

Web Services Sample Project

This project incorporates the methods and technologies covered in the Web services discussions. By using Eclipse and/or NetBeans, you will gain a better understanding of Web services by implementing them.

For this project, create 3 Web services and try to publish, at least, one into jUDDI. You should also try to use Eclipse and/or NetBeans, but I'm not sure if it's possible to publish Web services with NetBeans.

- 1) Create a Web service that accepts a user's name and return the string "Hello" + the user's name.
Input: Tom
Output: Hello Tom

- 2) Create a web service that converts between Fahrenheit degrees & Celsius degrees.
Link to helpful tutorial:
<http://www.eclipse.org/webtools/jst/components/ws/1.5/tutorials/BottomUpWebService/BottomUpWebService.html>

- 3) Create a web service from the given wsdl file.
Link to helpful tutorial:
<http://www.eclipse.org/webtools/jst/components/ws/1.5/tutorials/TopDownWebService/TopDownWebService.html>

Notes for jUDDI:

inquiry url = <http://152.8.244.134:8080/juddi/inquiry>
publish url = <http://152.8.244.134:8080/juddi/publish>
username = juddi
password = jade

*Remember the Apache Tomcat server must be running on the jUDDI machine to be able to access jUDDI.

2 – Use this code for your java class or you can download the java class from the link under #2.

```
public class Converter
{
    public float celsiusToFahrenheit ( float celsius )
    {
        return (celsius * 9 / 5) + 32;
    }

    public float fahrenheitToCelsius ( float fahrenheit )
    {
        return (fahrenheit - 32) * 5 / 9;
    }
}
```

3 - Copy the following into a separate file and name it 'AreaService.wsdl' or you can download the wsdl file from the link under #3.

```
<?xml version="1.0" encoding="UTF-8"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:tns="http://tempuri.org/AreaService/"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" name="AreaService"
targetNamespace="http://tempuri.org/AreaService/">
  <wsdl:types>
    <xsd:schema targetNamespace="http://tempuri.org/AreaService/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <xsd:element name="area" type="xsd:float"/>
      <xsd:element name="parameters" type="tns:dimensions"/>
      <xsd:complexType name="dimensions">
        <xsd:sequence>
          <xsd:element name="width"
type="xsd:float"/></xsd:element>
          <xsd:element name="height"
type="xsd:float"/></xsd:element>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:schema>
  </wsdl:types>
  <wsdl:message name="CalculateRectAreaResponse">
    <wsdl:part element="tns:area" name="area"/>
  </wsdl:message>
  <wsdl:message name="CalculateRectAreaRequest">
    <wsdl:part element="tns:parameters" name="parameters"/>
  </wsdl:message>
  <wsdl:portType name="AreaService">
    <wsdl:operation name="CalculateRectArea">
      <wsdl:input message="tns:CalculateRectAreaRequest"/>
      <wsdl:output message="tns:CalculateRectAreaResponse"/>
    </wsdl:operation>
  </wsdl:portType>
  <wsdl:binding name="AreaServiceSOAP" type="tns:AreaService">
    <soap:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="CalculateRectArea">
      <soap:operation
soapAction="http://tempuri.org/AreaService/NewOperation"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
  </wsdl:binding>
  <wsdl:service name="AreaService">
    <wsdl:port binding="tns:AreaServiceSOAP" name="AreaServiceSOAP">
      <soap:address location="http://tempuri.org"/>
    </wsdl:port>
  </wsdl:service>
</wsdl:definitions>
```