Semantic Web Services
Assignment 3

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1 SOAP Web Services

Listing 1: Request & Response for *getProductList()*

```
−−−[HTTP request]−−−
Accept: text/xml, multipart/related
Connection: keep−alive
Host: localhost:4434
User−agent: JAX−WS RI 2.2.9−b130926.1035 svn−revision#5
    f6196f2b90e9460065a4c2f4e30e065b245e51e
Content−type: text/xml; charset=utf−8
Soapaction: "http://services.ex03_soap.group7.sws.uibk.ac.at/IProductService/
    getProductListRequest"
Content−length: 209
<?xml version="1.0" ?>
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
  <S:Body>
    <ns2:getProductList xmlns:ns2="http://services.ex03_soap.group7.sws.uibk.ac.
        at/"></ns2:getProductList>
  </S:Body>
</S:Envelope>−−−−−−−−−−−−−−−−−−−−−−−−−

−−−[HTTP response 200]−−−
Date: Sun, 15 Apr 2018 14:56:27 GMT
Transfer−encoding: chunked
Content−type: text/xml; charset=utf−8
<?xml version="1.0" ?>
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
  <S:Body>
    <ns2:getProductListResponse xmlns:ns2="http://services.ex03_soap.group7.sws.
        uibk.ac.at/">
      <return>
        <productId>1</productId>
        <name>Product 0</name>
        <price>76.19510733034993</price>
      </return>
      <return>
        <productId>2</productId>
        <name>Product 1</name>
        <price>25.011139160308794</price>
      </return>
      <return>
        <productId>3</productId>
        <name>Product 2</name>
        <price>21.00335399134704</price>
      </return>
      <return>
        <productId>4</productId>
        <name>Product 3</name>
        <price>29.17199308628683</price>
      </return>
      <return>
        <productId>5</productId>
        <name>Product 4</name>
```

```xml
          <price>47.471766445795325</price>
        </return>
        <return>
          <productId>6</productId>
          <name>Product 5</name>
          <price>8.92248580120577</price>
        </return>
        <return>
          <productId>7</productId>
          <name>Product 6</name>
          <price>55.33865997201628</price>
        </return>
        <return>
          <productId>8</productId>
          <name>Product 7</name>
          <price>98.23981798191706</price>
        </return>
        <return>
          <productId>9</productId>
          <name>Product 8</name>
          <price>48.80248695740037</price>
        </return>
        <return>
          <productId>10</productId>
          <name>Product 9</name>
          <price>82.37709602984727</price>
        </return>
      </ns2:getProductListResponse>
    </S:Body>
</S:Envelope>————————————————
```

Listing 2: Request & Response for *getProduct()*

```
———[HTTP request]———
Accept: text/xml, multipart/related
Connection: keep−alive
Host: localhost:4434
User−agent: JAX−WS RI 2.2.9−b130926.1035 svn−revision#5
    f6196f2b90e9460065a4c2f4e30e065b245e51e
Content−type: text/xml; charset=utf−8
Soapaction: "http://services.ex03_soap.group7.sws.uibk.ac.at/IProductService/
    getProductRequest"
Content−length: 215
<?xml version="1.0" ?>
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
  <S:Body>
    <ns2:getProduct xmlns:ns2="http://services.ex03_soap.group7.sws.uibk.ac.at/">
      <arg0>1</arg0>
    </ns2:getProduct>
  </S:Body>
</S:Envelope>————————————————

———[HTTP response 200]———
Date: Sun, 15 Apr 2018 14:56:27 GMT
Transfer−encoding: chunked
Content−type: text/xml; charset=utf−8
<?xml version="1.0" ?>
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
  <S:Body>
    <ns2:getProductResponse xmlns:ns2="http://services.ex03_soap.group7.sws.uibk.
        ac.at/">
      <return>
        <productId>1</productId>
        <name>Product 0</name>
        <price>76.19510733034993</price>
      </return>
    </ns2:getProductResponse>
  </S:Body>
</S:Envelope>————————————————
```

Listing 3: Request & Response for *order()*

```
−−−[HTTP request]−−−
Accept: text/xml, multipart/related
Connection: keep−alive
Host: localhost:4434
User−agent: JAX−WS RI 2.2.9−b130926.1035 svn−revision#5
    f6196f2b90e9460065a4c2f4e30e065b245e51e
Content−type: text/xml; charset=utf−8
Soapaction: "http://services.ex03_soap.group7.sws.uibk.ac.at/IProductService/
    orderRequest"
Content−length: 219
<?xml version="1.0" ?>
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
  <S:Body>
    <ns2:order xmlns:ns2="http://services.ex03_soap.group7.sws.uibk.ac.at/">
      <arg0>2</arg0>
      <arg1>3</arg1>
    </ns2:order>
  </S:Body>
</S:Envelope>−−−−−−−−−−−−−−−−−−

−−−[HTTP response 200]−−−
Date: Sun, 15 Apr 2018 14:56:27 GMT
Transfer−encoding: chunked
Content−type: text/xml; charset=utf−8
<?xml version="1.0" ?>
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
  <S:Body>
    <ns2:orderResponse xmlns:ns2="http://services.ex03_soap.group7.sws.uibk.ac.at
        /">
      <return>true</return>
    </ns2:orderResponse>
  </S:Body>
</S:Envelope>−−−−−−−−−−−−−−−−−−
```

Listing 4: Request & Response for SOAP Fault in *getProduct()*

```
−−−[HTTP request]−−−
Accept: text/xml, multipart/related
Connection: keep−alive
Host: localhost:4434
User−agent: JAX−WS RI 2.2.9−b130926.1035 svn−revision#5
    f6196f2b90e9460065a4c2f4e30e065b245e51e
Content−type: text/xml; charset=utf−8
Soapaction: "http://services.ex03_soap.group7.sws.uibk.ac.at/IProductService/
    getProductRequest"
Content−length: 216
<?xml version="1.0" ?>
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
  <S:Body>
    <ns2:getProduct xmlns:ns2="http://services.ex03_soap.group7.sws.uibk.ac.at/">
      <arg0>11</arg0>
    </ns2:getProduct>
  </S:Body>
</S:Envelope>−−−−−−−−−−−−−−−−−−

−−−[HTTP response 500]−−−
Date: Sun, 15 Apr 2018 14:56:26 GMT
Transfer−encoding: chunked
Content−type: text/xml; charset=utf−8
<?xml version="1.0" ?>
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
  <S:Body>
    <S:Fault xmlns:ns4="http://www.w3.org/2003/05/soap−envelope" xmlns="">
      <faultcode>S:Server</faultcode>
      <faultstring>Product with ID='11' not found.</faultstring>
      <detail>
        <ns2:ProductNotFoundBean xmlns:ns2="http://ex03_soap.group7.sws.uibk.ac.
            at/">
          <message>Product with ID='11' not found.</message>
```

```
        </ns2:ProductNotFoundBean>
      </detail>
    </S:Fault>
  </S:Body>
</S:Envelope>
```

Listing 5: SOAP Fault as user-defined *ProductNotFoundException*

```
Exception in thread "main" at.ac.uibk.sws.group7.ex03_soap.exceptions.
    ProductNotFoundException: Product with ID='11' not found.
  at sun.reflect.NativeConstructorAccessorImpl.newInstance0(Native Method)
  at sun.reflect.NativeConstructorAccessorImpl.newInstance(
    NativeConstructorAccessorImpl.java:62)
  at sun.reflect.DelegatingConstructorAccessorImpl.newInstance(
    DelegatingConstructorAccessorImpl.java:45)
  at java.lang.reflect.Constructor.newInstance(Constructor.java:423)
  at com.sun.xml.internal.ws.fault.SOAPFaultBuilder.createException(
    SOAPFaultBuilder.java:135)
  at com.sun.xml.internal.ws.client.sei.StubHandler.readResponse(StubHandler.java
    :238)
  at com.sun.xml.internal.ws.db.DatabindingImpl.deserializeResponse(
    DatabindingImpl.java:189)
  at com.sun.xml.internal.ws.db.DatabindingImpl.deserializeResponse(
    DatabindingImpl.java:276)
  at com.sun.xml.internal.ws.client.sei.SyncMethodHandler.invoke(
    SyncMethodHandler.java:104)
  at com.sun.xml.internal.ws.client.sei.SyncMethodHandler.invoke(
    SyncMethodHandler.java:77)
  at com.sun.xml.internal.ws.client.sei.SEIStub.invoke(SEIStub.java:147)
  at com.sun.proxy.$Proxy26.getProduct(Unknown Source)
  at at.ac.uibk.sws.group7.ex03_soap.WsClient.main(WsClient.java:18)
```