University of Michigan – Dearborn
Department of Computer and Information Science

CIS 571 – Web Service - Project 2
Dr Medjahed
Report Due: 04/20/17 – 5:30pm
Demo: 04/20/17
Late Assignments will NOT be accepted

This a TEAM project. Each team should be composed of TWO students.

Please go to the following google doc and fill out information about your team BEFORE MARCH 2nd.
https://docs.google.com/a/umich.edu/document/d/1pnKsz6KIpNdg1mNwWJ3h4hkuXXbmnaSX9OEzm0B34vk/edit?usp=sharing

Part 1: (30 points)

You need to develop AT LEAST two SOAP Web services. These two services should be standalone and independent from each other. No service is supposed to interact with the other.

You are required to use these two Web services in part 3 for developing a BPEL business process.

While the two students in the team need to work as a group in designing the web service functionalities, it is expected that each student will be in charge of developing one of the two services.

Part 2: (20 points)

You need to develop REST versions of two services developed in part 1. You should be able to re-use much of the code developed in Part1 for your services.

In this part, I would like the students to switch roles. Each student needs to develop the REST version of the Web service developed by the other student.

Part 3: (50 points)

In this part, you are required to develop a BPEL process using AT LEAST three SOAP services. This should include the two SOAP services you developed in part 1. The third service may be any existing SOAP service on the Web. You also have the possibility to develop your own third SOAP service if this works better for you. The main idea is that it should make sense to mash-up all those services into a one BPEL process.

You are required to have at least ONE flow activity in your process.

You are allowed to use any BPEL engine of your choice. I recommend the Apache ODE (Apache Orchestration Director Engine) as (i) it is open source (hence free) and (ii) it has been successfully used by many students to develop BPEL processes.

Apache ODE (Apache Orchestration Director Engine) is an open source server that executes or runs one or more business processes which have been expressed in the Web Services Business Process Execution Language (WS-BPEL). It communicates with one or more Web services, sending and receiving messages, manipulating data and handling exceptions as defined by any given process. The engine is capable of running both long and short living processes to coordinate all the services that make up a service or application (orchestration). The Apache ODE server is installed on top of Tomcat Server. You obviously first need to install Eclipse and Tomcat server.

Important:

Although this is a team project, both students in the team are expected to equally contribute. A section describing **Individual Contributions** should be included in the report. Details about the report will follow.