

**Master : M1 Intelligence Artificiel Et Analyse De Données
IAAD**

Module : Systèmes Distribués

COMPTE RENDU

TP 2 : PROGRAMMATION RESEAUX

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1 Un Web service SOAP :

C'est un projet java maven composer de 3 classes

- `model.Compte`, contient 3 attributs `code`, `solde` `DateCreation`
- `ws.BanqueService`, classe de type `WebService`, contient 3 methodes (`WebMethode`) ;
une pour convertir[1], une pour get one `Compte`[2] et une pour avoir la liste des
comptes[3].
- `serveur.ServeurIWS`, pour déployer le service sur l'URL
`http://localhost:2001/BankWS`.

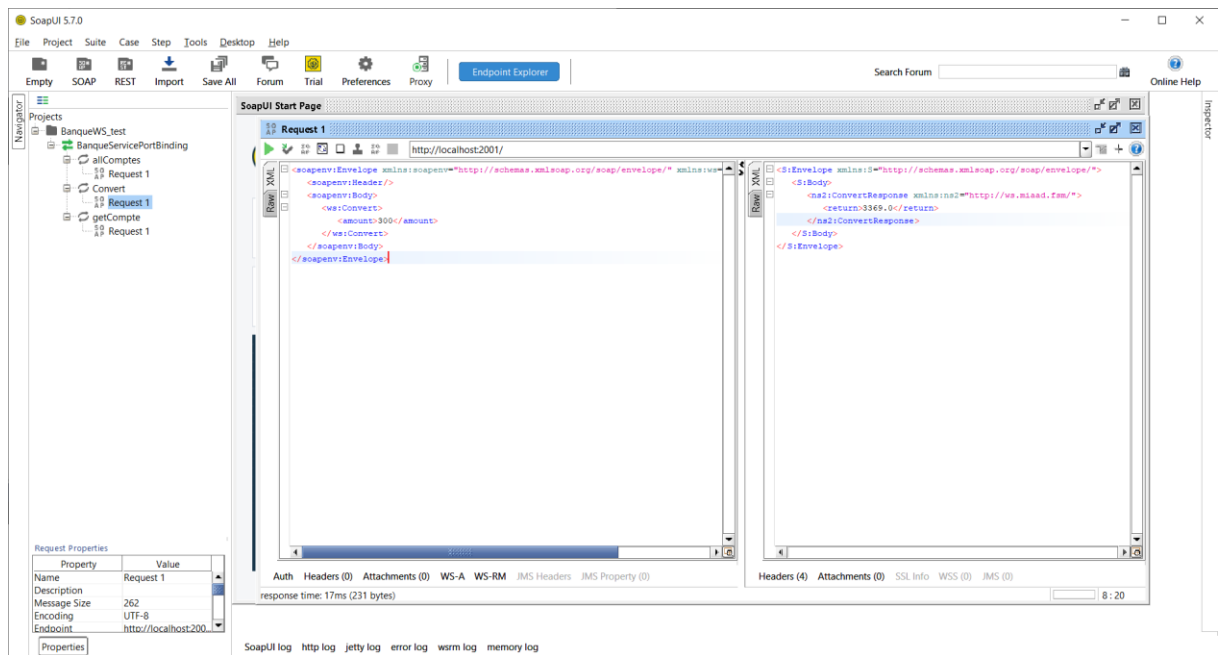
a) WSDL :

This XML file does not appear to have any style information associated with it. The document tree is shown below.

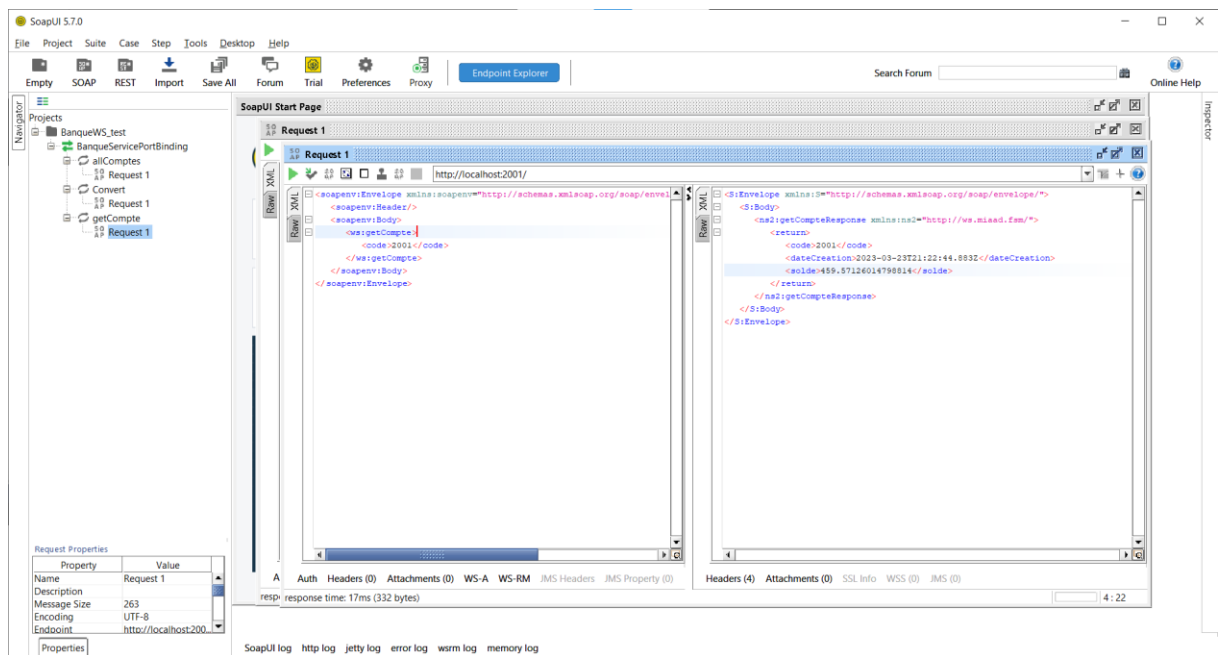
```
<!-- Published by XML-WS Runtime (https://github.com/eclipse-ee4j/metro-jax-ws). Runtime's version is
-->
<!-- Generated by XML-WS Runtime (https://github.com/eclipse-ee4j/metro-jax-ws). Runtime's version is
-->
<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
  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://ws.miaad.fsm/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
  targetNamespace="http://ws.miaad.fsm/"
  name="BankWS">
  <types>
    <xsd:schema>
      <xsd:import namespace="http://ws.miaad.fsm/" schemaLocation="http://localhost:2001/?xsd=1"/>
    </xsd:schema>
  </types>
  <message name="allComptes">
    <part name="parameters" element="tns:allComptes"/>
  </message>
  <message name="allComptesResponse">
    <part name="parameters" element="tns:allComptesResponse"/>
  </message>
  <message name="Convert">
    <part name="parameters" element="tns:Convert"/>
  </message>
  <message name="ConvertResponse">
    <part name="parameters" element="tns:ConvertResponse"/>
  </message>
  <message name="getCompte">
    <part name="parameters" element="tns:getCompte"/>
  </message>
  <message name="getCompteResponse">
    <part name="parameters" element="tns:getCompteResponse"/>
  </message>
  <portType name="BanqueService">
    <operation name="allComptes">
      <input wsam:Action="http://ws.miaad.fsm/BanqueService/allComptesRequest"
        message="tns:allComptes"/>
      <output wsam:Action="http://ws.miaad.fsm/BanqueService/allComptesResponse"
        message="tns:allComptesResponse"/>
    </operation>
    <operation name="Convert">
      <input wsam:Action="http://ws.miaad.fsm/BanqueService/ConvertRequest"
        message="tns:Convert"/>
      <output wsam:Action="http://ws.miaad.fsm/BanqueService/ConvertResponse"
        message="tns:ConvertResponse"/>
    </operation>
    <operation name="getCompte">
      <input wsam:Action="http://ws.miaad.fsm/BanqueService/getCompteRequest"
        message="tns:getCompte"/>
      <output wsam:Action="http://ws.miaad.fsm/BanqueService/getCompteResponse"
        message="tns:getCompteResponse"/>
    </operation>
  </portType>
  <binding name="BanqueServicePortBinding" type="tns:BanqueService">
    <soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>
    <operation name="allComptes">
      <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="getCompte">
      <soap:operation soapAction=""/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
    </operation>
  </binding>
  <service name="BankWS">
    <port name="BanqueServicePort" binding="tns:BanqueServicePortBinding">
      <soap:address location="http://localhost:2001/">
    </port>
  </service>
</definitions>
```

b) SoapUI :

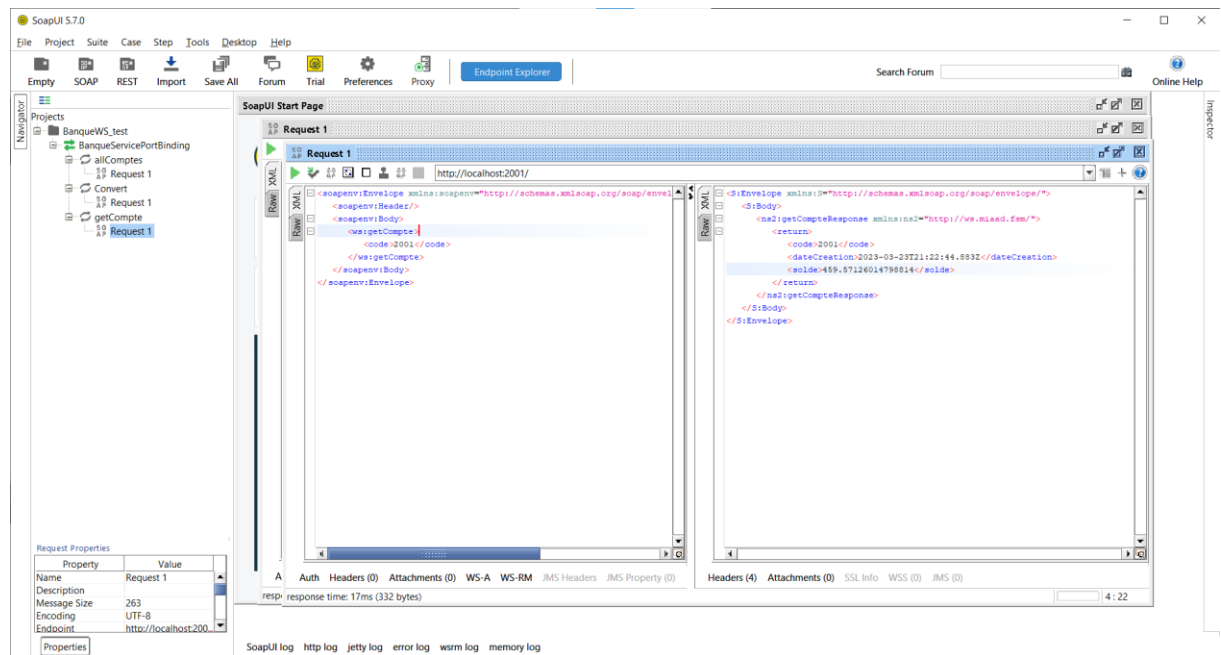
- M1



M2



M3



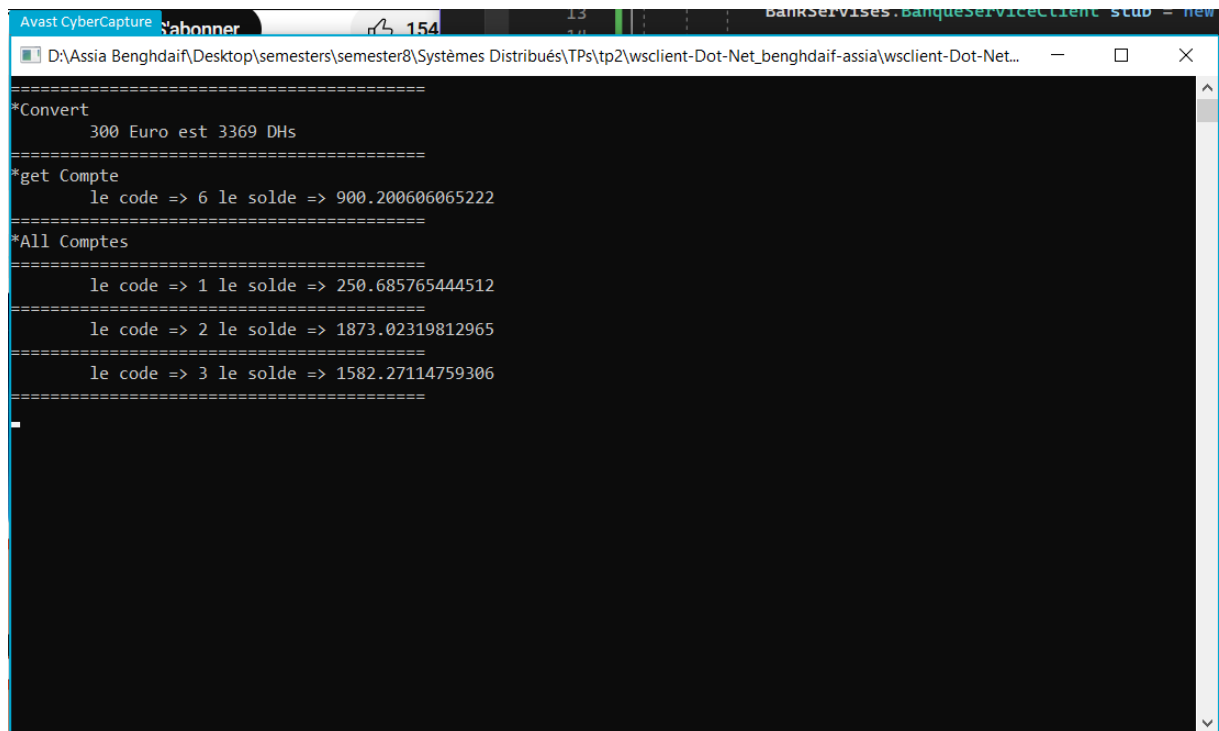
c) Client SOAP Java :

```

Run: ClientWS x
"C:\Program Files\Java\jdk-11.0.11\bin\java.exe" ...
300.0 euro = 3369.0 DHs
code => 5
solde => 214.79919552613546
Process finished with exit code 0

```

d) Client SOAP Dot Net :



The screenshot shows a Windows command prompt window titled "wsclient-Dot-Net_benghdaif-attia\wsclient-Dot-Net...". The window displays the output of a SOAP client application. The output is formatted with asterisks for section headers and equals signs for line separators. The sections include: *Convert (300 Euro est 3369 DHs), *get Compte (le code => 6 le solde => 900.200606065222), and *All Comptes (listing three accounts with their codes and balances). The window also shows a taskbar at the top with "Avast CyberCapture" and "Sahonner" open, and a system tray with a clock showing 15:41.

```
=====
*Convert
  300 Euro est 3369 DHs
=====
*get Compte
  le code => 6 le solde => 900.200606065222
=====
*All Comptes
=====
  le code => 1 le solde => 250.685765444512
=====
  le code => 2 le solde => 1873.02319812965
=====
  le code => 3 le solde => 1582.27114759306
=====
-
```

e) Client SOAP PHP :

localhost/wsclientPHP_benghdaif-assia.php

Convert amount

Get Compte

Get All Comptes

amount

300

Convert

Close

300 euro est 3369 DHs

localhost/wsclientPHP_benghdaif-assia.php

Convert amount

Get Compte

Get All Comptes

code

5

get

Close

Compte code=5, Compte solde=1761.62789883 DHs

localhost/wsclientPHP_benghdaif-assia.php

Convert amount

Get Compte

Get All Comptes

Compte Code	Solde
1	657.75233055141
2	1236.1893739246
3	1461.1597556456

Close

2 Déployer le Web Service dans un Projet Spring Boot

C'est un projet Spring boot composer de :

- classe `models.Compte`,
- `controllers.CompteController`, classe de type `WebService`, contient 3 methodes (`WebMethode`) ; une pour convertir[1], une pour get one `Compte`[2] et une pour avoir la liste des comptes[3].
- `MyConfig`

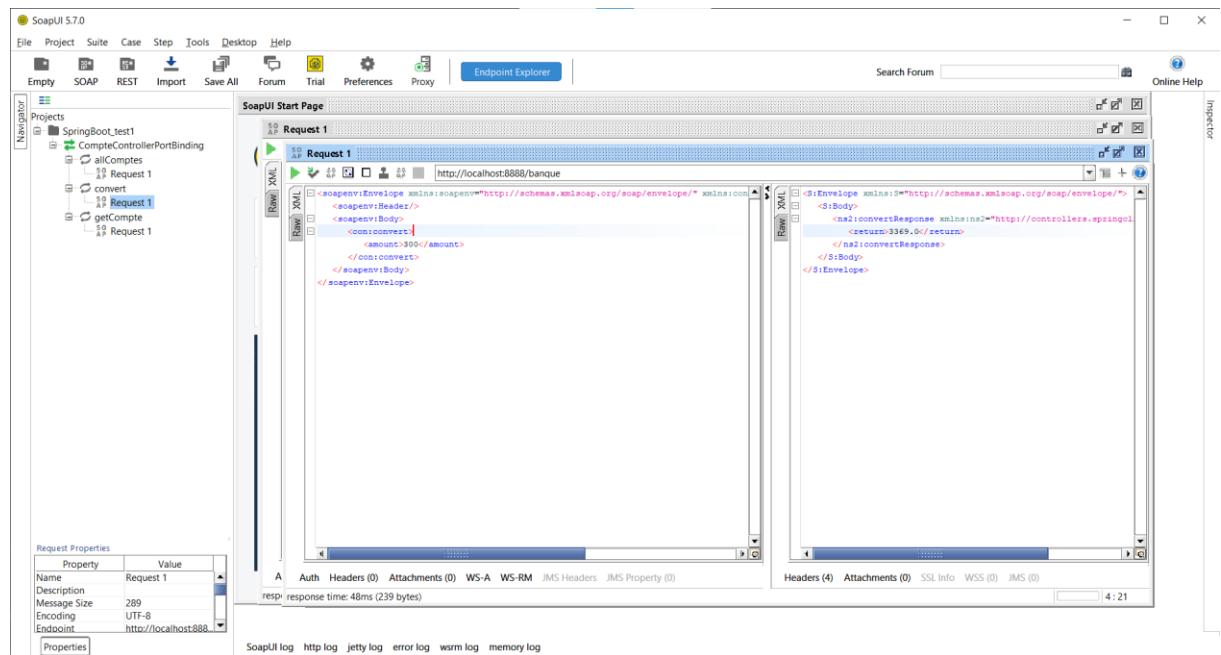
a) WSDL :

This XML file does not appear to have any style information associated with it. The document tree is shown below.

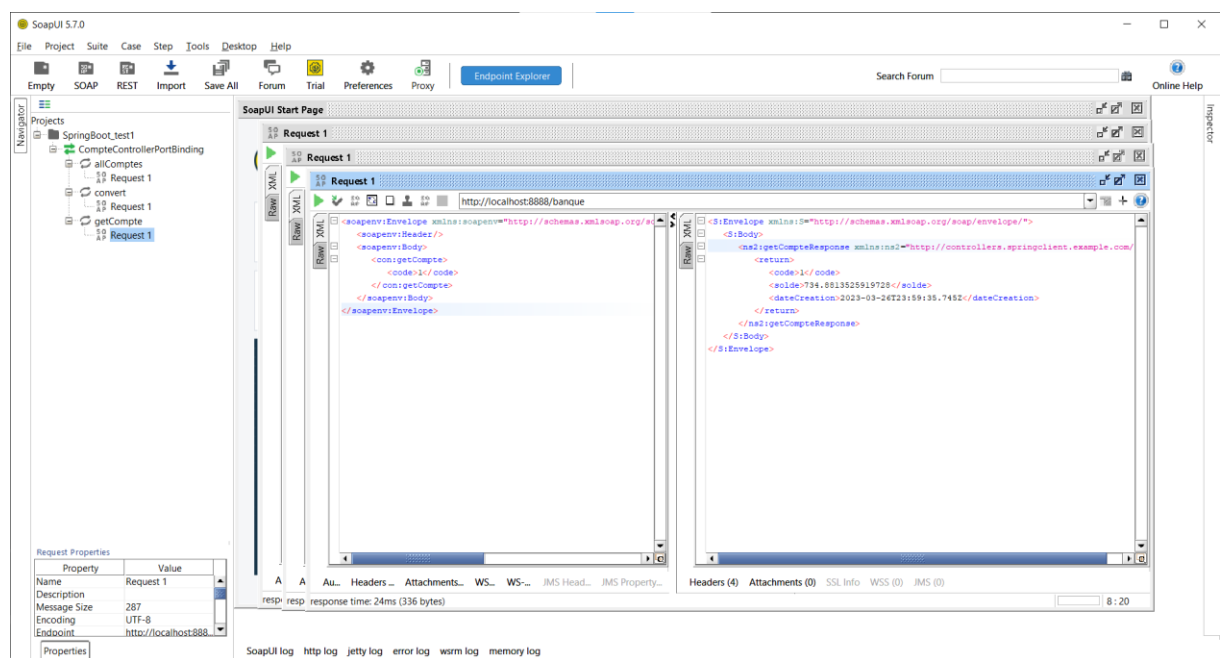
```
<!-- Published by JAX-WS RI (http://jax-ws.java.net). RI's version is JAX-WS RI 2.2.9-b130926.1035 svr
-->
<!-- Generated by JAX-WS RI (http://jax-ws.java.net). RI's version is JAX-WS RI 2.2.9-b130926.1035 svr
-->
<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
  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://controllers.springclient.miaad.fsm/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  targetNamespace="http://controllers.springclient.miaad.fsm/"
  name="CompteControllerService">
  <types>
    <xsd:schema>
      <xsd:import namespace="http://controllers.springclient.miaad.fsm/"
        schemaLocation="http://localhost:8888/banque?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="getCompte">
    <part name="parameters" element="tns:getCompte"/>
  </message>
  <message name="getCompteResponse">
    <part name="parameters" element="tns:getCompteResponse"/>
  </message>
  <message name="allComptes">
    <part name="parameters" element="tns:allComptes"/>
  </message>
  <message name="allComptesResponse">
    <part name="parameters" element="tns:allComptesResponse"/>
  </message>
  <portType name="CompteController">
    <operation name="convert">
      <input wsam:Action="http://controllers.springclient.miaad.fsm/CompteController/convertRequest"
        message="tns:convert"/>
      <output wsam:Action="http://controllers.springclient.miaad.fsm/CompteController/convertResponse"
        message="tns:convertResponse"/>
    </operation>
    <operation name="getCompte">
      <input wsam:Action="http://controllers.springclient.miaad.fsm/CompteController/getCompteRequest"
        message="tns:getCompte"/>
      <output wsam:Action="http://controllers.springclient.miaad.fsm/CompteController/getCompteResponse"
        message="tns:getCompteResponse"/>
    </operation>
    <operation name="allComptes">
      <input wsam:Action="http://controllers.springclient.miaad.fsm/CompteController/allComptesRequest"
        message="tns:allComptes"/>
      <output wsam:Action="http://controllers.springclient.miaad.fsm/CompteController/allComptesResponse"
        message="tns:allComptesResponse"/>
    </operation>
  </portType>
  <binding name="CompteControllerPortBinding" type="tns:CompteController">
    <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="getCompte">
      <soap:operation soapAction=""/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
    </operation>
    <operation name="allComptes">
      <soap:operation soapAction=""/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
    </operation>
  </binding>
  <service name="CompteControllerService">
    <port name="CompteControllerPort" binding="tns:CompteControllerPortBinding">
      <soap:address location="http://localhost:8888/banque"/>
    </port>
  </service>
</definitions>
```

b) SoapUI :

- [M1](#) :



• M2:



• M3

SoapUI 5.7.0

File Project Suite Case Step Tools Desktop Help

Empty SOAP REST Import Save All Forum Trial Preferences Proxy Endpoint Explorer Search Forum Online Help

Navigator

Projects

- SpringBoot_test1
 - CompteControllerPortBinding
 - allComptes
 - convert
 - Request 1
 - getCompte
 - Request 1

Request Properties

Property	Value
Name	Request 1
Description	
Message Size	240
Encoding	UTF-8
Endpoint	http://localhost:8888

Properties

SoapUI Start Page

Request 1

http://localhost:8888/banque

XML

```
<?xml version='1.0' encoding='UTF-8'>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header/>
  <soap:Body>
    <com:allComptes/>
  </soap:Body>
</soap:Envelope>
```

XML

```
<?xml version='1.0' encoding='UTF-8'>
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
  <S:Body>
    <ns2:allComptesResponse xmlns:ns2="http://controllers.springolient.example.com/">
      <return>
        <code>1</code>
      </return>
      <code>470.47411783143247</code>
      <dateCreation>2023-03-26T23:58:03.823Z</dateCreation>
      </return>
      <code>2</code>
      </return>
      <code>1488.1524246830726</code>
      <dateCreation>2023-03-26T23:58:03.823Z</dateCreation>
      </return>
      <code>3</code>
      <code>2000.9580143044996</code>
      <dateCreation>2023-03-26T23:58:03.823Z</dateCreation>
      </return>
    </ns2:allComptesResponse>
  </S:Body>
</S:Envelope>
```

response time: 57ms (573 bytes)

Headers (4) Attachments (0) SSL Info WSS (0) JMS (0)

11:47

SoapUI log http log jetty log error log wsrm log memory log