CS 1103 - FR02B
Lab 11

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Understanding WSDL:

What are the major elements of WSDL, and what do they hold?

There are 4 major elements of WSDL:

- ► **<type>:** Define the (XML Schema) data types used by the web service.
- ► **<message>:** Defines the data elements for each operation.
- ► **<portType>:** Describes the operations that can be performed and the messages involved.
- ► **<binding>:** Defines the protocol and data format for each port type.

WSDL Example:

Look through the file and name two datatypes (types) defined by the file as well as two methods operation within portType.

Two datatypes are "string" and "double".

Two operations are "getMetadata" and "getDataInfo"

Exploring WSDL:

How many methods are there in this web service?

There are 13 methods in this web service.

Using The Web Service:

Output result:

```
13:07  0.90 (m)
19:21  5.90 (m)
```

Benefits Of Standardizing:

The XML result (getDataInfo method):

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

<soapenv:Body>

<ns1:getDataInfoResponse xmlns:ns1="http://client.ws.shc.gc.ca"
soapenv:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/
">
```

```xml
<getDataInfoReturn xmlns:ns2="http://wds.dfo.gc.ca"
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
soapenc:arrayType="ns2:Metadata[2]" xsi:type="soapenc:Array">

<getDataInfoReturn href="#id0"/>

<getDataInfoReturn href="#id1"/>

</getDataInfoReturn>

</ns1:getDataInfoResponse>

<multiRef
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:ns3="http://wds.dfo.gc.ca" id="id0" soapenc:root="0"
soapenv:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/
" xsi:type="ns3:Metadata">

<name xsi:type="xsd:string">hilo</name>

<value xsi:type="xsd:string">Predicted water levels in meters
for the high and low tides</value>

</multiRef>

<multiRef xmlns:ns4="http://wds.dfo.gc.ca"
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
id="id1" soapenc:root="0"
soapenv:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/
" xsi:type="ns4:Metadata">

<name xsi:type="xsd:string">wl15</name>

<value xsi:type="xsd:string">Predicted water levels in meters
every fifteen minutes</value>

</multiRef>

</soapenv:Body>

</soapenv:Envelope>
```