

Télécom Saint-Étienne :Master Web-Intelligence

Web Services (TD2)

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Question1: Put both the WSDL, the SOAP request and response in your report.

The WSDL :

```
<!--
  Published by JAX-WS RI at http://jax-ws.dev.java.net. RI's version is
  Metro/2.3 (tags/2.3-7528; 2013-04-29T19:34:10+0000) JAXWS-RI/2.2.8
  JAXWS/2.2 svn-revision#unknown.
-->
<!--
  Generated by JAX-WS RI at http://jax-ws.dev.java.net. RI's version is
  Metro/2.3 (tags/2.3-7528; 2013-04-29T19:34:10+0000) JAXWS-RI/2.2.8
  JAXWS/2.2 svn-revision#unknown.
-->
<definitions xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-
200401-wss-wssecurity-utility-1.0.xsd" xmlns:wsp="http://www.w3.org/n
s/ws-policy" xmlns:wsp1_2="http://schemas.xmlsoap.org/ws/2004/09/polic
y" xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata" xmlns:s
oap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:tns="http://webservi
ces.yishuolyu.org/" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmln
s="http://schemas.xmlsoap.org/wsdl/" targetNamespace="http://webservi
ces.yishuolyu.org/" name="MyCurrencyConvertorService">
  <types>
    <xsd:schema>
      <xsd:import namespace="http://webservices.yishuolyu.org/" schemaLocat
ion="http://lv-pc:8080/CurrencyConvertor/MyCurrencyConvertorService?x
sd=1"/>
    </xsd:schema>
  </types>
  <message name="initializeList">
    <part name="parameters" element="tns:initializeList"/>
  </message>
  <message name="initializeListResponse">
    <part name="parameters" element="tns:initializeListResponse"/>
  </message>
  <message name="getCurrenciesList">
    <part name="parameters" element="tns:getCurrenciesList"/>
  </message>
  <message name="getCurrenciesListResponse">
    <part name="parameters" element="tns:getCurrenciesListResponse"/>
  </message>
</definitions>
```

```

</message>
<portType name="MyCurrencyConvertor">
  <operation name="initializeList">
    <input wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/initializeListRequest" message="tns:initializeList"/>
    <output wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/initializeListResponse" message="tns:initializeListResponse"/>
  </operation>
  <operation name="getCurrenciesList">
    <input wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/getCurrenciesListRequest" message="tns:getCurrenciesList"/>
    <output wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/getCurrenciesListResponse" message="tns:getCurrenciesListResponse"/>
  </operation>
</portType>
<binding name="MyCurrencyConvertorPortBinding" type="tns:MyCurrencyConvertor">
  <soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>
  <operation name="initializeList">
    <soap:operation soapAction=""/>
    <input>
      <soap:body use="literal"/>
    </input>
    <output>
      <soap:body use="literal"/>
    </output>
  </operation>
  <operation name="getCurrenciesList">
    <soap:operation soapAction=""/>
    <input>
      <soap:body use="literal"/>
    </input>
    <output>
      <soap:body use="literal"/>
    </output>
  </operation>
</binding>
<service name="MyCurrencyConvertorService">
  <port name="MyCurrencyConvertorPort" binding="tns:MyCurrencyConvertorPortBinding">
    <soap:address location="http://lv-pc:8080/CurrencyConvertor/MyCurrencyConvertorService"/>
  </port>
</service>

```

```
</port>
</service>
</definitions>
```

The SOAP request and response :

Method returned

```
java.util.List : "[Dollar, Euro, Yen]"
```

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:getCurrenciesList xmlns:ns2="http://webservices.yishuolyu.org/" />
  </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:getCurrenciesListResponse xmlns:ns2="http://webservices.yishuolyu.org/">
      <return xmlns:x="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="xs:string">Dollar</return>
      <return xmlns:x="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="xs:string">Euro</return>
      <return xmlns:x="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="xs:string">Yen</return>
    </ns2:getCurrenciesListResponse>
  </S:Body>
</S:Envelope>
```

Question 2: add the new WSDL, the SOAP requests and responses in your report.

The new WSDL :

```
<!--
```

```
Published by JAX-WS RI at http://jax-ws.dev.java.net. RI's
version is Metro/2.3 (tags/2.3-7528;
2013-04-29T19:34:10+0000) JAXWS-RI/2.2.8 JAXWS/2.2
svn-revision#unknown.
```

```
-->
```

```
<!--
```

```
Generated by JAX-WS RI at http://jax-ws.dev.java.net. RI's
version is Metro/2.3 (tags/2.3-7528;
2013-04-29T19:34:10+0000) JAXWS-RI/2.2.8 JAXWS/2.2
svn-revision#unknown.
```

```
-->
```

```
<definitions xmlns:wsu="http://docs.oasis-open.org/wss/20
04/01/oasis-200401-wss-wssecurity-utility-1.0.xsd" xmlns:
wsp="http://www.w3.org/ns/ws-policy" xmlns:wsp1_2="http:/
/schemas.xmlsoap.org/ws/2004/09/policy" xmlns:wsam="http:/
/www.w3.org/2007/05/addressing/metadata" xmlns:soap="http
://schemas.xmlsoap.org/wsdl/soap/" xmlns:tns="http://webs
ervices.yishuolyu.org/" xmlns:xsd="http://www.w3.org/2001
/XMLSchema" xmlns="http://schemas.xmlsoap.org/wsdl/" targe
tNamespace="http://webservices.yishuolyu.org/" name="MyCu
rrencyConvertorService">
<types>
```

```

<xsd:schema>
<xsd:import namespace="http://webservices.yishuolyu.org/"
  schemaLocation="http://lv-pc:8080/CurrencyConvertor/MyCu
rrencyConvertorService?xsd=1"/>
</xsd:schema>
</types>
<message name="convert">
<part name="parameters" element="tns:convert"/>
</message>
<message name="convertResponse">
<part name="parameters" element="tns:convertResponse"/>
</message>
<message name="initializeList">
<part name="parameters" element="tns:initializeList"/>
</message>
<message name="initializeListResponse">
<part name="parameters" element="tns:initializeListRespon
se"/>
</message>
<message name="getCurrenciesList">
<part name="parameters" element="tns:getCurrenciesList"/>
</message>
<message name="getCurrenciesListResponse">
<part name="parameters" element="tns:getCurrenciesListRes
ponse"/>
</message>
<portType name="MyCurrencyConvertor">
<operation name="convert">
<input wsam:Action="http://webservices.yishuolyu.org/MyCu
rrencyConvertor/convertRequest" message="tns:convert"/>
<output wsam:Action="http://webservices.yishuolyu.org/MyC
urrencyConvertor/convertResponse" message="tns:convertRes
ponse"/>
</operation>
<operation name="initializeList">
<input wsam:Action="http://webservices.yishuolyu.org/MyCu
rrencyConvertor/initializeListRequest" message="tns:initi
alizeList"/>
<output wsam:Action="http://webservices.yishuolyu.org/MyC
urrencyConvertor/initializeListResponse" message="tns:ini
tializeListResponse"/>
</operation>
<operation name="getCurrenciesList">

```

```
<input wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/getCurrenciesListRequest" message="tns:getCurrenciesList"/>
<output wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/getCurrenciesListResponse" message="tns:getCurrenciesListResponse"/>
</operation>
</portType>
<binding name="MyCurrencyConvertorPortBinding" type="tns:MyCurrencyConvertor">
<soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>
<operation name="convert">
<soap:operation soapAction=""/>
<input>
<soap:body use="literal"/>
</input>
<output>
<soap:body use="literal"/>
</output>
</operation>
<operation name="initializeList">
<soap:operation soapAction=""/>
<input>
<soap:body use="literal"/>
</input>
<output>
<soap:body use="literal"/>
</output>
</operation>
<operation name="getCurrenciesList">
<soap:operation soapAction=""/>
<input>
<soap:body use="literal"/>
</input>
<output>
<soap:body use="literal"/>
</output>
</operation>
</binding>
<service name="MyCurrencyConvertorService">
<port name="MyCurrencyConvertorPort" binding="tns:MyCurrencyConvertorPortBinding">
```

```

<soap:address location="http://lv-pc:8080/CurrencyConvertor/MyCurrencyConvertorService"/>
</port>
</service>
</definitions>

```

The SOAP requests and responses : (convert (String source, String destination, double amount))

Method parameter(s)

Type	Value
java.lang.String	Yen
java.lang.String	Euro
double	100

Method returned

double : "14.000000000000002"

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:convert xmlns:ns2="http://webservices.yishuolyu.org/">
      <arg0>Yen</arg0>
      <arg1>Euro</arg1>
      <arg2>100.0</arg2>
    </ns2:convert>
  </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:convertResponse xmlns:ns2="http://webservices.yishuolyu.org/">
      <return>14.000000000000002</return>
    </ns2:convertResponse>
  </S:Body>
</S:Envelope>

```

Question 3: add the new WSDL, the SOAP requests and responses in your report.

The new WSDL :

<!--

Published by JAX-WS RI at http://jax-ws.dev.java.net. RI's version is Metro/2.3 (tags/2.3-7528; 2013-04-29T19:34:10+0000) JAXWS-RI/2.2.8 JAXWS/2.2 svn-revision#unknown.

-->

<!--

Generated by JAX-WS RI at http://jax-ws.dev.java.net. RI's version is Metro/2.3 (tags/2.3-7528; 2013-04-29T19:34:10+0000) JAXWS-RI/2.2.8 JAXWS/2.2 svn-revision#unknown.

-->

```

<definitions xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd" xmlns:wsp="http://www.w3.org/ns/ws-policy" xmlns:wsp1_2="http://schemas.xmlsoap.org/ws/2004/09/policy" xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:tns="http://webs

```

```

ervices.yishuolyu.org/" xmlns:xsd="http://www.w3.org/2001
/XMLSchema"xmlns="http://schemas.xmlsoap.org/wsdl/" targe
tNamespace="http://webservices.yishuolyu.org/" name="MyCu
rrencyConvertorService">
<types>
<xsd:schema>
<xsd:import namespace="http://webservices.yishuolyu.org/"
  schemaLocation="http://lv-pc:8080/CurrencyConvertor/MyCu
rrencyConvertorService?xsd=1"/>
</xsd:schema>
</types>
<message name="initializeList">
<part name="parameters" element="tns:initializeList"/>
</message>
<message name="initializeListResponse">
<part name="parameters" element="tns:initializeListRespon
se"/>
</message>
<message name="getCurrenciesList">
<part name="parameters" element="tns:getCurrenciesList"/>
</message>
<message name="getCurrenciesListResponse">
<part name="parameters" element="tns:getCurrenciesListRes
ponse"/>
</message>
<message name="convert">
<part name="parameters" element="tns:convert"/>
</message>
<message name="convertResponse">
<part name="parameters" element="tns:convertResponse"/>
</message>
<message name="addCurrency">
<part name="parameters" element="tns:addCurrency"/>
</message>
<message name="addCurrencyResponse">
<part name="parameters" element="tns:addCurrencyResponse"
/>
</message>
<portType name="MyCurrencyConvertor">
<operation name="initializeList">
<input wsam:Action="http://webservices.yishuolyu.org/MyCu
rrencyConvertor/initializeListRequest" message="tns:initi
alizeList"/>

```

```

<output wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/initializeListResponse" message="tns:initializeListResponse"/>
</operation>
<operation name="getCurrenciesList">
<input wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/getCurrenciesListRequest" message="tns:getCurrenciesList"/>
<output wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/getCurrenciesListResponse" message="tns:getCurrenciesListResponse"/>
</operation>
<operation name="convert">
<input wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/convertRequest" message="tns:convert"/>
<output wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/convertResponse" message="tns:convertResponse"/>
</operation>
<operation name="addCurrency">
<input wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/addCurrencyRequest" message="tns:addCurrency"/>
<output wsam:Action="http://webservices.yishuolyu.org/MyCurrencyConvertor/addCurrencyResponse" message="tns:addCurrencyResponse"/>
</operation>
</portType>
<binding name="MyCurrencyConvertorPortBinding" type="tns:MyCurrencyConvertor">
<soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>
<operation name="initializeList">
<soap:operation soapAction=""/>
<input>
<soap:body use="literal"/>
</input>
<output>
<soap:body use="literal"/>
</output>
</operation>
<operation name="getCurrenciesList">
<soap:operation soapAction=""/>
<input>

```



```

<soap:body use="literal"/>
</input>
<output>
<soap:body use="literal"/>
</output>
</operation>
<operation name="convert">
<soap:operation soapAction=""/>
<input>
<soap:body use="literal"/>
</input>
<output>
<soap:body use="literal"/>
</output>
</operation>
<operation name="addCurrency">
<soap:operation soapAction=""/>
<input>
<soap:body use="literal"/>
</input>
<output>
<soap:body use="literal"/>
</output>
</operation>
</binding>
<service name="MyCurrencyConvertorService">
<port name="MyCurrencyConvertorPort" binding="tns:MyCurrencyConvertorPortBinding">
<soap:address location="http://lv-pc:8080/CurrencyConvertor/MyCurrencyConvertorService"/>
</port>
</service>
</definitions>

```

The SOAP requests and responses : (addCurrency(String name))

Method parameter(s)

Type	Value
java.lang.String	KRW

Method returned

java.util.List : "[Dollar, Euro, Yen, KRW]"

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:addCurrency xmlns:ns2="http://webservices.yishuolyu.org/">
      <arg0>KRW</arg0>
    </ns2:addCurrency>
  </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:addCurrencyResponse xmlns:ns2="http://webservices.yishuolyu.org/">
      <return>Dollar</return>
      <return>Euro</return>
      <return>Yen</return>
      <return>KRW</return>
    </ns2:addCurrencyResponse>
  </S:Body>
</S:Envelope>
```

Question 4 : Compare the new WSDL with old one, What happened ?

R : The method with '@WebMethod(exclude=true)' do not get included within the generated WSDL. That is, a method isn't marked as a web method for opening.

Question 5 : What to you see in the SOAP response ? compare it with the one generated by the old getCurrenciesList() what is the difference? Do not forget to add the SOAP response to you report.

The SOAP requests and responses :

Method parameter(s)

Type	Value
------	-------

Method returned

java.util.List : "[org.yishuolyu.webservices.Currency@4a2f88cf]"

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:getCurrenciesList xmlns:ns2="http://webservices.yishuolyu.org/">
  </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:getCurrenciesListResponse xmlns:ns2="http://webservices.yishuolyu.org/">
      <return>
        <country>EU</country>
        <name>EURO</name>
        <yearAdopted>1999</yearAdopted>
      </return>
    </ns2:getCurrenciesListResponse>
  </S:Body>
</S:Envelope>
```

The difference :

R : The thing returned in SOAP Response is different. For the new one, the thing returned is an instantiation of the class Currency and there aren't some specific attributes of 'return'.

Question 6 : add this XML schema to your report. Give a list of the types used by you service.

What do you think? Please give your comments about the types you find.

XML schema :

```
<!--
  Published by JAX-WS RI at http://jax-ws.dev.java.net. RI's
  version is Metro/2.3 (tags/2.3-7528;
  2013-04-29T19:34:10+0000) JAXWS-RI/2.2.8 JAXWS/2.2
  svn-revision#unknown.
-->
<xs:schema xmlns:tns="http://webservices.yishuolyu.org/"
  xmlns:xs="http://www.w3.org/2001/XMLSchema" version="1.0"
  targetNamespace="http://webservices.yishuolyu.org/">
  <xs:element name="getCurrenciesList" type="tns:getCurrenc
    iesList"/>
  <xs:element name="getCurrenciesListResponse" type="tns:ge
    tCurrenciesListResponse"/>
  <xs:complexType name="getCurrenciesList">
    <xs:sequence/>
  </xs:complexType>
  <xs:complexType name="getCurrenciesListResponse">
    <xs:sequence>
      <xs:element name="return" type="tns:currency" minOccurs="
        0" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="currency">
    <xs:sequence>
      <xs:element name="country" type="xs:string" minOccurs="0"
        />
      <xs:element name="name" type="xs:string" minOccurs="0"/>
      <xs:element name="yearAdopted" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

The list of the types used by you service :

R: [getCurrenciesList, getCurrenciesListResponse, currency, string, int]

My comments about the types I find :

R : The types I find include the type of all variables and all methods involved by the web service.