CS251: Software Engineering I 2014-2015

Project Title : WebService2Code

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Problem Statement

Web service is a method of communication between two electronic devices over a network. It is a software function provided at a network address over the web. Generally web service could be defined as a software system designed to support interoperable machine-to-machine interaction over a network.

Web Services has two types of uses; it's used as reusable application components i.e. Web services can offer application-components like: currency conversion, weather reports, or even language translation as services; it could also be used to connect existing software i.e. Web services can help to solve the interoperability problem by giving different applications a way to link their data. With Web services user can exchange data between different applications and different platforms. The following link contains an example for a web-service that provides temperature convertor methods to convert from Fahrenheit to Celsius and vise versa: http://www.w3schools.com/webservices/tempconvert.asmx If you opened the above link in your browser you could find a list of the methods provided by this web-service with a hyperlink for something called Service Description http://www.w3schools.com/webservices/tempconvert.asmx?WSDL; That page describe the temperature web-service in xml format you may find list of methods supported by this web-service their parameters and return types the following link describe in details the WSDL formats : http://www.w3schools.com/webservices/ws_wsdl_intro.asp

If you go to the following link: http://www.w3schools.com/webservices/tempconvert.asmx?op=CelsiusToFahrenheit; you could find a description about the CelsiusToFahrenheit method provided by temperature converter web-service with protocol details to execute that method and get the result using a mix of http and xml requests and responses.

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The goal of this project is to deliver a software application for helping developers to integrate/consume a soap web service into his/her final application. The application should take the web-services WSDL link as an input and generate the required classes/methods to encapsulate that web service. The user should able to configure the application to select specific web-service methods or all methods to generate. The generated source files should contains a JavaDoc type comments headers and its final location should be configured. On the other hand the application should provide a way for user to preview, alter/modify the generated source files manually. As a first version The Webservice2Code application should support .net soap web-services for android platforms.

You could have a look at the following examples:

1. http://www.wsdl2code.com/pages/Home.aspx

2. http://code.google.com/p/wsdl2ksoap/

3. http://www.herongyang.com/WSDL/WSDL2Java-Generate-Web-Service-Stub-Class.html