1] CalculatorWS.java

```java
package org.me.calculator;

import javax.jws.WebService;

import javax.jws.WebMethod;

import javax.jws.WebParam;

import javax.ejb.Stateless;

@WebService(serviceName = "CalculatorWS")

@Stateless()

public class CalculatorWS {

/**

* This is a sample web service operation

*/


/**

* Web service operation

*/

@WebMethod(operationName = "add")

public int add(@WebParam(name = "i") int i, @WebParam(name = "j") int j) {

//TODO write your implementation code here:

int k = i + j;

return k;

}

}
```

2]CalculatorWS_Client_Application.java:

```java
package calculatorws_client_application;

public class CalculatorWS_Client_Application {

/**

* @param args the command line arguments
```

```java
*/
public static void main(String[] args) {
// TODO code application logic here
try{
int i=10;
int j=20;
int result= add(i,j);
System.out.println("Result= "+result);
}catch(Exception e){
System.out.println("Exception : "+e);
}
}
private static int add(int i, int j) {
org.me.calculator.CalculatorWS_Service service = new
org.me.calculator.CalculatorWS_Service();
org.me.calculator.CalculatorWS port = service.getCalculatorWSPort();
return port.add(i, j);
}
}
```
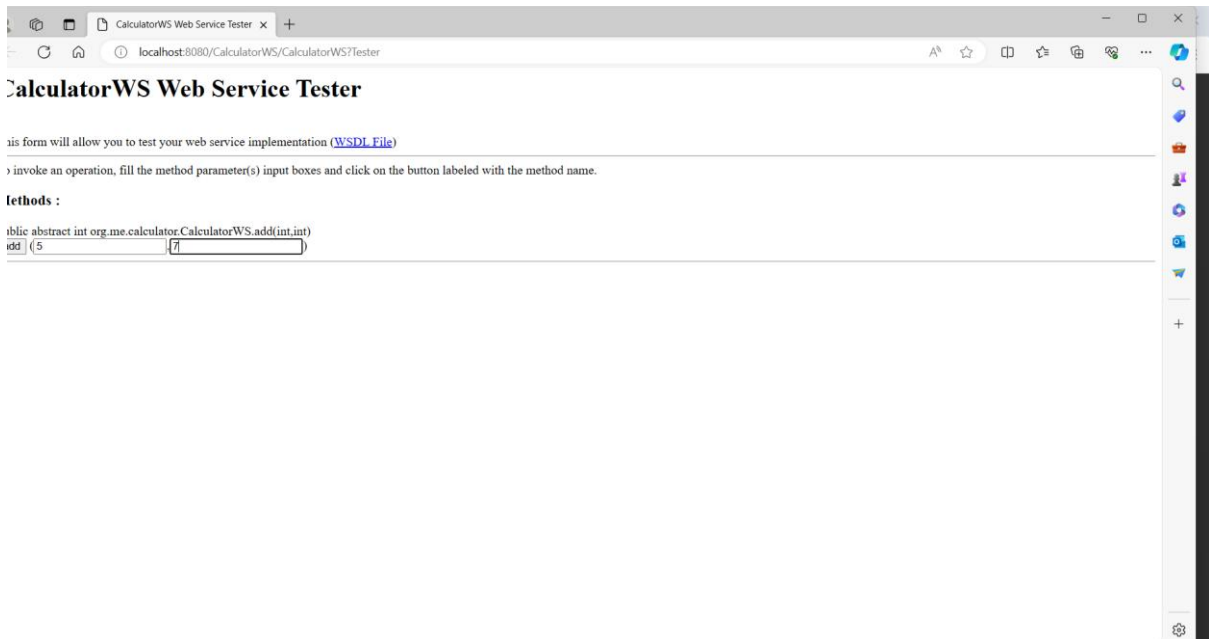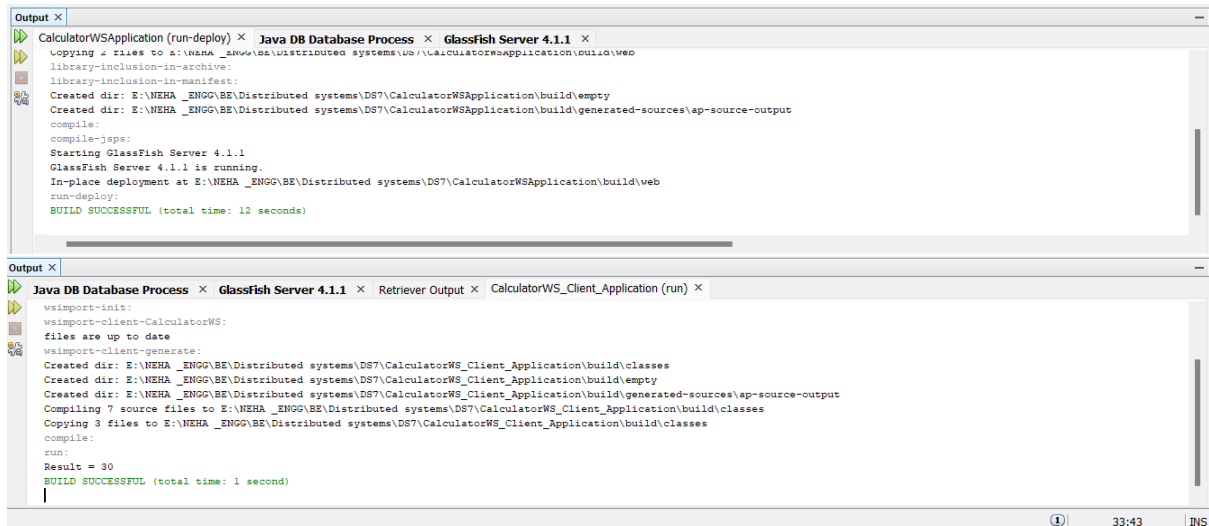
OUTPUT:

Output ×

CalculatorWSApplication (run-deploy) ×   Java DB Database Process   ×   GlassFish Server 4.1.1   ×

Copying 2 files to E:\NEHA _ENGG\BE\Distributed systems\DS7\CalculatorWSApplication\build\web
library-inclusion-in-archive:
library-inclusion-in-manifest:
Created dir: E:\NEHA _ENGG\BE\Distributed systems\DS7\CalculatorWSApplication\build\empty
Created dir: E:\NEHA _ENGG\BE\Distributed systems\DS7\CalculatorWSApplication\build\generated-sources\ap-source-output
compile:
compile-jsps:
Starting GlassFish Server 4.1.1
GlassFish Server 4.1.1 is running.
In-place deployment at E:\NEHA _ENGG\BE\Distributed systems\DS7\CalculatorWSApplication\build\web
run-deploy:
BUILD SUCCESSFUL (total time: 12 seconds)

Output ×

Java DB Database Process   ×   GlassFish Server 4.1.1   ×   Retriever Output ×   CalculatorWS_Client_Application (run) ×

wsimport-init:
wsimport-client-CalculatorWS:
files are up to date
wsimport-client-generate:
Created dir: E:\NEHA _ENGG\BE\Distributed systems\DS7\CalculatorWS_Client_Application\build\classes
Created dir: E:\NEHA _ENGG\BE\Distributed systems\DS7\CalculatorWS_Client_Application\build\empty
Created dir: E:\NEHA _ENGG\BE\Distributed systems\DS7\CalculatorWS_Client_Application\build\generated-sources\ap-source-output
Compiling 7 source files to E:\NEHA _ENGG\BE\Distributed systems\DS7\CalculatorWS_Client_Application\build\classes
Copying 3 files to E:\NEHA _ENGG\BE\Distributed systems\DS7\CalculatorWS_Client_Application\build\classes
compile:
run:
Result = 30
BUILD SUCCESSFUL (total time: 1 second)

33:43   INS

CalculatorWS Web Service Tester ×   +

localhost:8080/CalculatorWS/CalculatorWS?Tester

CalculatorWS 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 org.me.calculator.CalculatorWS.add(int,int)

add (5 | 7)

dd Method invocation

Method parameter(s)

ype	Value
1t	5
1t	7

Method returned

t : "12"

OAP 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:add xmlns:ns2="http://calculator.me.org/">
            <i>5</i>
            <j>7</j>
        </ns2:add>
    </S:Body>
</S:Envelope>
```

OAP 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:addResponse xmlns:ns2="http://calculator.me.org/">
            <return>12</return>
        </ns2:addResponse>
    </S:Body>
```