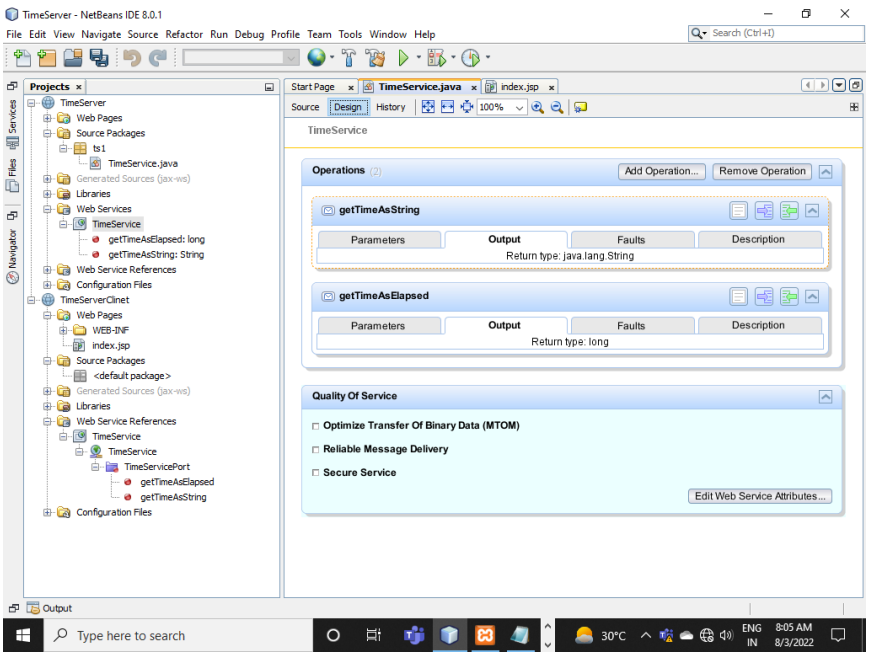


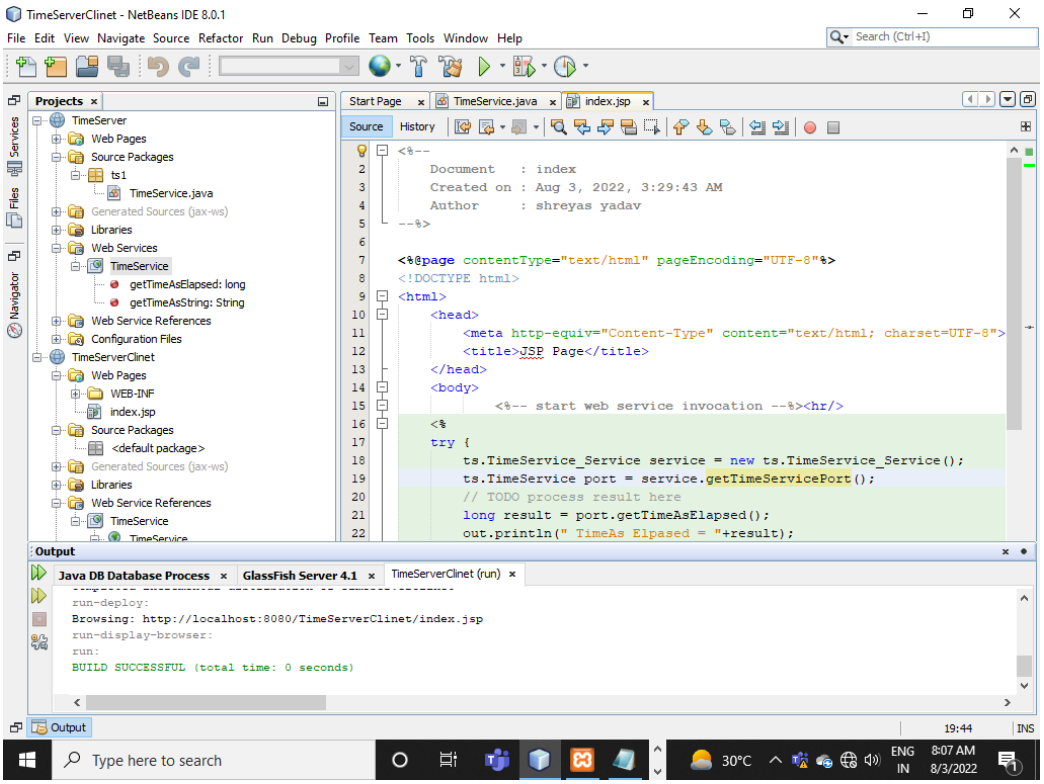
index.jsp:

```
<%--
    document   : index
    created on : aug 3, 2022, 3:29:43 am
    author     : shreyas yadav
--%>
<%@page contenttype="text/html" pageencoding="utf-8"%>
<!doctype html>
<html>
    <head>
        <meta http-equiv="content-type" content="text/html; charset=utf-8">
        <title>jsp page</title>
    </head>
    <body>
            <%-- start web service invocation --%><hr/>
    <%
    try {
        ts.timeservice_service service = new ts.timeservice_service();
        ts.timeservice port = service.gettimeserviceport();
        // todo process result here
        long result = port.gettimeaselapsed();
        out.println(" timeas elpased = "+result);
    } catch (exception ex) {
        // todo handle custom exceptions here
    }
    %>
    <%-- end web service invocation --%><hr/>
    <%-- start web service invocation --%><hr/>
```

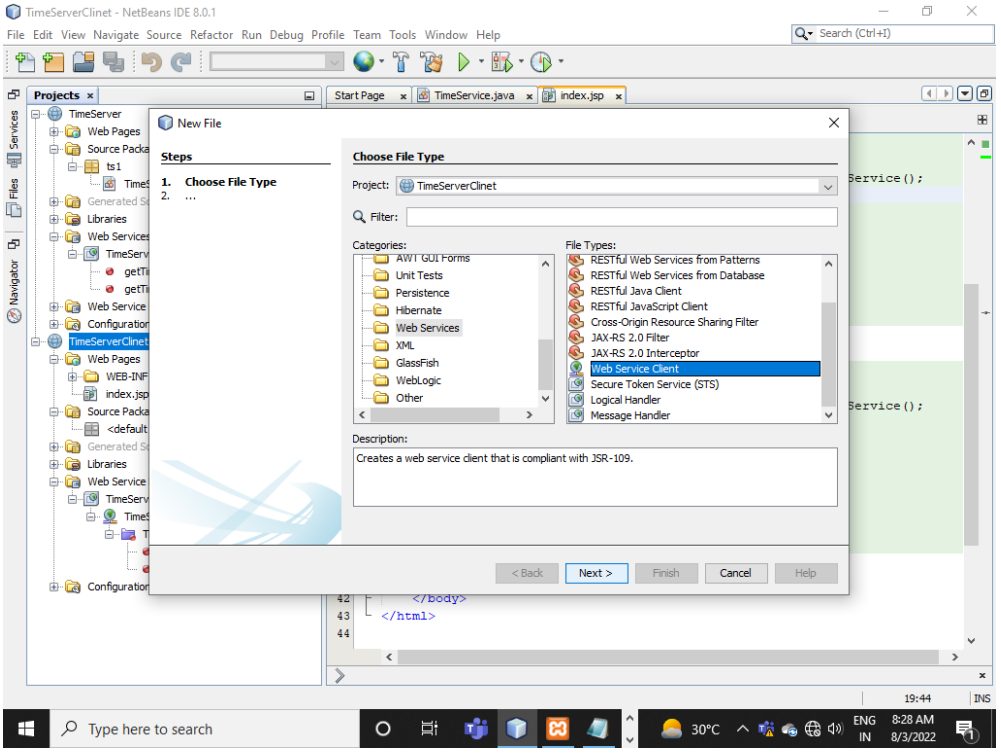
```
    <%
    try {
        ts.timeservice_service service = new ts.timeservice_service();
        ts.timeservice port = service.gettimeserviceport();
        // todo process result here
        java.lang.string result = port.gettimeasstring();
        out.println(" time as string = "+result);
    } catch (exception ex) {
    }
    %>
    <%-- end web service invocation --%><hr/>
    </body>
</html>
```

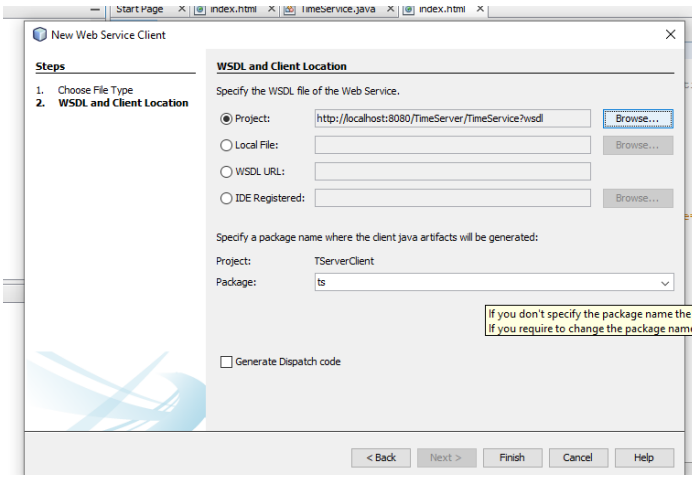
design:

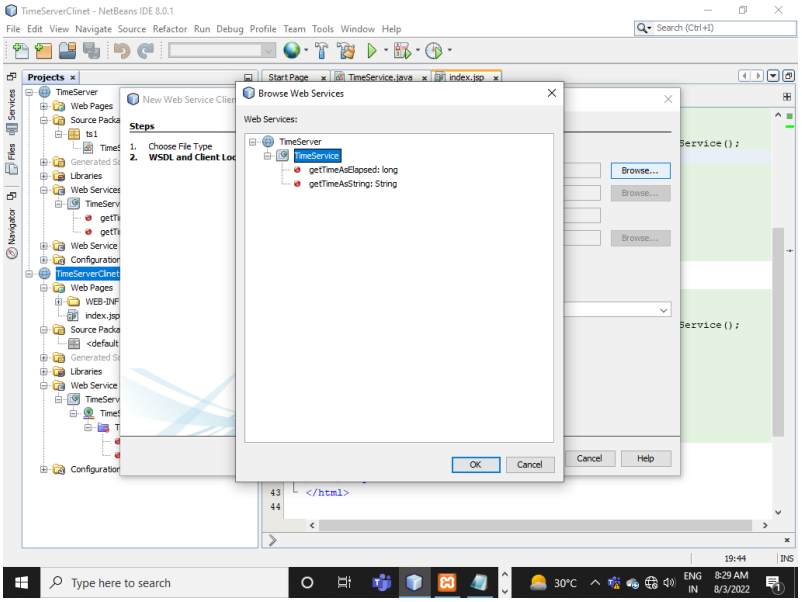




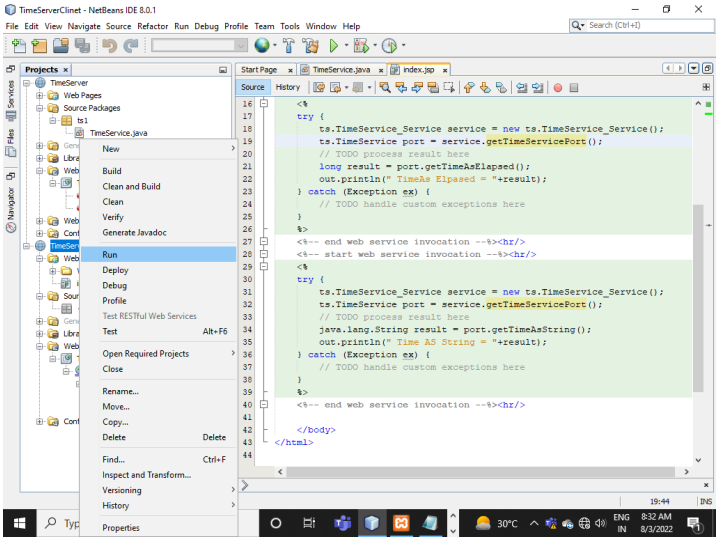
create web service client:



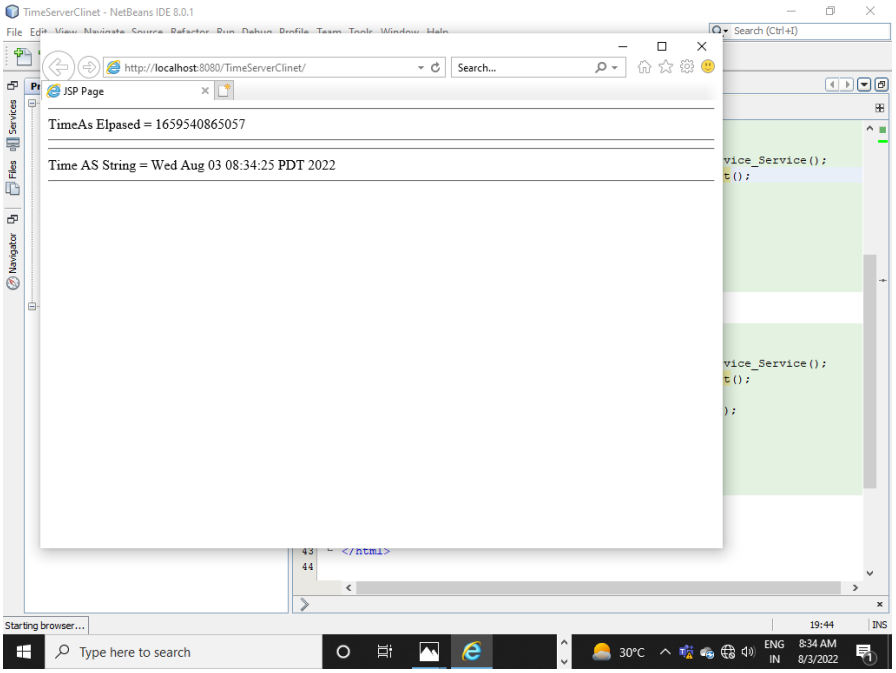




timeserverclient



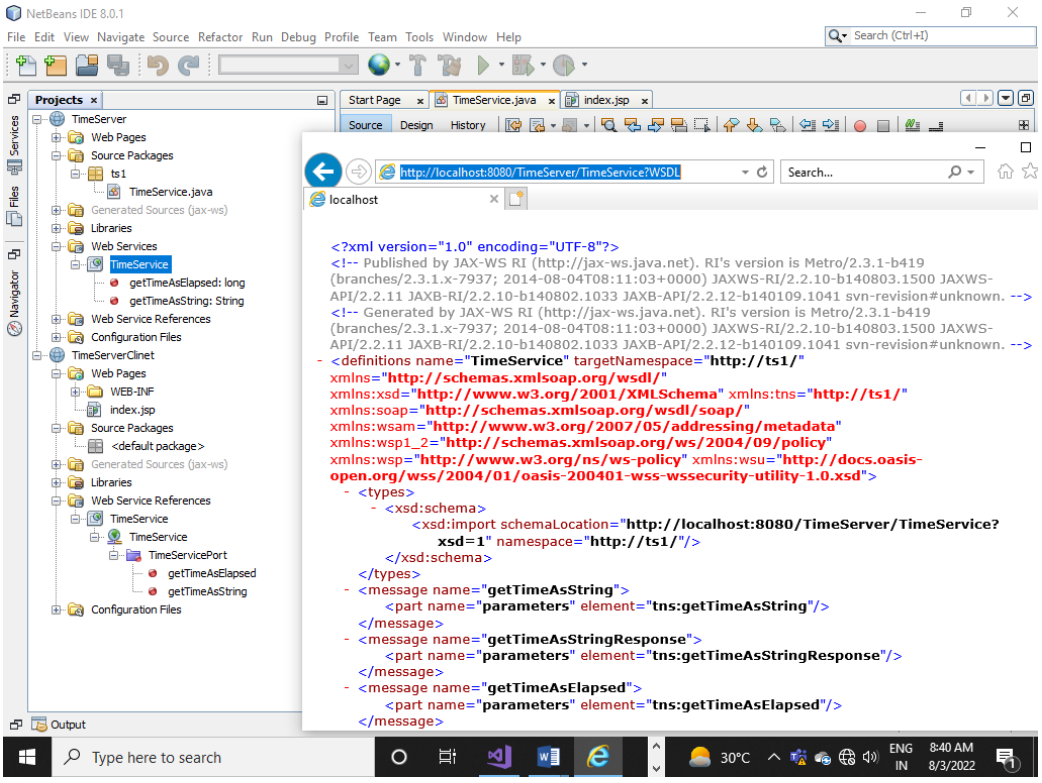
output:



wsdl url:

http://localhost:8080/timeserver/timeservice?wsdl

test web service:

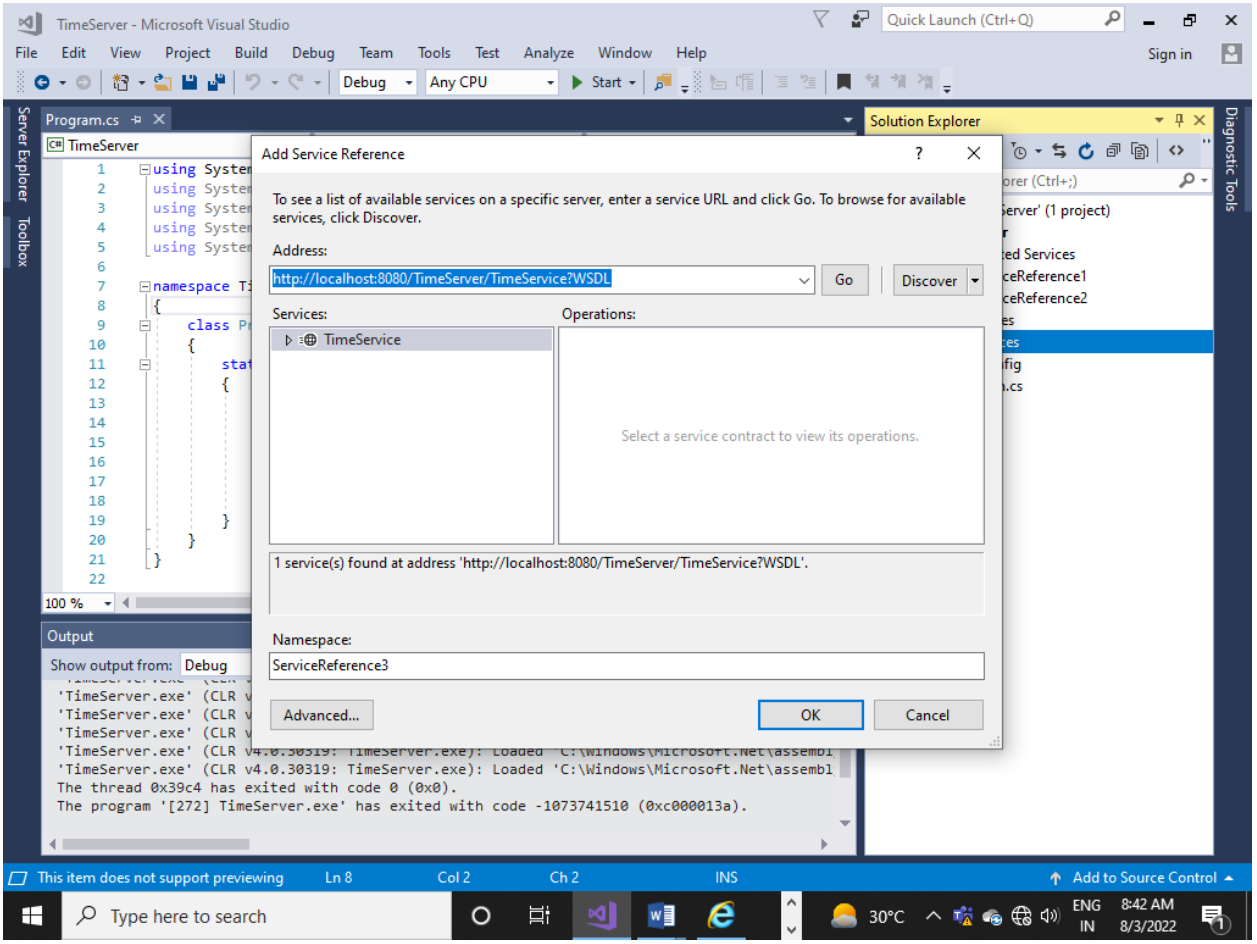


visual studio:

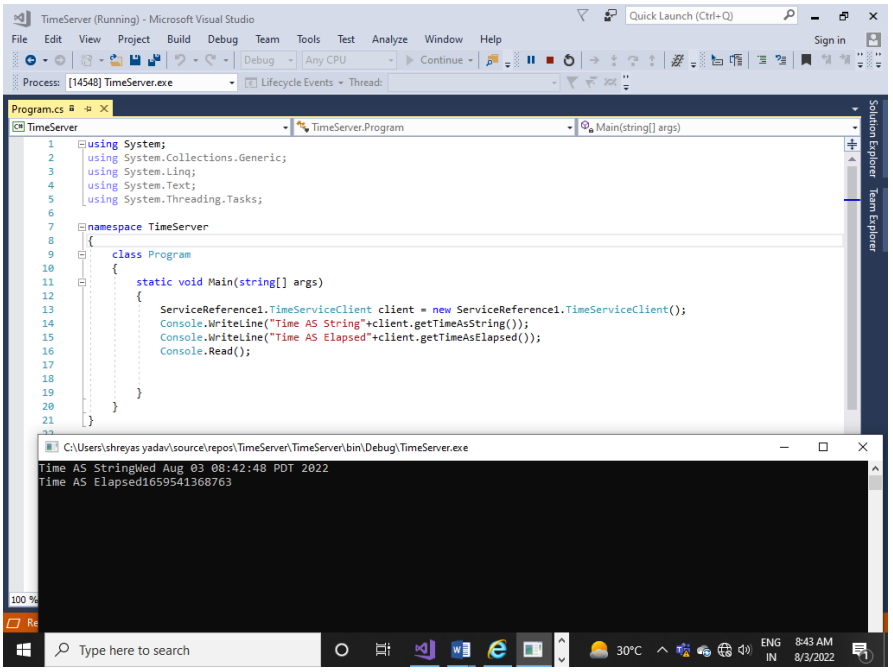
code:

program.cs:

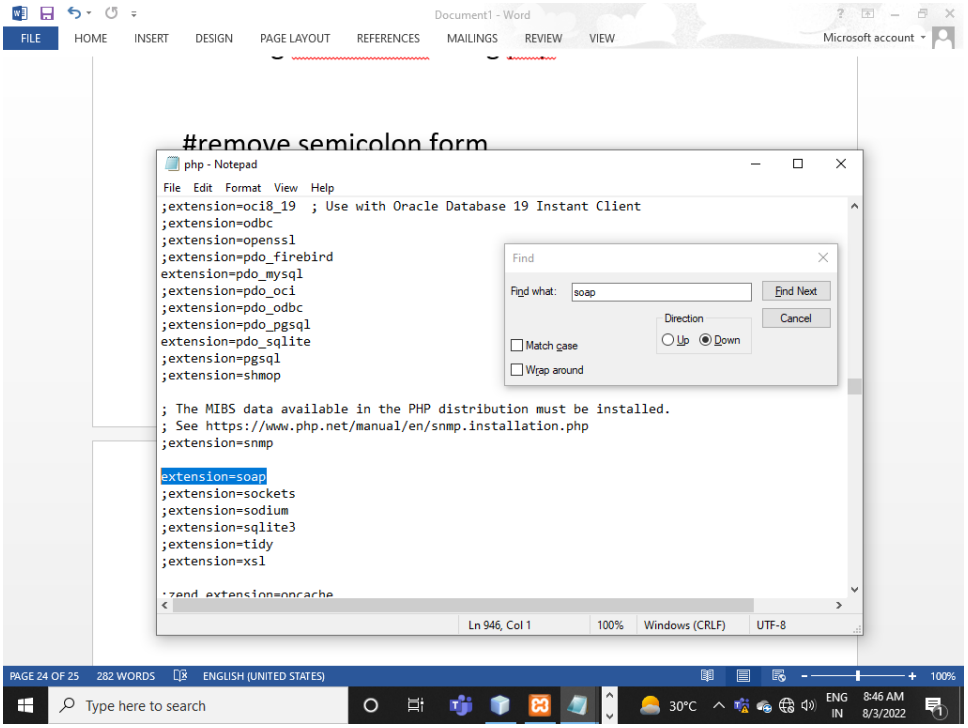
```
using system;
using system.collections.generic;
using system.linq;
using system.text;
using system.threading.tasks;

namespace timeserver
{
    class program
    {
        static void main(string[] args)
        {
            servicereference1.timeserviceclient client = new
servicereference1.timeserviceclient();
            console.writeline("time as string"+client.gettimeasstring());
            console.writeline("time as elapsed"+client.gettimeaselapsed());
            console.read();



        }
    }
}
```


TimeServer - Microsoft Visual Studio
Add Service Reference
To see a list of available services on a specific server, enter a service URL and click Go. To browse for available services, click Discover.
Address:
http://localhost:8080/TimeServer/TimeService?WSDL
Go
Discover
Services:
Operations:
TimeService
Select a service contract to view its operations.
1 service(s) found at address 'http://localhost:8080/TimeServer/TimeService?WSDL'.
Namespace:
ServiceReference3
Advanced...
OK
Cancel
Solution Explorer
Output
Show output from: Debug
The thread 0x39c4 has exited with code 0 (0x0).
The program '[272] TimeServer.exe' has exited with code -1073741510 (0xc000013a).
Type here to search

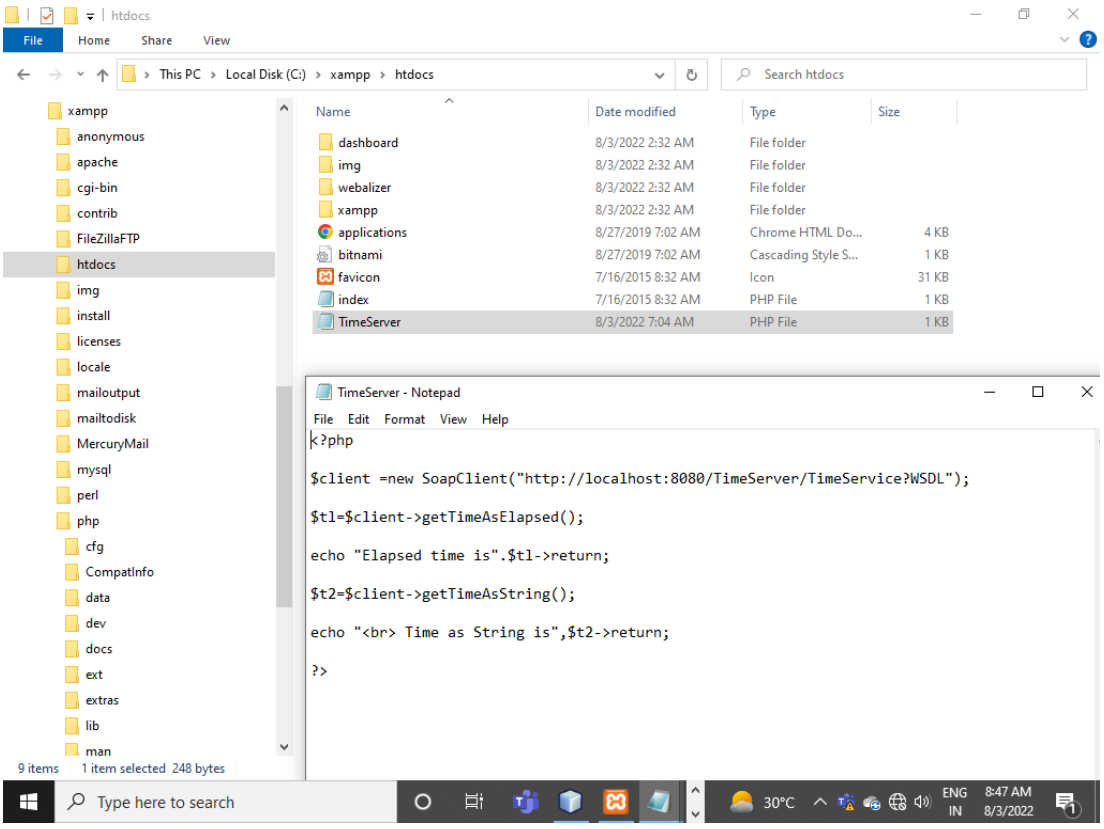
output:


TimeServer (Running) - Microsoft Visual Studio
Program.cs
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace TimeServer
{
class Program
{
static void Main(string[] args)
{
ServiceReference1.TimeServiceClient client = new ServiceReference1.TimeServiceClient();
Console.WriteLine("Time AS String"+client.getTimeAsString());
Console.WriteLine("Time AS Elapsed"+client.getTimeAsElapsed());
Console.Read();
}
}
}
C:\Users\shreyas yadav\source\repos\TimeServer\TimeServer\bin\Debug\TimeServer.exe
Time AS StringWed Aug 03 08:42:48 PDT 2022
Time AS Elapsed1659541368763
Type here to search

creating webservice using php:

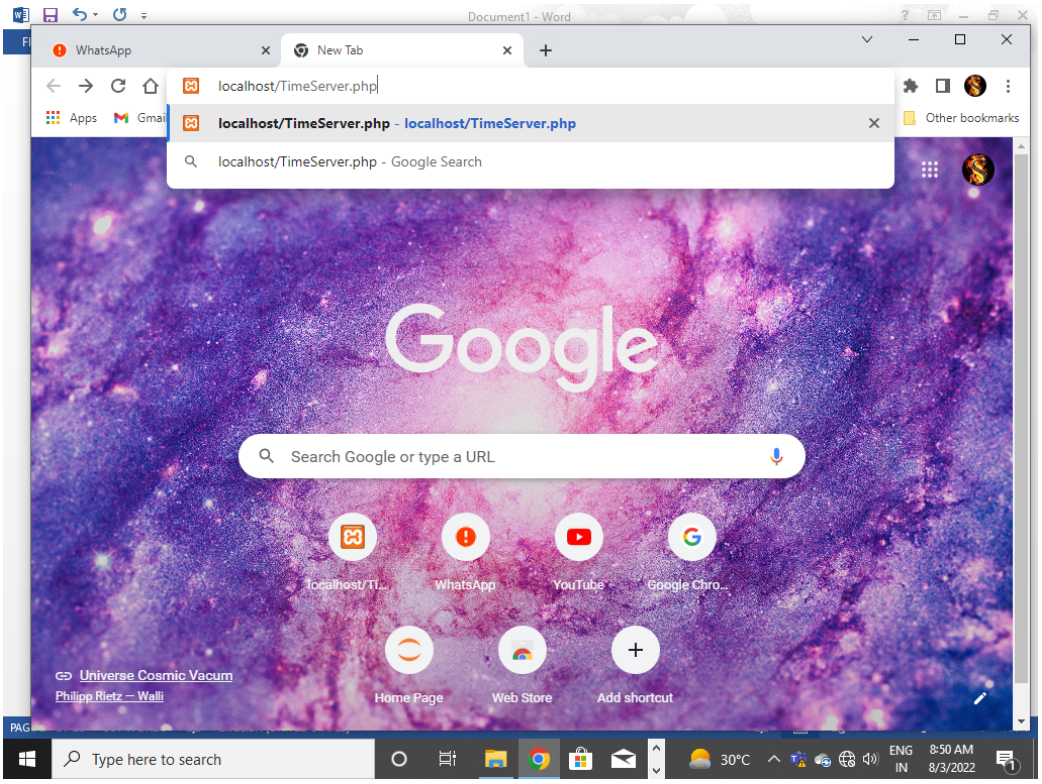


#remove semicolon form extension=soap



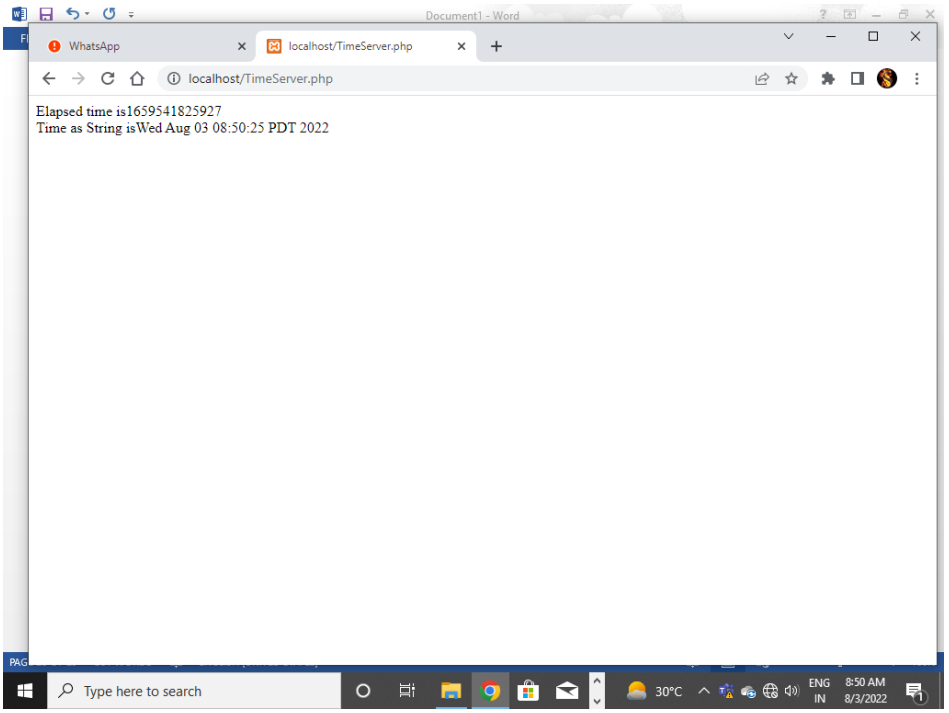
timeserver.php:

```
<?php

$client =new
soapclient("http://localhost:8080/timeserver/timeservice?wsdl");

$tl=$client->gettimeaselapsed();

echo "elapsed time is".$tl->return;

$t2=$client->gettimeasstring();

echo "<br> time as string is",$t2->return;

?>
```

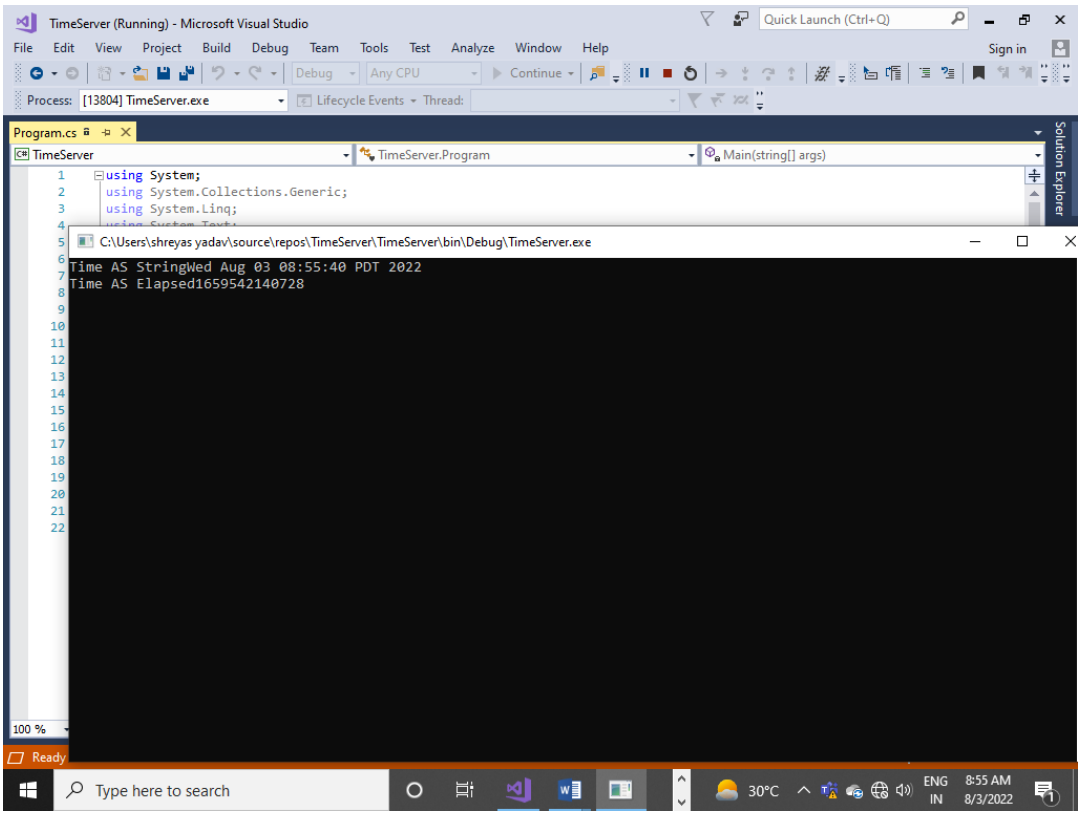


output:

in php



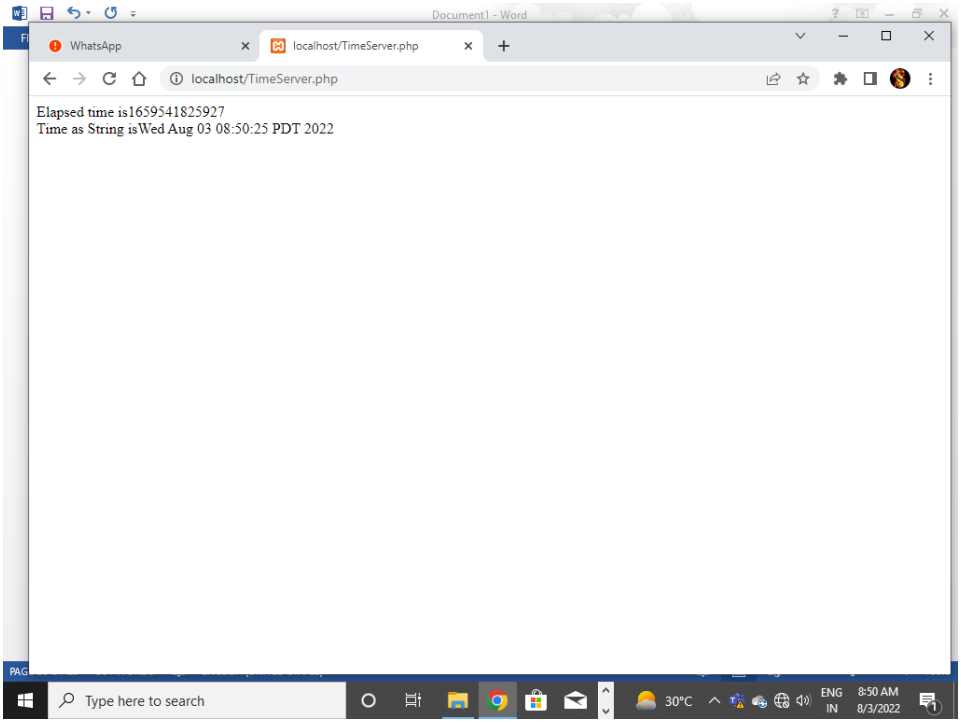
in visual studio



in net beans


http://localhost:8080/TimeServerClinet/index.jsp
Search...
JSP Page
TimeAs Elpased = 1659542180208
Time AS String = Wed Aug 03 08:56:20 PDT 2022


Type here to search
30°C
ENG
IN
8:56 AM
8/3/2022


Document1 - Word
WhatsApp
localhost/TimeServer.php
localhost/TimeServer.php
Elapsed time is1659541825927
Time as String isWed Aug 03 08:50:25 PDT 2022
Type here to search
30°C
ENG
IN
8:50 AM
8/3/2022

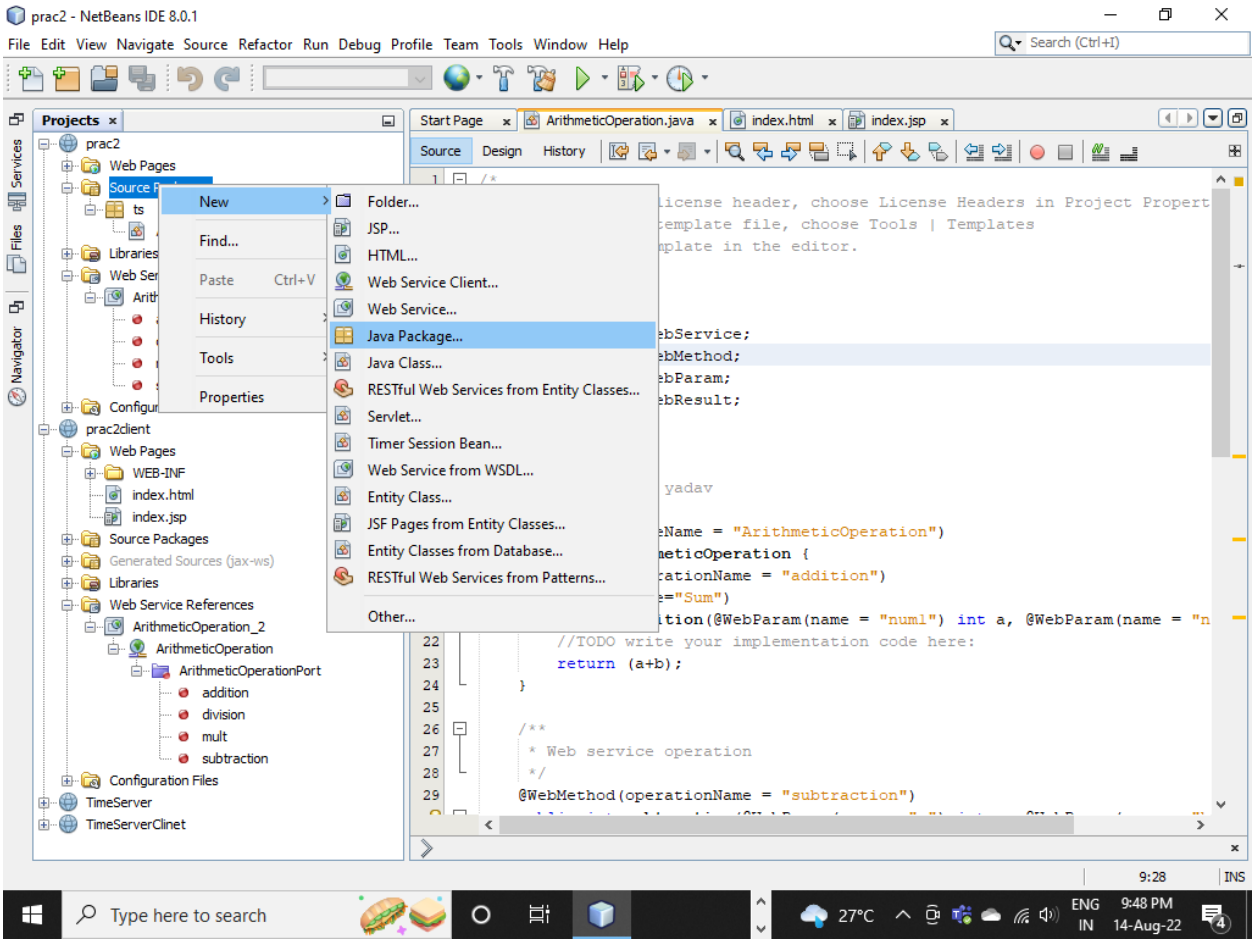
Web service practical no 2
TCS2223010
aim:

create a java ws for performing basic calculations like addition, subtraction ,multiplication and division and create a java client that consumes the same.

arithmetic operations:

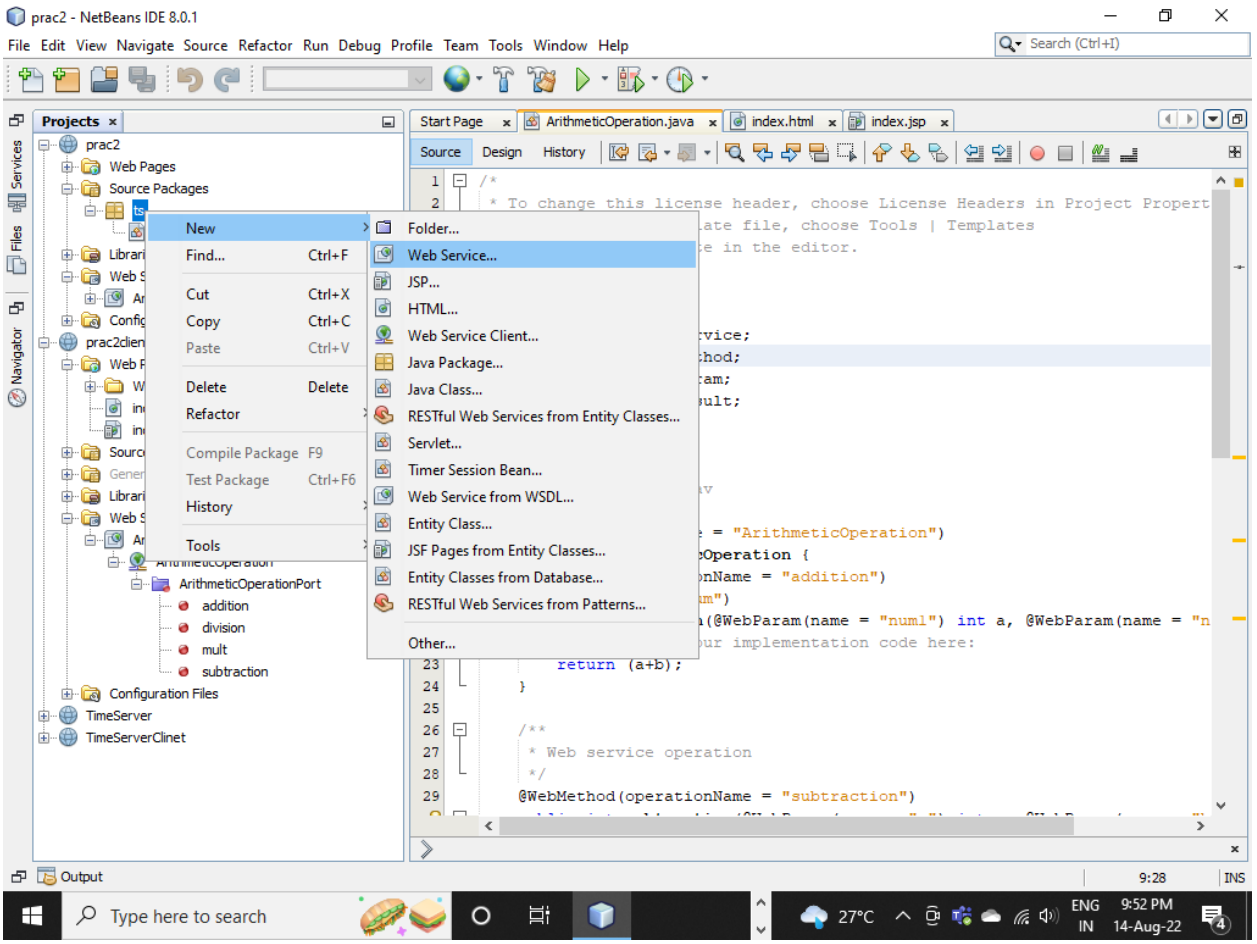
steps:

creating package:



package name ts:

creating java page:



code:

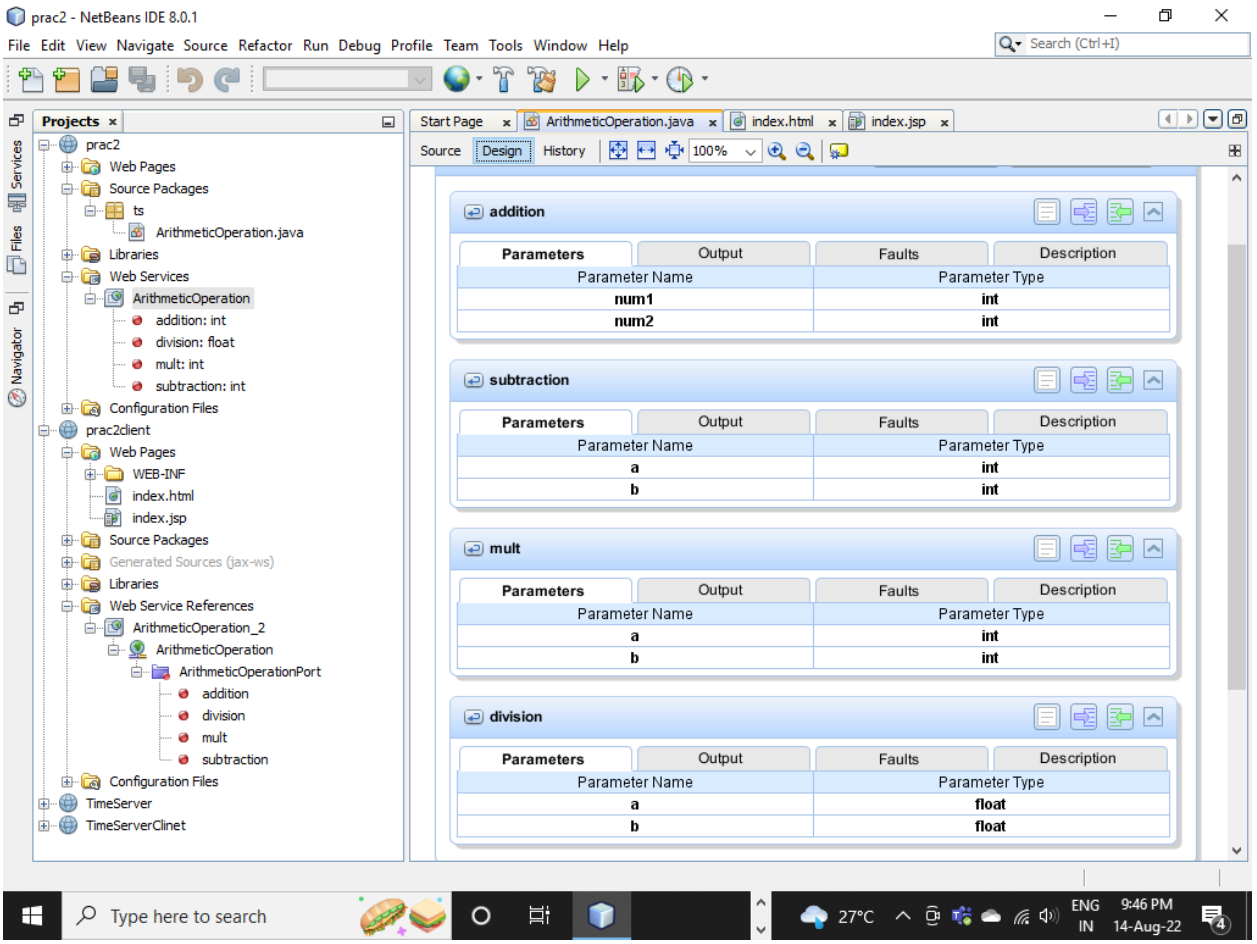
arithmetic operation.java:

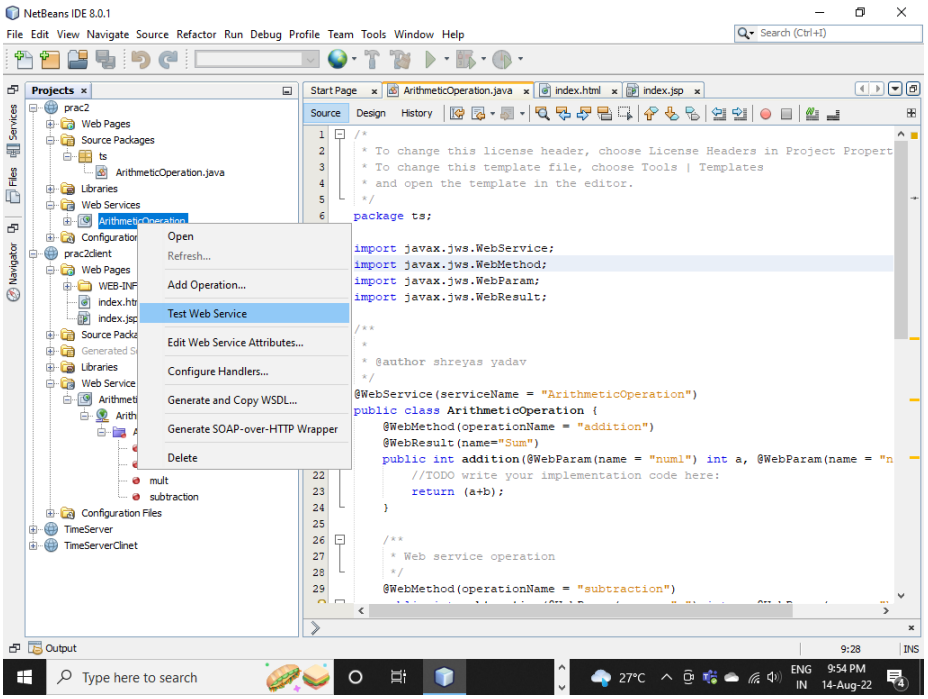
```
/*
 * to change this license header, choose license headers in project properties.
 * to change this template file, choose tools | templates
 * and open the template in the editor.
 */
package ts;

import javax.jws.webservice;
```

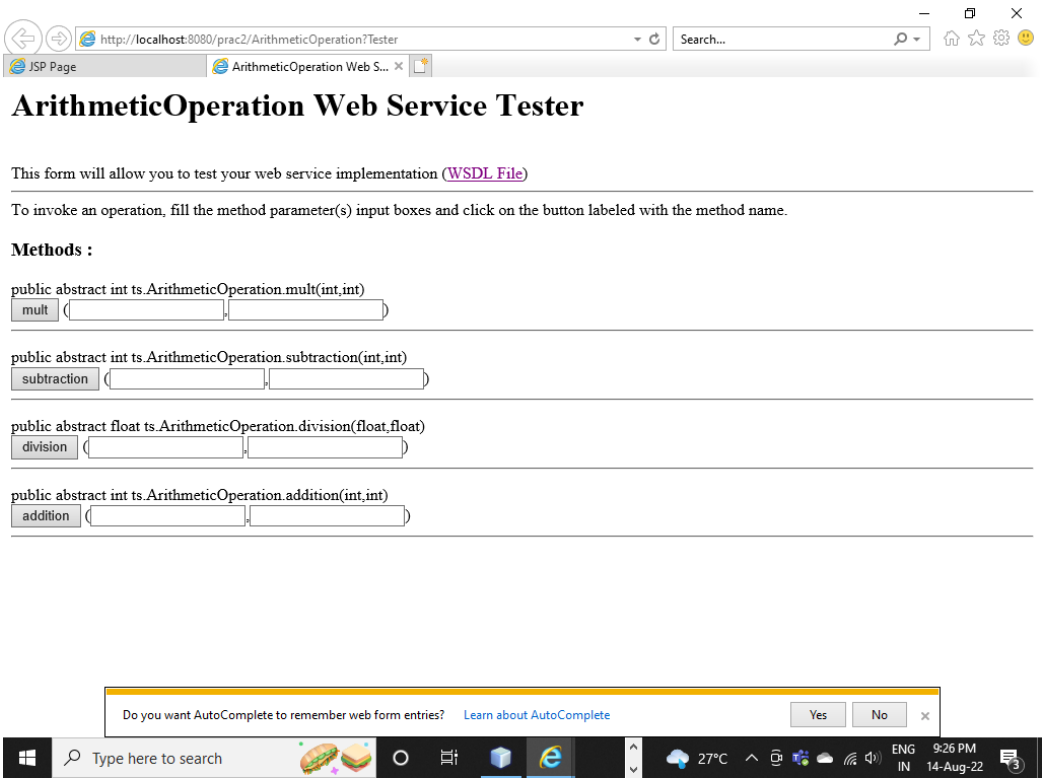
```
import javax.jws.webmethod;
import javax.jws.webparam;
import javax.jws.webresult;

/**
 *
 * @author shreyas yadav
 */
@webservice(servicename = "arithmeticoperation")
public class arithmeticoperation {
    @webmethod(operationname = "addition")
    @webresult(name="sum")
    public int addition(@webparam(name = "num1") int a,
@webparam(name = "num2") int b) {
        //todo write your implementation code here:
        return (a+b);
    }

    /**
     * web service operation
     */
    @webmethod(operationname = "subtraction")
    public int subtraction(@webparam(name = "a") int a,
@webparam(name = "b") int b) {
        //todo write your implementation code here:
        return (a-b);
    }
```

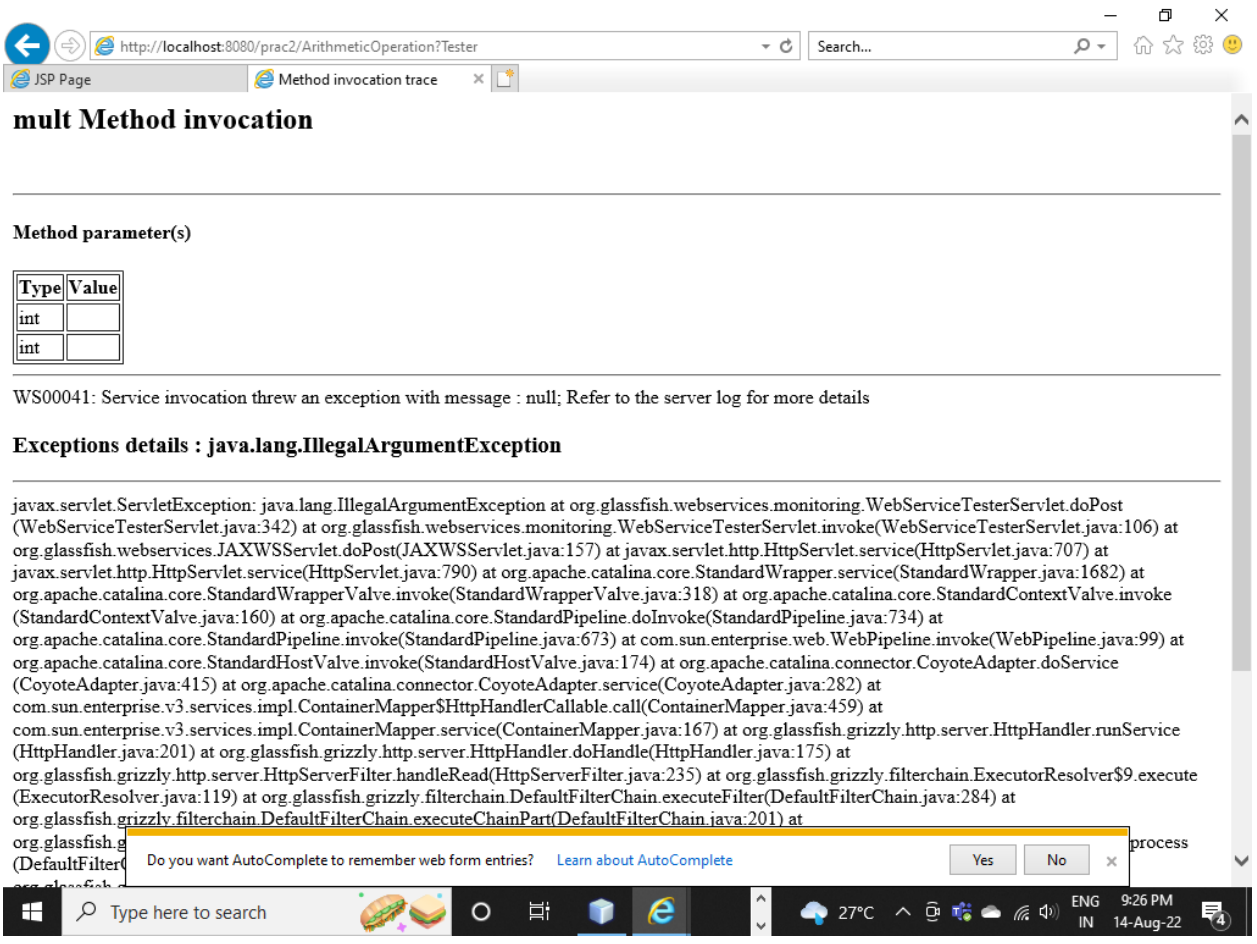
```
    /**
     * web service operation
     */
    @webmethod(operationname = "mult")
    public int mult(@webparam(name = "a") int a, @webparam(name =
"b") int b) {
        //todo write your implementation code here:
        return (a*b);
    }


    /**
     * web service operation
     */
    @webmethod(operationname = "division")
    public float division(@webparam(name = "a") float a,
@webparam(name = "b") float b) {
        //todo write your implementation code here:
        return (a/b);
    }
}
```

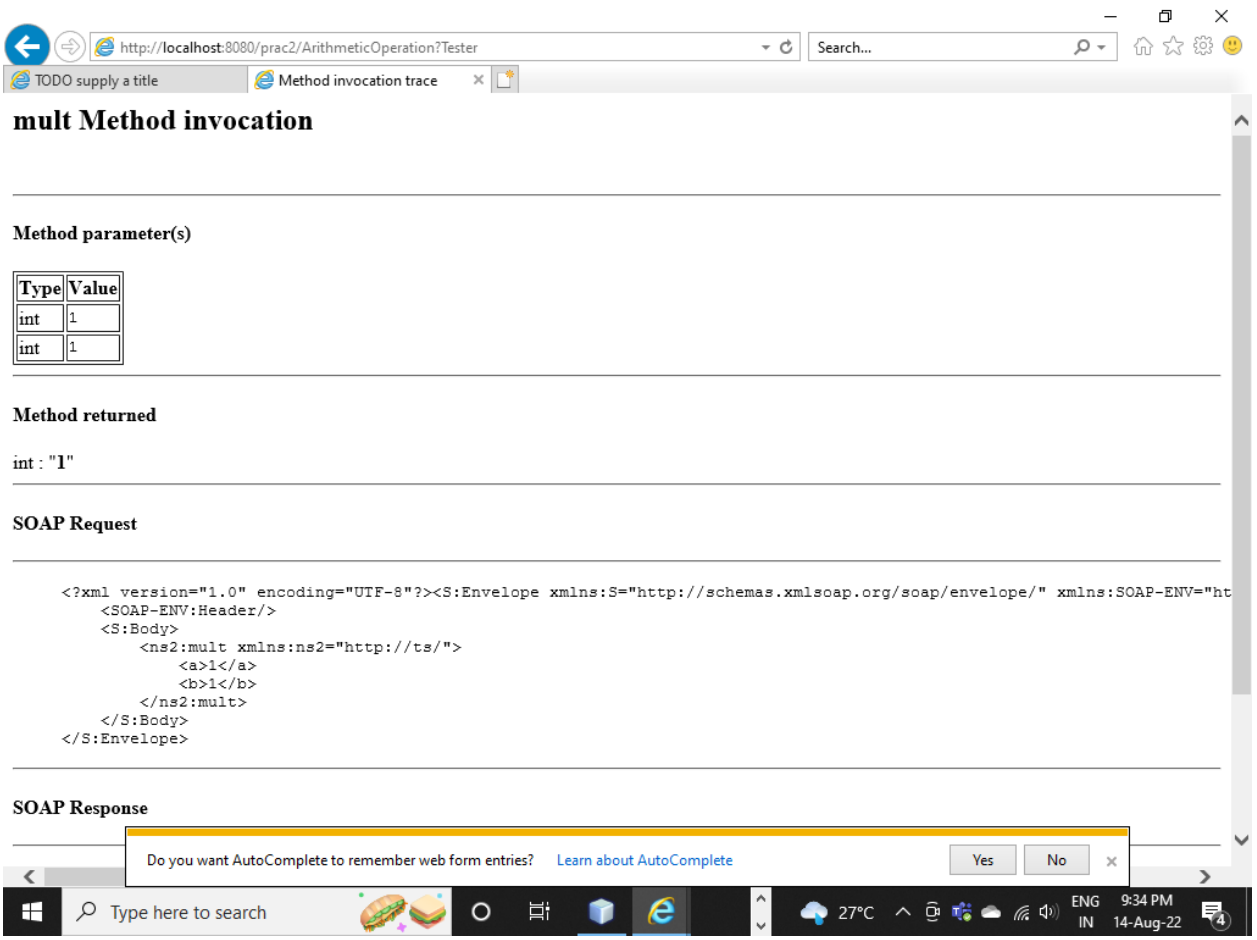
design:

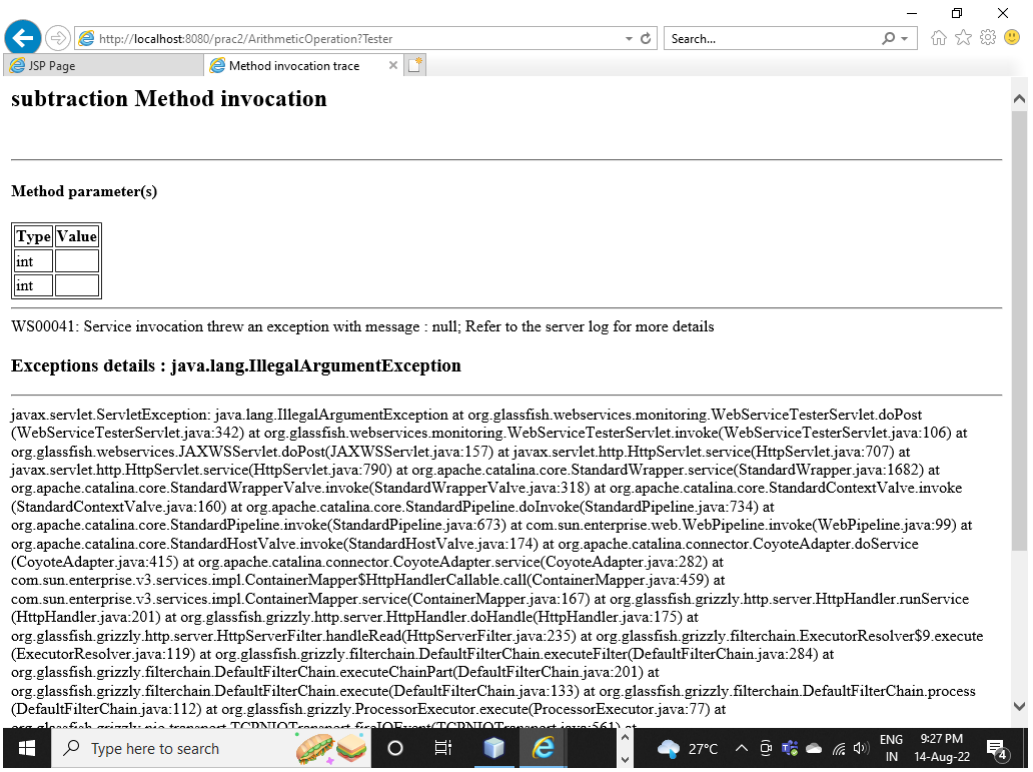

prac2 - NetBeans IDE 8.0.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Search (Ctrl+I)
Projects
prac2
Web Pages
Source Packages
ts
ArithmeticOperation.java
Libraries
Web Services
ArithmeticOperation
addition: int
division: float
mult: int
subtraction: int
Configuration Files
prac2client
Web Pages
WEB-INF
index.html
index.jsp
Source Packages
Generated Sources (jax-ws)
Libraries
Web Service References
ArithmeticOperation_2
ArithmeticOperation
ArithmeticOperationPort
addition
division
mult
subtraction
Configuration Files
TimeServer
TimeServerClinet
Start Page
ArithmeticOperation.java
index.html
index.jsp
Source
Design
History
100%
addition
Parameters
Output
Faults
Description
Parameter Name
Parameter Type
num1
int
num2
int
subtraction
a
int
b
int
mult
a
int
b
int
division
a
float
b
float
Type here to search
27°C
ENG
IN
9:46 PM
14-Aug-22


NetBeans IDE 8.0.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Search (Ctrl+I)
Projects
Start Page
ArithmeticOperation.java
index.html
index.jsp
Source
Design
History
Open
Refresh...
Add Operation...
Test Web Service
Edit Web Service Attributes...
Configure Handlers...
Generate and Copy WSDL...
Generate SOAP-over-HTTP Wrapper
Delete
/*
* To change this license header, choose License Headers in Project Propert
* To change this template file, choose Tools | Templates
* and open the template in the editor.
*/
package ts;
import javax.jws.WebService;
import javax.jws.WebMethod;
import javax.jws.WebParam;
import javax.jws.WebResult;
/**
*
* @author shreyas yadav
*/
@WebService(serviceName = "ArithmeticOperation")
public class ArithmeticOperation {
@WebMethod(operationName = "addition")
@WebResult(name="Sum")
public int addition(@WebParam(name = "num1") int a, @WebParam(name = "n
//TODO write your implementation code here:
return (a+b);
}
/**
* Web service operation
*/
@WebMethod(operationName = "subtraction")
Output
9:28
INS
Type here to search
27°C
ENG
IN
9:54 PM
14-Aug-22


http://localhost:8080/prac2/ArithmeticOperation?Tester
Search...
JSP Page
ArithmeticOperation Web S...
ArithmeticOperation Web Service Tester
This form will allow you to test your web service implementation (WSDL File)
To invoke an operation, fill the method parameter(s) input boxes and click on the button labeled with the method name.
Methods :
public abstract int ts.ArithmeticOperation.mult(int,int)
mult
public abstract int ts.ArithmeticOperation.subtraction(int,int)
subtraction
public abstract float ts.ArithmeticOperation.division(float,float)
division
public abstract int ts.ArithmeticOperation.addition(int,int)
addition
Do you want AutoComplete to remember web form entries?
Learn about AutoComplete
Yes
No
Type here to search
27°C
ENG
IN
9:26 PM
14-Aug-22


http://localhost:8080/prac2/ArithmeticOperation?Tester
Search...
JSP Page
Method invocation trace
mult Method invocation
Method parameter(s)
Type
Value
int
int
WS00041: Service invocation threw an exception with message : null; Refer to the server log for more details
Exceptions details : java.lang.IllegalArgumentException
javax.servlet.ServletException: java.lang.IllegalArgumentException at org.glassfish.webservices.monitoring.WebServiceTesterServlet.doPost (WebServiceTesterServlet.java:342) at org.glassfish.webservices.monitoring.WebServiceTesterServlet.invoke(WebServiceTesterServlet.java:106) at org.glassfish.webservices.JAXWSServlet.doPost(JAXWSServlet.java:157) at javax.servlet.http.HttpServlet.service(HttpServlet.java:707) at javax.servlet.http.HttpServlet.service(HttpServlet.java:790) at org.apache.catalina.core.StandardWrapper.service(StandardWrapper.java:1682) at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:318) at org.apache.catalina.core.StandardContextValve.invoke (StandardContextValve.java:160) at org.apache.catalina.core.StandardPipeline.doInvoke(StandardPipeline.java:734) at org.apache.catalina.core.StandardPipeline.invoke(StandardPipeline.java:673) at com.sun.enterprise.web.WebPipeline.invoke(WebPipeline.java:99) at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:174) at org.apache.catalina.connector.CoyoteAdapter.doService (CoyoteAdapter.java:415) at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:282) at com.sun.enterprise.v3.services.impl.ContainerMapper$HttpHandlerCallable.call(ContainerMapper.java:459) at com.sun.enterprise.v3.services.impl.ContainerMapper.service(ContainerMapper.java:167) at org.glassfish.grizzly.http.server.HttpHandler.runService (HttpHandler.java:201) at org.glassfish.grizzly.http.server.HttpHandler.doHandle(HttpHandler.java:175) at org.glassfish.grizzly.http.server.HttpServerFilter.handleRead(HttpServerFilter.java:235) at org.glassfish.grizzly.filterchain.ExecutorResolver$9.execute (ExecutorResolver.java:119) at org.glassfish.grizzly.filterchain.DefaultFilterChain.executeFilter(DefaultFilterChain.java:284) at org.glassfish.grizzly.filterchain.DefaultFilterChain.executeChainPart(DefaultFilterChain.java:201) at
process
Do you want AutoComplete to remember web form entries?
Learn about AutoComplete
Yes
No
Type here to search
27°C
ENG
IN
9:26 PM
14-Aug-22


http://localhost:8080/prac2/ArithmeticOperation?Tester
Search...
TODO supply a title
Method invocation trace
mult Method invocation
Method parameter(s)
Type Value
int 1
int 1
Method returned
int : "1"
SOAP Request
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="ht
<SOAP-ENV:Header/>
<S:Body>
<ns2:mult xmlns:ns2="http://ts/">
<a>1
1
</ns2:mult>
</S:Body>
</S:Envelope>
SOAP Response
Do you want AutoComplete to remember web form entries?
Learn about AutoComplete
Yes
No
Type here to search
27°C
ENG
IN
9:34 PM
14-Aug-22


http://localhost:8080/prac2/ArithmeticOperation?Tester
Search...
JSP Page
Method invocation trace
subtraction Method invocation
Method parameter(s)
Type Value
int
int
WS00041: Service invocation threw an exception with message : null; Refer to the server log for more details
Exceptions details : java.lang.IllegalArgumentException
javax.servlet.ServletException: java.lang.IllegalArgumentException at org.glassfish.webservices.monitoring.WebServiceTesterServlet.doPost
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org.glassfish.webservices.JAXWSServlet.doPost(JAXWSServlet.java:157) at javax.servlet.http.HttpServlet.service(HttpServlet.java:707) at
javax.servlet.http.HttpServlet.service(HttpServlet.java:790) at org.apache.catalina.core.StandardWrapper.service(StandardWrapper.java:1682) at
org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:318) at org.apache.catalina.core.StandardContextValve.invoke
(StandardContextValve.java:160) at org.apache.catalina.core.StandardPipeline.doInvoke(StandardPipeline.java:734) at
org.apache.catalina.core.StandardPipeline.invoke(StandardPipeline.java:673) at com.sun.enterprise.web.WebPipeline.invoke(WebPipeline.java:99) at
org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:174) at org.apache.catalina.connector.CoyoteAdapter.doService
(CoyoteAdapter.java:415) at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:282) at
com.sun.enterprise.v3.services.impl.ContainerMapper$HttpHandlerCallable.call(ContainerMapper.java:459) at
com.sun.enterprise.v3.services.impl.ContainerMapper.service(ContainerMapper.java:167) at org.glassfish.grizzly.http.server.HttpHandler.runService
(HttpHandler.java:201) at org.glassfish.grizzly.http.server.HttpHandler.doHandle(HttpHandler.java:175) at
org.glassfish.grizzly.http.server.HttpServerFilter.handleRead(HttpServerFilter.java:235) at org.glassfish.grizzly.filterchain.ExecutorResolver$9.execute
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org.glassfish.grizzly.filterchain.DefaultFilterChain.executeChainPart(DefaultFilterChain.java:201) at
org.glassfish.grizzly.filterchain.DefaultFilterChain.execute(DefaultFilterChain.java:133) at org.glassfish.grizzly.filterchain.DefaultFilterChain.process
(DefaultFilterChain.java:112) at org.glassfish.grizzly.ProcessorExecutor.execute(ProcessorExecutor.java:77) at
Type here to search
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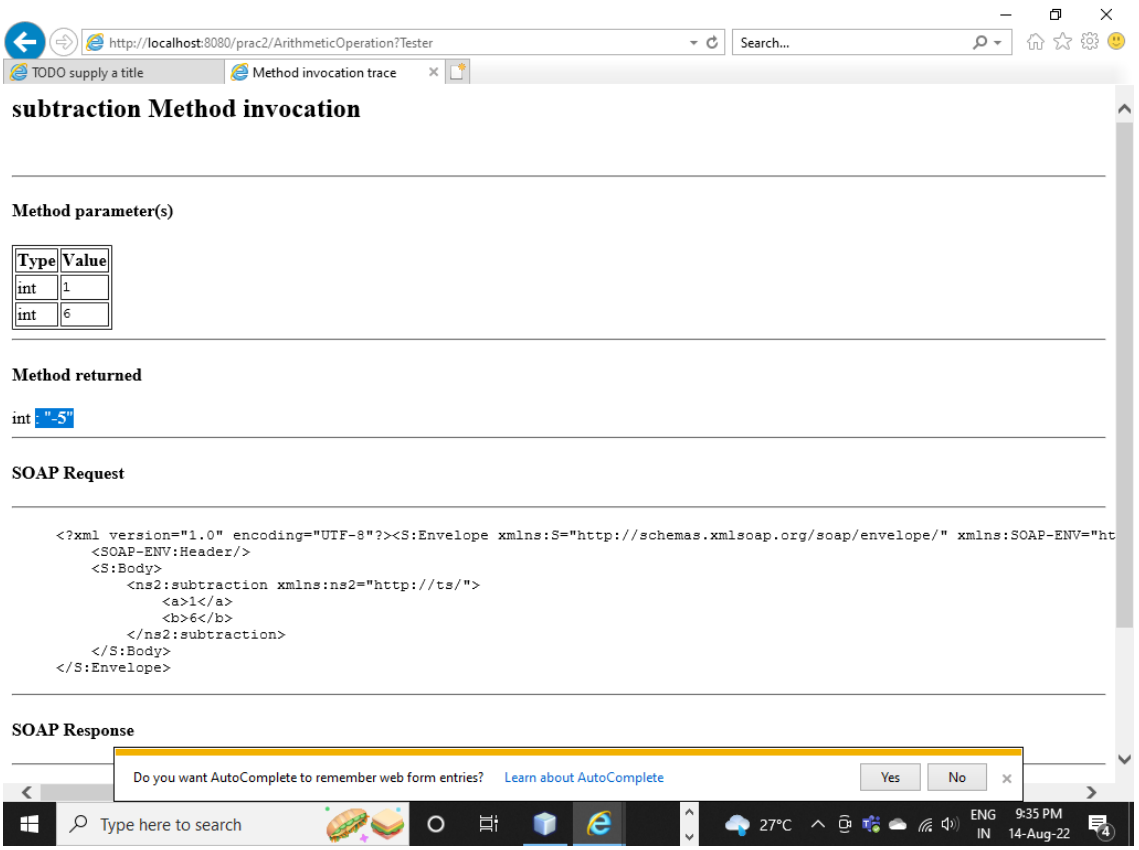
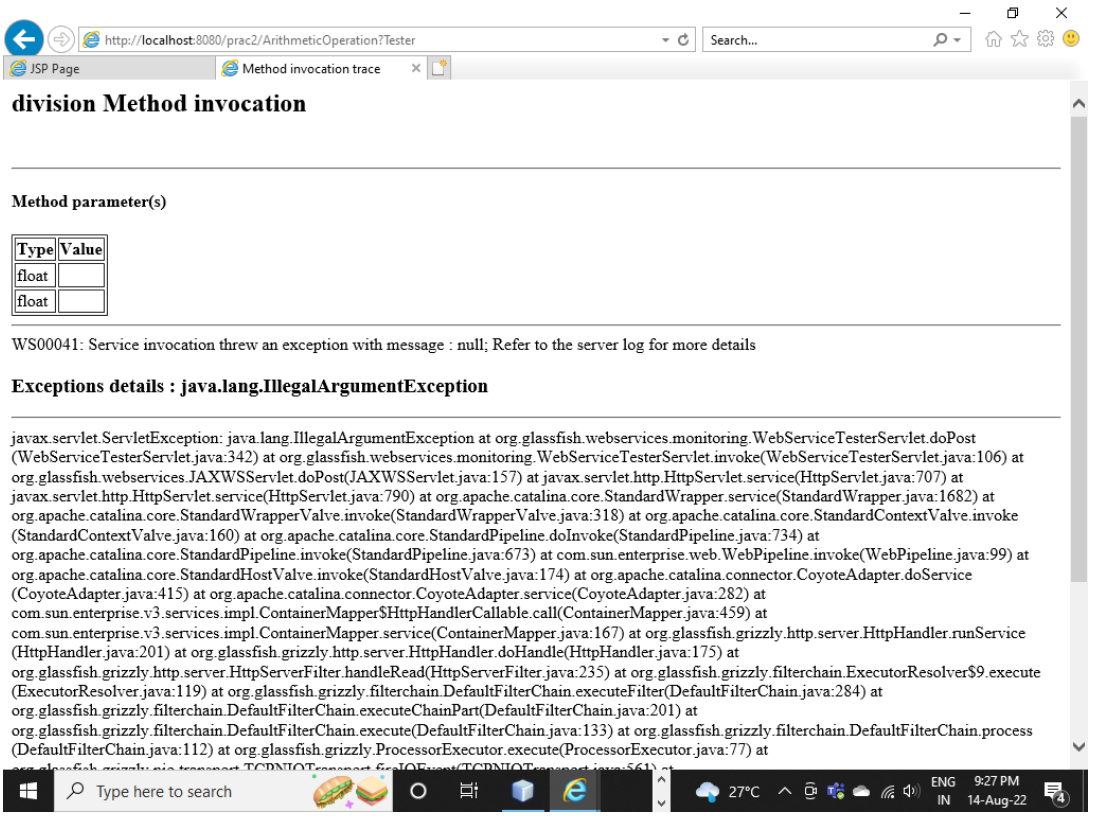
ENG
IN
9:27 PM
14-Aug-22


http://localhost:8080/prac2/ArithmeticOperation?Tester
Search...
TODO supply a title
Method invocation trace
subtraction Method invocation
Method parameter(s)
Type Value
int 1
int 6
Method returned
int : "-5"
SOAP Request
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="ht
<SOAP-ENV:Header/>
<S:Body>
<ns2:subtraction xmlns:ns2="http://ts/">
<a>1
6
</ns2:subtraction>
</S:Body>
</S:Envelope>
SOAP Response
Do you want AutoComplete to remember web form entries?
Learn about AutoComplete
Yes
No
Type here to search
27°C
ENG
IN
9:35 PM
14-Aug-22


http://localhost:8080/prac2/ArithmeticOperation?Tester
Search...
JSP Page
Method invocation trace
division Method invocation
Method parameter(s)
Type Value
float
float
WS00041: Service invocation threw an exception with message : null; Refer to the server log for more details
Exceptions details : java.lang.IllegalArgumentException
javax.servlet.ServletException: java.lang.IllegalArgumentException at org.glassfish.webservices.monitoring.WebServiceTesterServlet.doPost
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javax.servlet.http.HttpServlet.service(HttpServlet.java:790) at org.apache.catalina.core.StandardWrapper.service(StandardWrapper.java:1682) at
org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:318) at org.apache.catalina.core.StandardContextValve.invoke
(StandardContextValve.java:160) at org.apache.catalina.core.StandardPipeline.doInvoke(StandardPipeline.java:734) at
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org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:174) at org.apache.catalina.connector.CoyoteAdapter.doService
(CoyoteAdapter.java:415) at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:282) at
com.sun.enterprise.v3.services.impl.ContainerMapper$HttpHandlerCallable.call(ContainerMapper.java:459) at
com.sun.enterprise.v3.services.impl.ContainerMapper.service(ContainerMapper.java:167) at org.glassfish.grizzly.http.server.HttpHandler.runService
(HttpHandler.java:201) at org.glassfish.grizzly.http.server.HttpHandler.doHandle(HttpHandler.java:175) at
org.glassfish.grizzly.http.server.HttpServerFilter.handleRead(HttpServerFilter.java:235) at org.glassfish.grizzly.filterchain.ExecutorResolver$9.execute
(ExecutorResolver.java:119) at org.glassfish.grizzly.filterchain.DefaultFilterChain.executeFilter(DefaultFilterChain.java:284) at
org.glassfish.grizzly.filterchain.DefaultFilterChain.executeChainPart(DefaultFilterChain.java:201) at
org.glassfish.grizzly.filterchain.DefaultFilterChain.execute(DefaultFilterChain.java:133) at org.glassfish.grizzly.filterchain.DefaultFilterChain.process
(DefaultFilterChain.java:112) at org.glassfish.grizzly.ProcessorExecutor.execute(ProcessorExecutor.java:77) at
Type here to search
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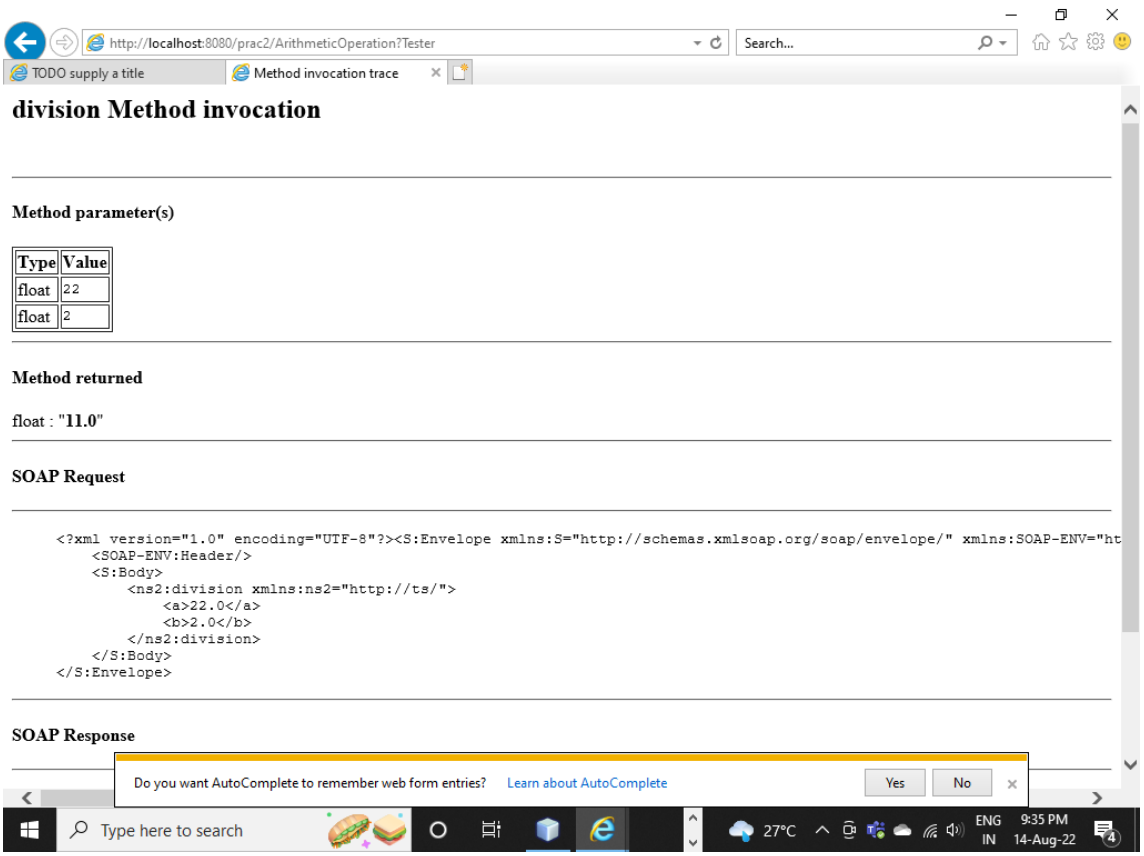
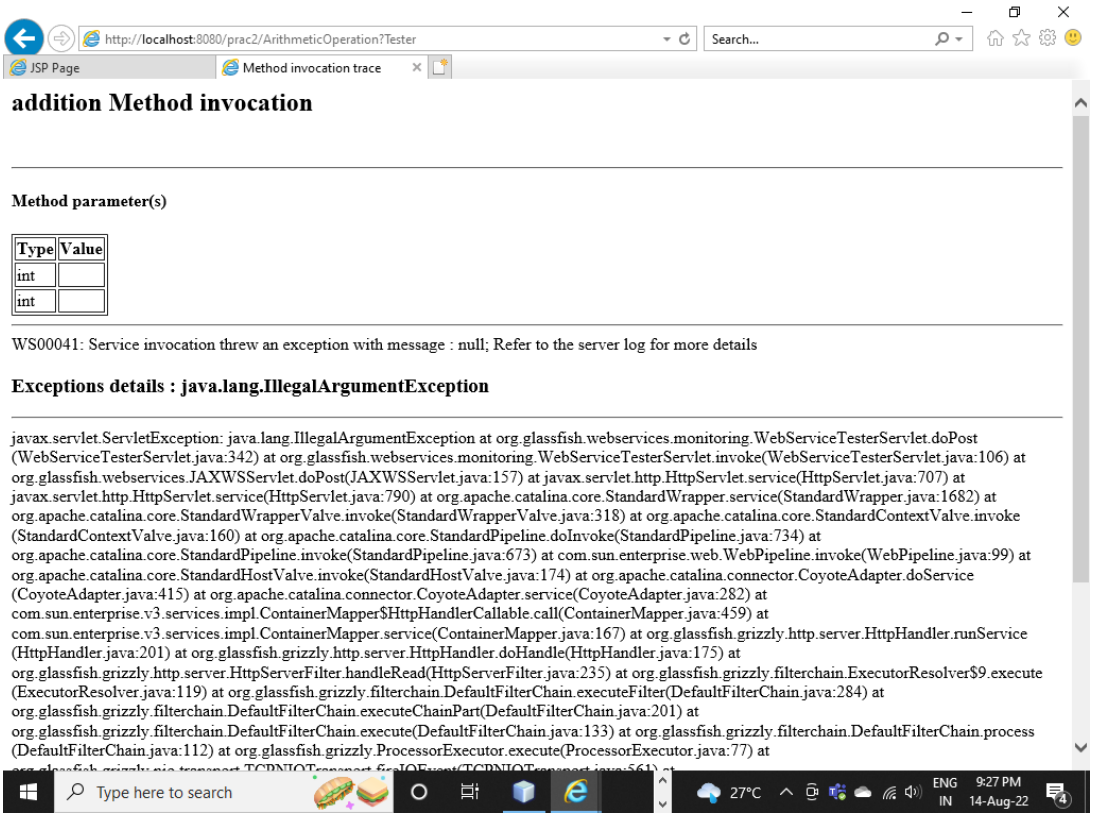
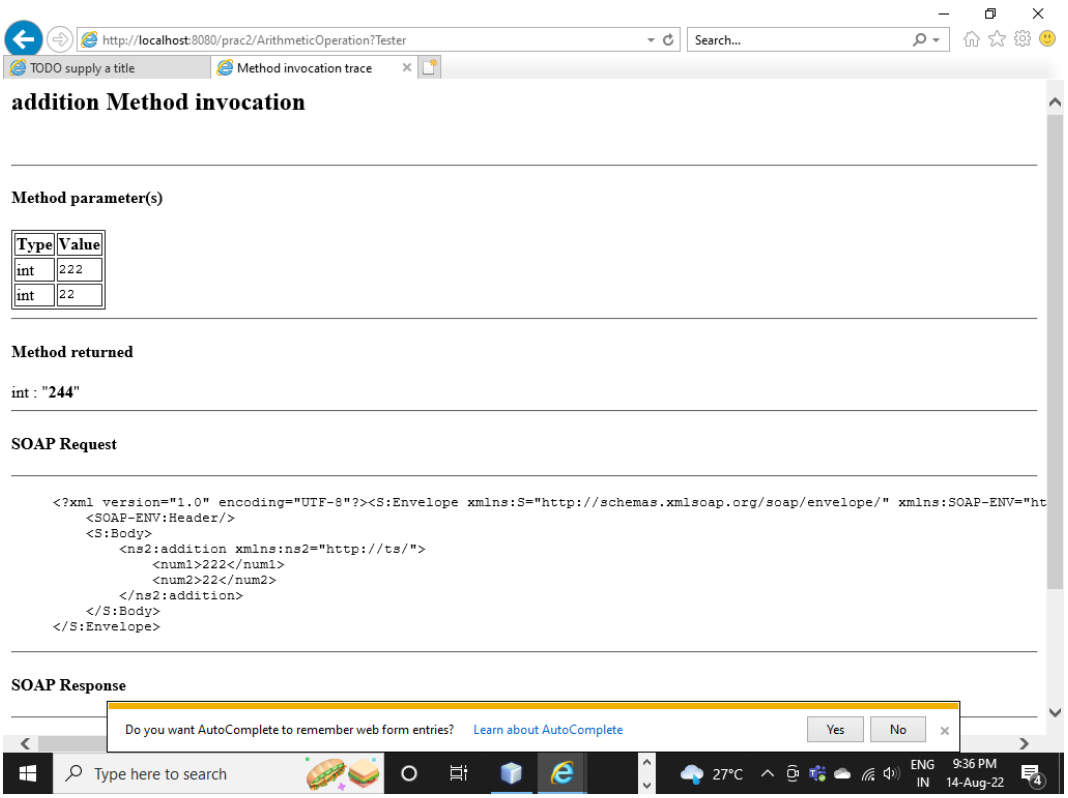
ENG
IN
9:27 PM
14-Aug-22


http://localhost:8080/prac2/ArithmeticOperation?Tester
Search...
TODO supply a title
Method invocation trace
division Method invocation
Method parameter(s)
Type Value
float 22
float 2
Method returned
float : "11.0"
SOAP Request
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="ht
<SOAP-ENV:Header/>
<S:Body>
<ns2:division xmlns:ns2="http://ts/">
<a>22.0
2.0
</ns2:division>
</S:Body>
</S:Envelope>
SOAP Response
Do you want AutoComplete to remember web form entries?
Learn about AutoComplete
Yes
No
Type here to search
27°C
ENG
IN
9:35 PM
14-Aug-22


http://localhost:8080/prac2/ArithmeticOperation?Tester
Search...
JSP Page
Method invocation trace
addition Method invocation
Method parameter(s)
Type Value
int
int
WS00041: Service invocation threw an exception with message : null; Refer to the server log for more details
Exceptions details : java.lang.IllegalArgumentException
javax.servlet.ServletException: java.lang.IllegalArgumentException at org.glassfish.webservices.monitoring.WebServiceTesterServlet.doPost (WebServiceTesterServlet.java:342) at org.glassfish.webservices.monitoring.WebServiceTesterServlet.invoke(WebServiceTesterServlet.java:106) at org.glassfish.webservices.JAXWSServlet.doPost(JAXWSServlet.java:157) at javax.servlet.http.HttpServlet.service(HttpServlet.java:707) at javax.servlet.http.HttpServlet.service(HttpServlet.java:790) at org.apache.catalina.core.StandardWrapper.service(StandardWrapper.java:1682) at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:318) at org.apache.catalina.core.StandardContextValve.invoke (StandardContextValve.java:160) at org.apache.catalina.core.StandardPipeline.doInvoke(StandardPipeline.java:734) at org.apache.catalina.core.StandardPipeline.invoke(StandardPipeline.java:673) at com.sun.enterprise.web.WebPipeline.invoke(WebPipeline.java:99) at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:174) at org.apache.catalina.connector.CoyoteAdapter.doService (CoyoteAdapter.java:415) at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:282) at com.sun.enterprise.v3.services.impl.ContainerMapper$HttpHandlerCallable.call(ContainerMapper.java:459) at com.sun.enterprise.v3.services.impl.ContainerMapper.service(ContainerMapper.java:167) at org.glassfish.grizzly.http.server.HttpHandler.runService (HttpHandler.java:201) at org.glassfish.grizzly.http.server.HttpHandler.doHandle(HttpHandler.java:175) at org.glassfish.grizzly.http.server.HttpServerFilter.handleRead(HttpServerFilter.java:235) at org.glassfish.grizzly.filterchain.ExecutorResolver$9.execute (ExecutorResolver.java:119) at org.glassfish.grizzly.filterchain.DefaultFilterChain.executeFilter(DefaultFilterChain.java:284) at org.glassfish.grizzly.filterchain.DefaultFilterChain.executeChainPart(DefaultFilterChain.java:201) at org.glassfish.grizzly.filterchain.DefaultFilterChain.execute(DefaultFilterChain.java:133) at org.glassfish.grizzly.filterchain.DefaultFilterChain.process (DefaultFilterChain.java:112) at org.glassfish.grizzly.ProcessorExecutor.execute(ProcessorExecutor.java:77) at
Type here to search
27°C
ENG
IN
9:27 PM
14-Aug-22



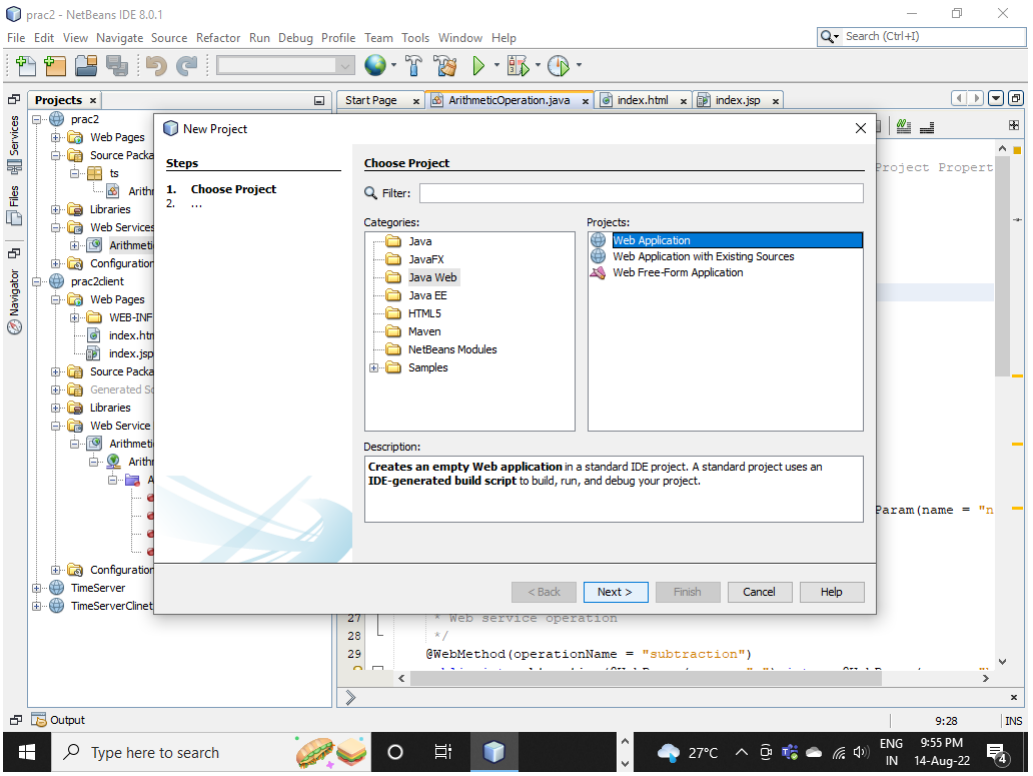
wsdl url:

http://localhost:8080/prac2/arithmeticoperation?wsdl

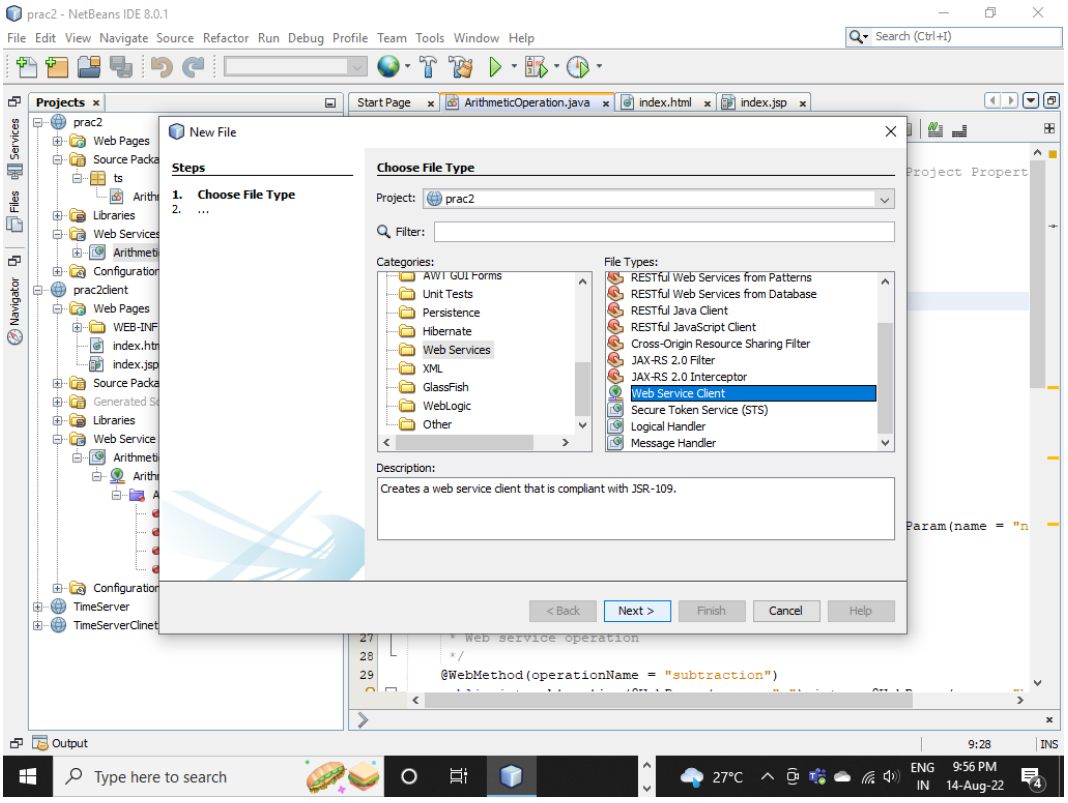
client

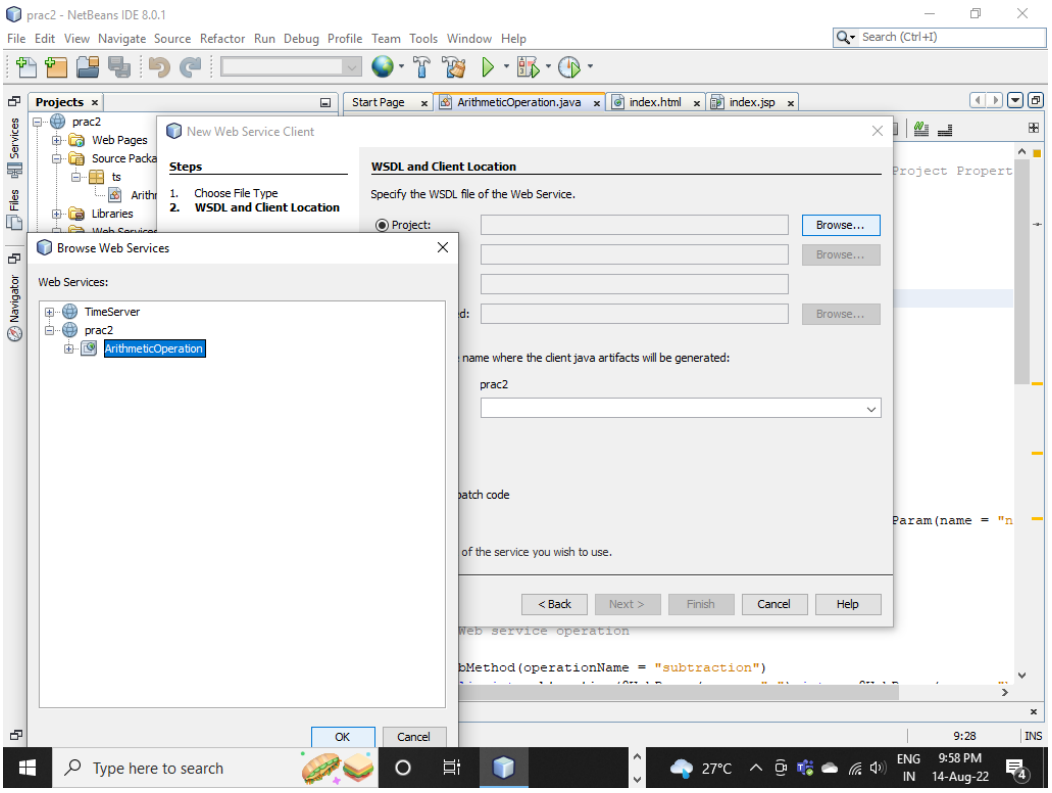
creating client side:

create new project:



now create new file:

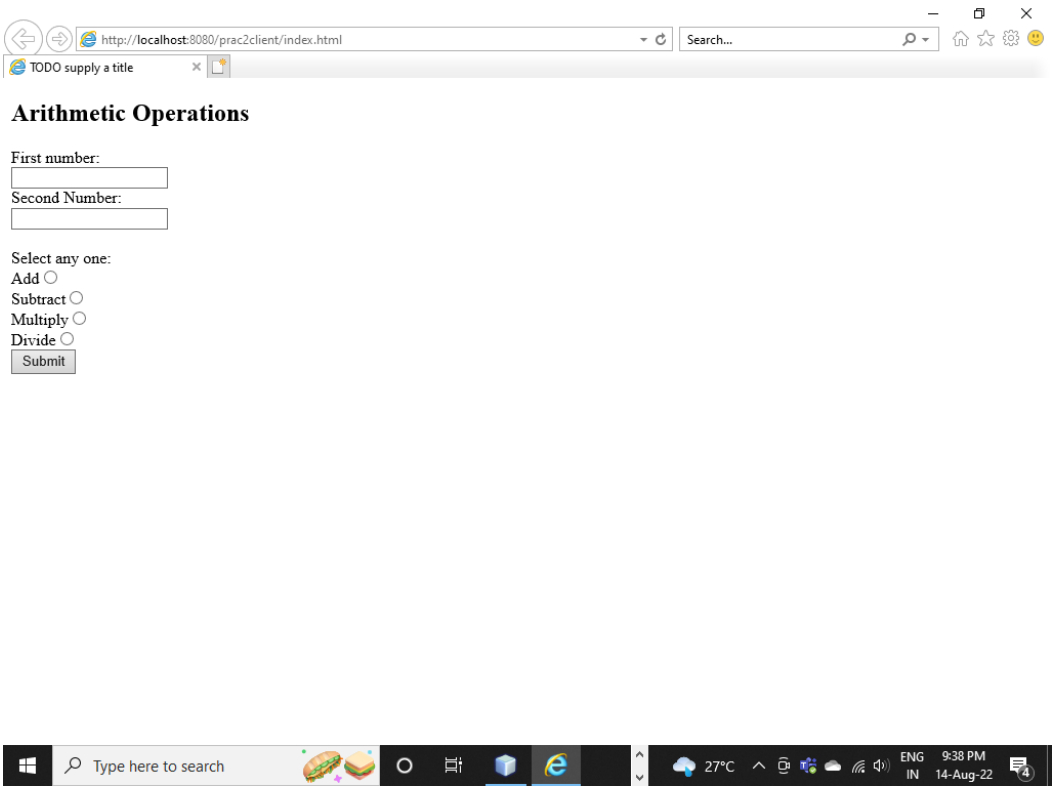




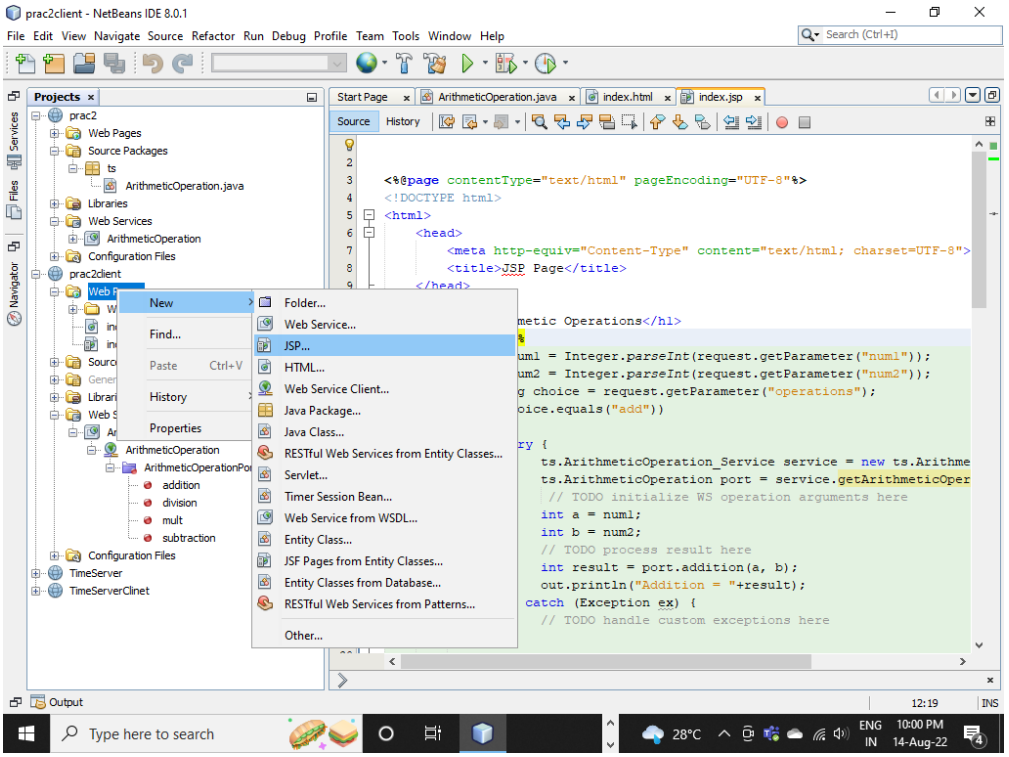
index.html:

```
<!doctype html>
<!--
to change this license header, choose license headers in project properties.
to change this template file, choose tools | templates
and open the template in the editor.
-->
<html>
    <head>
        <title>todo supply a title</title>
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
    </head>
```

```
    <body>
        <h2>arithmetic operations</h2>


        <form action="index.jsp">
          <label for="num1">first number:</label><br>
          <input type="text" id="num1" name="num1"><br>
          <label for="num2">second number:</label><br>
          <input type="text" id="num2" name="num2"><br><br>
          select any one:
          <br>add<input type="radio" name="operations" value="add"
/><br>
          subtract<input type="radio" name="operations" value="sub"
/><br>
          multiply<input type="radio" name="operations" value="mult"
/><br>
          divide<input type="radio" name="operations" value="div" /><br>
          <input type="submit" value="submit">
        </form>
    </body>
</html>
```



creating jsp page:



index.jsp:

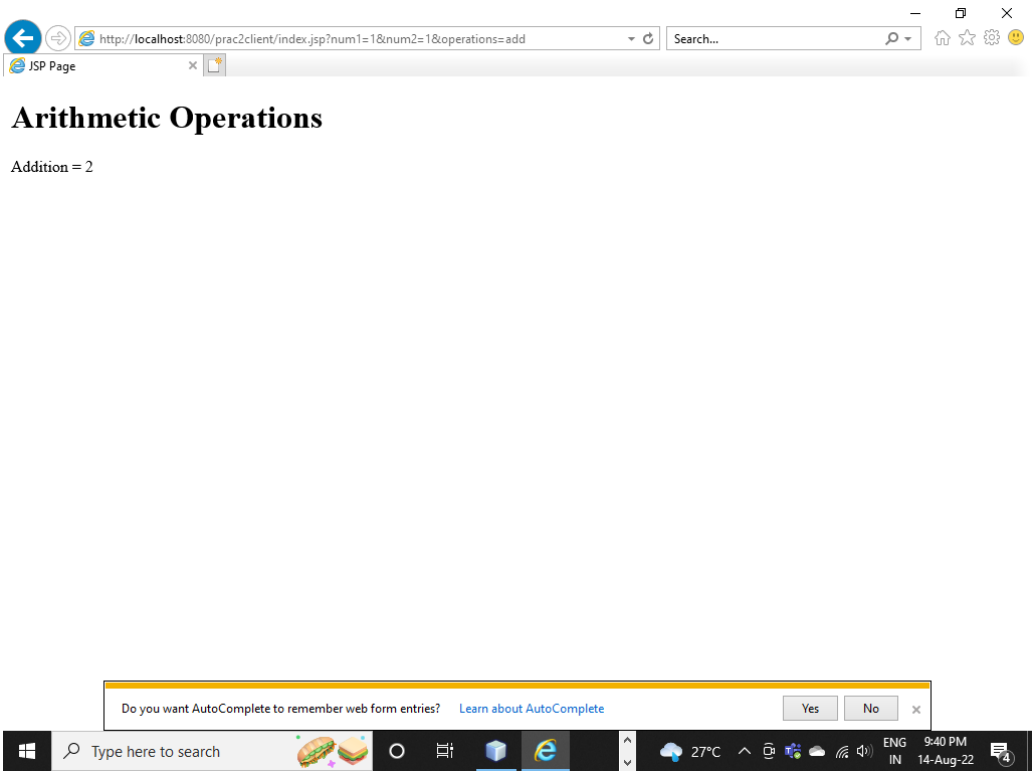
```
<%@page contenttype="text/html" pageencoding="utf-8"%>
<!doctype html>
<html>
   <head>
      <meta http-equiv="content-type" content="text/html; charset=utf-8">
      <title>jsp page</title>
   </head>
   <body>
      <h1>arithmetic operations</h1>
          <%
        int num1 = integer.parseint(request.getparameter("num1"));
         int num2 = integer.parseint(request.getparameter("num2"));
        string choice = request.getparameter("operations");
        if(choice.equals("add"))
        {
           try {
               ts.arithmeticoperation_service service = new
ts.arithmeticoperation_service();
               ts.arithmeticoperation port =
service.getarithmeticoperationport();
                // todo initialize ws operation arguments here
               int a = num1;
               int b = num2;
               // todo process result here
               int result = port.addition(a, b);
               out.println("addition = "+result);
            } catch (exception ex) {
```

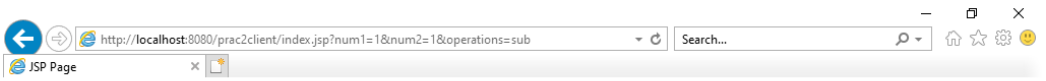
```
                // todo handle custom exceptions here
            }


        }
        else if(choice.equals("sub")){
            try {
                ts.arithmeticoperation_service service = new
ts.arithmeticoperation_service();
                ts.arithmeticoperation port =
service.getarithmeticoperationport();
                 // todo initialize ws operation arguments here
                int a = num1;
                int b = num2;
                // todo process result here
                int result = port.subtraction(a, b);
                out.println("subtraction = "+result);
            } catch (exception ex) {
                // todo handle custom exceptions here
            }
        }
        else if(choice.equals("mult")){
            try {
                ts.arithmeticoperation_service service = new
ts.arithmeticoperation_service();
                ts.arithmeticoperation port =
service.getarithmeticoperationport();
                 // todo initialize ws operation arguments here
                int a = num1;
                int b = num2;
```

```
                // todo process result here
                int result = port.mult(a, b);
                out.println("multiplication = "+result);
            } catch (exception ex) {
                // todo handle custom exceptions here
            }

        }
        else {
            try {
                ts.arithmeticoperation_service service = new
ts.arithmeticoperation_service();
                ts.arithmeticoperation port =
service.getarithmeticoperationport();
                 // todo initialize ws operation arguments here
                float a = num1;
                float b = num2;
                // todo process result here
                float result = port.division(a, b);
                out.println("division = "+result);
            } catch (exception ex) {
                // todo handle custom exceptions here
            }

        }

    %>
```

```
    </body>
</html>
```

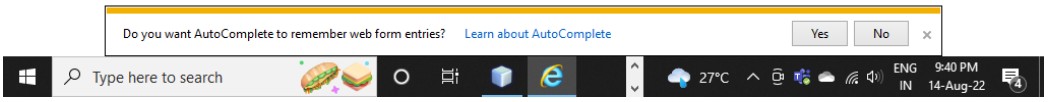
output:

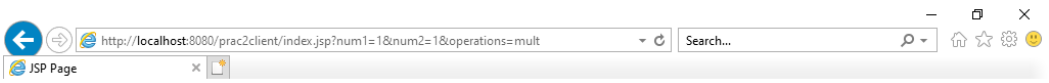




Arithmetic Operations

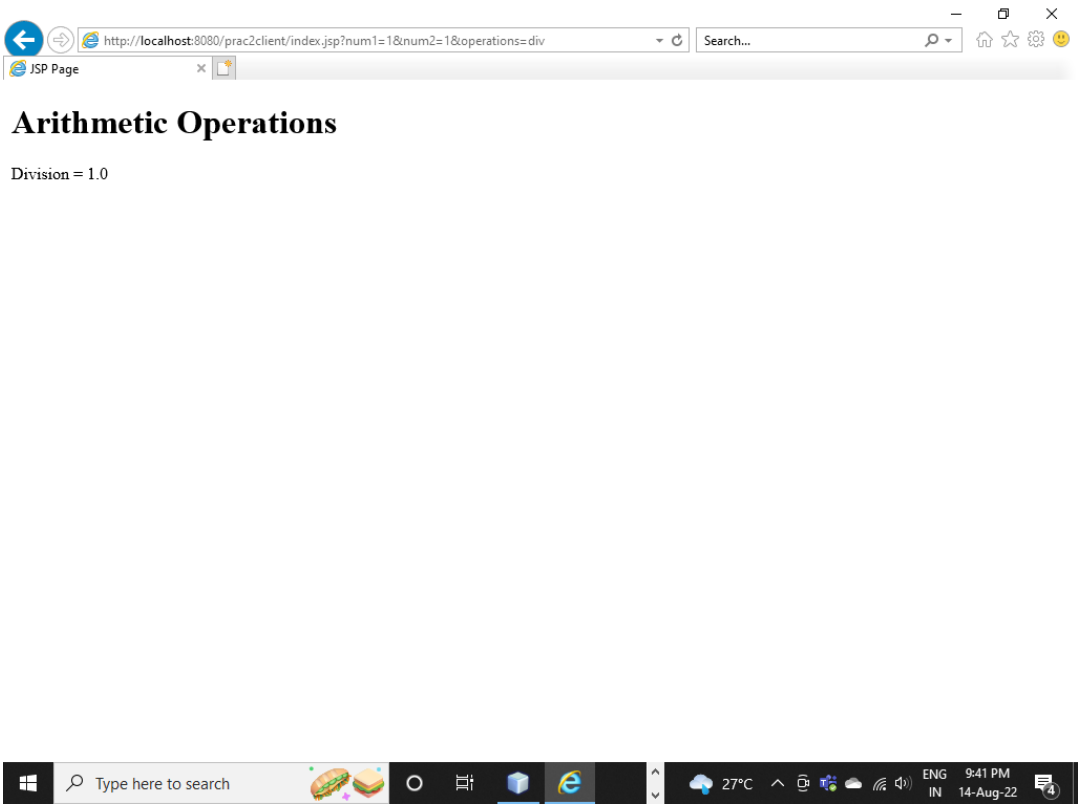
Subtraction = 0





Arithmetic Operations

Multiplication = 1


http://localhost:8080/prac2client/index.jsp?num1=1&num2=1&operations=div
Search...
JSP Page
Arithmetic Operations
Division = 1.0
Type here to search
27°C
ENG
IN
9:41 PM
14-Aug-22

Web service Practical no 3
TCS2223010

Aim: create a web service that gives – (i) nse index, (ii) bse index, (iii)gold rate. the values are stored in database. also create a web client for a share trading firm that displays these values on its home page

code:

stockapplication

```
package stock;

import javax.jws.webservice; import
javax.jws.webmethod; import
javax.jws.webparam; import
javax.jws.webresult; import java.sql.*;

@webservice(servicename = "stockservice") public class
stockservice {

webmethod(operationname = "getnse")
@webresult(name="nse")
    public long getnse() { long nse
        = 0;
        try{

            //load driver class.forname("org.apache.derby.jdbc.clientdriver");
            //connection creation

            connection con              =
drivermanager.getconnection("jdbc:derby://localhost:1527/stockdatabase","stkadmin","admin123");
            statement stmt = con.createstatement();
            resultset rs = stmt.executequery("select * from stockdata"); rs.next();
            nse = rs.getint("nse");}

        catch(exception e){ e.printstacktrace();

        }
        return nse;
    }
```

```
@webmethod(operationname = "getbs
```

```
@webresult(name="bse") public long
getbse() {
        long bse = 0; try{
            //load driver class.forname("org.apache.derby.jdbc.clientdriver");
            //connection creation
            connection con        =
 drivermanager.getconnection("jdbc:derby://localhost:1527/stockdataba
 se","stkadmin","admin123");
            statement stmt = con.createstatement();
            resultset rs = stmt.executequery("select * from stockdata"); rs.next();
            bse = rs.getint("bse");


        }
        catch(exception e){
            e.printstacktrace();
        }

        return bse;
    }
```

```
        long gld = 0; try{
            //load driver class.forname("org.apache.derby.jdbc.clientdriver");
            //connection creation

            connection con        =
drivermanager.getconnection("jdbc:derby://localhost:1527/stockdataba
se","stkadmin","admin123");
            statement stmt = con.createstatement();
            resultset rs = stmt.executequery("select * from stockdata"); rs.next();
            gld = rs.getint("goldrate");



        }
        catch(exception e){
            e.printstacktrace();
        }

        return gld;
    }
}
```

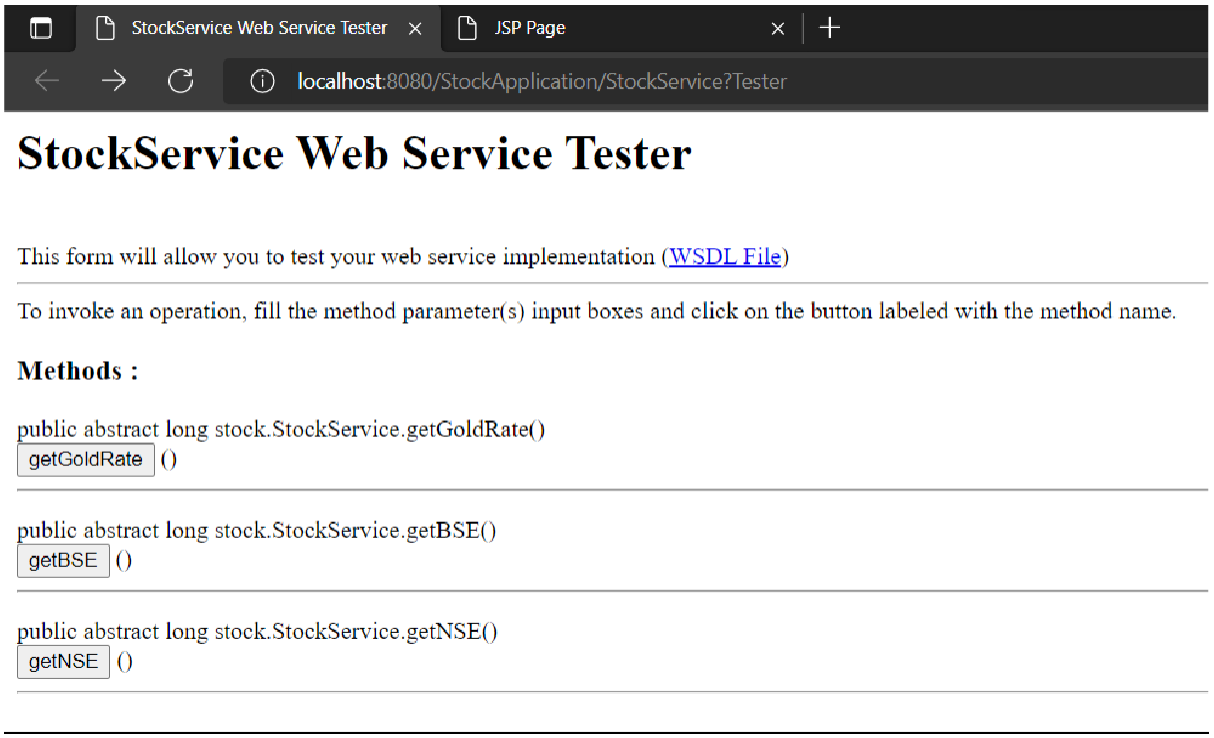
stockclient

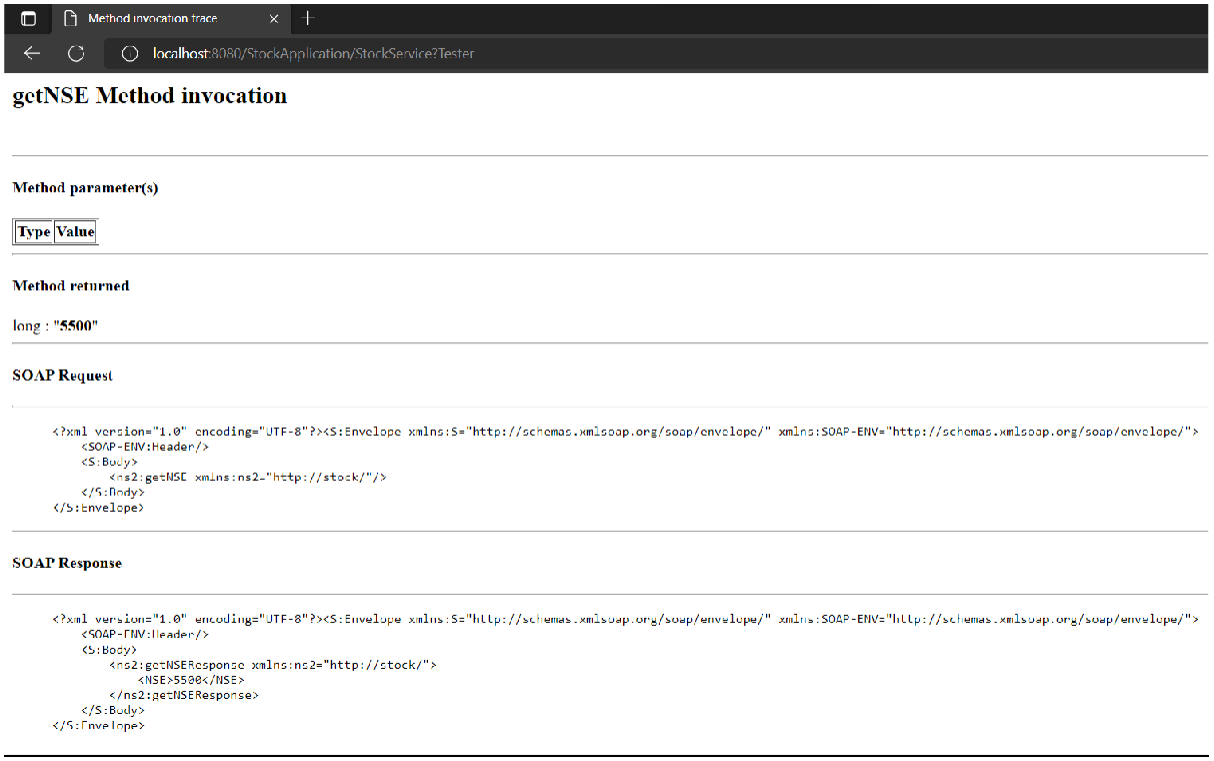
```
<%@page contenttype="text/html" pageencoding="utf-8"%>
<!doctype html>
<html>
    <head>
```

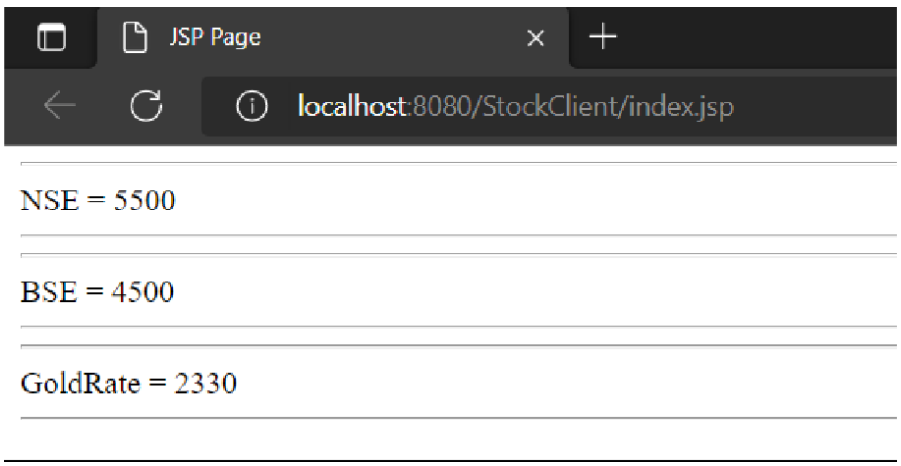
```
        <meta http-equiv="content-type" content="text/html;
charset=utf-8">
        <title>jsp page</title>
    </head>
    <body>
            <%-- start web service invocation --%><hr/>

    <%
    try {
  stock.stockservice_service service = new stock.stockservice_service();
  stock.stockservice port = service.getstockserviceport();
  // todo process result here long
  result          =          port.getnse();
  out.println("nse = "+result);
    } catch (exception ex) {
  // todo handle custom exceptions here
    }
    %>
    <%-- end web service invocation --%><hr/>


        <%-- start web service invocation --%><hr/>
    <%
    try {
  stock.stockservice_service service = new stock.stockservice_service();
  stock.stockservice port = service.getstockserviceport();
```

```
// todo process result here long
result = port.getbse();
out.println("bse = "+result);
  } catch (exception ex) {

// todo handle custom exceptions here
  }
  %>
  <%-- end web service invocation --%><hr/>


    <%-- start web service invocation --%><hr/>
  <%
  try {
stock.stockservice_service service = new stock.stockservice_service();
stock.stockservice port = service.getstockserviceport();
// todo process result here long result
= port.getgoldrate();
out.println("goldrate = "+result);

  } catch (exception ex) {
// todo handle custom exceptions here
  }
  %>
  <%-- end web service invocation --%><hr/>


  </body>
</html>
```

output:


StockService Web Service Tester
JSP Page
localhost:8080/StockApplication/StockService?Tester
StockService Web Service Tester
This form will allow you to test your web service implementation (WSDL File)
To invoke an operation, fill the method parameter(s) input boxes and click on the button labeled with the method name.
Methods :
public abstract long stock.StockService.getGoldRate()
getGoldRate ()
public abstract long stock.StockService.getBSE()
getBSE ()
public abstract long stock.StockService.getNSE()
getNSE ()


Method invocation trace
localhost:8080/StockApplication/StockService?Tester
getNSE Method invocation
Method parameter(s)
Type Value
Method returned
long : "5500"
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:getNSE xmlns:ns2="http://stock/"/>
</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:getNSEResponse xmlns:ns2="http://stock/">
<NSE>5500</NSE>
</ns2:getNSEResponse>
</S:Body>
</S:Envelope>


JSP Page
localhost:8080/StockClient/index.jsp
NSE = 5500
BSE = 4500
GoldRate = 2330

Web service practical no 4
TCS2223010

aim: create a web service for ugc that contains a method which accepts college name as parameter and returns the naac rating. the college names and their ratings are stored in database. design a web client to test the above web service.

code:

ugcserver

```
package rate;

import javax.jws.webservice; import
javax.jws.webmethod; import
javax.jws.webparam; import
java.sql.*;

@webservice(servicename = "ugcservice") public class
ugcservice {
    @webmethod(operationname = "getrating")
    public string getrating(@webparam(name="cllgname")string name) {
        string rating = null;
        string cname = name.touppercase(); try
```

```
        {
        class.forname("org.apache.derby.jdbc.clientdriver"); connection con =
drivermanager.getconnection("jdbc:derby://localhost:1527/ugcd
atabase","ugcadmin","admin123");
        preparedstatement pstmt = con.preparestatement("select * from
collegerating where college = ?");
        pstmt.setstring(1, cname);
        resultset rs = pstmt.executequery(); rs.next();
        rating = rs.getstring("rating");

        }
        catch(exception e){
            e.printstacktrace();
        }

        return rating;
    }
}
```

ugcclient index.html

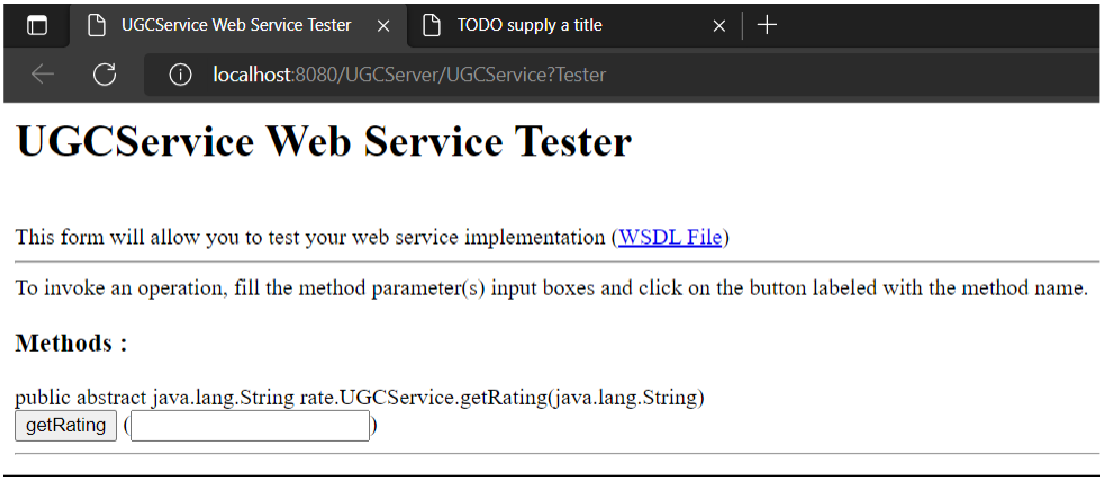
```
<!DOCTYPE html>
<html>
    <head>
        <title>TODO supply a title</title>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
    </head>
    <body>
        <form action="Client.jsp">
            Enter College Name: <input type="text" name="cllgrate" value="" /><br>
            <input type="submit" value="Submit" />
        </form>
    </body>
</html>
```

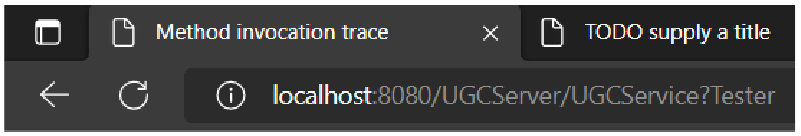
client.jsp

```
<%@page contenttype="text/html" pageencoding="utf-8"%>
<!doctype html>
<html>
    <head>
        <meta http-equiv="content-type" content="text/html;
charset=utf-8">
        <title>jsp page</title>
     </head>
     <body>
         <%
        string cllg = request.getparameter("cllgrate"); try {
 rate.ugcservice_service service = new rate.ugcservice_service();
 rate.ugcservice port = service.getugcserviceport();
  // todo initialize ws operation arguments here
 java.lang.string cllgname = cllg;
 // todo process result here

 java.lang.string result = port.getrating(cllgname); out.println("rating = "+result);
   } catch (exception ex) {

 // todo handle custom exceptions here
   }
   %>
```

```
    </body>
</html>
```

output:





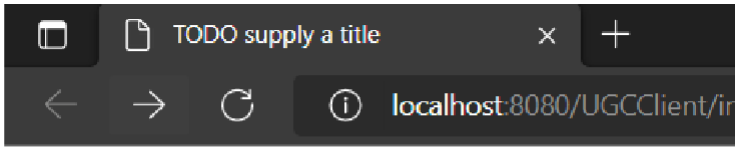
getRating Method invocation

Method parameter(s)

Type	Value
java.lang.String	sies

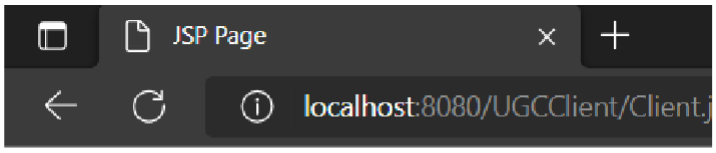
Method returned

java.lang.String : "**A**"



Enter College Name: birla

Submit



Rating = B

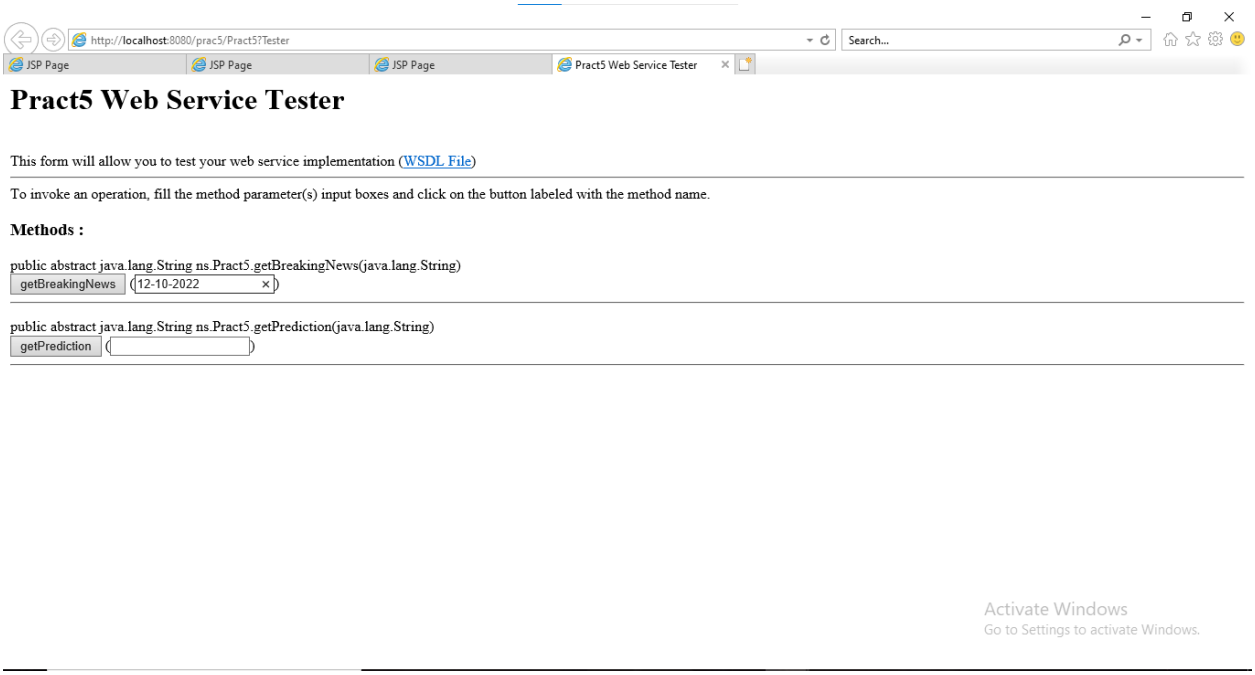
Web service practical no 5
TCS2223010

prac5.java

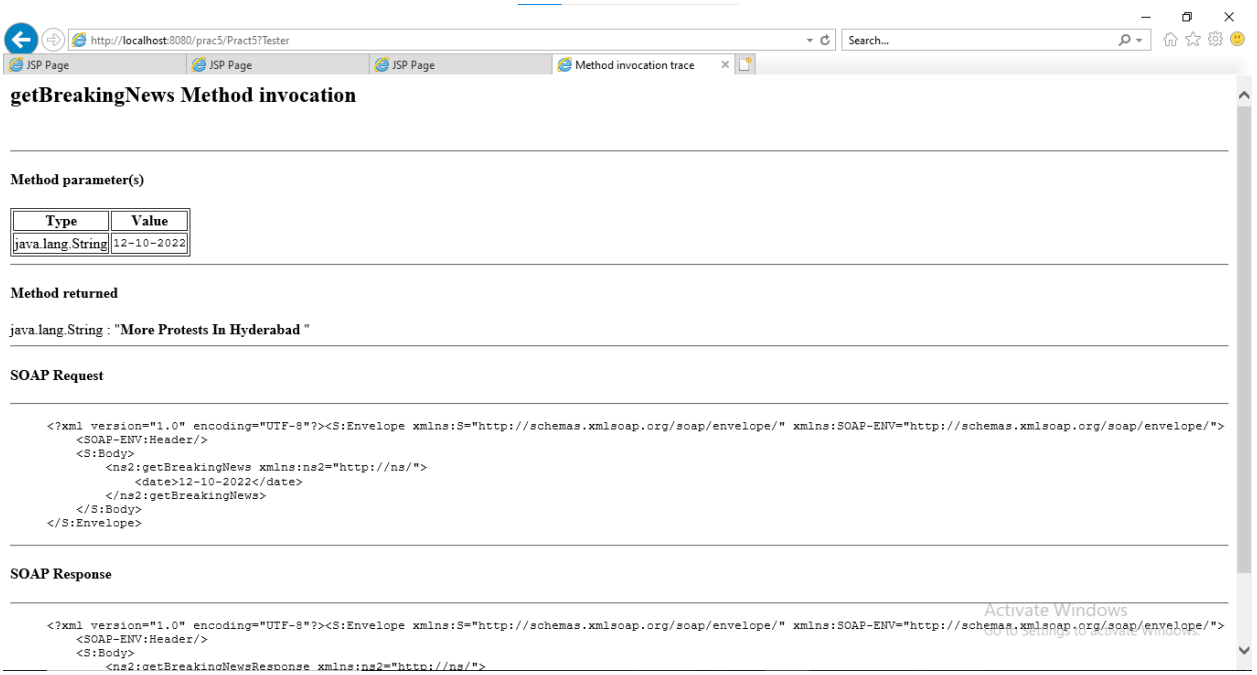
```
/*
 * to change this license header, choose license headers in project properties.
 * to change this template file, choose tools | templates
 * and open the template in the editor.
 */
package ns;

import java.sql.connection;
import java.sql.drivermanager;
import java.sql.preparedstatement;
import java.sql.resultset;
import javax.jws.webservice;
import javax.jws.webmethod;
import javax.jws.webparam;

/**
 *
 * @author sies
 */
@webservice(servicename = "pract5")
public class pract5 {
```

```
    /**
     * web service operation
     */
    @webmethod(operationname = "getbreakingnews")
    public string getbreakingnews(@webparam(name = "date") string
date) {
        string ur_date = "";
        //todo write your implementation code here:
        try{
            //load driver
            class.forname("org.apache.derby.jdbc.clientdriver");
            //connection creation
            connection con =
drivermanager.getconnection("jdbc:derby://localhost:1527/news",
"news", "news");
            preparedstatement pstmt = con.preparestatement("select * from
news where date = ? ");
            pstmt.setstring(1,date);
            resultset rs =  pstmt.executequery();
            rs.next();
            ur_date = rs.getstring("breakingnews");

        }catch(exception e){
            e.printstacktrace();
        }
        return ur_date;
    }

    /**
```

```
     * web service operation
     */
    @webmethod(operationname = "getprediction")
    public string getprediction(@webparam(name = "sunsign") string
sunsign) {
        string pre = "";
        //todo write your implementation code here:
        try{
            //load driver
            class.forname("org.apache.derby.jdbc.clientdriver");
            //connection creation
            connection con =
drivermanager.getconnection("jdbc:derby://localhost:1527/sunsign",
"sun", "123");
            preparedstatement pstmt = con.preparestatement("select * from
sunsign where sunsign = ? ");
            pstmt.setstring(1,sunsign);
            resultset rs =  pstmt.executequery();
            rs.next();
            pre = rs.getstring("prediction");

        }catch(exception e){
            e.printstacktrace();
        }
        return pre;
    }
}
```


http://localhost:8080/prac5/Pract5?Tester
Search...
JSP Page
JSP Page
JSP Page
Pract5 Web Service Tester
Pract5 Web Service Tester
This form will allow you to test your web service implementation (WSDL File)
To invoke an operation, fill the method parameter(s) input boxes and click on the button labeled with the method name.
Methods :
public abstract java.lang.String ns.Pract5.getBreakingNews(java.lang.String)
getBreakingNews
12-10-2022
public abstract java.lang.String ns.Pract5.getPrediction(java.lang.String)
getPrediction
Activate Windows
Go to Settings to activate Windows.


http://localhost:8080/prac5/Pract5?Tester
Search...
JSP Page
JSP Page
JSP Page
Method invocation trace
getPrediction Method invocation
Method parameter(s)
Type
Value
java.lang.String
Pisces
Method returned
java.lang.String : "In astrology, Pisces is the 12th sign of the zodiac February 19 to about March 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:getPrediction xmlns:ns2="http://ns/">
<sunsign>Pisces</sunsign>
</ns2:getPrediction>
</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:getPredictionResponse xmlns:ns2="http://ns/">
<return>In astrology, Pisces is the 12th sign of the zodiac February 19 to about March 20 </return>
</ns2:getPredictionResponse>
</S:Body>
</S:Envelope>
Activate Windows
Go to Settings to activate Windows.



insert into sunsign values ('pisces','in astrology, pisces is the 12th sign of the zodiac february 19 to about march 20');

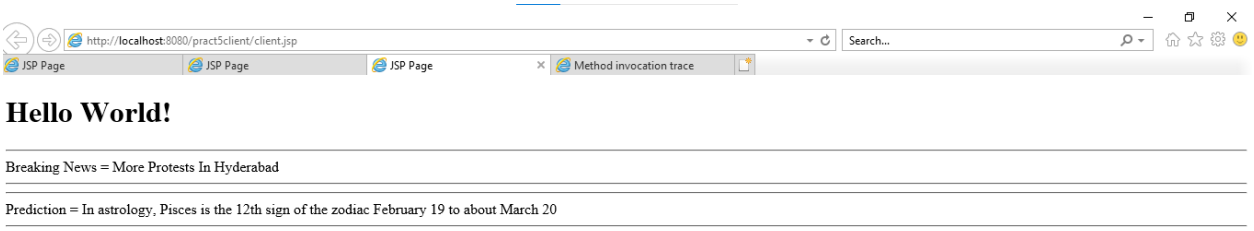
insert into news values ('12-10-2022', 'more protests in hyderabad');

client.jsp

```
<%--
    document   : client
    created on : aug 25, 2022, 9:54:30 am
    author     : sies
--%>

<%@page contenttype="text/html" pageencoding="utf-8"%>
<!doctype html>
<html>
    <head>
        <meta http-equiv="content-type" content="text/html; charset=utf-8">
        <title>jsp page</title>
```

```
</head>
<body>
    <h1>hello world!</h1>
        <%-- start web service invocation --%><hr/>
<%
try {
     ns.pract5_service service = new ns.pract5_service();
     ns.pract5 port = service.getpract5port();
      // todo initialize ws operation arguments here
     java.lang.string date = "12-10-2022";
     // todo process result here
     java.lang.string result = port.getbreakingnews(date);
     out.println("breaking news = "+result);
} catch (exception ex) {
     // todo handle custom exceptions here
}
%>
<%-- end web service invocation --%><hr/>
<%-- start web service invocation --%><hr/>
<%
try {
     ns.pract5_service service = new ns.pract5_service();
     ns.pract5 port = service.getpract5port();
      // todo initialize ws operation arguments here
     java.lang.string sunsign = "pisces";
     // todo process result here
     java.lang.string result = port.getprediction(sunsign);
```

```
        out.println("prediction = "+result);
    } catch (exception ex) {
        // todo handle custom exceptions here
    }
    %>
    <%-- end web service invocation --%><hr/>


    </body>
</html>
```



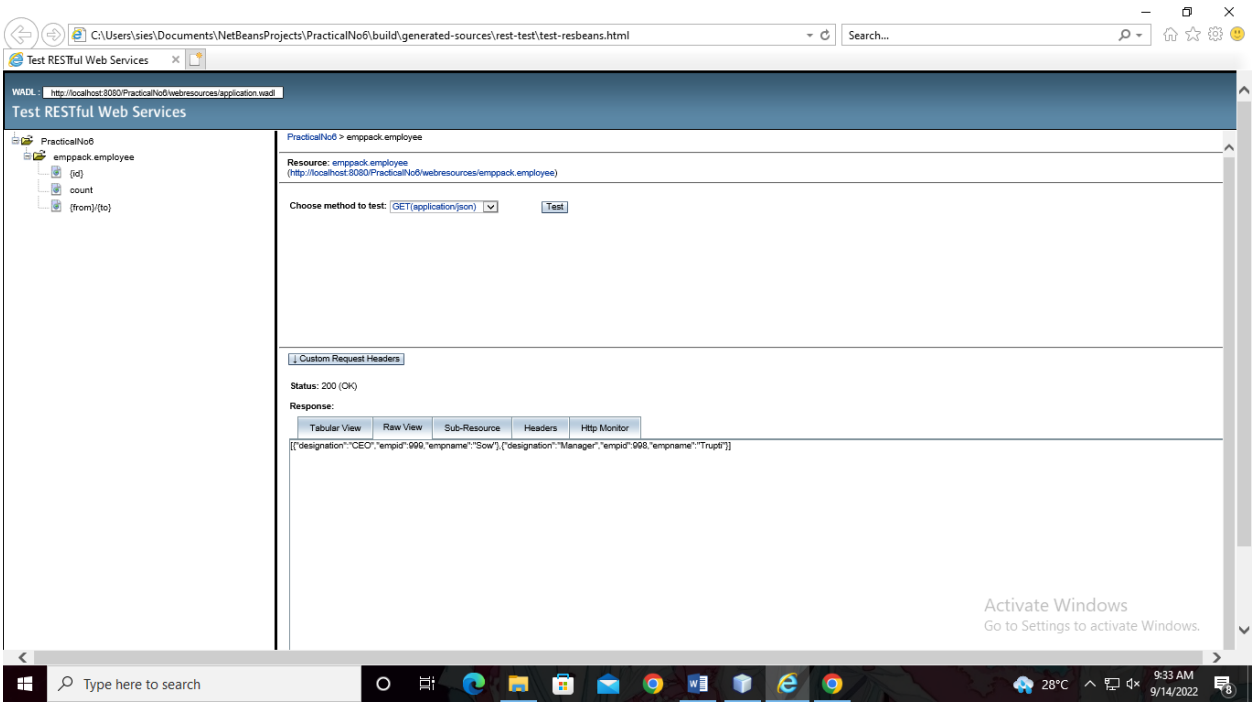
Web service practical no 6
TCS2223010

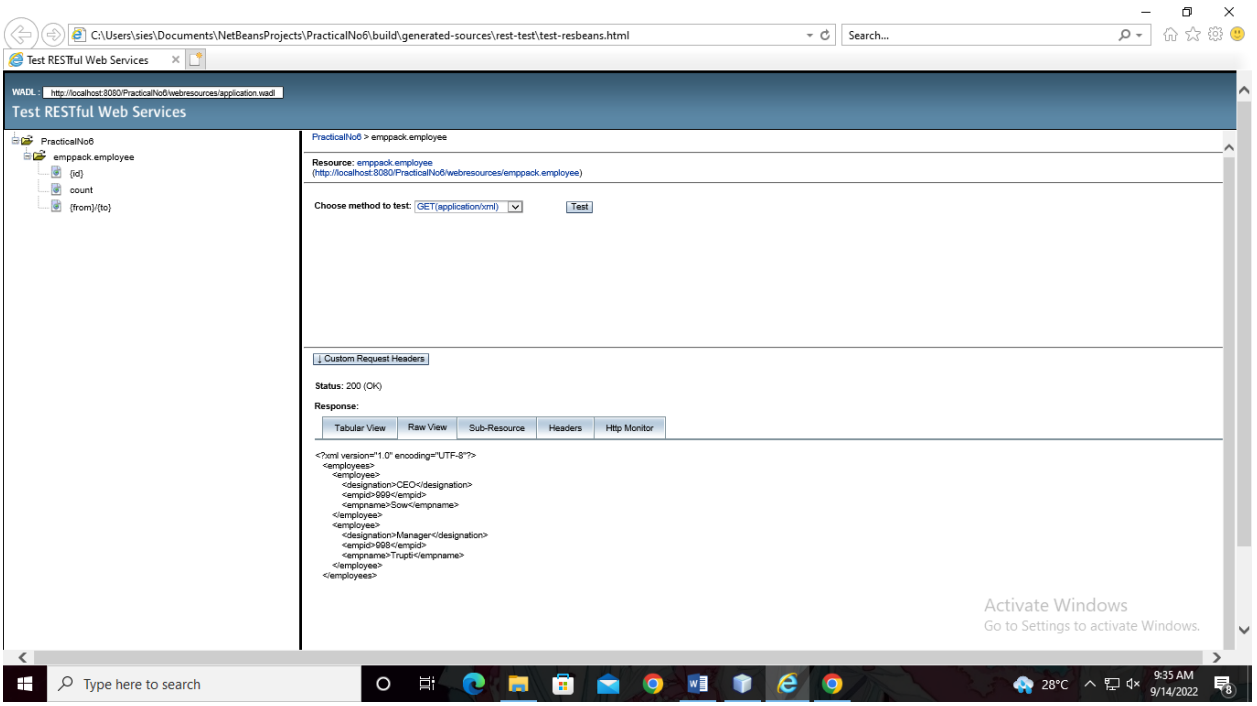
aim:

design a restful webservice from a database table employee with columns empid,empname and designation. test the webservice for the various http requests.

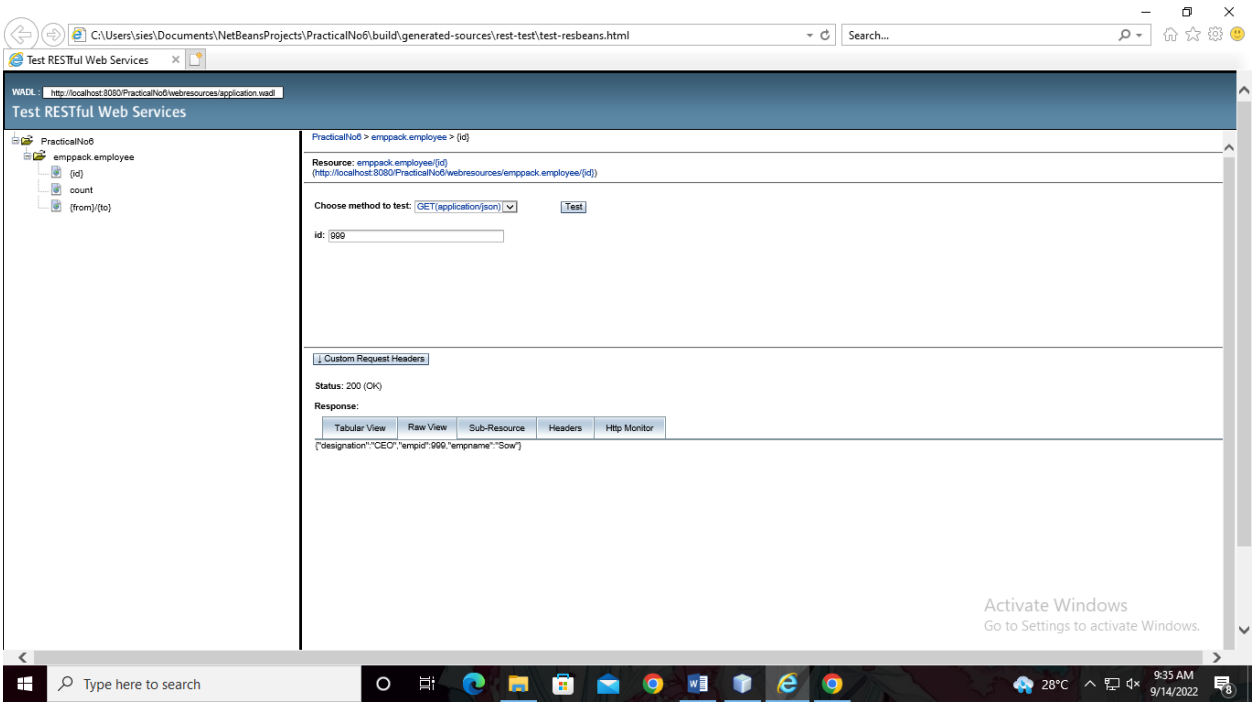
code:

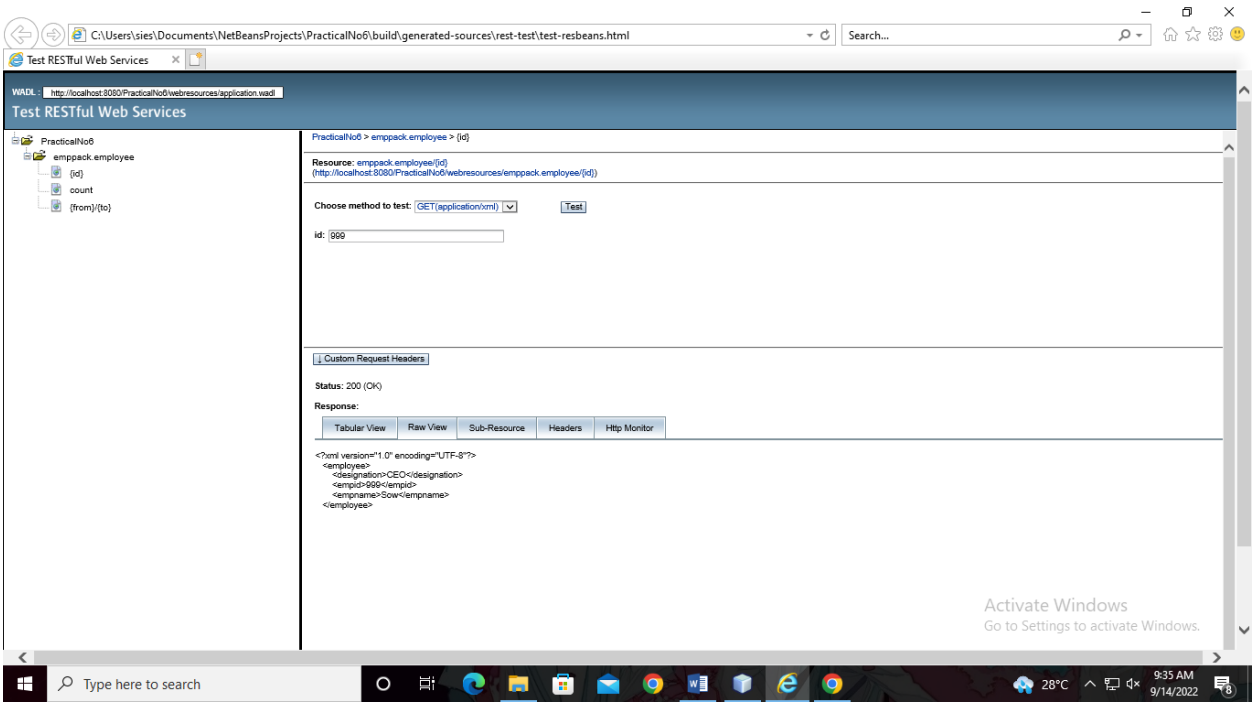
output:


C:\Users\sies\Documents\NetBeansProjects\PracticalNo6\build\generated-sources\rest-test\test-resbeans.html
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo6/webresources/application.wadl
Test RESTful Web Services
PracticalNo6
emppack.employee
{id}
count
{from}/{to}
PracticalNo6 > emppack.employee
Resource: emppack.employee
(http://localhost:8080/PracticalNo6/webresources/emppack.employee)
Choose method to test: GET(application/json)
Test
Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
[{"designation":"CEO","empid":999,"empname":"Sow"},{"designation":"Manager","empid":998,"empname":"Trupti"}]
Activate Windows
Go to Settings to activate Windows.
Type here to search
28°C
9:33 AM
9/14/2022

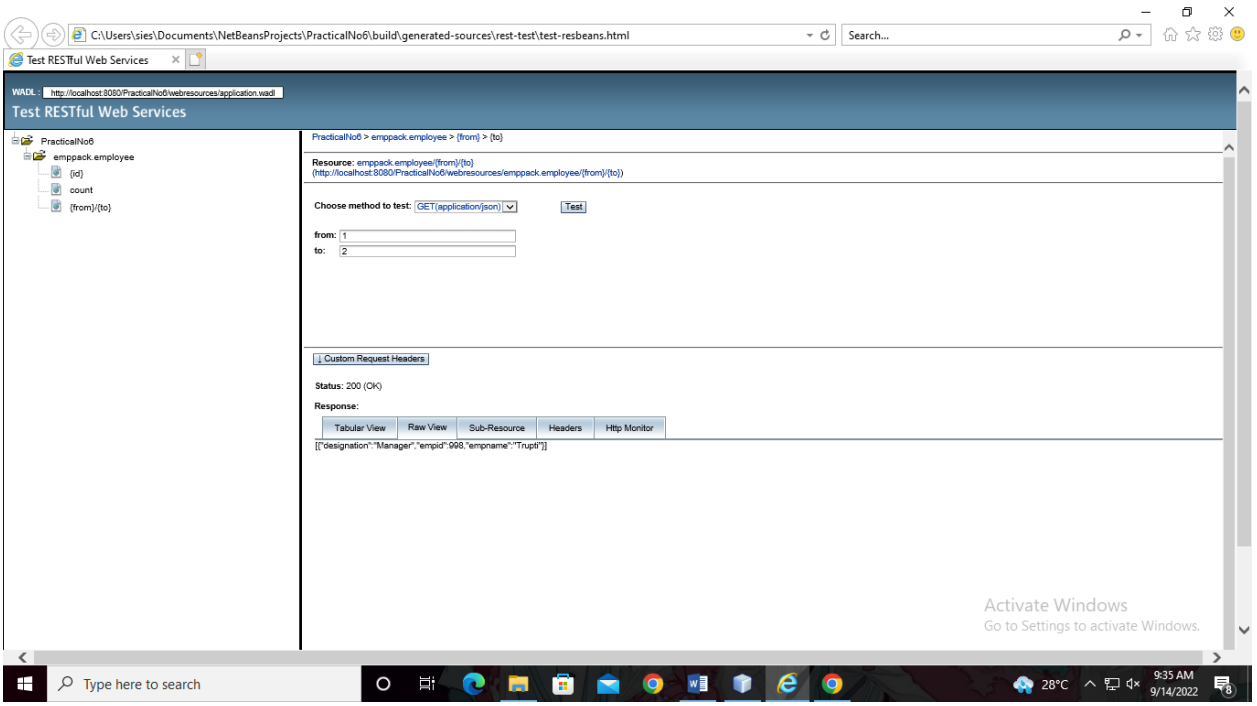

C:\Users\sies\Documents\NetBeansProjects\PracticalNo6\build\generated-sources\rest-test\test-resbeans.html
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo6/webresources/application.wadl
Test RESTful Web Services
PracticalNo6
emppack.employee
{id}
count
{from}/{to}
PracticalNo6 > emppack.employee
Resource: emppack.employee
(http://localhost:8080/PracticalNo6/webresources/emppack.employee)
Choose method to test: GET(application/xml)
Test
Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
<?xml version="1.0" encoding="UTF-8"?>
<employees>
<employee>
<designation>CEO</designation>
<empid>999</empid>
<empname>Sow</empname>
</employee>
<employee>
<designation>Manager</designation>
<empid>998</empid>
<empname>Trupti</empname>
</employee>
</employees>
Activate Windows
Go to Settings to activate Windows.
Type here to search
28°C
9:35 AM
9/14/2022

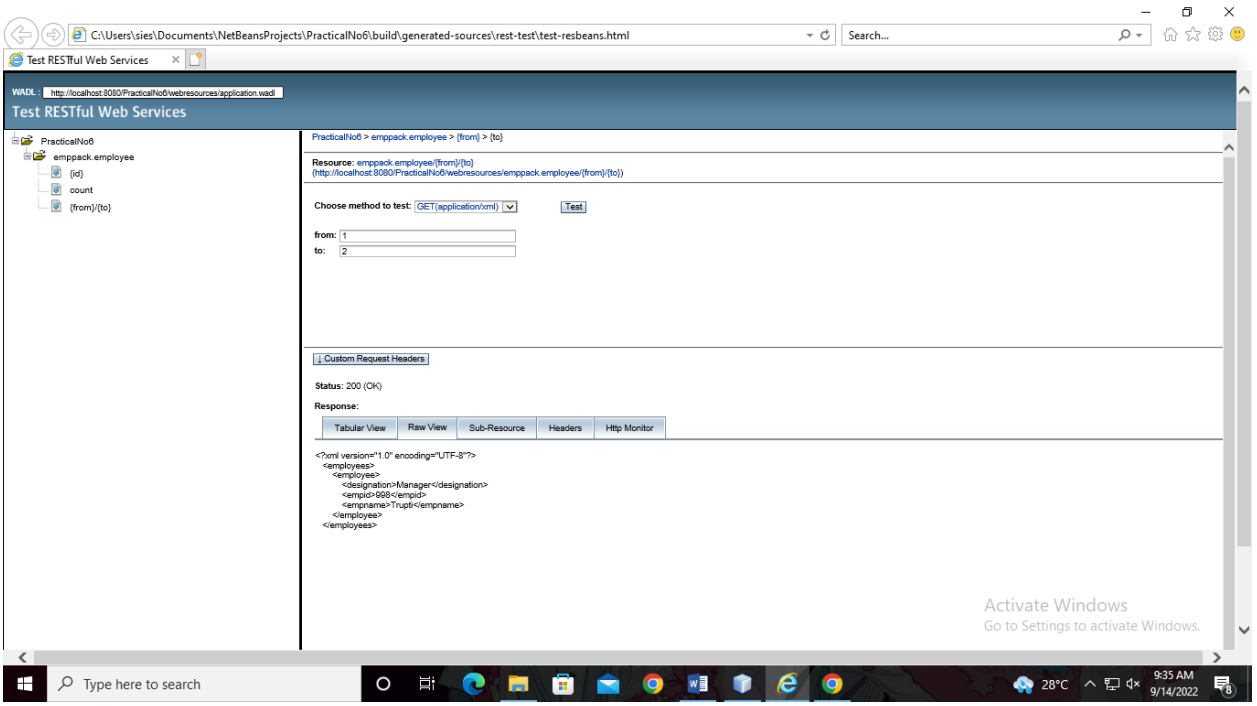
id


C:\Users\sies\Documents\NetBeansProjects\PracticalNo6\build\generated-sources\rest-test\test-resbeans.html
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo6/webresources/application.wadl
Test RESTful Web Services
PracticalNo6
emppack.employee
{id}
count
{from}/{to}
PracticalNo6 > emppack.employee > {id}
Resource: emppack.employee/{id}
(http://localhost:8080/PracticalNo6/webresources/emppack.employee/{id})
Choose method to test: GET(application/json)
Test
id: 999
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
{"designation":"CEO","empid":999,"empname":"Sow"}
Activate Windows
Go to Settings to activate Windows.
Type here to search
28°C
9:35 AM
9/14/2022

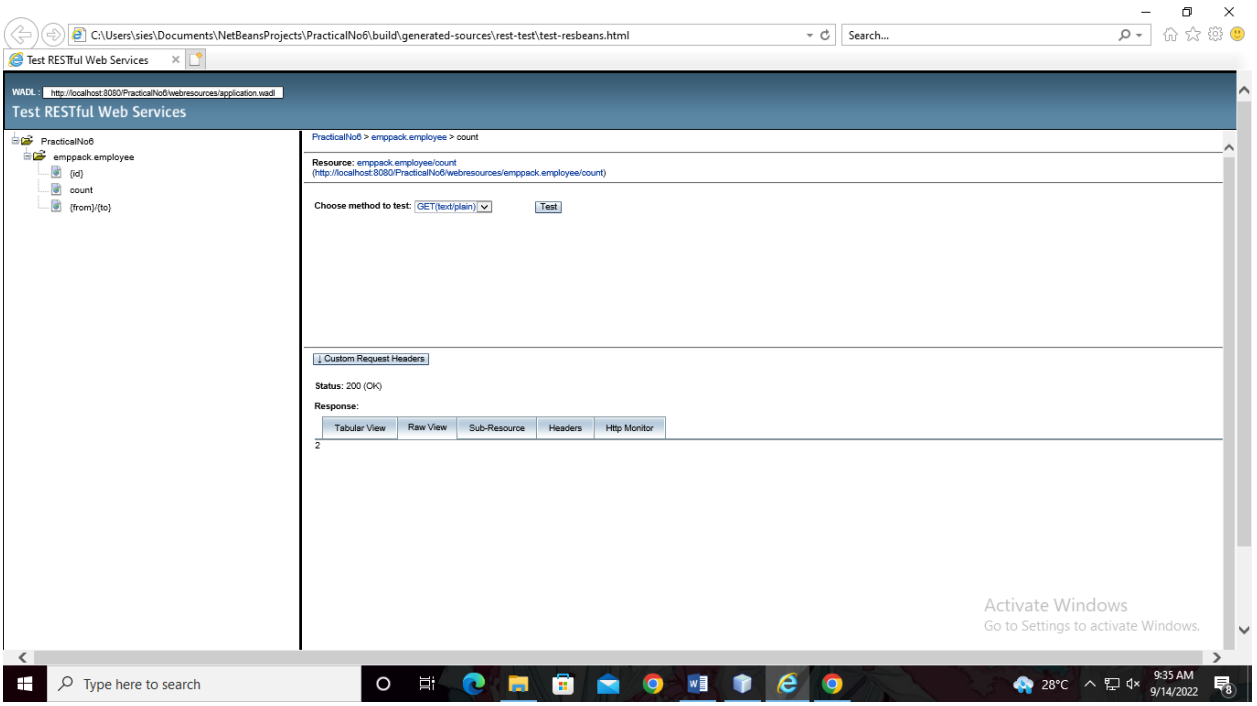

C:\Users\sies\Documents\NetBeansProjects\PracticalNo6\build\generated-sources\rest-test\test-resbeans.html
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo6/webresources/application.wadl
Test RESTful Web Services
PracticalNo6
emppack.employee
{id}
count
{from}/{to}
PracticalNo6 > emppack.employee > {id}
Resource: emppack.employee/{id}
(http://localhost:8080/PracticalNo6/webresources/emppack.employee/{id})
Choose method to test: GET(application/xml)
Test
id: 999
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
<?xml version="1.0" encoding="UTF-8"?>
<employee>
<designation>CEO</designation>
<empid>999</empid>
<empname>Sow</empname>
</employee>
Activate Windows
Go to Settings to activate Windows.
Type here to search
28°C
9:35 AM
9/14/2022

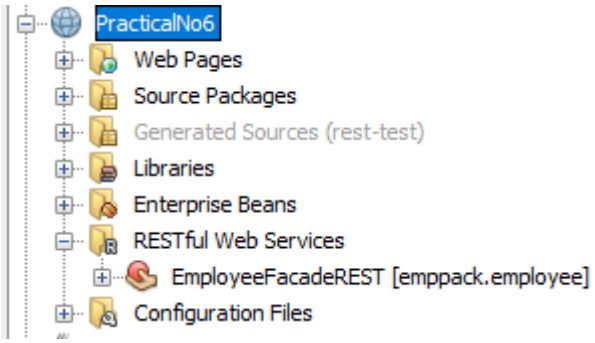
from/to:


C:\Users\sies\Documents\NetBeansProjects\PracticalNo6\build\generated-sources\rest-test\test-resbeans.html
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo6/webresources/application.wadl
Test RESTful Web Services
PracticalNo6
emppack.employee
{id}
count
{from}/{to}
PracticalNo6 > emppack.employee > {from} > {to}
Resource: emppack.employee/{from}/{to}
(http://localhost:8080/PracticalNo6/webresources/emppack.employee/{from}/{to})
Choose method to test: GET(application/json)
Test
from: 1
to: 2
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
[{"designation":"Manager","empid":998,"empname":"Trupti"}]
Activate Windows
Go to Settings to activate Windows.
Type here to search
28°C
9:35 AM
9/14/2022


C:\Users\sies\Documents\NetBeansProjects\PracticalNo6\build\generated-sources\rest-test\test-resbeans.html
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo6/webresources/application.wadl
Test RESTful Web Services
PracticalNo6
emppack.employee
{id}
count
{from}/{to}
PracticalNo6 > emppack.employee > {from} > {to}
Resource: emppack.employee/{from}/{to}
(http://localhost:8080/PracticalNo6/webresources/emppack.employee/{from}/{to})
Choose method to test: GET(application/xml)
Test
from: 1
to: 2
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
<?xml version="1.0" encoding="UTF-8"?>
<employees>
<employee>
<designation>Manager</designation>
<empid>998</empid>
<empname>Trupti</empname>
</employee>
</employees>
Activate Windows
Go to Settings to activate Windows.
Type here to search
28°C
9:35 AM
9/14/2022

count:


C:\Users\sies\Documents\NetBeansProjects\PracticalNo6\build\generated-sources\rest-test\test-resbeans.html
Search...
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo6/webresources/application.wadl
Test RESTful Web Services
PracticalNo6
emppack.employee
{id}
count
{from}/{to}
PracticalNo6 > emppack.employee > count
Resource: emppack.employee/count
(http://localhost:8080/PracticalNo6/webresources/emppack.employee/count)
Choose method to test: GET(text/plain)
Test
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
2
Activate Windows
Go to Settings to activate Windows.
Type here to search
28°C
9:35 AM
9/14/2022


PracticalNo6
Web Pages
Source Packages
Generated Sources (rest-test)
Libraries
Enterprise Beans
RESTful Web Services
EmployeeFacadeREST [emppack.employee]
Configuration Files

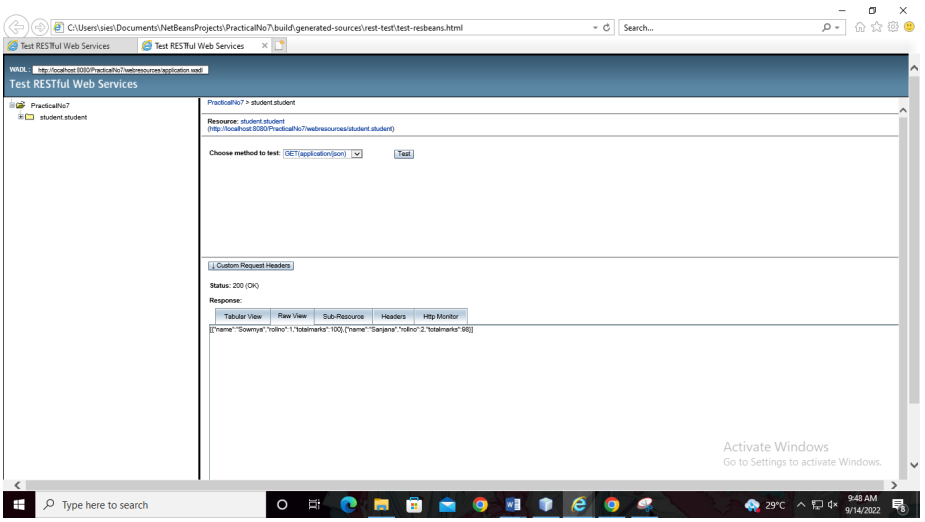
Web service practical no 7
TCS2223010

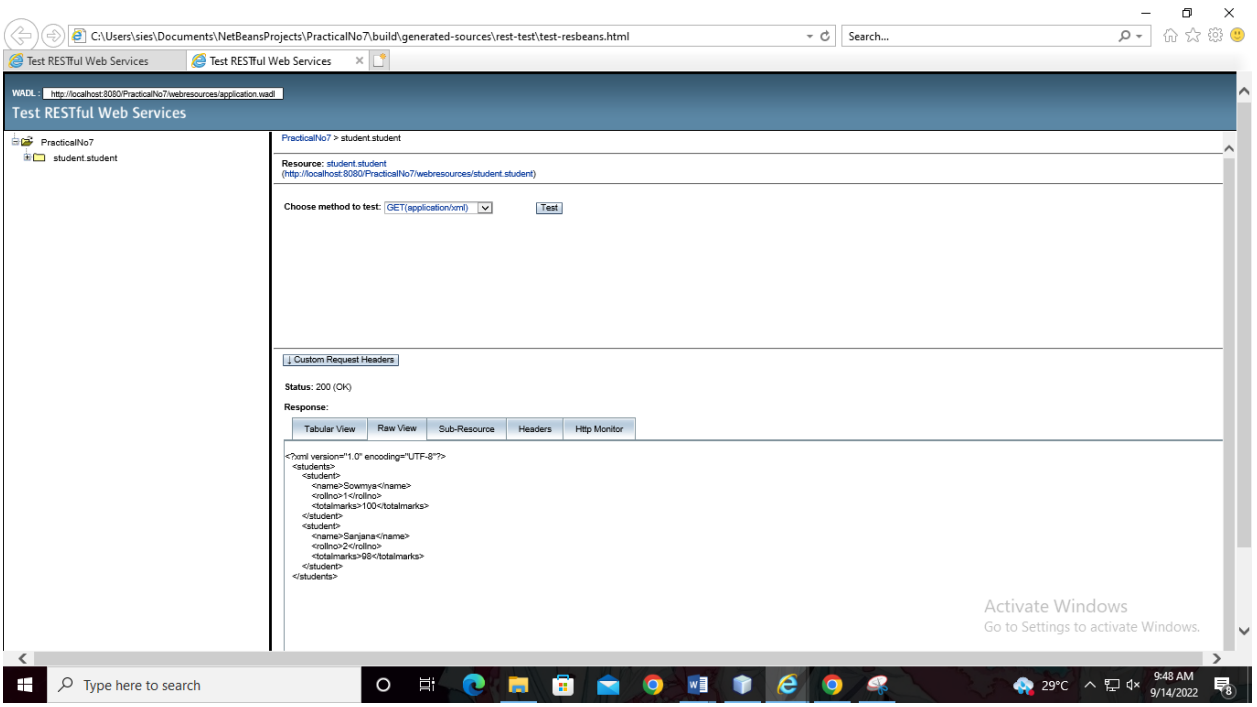
aim:

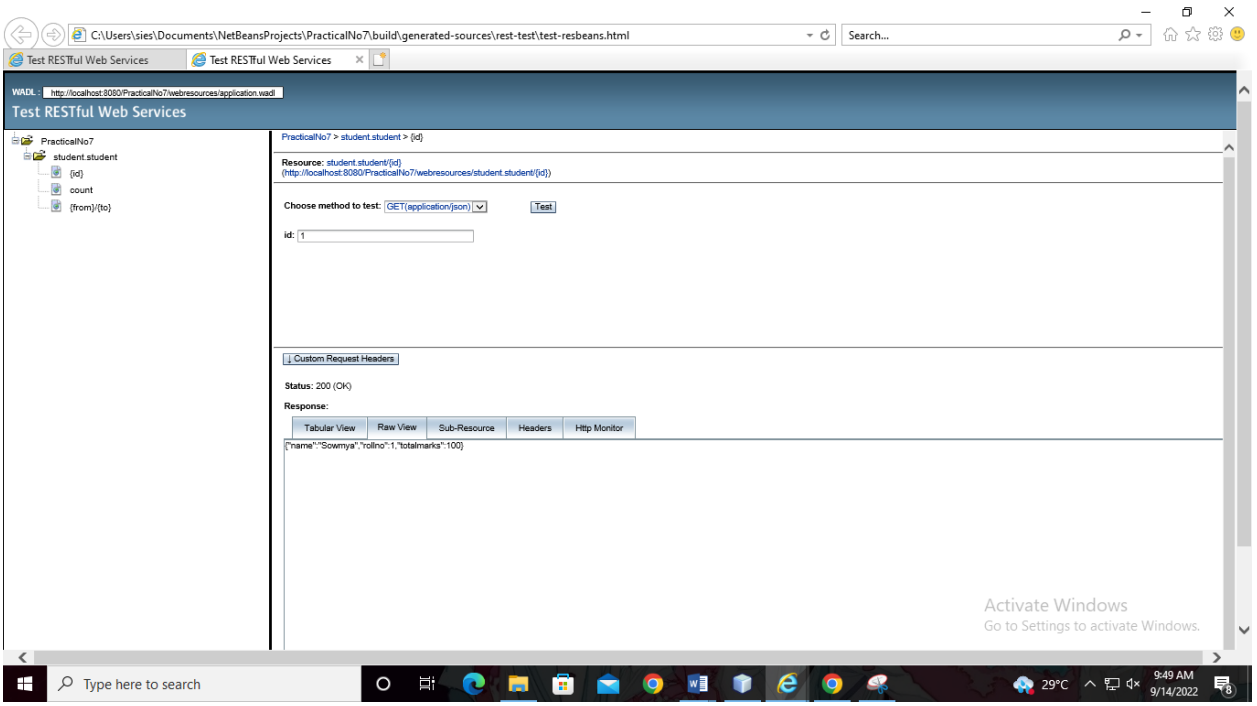
design a restful webservice from a database table student with columns rollno,name and totalmarks. create a restful client that displays the data by accessing restful service.

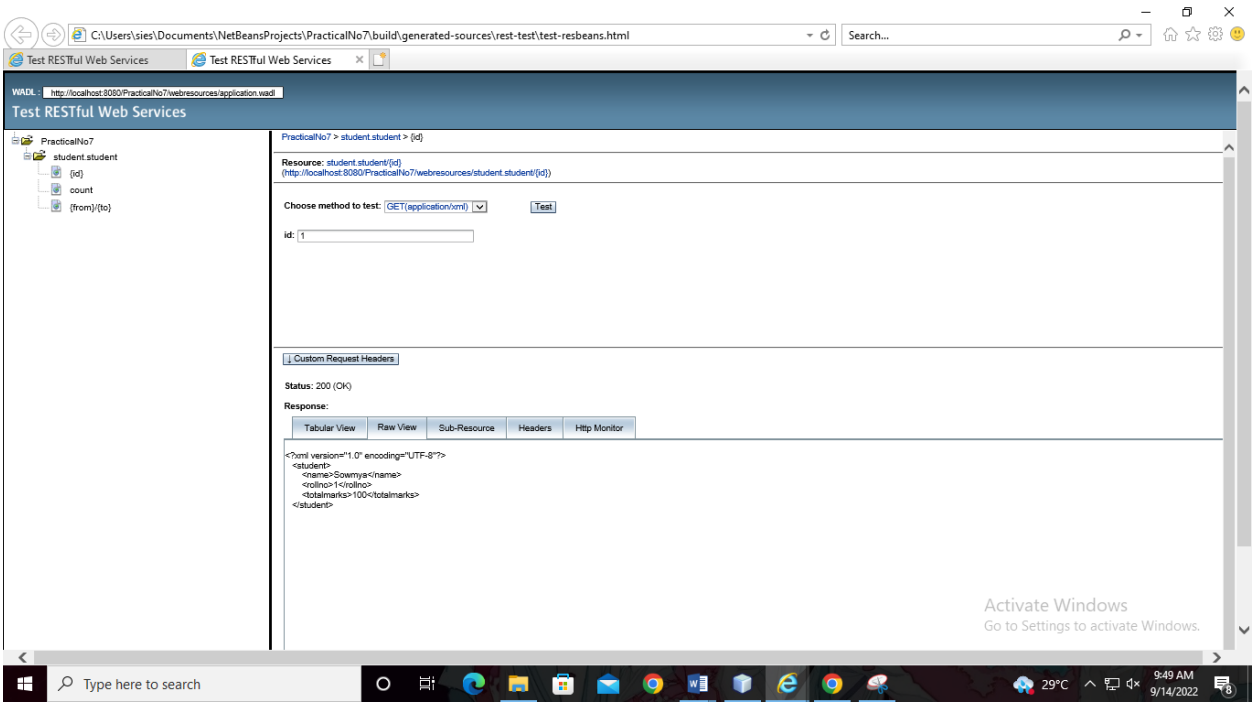
code:

output:

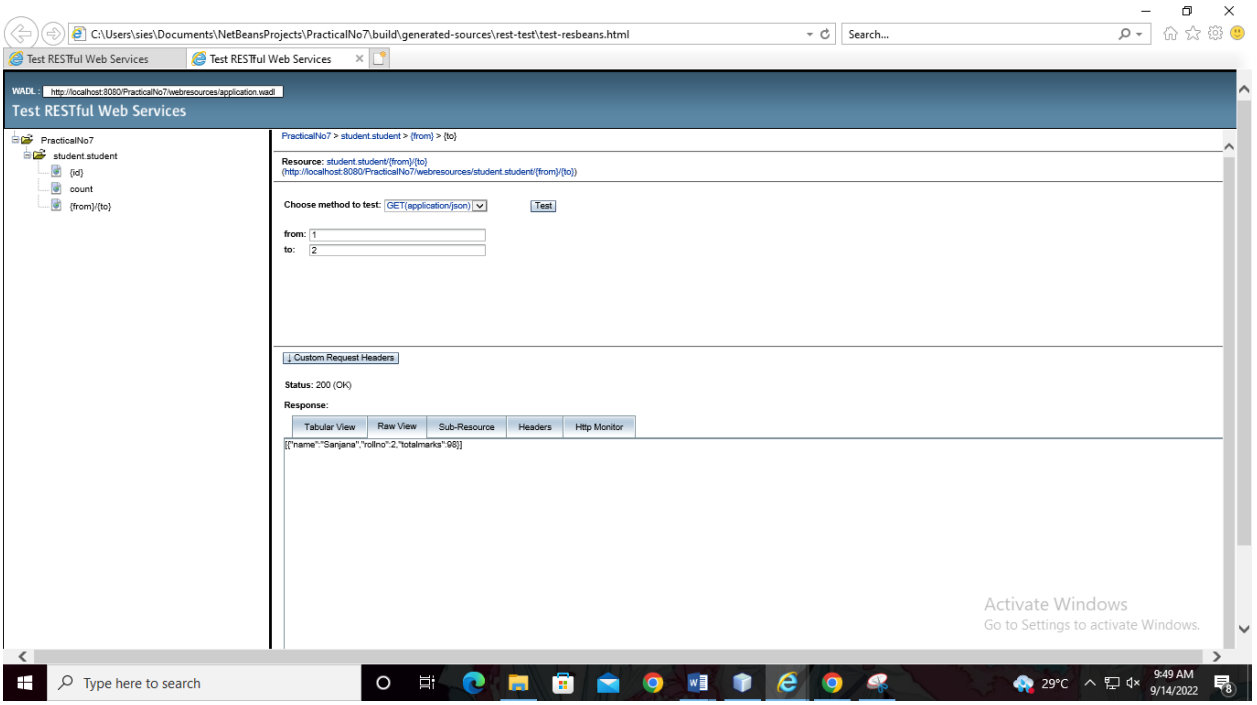


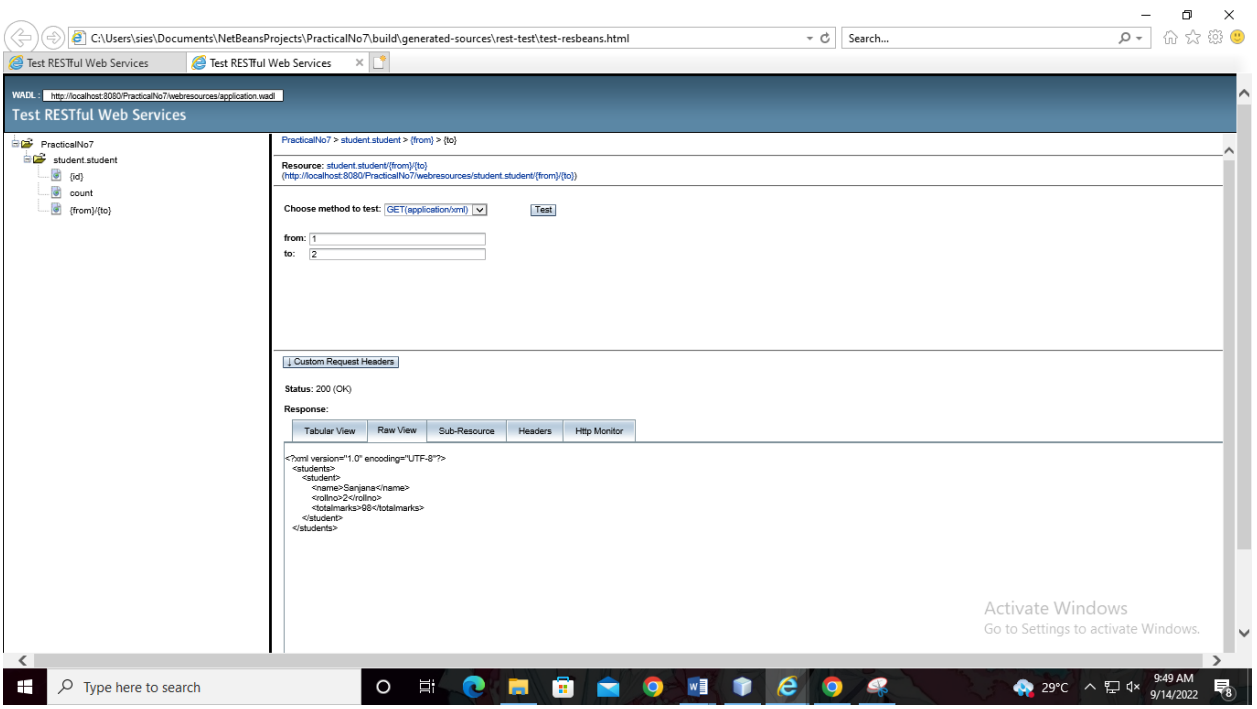



C:\Users\sies\Documents\NetBeansProjects\PracticalNo7\build\generated-sources\rest-test\test-resbeans.html
Search...
Test RESTful Web Services
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo7/webresources/application.wadl
Test RESTful Web Services
PracticalNo7
student.student
{id}
count
{from}/{to}
PracticalNo7 > student.student > {id}
Resource: student.student/{id}
(http://localhost:8080/PracticalNo7/webresources/student.student/{id})
Choose method to test: GET(application/json)
Test
id: 1
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
{"name":"Sowmya","rollno":1,"totalmarks":100}
Activate Windows
Go to Settings to activate Windows.
Type here to search
29°C
9:49 AM
9/14/2022

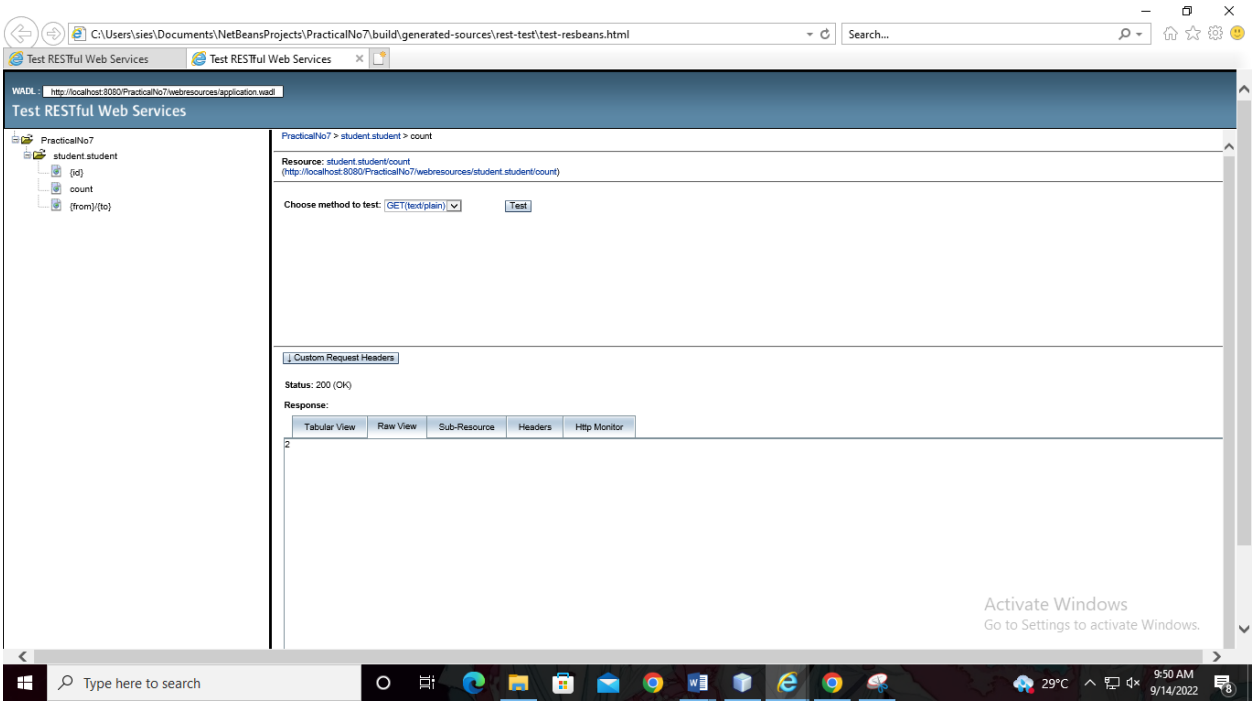

C:\Users\sies\Documents\NetBeansProjects\PracticalNo7\build\generated-sources\rest-test\test-resbeans.html
Search...
Test RESTful Web Services
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo7/webresources/application.wadl
Test RESTful Web Services
PracticalNo7
student.student
{id}
count
{from}/{to}
PracticalNo7 > student.student > {id}
Resource: student.student/{id}
(http://localhost:8080/PracticalNo7/webresources/student.student/{id})
Choose method to test: GET(application/xml)
Test
id: 1
↓ Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
<?xml version="1.0" encoding="UTF-8"?>
<student>
<name>Sowmya</name>
<rollno>1</rollno>
<totalmarks>100</totalmarks>
</student>
Activate Windows
Go to Settings to activate Windows.
Type here to search
29°C
9:49 AM
9/14/2022

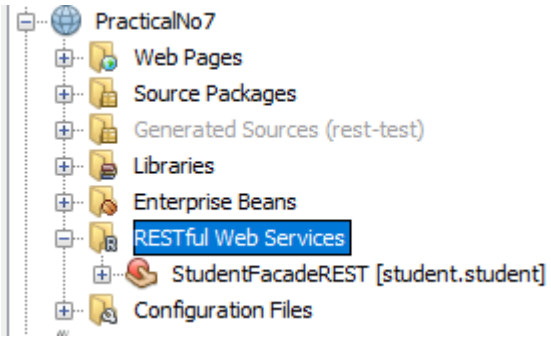
from/to:


C:\Users\sies\Documents\NetBeansProjects\PracticalNo7\build\generated-sources\rest-test\test-resbeans.html
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo7/webresources/application.wadl
Test RESTful Web Services
PracticalNo7
student.student
{id}
count
{from}/{to}
PracticalNo7 > student.student > {from} > {to}
Resource: student.student/{from}/{to}
(http://localhost:8080/PracticalNo7/webresources/student.student/{from}/{to})
Choose method to test: GET(application/json)
Test
from: 1
to: 2
Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
[{"name":"Sanjana","rollno":2,"totalmarks":98}]
Activate Windows
Go to Settings to activate Windows.
Type here to search
29°C
9:49 AM
9/14/2022


C:\Users\sies\Documents\NetBeansProjects\PracticalNo7\build\generated-sources\rest-test\test-resbeans.html
Test RESTful Web Services
WADL : http://localhost:8080/PracticalNo7/webresources/application.wadl
Test RESTful Web Services
PracticalNo7
student.student
{id}
count
{from}/{to}
PracticalNo7 > student.student > {from} > {to}
Resource: student.student/{from}/{to}
(http://localhost:8080/PracticalNo7/webresources/student.student/{from}/{to})
Choose method to test: GET(application/xml)
Test
from: 1
to: 2
Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
<?xml version="1.0" encoding="UTF-8"?>
<students>
<student>
<name>Sanjana</name>
<rollno>2</rollno>
<totalmarks>98</totalmarks>
</student>
</students>
Activate Windows
Go to Settings to activate Windows.
Type here to search
29°C
9:49 AM
9/14/2022

count:


C:\Users\sies\Documents\NetBeansProjects\PracticalNo7\build\generated-sources\rest-test\test-resbeans.html
Search...
Test RESTful Web Services
Test RESTful Web Services
WADL: http://localhost:8080/PracticalNo7/webresources/application.wadl
Test RESTful Web Services
PracticalNo7
student.student
{id}
count
{from}/{to}
PracticalNo7 > student.student > count
Resource: student.student/count
(http://localhost:8080/PracticalNo7/webresources/student.student/count)
Choose method to test: GET(text/plain)
Test
Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
2
Activate Windows
Go to Settings to activate Windows.
Type here to search
29°C
9:50 AM
9/14/2022


PracticalNo7
Web Pages
Source Packages
Generated Sources (rest-test)
Libraries
Enterprise Beans
RESTful Web Services
StudentFacadeREST [student.student]
Configuration Files

Web service practical no 8
TCS2223010

aim:

create a wcf service to perform calculations like addition, subtraction, multiplication and division. create a client for wcf which invokes the various operations.

program code:

iservice1.cs:

```
using system;
using system.collections.generic;
using system.linq;
using system.runtime.serialization;
using system.servicemodel;
using system.text;

namespace wcfservice1
{
    // note: you can use the "rename" command on the "refactor" menu to change the interface name "iservice1" in both code and config file together.
    [servicecontract]
    public interface iservice1
    {
        [operationcontract]
        double sum(double a, double b);

        [operationcontract]
        double diff(double a, double b);

        [operationcontract]
        double mul(double a, double b);

        [operationcontract]
        double div(double a, double b);
    }
}
```

service1.svc.cs:

```
using system;
using system.collections.generic;
using system.linq;
using system.runtime.serialization;
using system.servicemodel;
using system.text;

namespace wcfservice1
{
    // note: you can use the "rename" command on the "refactor" menu to change the class name "service1" in code, svc and config file together.
    // note: in order to launch wcf test client for testing this service, please select service1.svc or service1.svc.cs at the solution explorer and start debugging.
    public class service1 : iservice1
    {
        public double mul(double a, double b)
        {
            double result = a * b;
            return result;
            //throw new notimplementedexception();
        }

        public double sum(double a, double b)
        {
            double result = a + b;
            return result;
            //throw new notimplementedexception();
        }

        public double diff(double a, double b)
        {
            double result = a - b;
            return result;
            //throw new notimplementedexception();
        }

        public double div(double a, double b)
        {
            double result = a / b;
            return result;
            //throw new notimplementedexception();
        }
```

```
    }
}
```

webform1.aspx:

```
<%@ page language="c#" autoeventwireup="true"
codebehind="webform1.aspx.cs" inherits="wcfclient.webform1" %>

<!doctype html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <asp:textbox id="textbox1" runat="server"></asp:textbox>
        <div>
            <asp:textbox id="textbox2" runat="server"></asp:textbox>
            <br />
            <asp:button id="button1" runat="server" onclick="button1_click"
text="add" />
            <asp:button id="button2" runat="server" onclick="button2_click"
text="sub" />
            <asp:button id="button3" runat="server" onclick="button3_click"
text="multiply" />
            <asp:button id="button4" runat="server" onclick="button4_click"
text="div" />
            <br />
            <asp:textbox id="textbox3" runat="server"></asp:textbox>
        </div>
    </form>
</body>
</html>
```

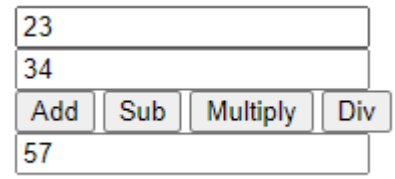
webform1.aspx.cs:

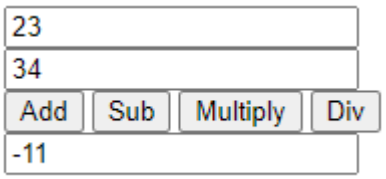
```
using system;
using system.collections.generic;
using system.linq;
using system.web;
using system.web.ui;
```

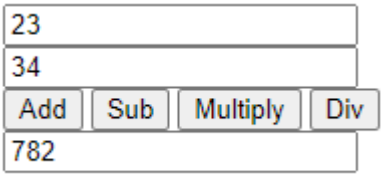
```
using system.web.ui.webcontrols;

namespace wcfclient
{
   public partial class webform1 : system.web.ui.page
   {
      protected void page_load(object sender, eventargs e)
      {

      }

      protected void button1_click(object sender, eventargs e)
      {
         servicereference1.service1client client = new
servicereference1.service1client();
         double a = double.parse(textbox1.text);
         double b = double.parse(textbox2.text);
         textbox3.text = convert.tostring(client.sum(a, b));
      }

      protected void button2_click(object sender, eventargs e)
      {
         servicereference1.service1client client = new
servicereference1.service1client();
         double a = double.parse(textbox1.text);
         double b = double.parse(textbox2.text);
         textbox3.text = convert.tostring(client.diff(a, b));
      }

      protected void button3_click(object sender, eventargs e)
      {
         servicereference1.service1client client = new
servicereference1.service1client();
         double a = double.parse(textbox1.text);
         double b = double.parse(textbox2.text);
         textbox3.text = convert.tostring(client.mul(a, b));
      }

      protected void button4_click(object sender, eventargs e)
      {
         servicereference1.service1client client = new
servicereference1.service1client();
         double a = double.parse(textbox1.text);
```

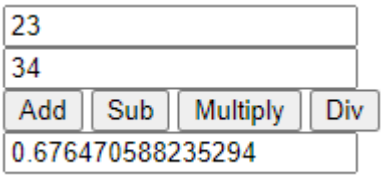
```
            double b = double.parse(textbox2.text);
            textbox3.text = convert.tostring(client.div(a, b));
        }
    }
}
```

output:









Web service practical no 9
TCS2223010

aim:

create a wcf service with different endpoint for soap based and rest based implementation

program code:

helloservice.cs:

```
using system;
using system.collections.generic;
using system.linq;
using system.runtime.serialization;
using system.servicemodel;
using system.text;

namespace wcfhelloapp
{
    // note: you can use the "rename" command on the "refactor" menu to change the interface name "ihelloservice" in both code and config file together.
    [servicecontract]
    public interface ihelloservice
    {
        [operationcontract]
        [system.servicemodel.web.webinvoke(method = "get", uritemplate = "/sayhello/{value}", requestformat = system.servicemodel.web.webmessageformat.json, responseformat = system.servicemodel.web.webmessageformat.json)]
        string sayhello(string value);

    }
}
```

helloservice.svc.cs:

```
using system;
using system.collections.generic;
using system.linq;
using system.runtime.serialization;
using system.servicemodel;
```

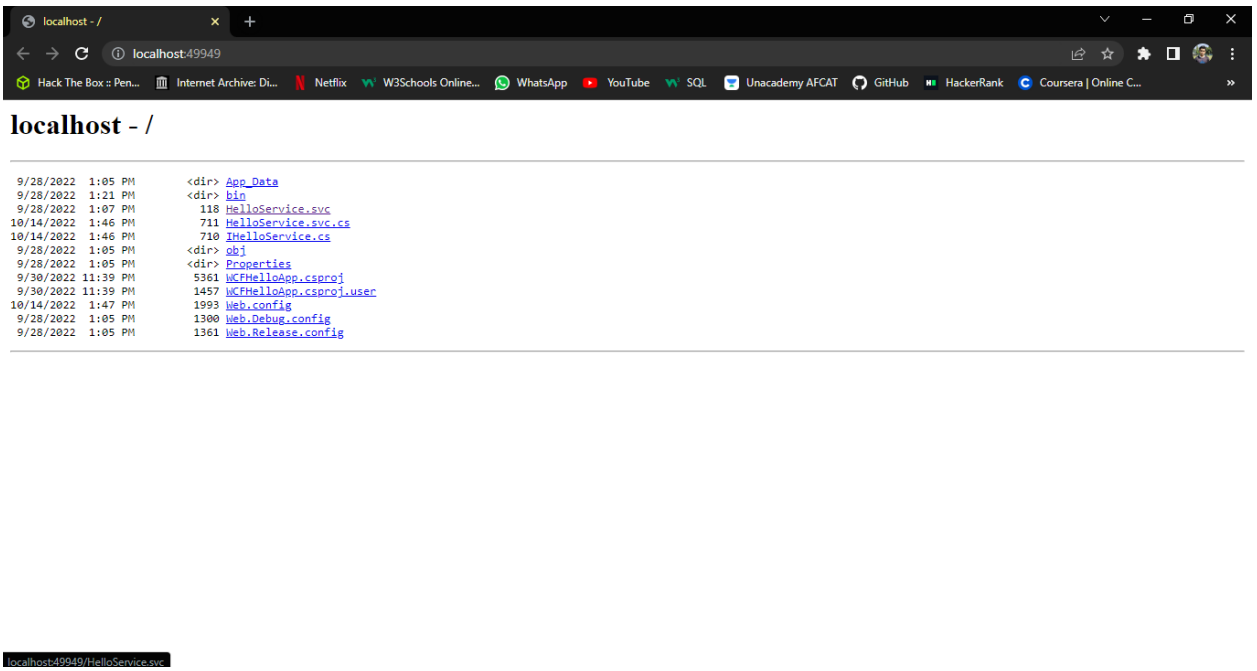
```
using system.text;

namespace wcfhelloapp
{
    // note: you can use the "rename" command on the "refactor" menu to
change the class name "helloservice" in code, svc and config file
together.
    // note: in order to launch wcf test client for testing this service, please
select helloservice.svc or helloservice.svc.cs at the solution explorer and
start debugging.
    public class helloservice : ihelloservice
    {
        public string sayhello(string value)
        {
            return string.format($"hello {value}! welcome to wcf");
        }
    }
}
```

web.config:

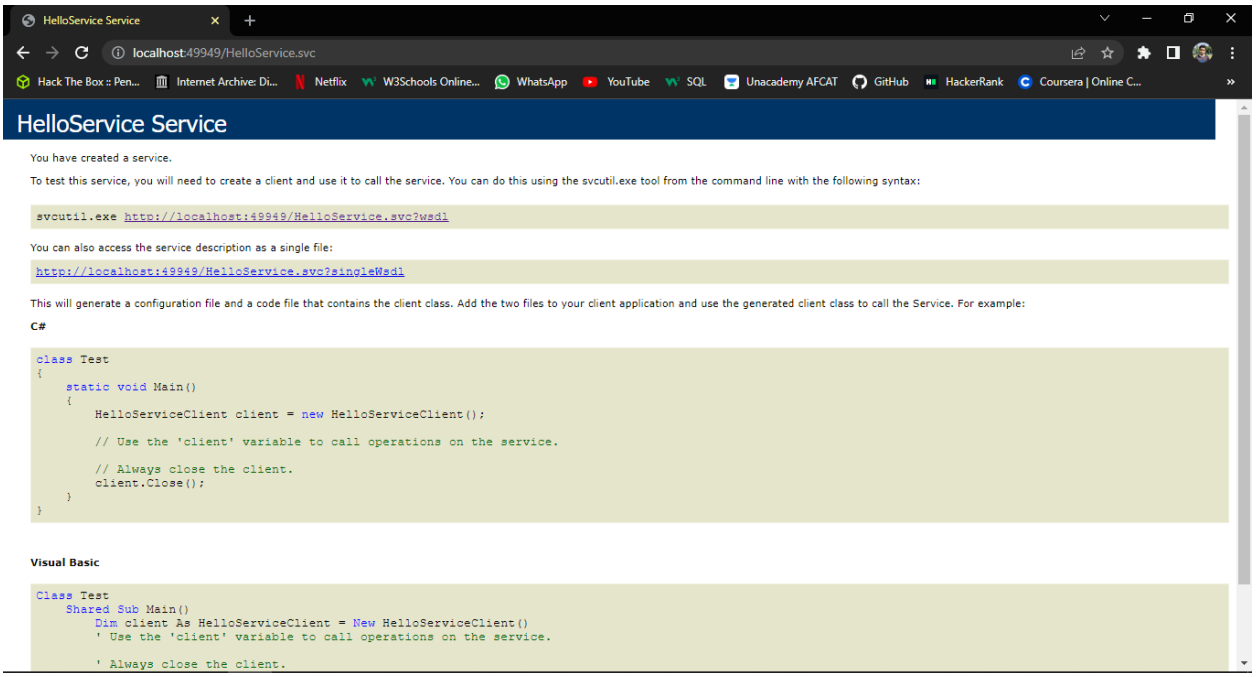
```
<?xml version="1.0"?>
<configuration>

  <appsettings>
    <add key="aspnet:usetaskfriendlysynchronizationcontext"
value="true" />
  </appsettings>
  <system.web>
    <compilation debug="true" targetframework="4.6.1" />
    <httpruntime targetframework="4.6.1"/>
  </system.web>
  <system.servicemodel>
    <services>
      <service name="wcfhelloapp.helloservice">
        <endpoint address="jsonservice" binding="webhttpbinding"
contract="wcfhelloapp.ihelloservice" behaviorconfiguration="web">
        </endpoint>
        <endpoint address="soapservice" binding="basichttpbinding"
contract="wcfhelloapp.ihelloservice">
        </endpoint>
      </service>
    </services>
```

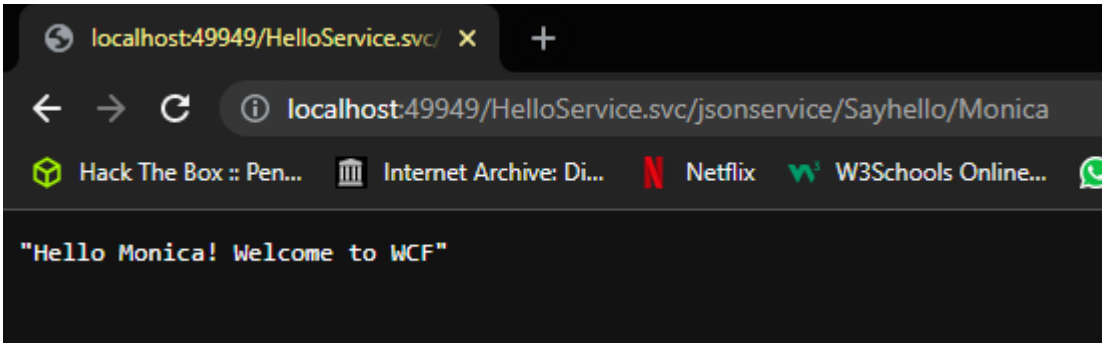
```
    <behaviors>
      <servicebehaviors>
        <behavior>
          <!-- to avoid disclosing metadata information, set the values below
to false before deployment -->
          <servicemetadata httpgetenabled="true" httpsgetenabled="true"/>
          <!-- to receive exception details in faults for debugging purposes,
set the value below to true.  set to false before deployment to avoid
disclosing exception information -->
          <servicedebug includeexceptiondetailinfaults="false"/>
        </behavior>
      </servicebehaviors>
      <endpointbehaviors>
        <behavior name="web">
          <webhttp/>
        </behavior>
      </endpointbehaviors>
    </behaviors>
    <protocolmapping>
        <add binding="basichttpsbinding" scheme="https" />
    </protocolmapping>
    <servicehostingenvironment aspnetcompatibilityenabled="true"
multiplesitebindingsenabled="true" />
  </system.servicemodel>
  <system.webserver>
    <modules runallmanagedmodulesforallrequests="true"/>
    <!--
        to browse web app root directory during debugging, set the value
below to true.
        set to false before deployment to avoid disclosing web app folder
information.
      -->
    <directorybrowse enabled="true"/>
  </system.webserver>

</configuration>
```

output:



localhost:49949/HelloService.svc





Web service practical no 10
TCS2223010

aim:

to create a restful client for practical no.7

program code:

index.html:

```
<html>
    <head>
        <title>todo supply a title</title>
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    </head>
    <body>
        <form>
        <h1>  </h1>
        <br>
        <input type="submit" formaction="getdata.jsp" value="get data">
        </form>
    </body>
</html>
```

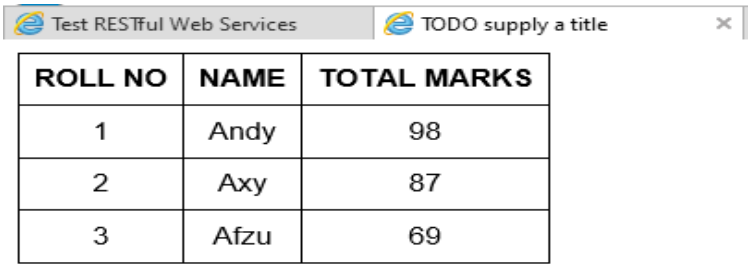
getdata.jsp:

```
<%--
    document   : getdata
    created on : oct 15, 2022, 7:17:22 pm
    author     : user
--%>

<%@page contenttype="text/html" pageencoding="utf-8"%>
<!doctype html>
<html>
    <head>
<title>todo supply a title</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-
scale=1.0">
<style>
```

```
    table
    {
    font-family: arial, sans-serif;
    border-collapse: collapse;
    }

    td, th
    {
    border: 1px solid #000000;
    text-align: center;
    padding: 8px;
    }

</style>
<script>
var request = new xmlhttprequest();
request.open('get',
'http://localhost:8080/student/webresources/stupack.student/', true);
request.onload = function ()
{
// begin accessing json data here
    var data = json.parse(this.response);

    for (var i = 0; i < data.length; i++)
    {
        var table = document.getelementbyid("mytable");
        var row = table.insertrow();
        var cell1 = row.insertcell(0);
        var cell2 = row.insertcell(1);
        var cell3 = row.insertcell(2);
        cell1.innerhtml = data[i].rollno;
        cell2.innerhtml = data[i].name;
        cell3.innerhtml = data[i].totalmarks;
    }
};

request.send();
</script>
</head>
<body>
<table id="mytable">
<tr>
<th>roll no</th>
```

```
<th>name</th>
<th>total marks</th>
</tr>
</table>
</body>
</html>
```

output:



ROLL NO	NAME	TOTAL MARKS
1	Andy	98
2	Axy	87
3	Afzu	69