Homework 1 semester 2/2016: Web Service (6%)

This is individual homework. You are to write a distributed application using Web services. You will develop a client application called "ClientApplication" to call 1) a Web service named "DomainExtensionWS" that you develop and 2) an existing Web service named "CountryInfoService". The instructions are:

1. Study the WSDL of "CountryInfoService" Web service at
   http://www.oorsprong.org/websamples.countryinfo/CountryInfoService.wso?WSDL
   This Web service has an operation named "CountryName" that returns the country name for the country ISO code.
   The input is

   - String sCountryISOCode – country ISO code, e.g. TH, JP (2 uppercase characters)

   and the output is

   - String CountryNameResult – country name, e.g. Thailand, Japan

   Remark If you want to try to call a Web service to see its result, you may download SoapUI at http://www.soapui.org/. First, create a New Soap Project and specify the WSDL of the Web service as the Initial WSDL. Then, select an operation you want to call, specifying the input and making a call to see the result.

2. Develop a Web service named "DomainExtensionWS" that has an operation named "getDomainExtension"
   with the input
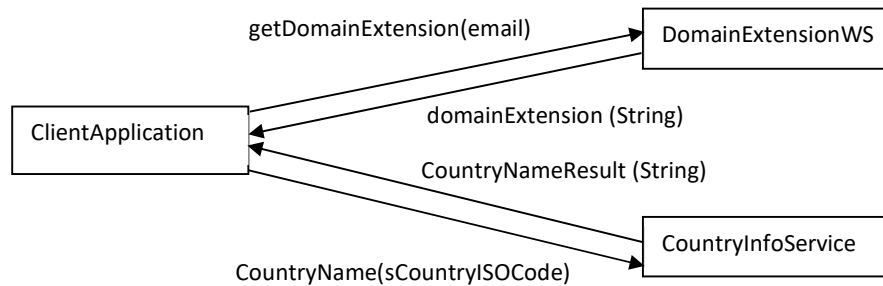
   - String email, e.g. twittie.s@chula.ac.th

   and the output

   - String domainExtension, e.g. TH (domain extension in underline)

3. Develop a client named "ClientApplication" that works as follows:

   - Call the operation named "getDomainExtension" of "DomainExtensionWS" to get the domain extension of the email.
   - Call the operation named "CountryName" of "CountryInfoService" to get the country name of the email domain extension.
   - Display on the screen
       Name is <your name>
       Student ID is <student ID>
       Email is <email>
       Email user lives in <output from "CountryName">

The overall picture of the application is shown below.

Submission

1. Project folder, containing all code
2. File of the screen capture of the output of "ClientApplication" (displaying your name, student ID, email, and country name)

Put everything in a .zip file and submit to CourseVille by **midnight of Friday 10 March 2017**.

Remarks

You may use ANY IDE or Web service framework of your choice. (Study the tutorial of your tool.)

For Java Web service (JAX-WS) using NetBeans IDE

1. Download NetBeans IDE Download Bundles (Java EE or All) at https://netbeans.org/downloads/

2. You may follow its tutorial at https://netbeans.org/kb/docs/websvc/jax-ws.html

- Creating a Web Service

- Adding an Operation to the Web Service

- Deploying and Testing the Web Service

- Consuming the Web Service: Client 1: Java Class in Java SE Application

3. You can build a project named "DomainExtensionService" as Java Web (Web Application)

- Create Web Service named "DomainExtensionWS"

4. You can build "ClientApplication" as Java (Java Application) that is

- Web Service client of "DomainExtensionWS" by specifying the Project "DomainExtensionService" as the location of the WSDL file of "DomainExtensionWS".

- Web Service client of "CountryInfoService" by specifying the WSDL URL of "CountryInfoService" (http://www.oorsprong.org/websamples.countryinfo/CountryInfoService.wso?WSDL).

- Once these WSDLs are specified, corresponding Web Service References are created for use by "ClientApplication".