

TD n ° 2 Web Services

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Question 1

1 WSDL

```
<?xml version='1.0' encoding='UTF-8'?>
<!-- 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://webservices.bascollaoussing.org/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns="http://schemas.xmlsoap.org/wsdl/"
  targetNamespace="http://webservices.bascollaoussing.org/"
  name="MyCurrencyConvertorService">
  <types>
    <xsd:schema>
      <xsd:import namespace="http://webservices.bascollaoussing.org/"
        schemaLocation="http://bascool:8080/CurrencyConvertor/
          MyCurrencyConvertorService?xsd=1"/>
    </xsd:schema>
  </types>
  <message name="getCurrenciesList">
    <part name="parameters" element="tns:getCurrenciesList"/>
  </message>
  <message name="getCurrenciesListResponse">
    <part name="parameters" element="tns:getCurrenciesListResponse"/>
  </message>
  <message name="initializeList">
    <part name="parameters" element="tns:initializeList"/>
  </message>
  <message name="initializeListResponse">
    <part name="parameters" element="tns:initializeListResponse"/>
  </message>
  <portType name="MyCurrencyConvertor">
    <operation name="getCurrenciesList">
      <input wsam:Action="http://webservices.bascollaoussing.org/
        MyCurrencyConvertor/getCurrenciesListRequest"
        message="tns:getCurrenciesList"/>
      <output wsam:Action="http://webservices.bascollaoussing.org/
        MyCurrencyConvertor/getCurrenciesListResponse"
        message="tns:getCurrenciesListResponse"/>
    </operation>
    <operation name="initializeList">
      <input wsam:Action="http://webservices.bascollaoussing.org/
        MyCurrencyConvertor/initializeListRequest"
        message="tns:initializeList"/>
      <output wsam:Action="http://webservices.bascollaoussing.org/
        MyCurrencyConvertor/initializeListResponse"
        message="tns:initializeListResponse"/>
    </operation>
  </portType>
  <binding name="MyCurrencyConvertorPortBinding" type="tns:MyCurrencyConvertor">
    <soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>
    <operation name="getCurrenciesList">
      <soap:operation soapAction=""/>
      <input>
        <soap:body use="literal"/>
      </input>
    </operation>
  </binding>
</definitions>
```

```

        </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>
</binding>
<service name="MyCurrencyConvertorService">
    <port name="MyCurrencyConvertorPort" binding="tns:MyCurrencyConvertorPortBinding">
        <soap:address location="http://bascool:8080/CurrencyConvertor/MyCurrencyConvertorService"/>
    </port>
</service>
</definitions>

```

2 Requête SOAP

```

<?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.bascollaoussing.org/">
    </S:Body>
</S:Envelope>

```

3 Reponse SOAP

```

<?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.bascollaoussing.org/">
            <return>euro</return>
            <return>dollar</return>
            <return>yen</return>
        </ns2:getCurrenciesListResponse>
    </S:Body>
</S:Envelope>

```

Question 2

1 WSDL

```

<?xml version='1.0' encoding='UTF-8'?>
<!-- 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://webservices.bascollaoussing.org/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://schemas.xmlsoap.org/wsdl/"
targetNamespace="http://webservices.bascollaoussing.org/"
name="MyCurrencyConvertorService">
<types>
  <xsd:schema>
    <xsd:import namespace="http://webservices.bascollaoussing.org/"
      schemaLocation="http://bascool:8080/CurrencyConvertor/
        MyCurrencyConvertorService?xsd=1"/>
  </xsd:schema>
</types>
<message name="getCurrenciesList">
  <part name="parameters" element="tns:getCurrenciesList"/>
</message>
<message name="getCurrenciesListResponse">
  <part name="parameters" element="tns:getCurrenciesListResponse"/>
</message>
<message name="initializeList">
  <part name="parameters" element="tns:initializeList"/>
</message>
<message name="initializeListResponse">
  <part name="parameters" element="tns:initializeListResponse"/>
</message>
<message name="convert">
  <part name="parameters" element="tns:convert"/>
</message>
<message name="convertResponse">
  <part name="parameters" element="tns:convertResponse"/>
</message>
<portType name="MyCurrencyConvertor">
  <operation name="getCurrenciesList">
    <input wsam:Action="http://webservices.bascollaoussing.org/
      MyCurrencyConvertor/getCurrenciesListRequest"
      message="tns:getCurrenciesList"/>
    <output wsam:Action="http://webservices.bascollaoussing.org/
      MyCurrencyConvertor/getCurrenciesListResponse"
      message="tns:getCurrenciesListResponse"/>
  </operation>
  <operation name="initializeList">
    <input wsam:Action="http://webservices.bascollaoussing.org/
      MyCurrencyConvertor/initializeListRequest"
      message="tns:initializeList"/>
    <output wsam:Action="http://webservices.bascollaoussing.org/
      MyCurrencyConvertor/initializeListResponse"
      message="tns:initializeListResponse"/>
  </operation>
  <operation name="convert">
    <input wsam:Action="http://webservices.bascollaoussing.org/
      MyCurrencyConvertor/convertRequest"
      message="tns:convert"/>
    <output wsam:Action="http://webservices.bascollaoussing.org/
      MyCurrencyConvertor/convertResponse"
      message="tns:convertResponse"/>
  </operation>
</portType>
<binding name="MyCurrencyConvertorPortBinding" type="tns:MyCurrencyConvertor">
  <soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>
  <operation name="getCurrenciesList">

```

```

        <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="convert">
        <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://bascool:8080/CurrencyConvertor/MyCurrencyConvertorService"/>
    </port>
</service>
</definitions>

```

2 Requête SOAP

```

<?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.bascollaoussing.org/">
            <arg0>euro</arg0>
            <arg1>dollar</arg1>
            <arg2>51.15</arg2>
        </ns2:convert>
    </S:Body>
</S:Envelope>

```

3 Reponse SOAP

```

<?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.bascollaoussing.org/">
            <return>55.7253675</return>
        </ns2:convertResponse>
    </S:Body>
</S:Envelope>

```

```
</S:Body>
</S:Envelope>
```

Question 3

1 WSDL

```
<?xml version='1.0' encoding='UTF-8'?>
<!-- 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://webservices.bascollaoussing.org/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns="http://schemas.xmlsoap.org/wsdl/"
  targetNamespace="http://webservices.bascollaoussing.org/"
  name="MyCurrencyConvertorService">
  <types>
    <xsd:schema>
      <xsd:import namespace="http://webservices.bascollaoussing.org/"
        schemaLocation="http://bascool:8080/CurrencyConvertor/
          MyCurrencyConvertorService?xsd=1"/>
    </xsd:schema>
  </types>
  <message name="getCurrenciesList">
    <part name="parameters" element="tns:getCurrenciesList"/>
  </message>
  <message name="getCurrenciesListResponse">
    <part name="parameters" element="tns:getCurrenciesListResponse"/>
  </message>
  <message name="initializeList">
    <part name="parameters" element="tns:initializeList"/>
  </message>
  <message name="initializeListResponse">
    <part name="parameters" element="tns:initializeListResponse"/>
  </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="getCurrenciesList">
      <input wsam:Action="http://webservices.bascollaoussing.org/
        MyCurrencyConvertor/getCurrenciesListRequest"
        message="tns:getCurrenciesList"/>
      <output wsam:Action="http://webservices.bascollaoussing.org/
        MyCurrencyConvertor/getCurrenciesListResponse"
        message="tns:getCurrenciesListResponse"/>
    </operation>
```

```

<operation name="initializeList">
  <input wsam:Action="http://webservices.bascollaoussing.org/
    MyCurrencyConvertor/initializeListRequest"
    message="tns:initializeList"/>
  <output wsam:Action="http://webservices.bascollaoussing.org/
    MyCurrencyConvertor/initializeListResponse"
    message="tns:initializeListResponse"/>
</operation>
<operation name="convert">
  <input wsam:Action="http://webservices.bascollaoussing.org/
    MyCurrencyConvertor/convertRequest"
    message="tns:convert"/>
  <output wsam:Action="http://webservices.bascollaoussing.org/
    MyCurrencyConvertor/convertResponse"
    message="tns:convertResponse"/>
</operation>
<operation name="addCurrency">
  <input wsam:Action="http://webservices.bascollaoussing.org/
    MyCurrencyConvertor/addCurrencyRequest"
    message="tns:addCurrency"/>
  <output wsam:Action="http://webservices.bascollaoussing.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="getCurrenciesList">
    <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="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>

```

```

    </binding>
    <service name="MyCurrencyConvertorService">
        <port name="MyCurrencyConvertorPort" binding="tns:MyCurrencyConvertorPortBinding">
            <soap:address location="http://bascool:8080/CurrencyConvertor/MyCurrencyConvertorService"/>
        </port>
    </service>
</definitions>

```

2 Requête SOAP

```

<?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.bascollaoussing.org/">
            <arg0>rouble</arg0>
        </ns2:addCurrency>
    </S:Body>
</S:Envelope>

```

3 Reponse SOAP

```

<?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.bascollaoussing.org/">
            <return>true</return>
        </ns2:addCurrencyResponse>
    </S:Body>
</S:Envelope>

```

Question 4

On obtient de nouveau le WSDL de la question 2 où la méthode addCurrency n'était pas encore implémentée.

Question 5

```

<?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.bascollaoussing.org/">
            <return>
                <country>UE</country>
                <name>euro</name>
                <yearAdopted>1999</yearAdopted>
            </return>
            <return>
                <country>USA</country>
                <name>dollar</name>
                <yearAdopted>1785</yearAdopted>
            </return>
            <return>
                <country>Japon</country>
            </return>
        </ns2:getCurrenciesListResponse>
    </S:Body>
</S:Envelope>

```



```

        <name>yen</name>
        <yearAdopted>1871</yearAdopted>
    </return>
</ns2:getCurrenciesListResponse>
</S:Body>
</S:Envelope>

```

Dans l'ancienne réponse SAOP de `getCurrenciesList`, les retour était sous la forme d'une simple chaîne de caractère représentant le nom de la monnaie. Maintenant les retours sont composés de 3 balises, `country` contenant le nom du pays utilisant la monnaie, `name` contenant le nom de la monnaie et `yearAdopted` contenant l'année d'adoption de la monnaie.

Question 6

```

<?xml version='1.0' encoding='UTF-8'?>
<!-- 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.bascollaoussing.org/"
    xmlns:xs="http://www.w3.org/2001/XMLSchema"
    version="1.0"
    targetNamespace="http://webservices.bascollaoussing.org/">

    <xs:element name="getCurrenciesList" type="tns:getCurrenciesList"/>

    <xs:element name="getCurrenciesListResponse" type="tns:getCurrenciesListResponse"/>

    <xs:element name="initializeList" type="tns:initializeList"/>

    <xs:element name="initializeListResponse" type="tns:initializeListResponse"/>

    <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:complexType name="initializeList">
        <xs:sequence/>
    </xs:complexType>

    <xs:complexType name="initializeListResponse">
        <xs:sequence/>
    </xs:complexType>
</xs:schema>

```

Notre service utilise 5 types :

- `getCurrenciesList`
- `getCurrenciesListResponse`
- `currency`
- `initializeList`

- `initializeListResponse`

On note qu'il y a 3 catégories de types parmi ceux que nous utilisons.

Une première catégorie définissant le contenu d'une requête SOAP :

`getCurrenciesList` ; Pour la requête de la méthode `getCurrenciesList()` ;

`initializeList` ; Pour la requête de la méthode `initializeList()` ;

Une deuxième catégorie définissant le contenu d'une réponse SOAP :

`getCurrenciesListResponse` ; Pour la réponse du serveur à l'appel la méthode `getCurrenciesList()` ;

`initializeListResponse` ; Pour la réponse du serveur à l'appel la méthode `initializeList()` ;

Une troisième catégorie définissant le contenu des objets utilisés :

`currency` ; Pour le type que nous avons défini pour remplacer les simples chaînes du début