

22. April 2010

Semantic Web Services

Exercise sheet 5
Web2.0 services**Exercise 1 (WADL (1)) (5 points)**

Create a WADL file that corresponds to a business service providing the following functionality:

- Create a new order
public Purchase OrderStatus acceptPO(PurchaseOrder order)
- Retrieve an existing order
public PurchaseOrder retrievePO(String orderID)
- Modify an existing order
public PurchaseOrder updatePO(PurchaseOrder order)
- Cancel an order already submitted
public void cancelPO(String orderID)

The service shall be available at the following endpoint-address:
<http://www.swsbook.com/theRESTfulService>

Exercise 2 (WADL (2)) (5 points)

Consider a bus transportation company being a company that provides tourism services as part of the VTA scenario introduced in Exercise Sheet 4 - Web services. Design a WADL description for one of the services this company provides and explain all its elements.

Exercise 3 (JSON (1)) (5 points)

Given the XML representation of a data object exchanged with a RESTful service that provides music information in Listing 1 create the corresponding JSON textual representation.

Listing 1: Rock band music info – XML representations

```
<!DOCTYPE glossary PUBLIC "-//OASIS//DTD DocBook V3.1//EN">
<Rockbands>
  <Rockband>
    <Name>Beatles</Name>
    <Country>England</Country>
    <YearFormed>1959</YearFormed>
    <Members>
      <Member>Paul</Member>
      <Member>John</Member>
      <Member>George</Member>
      <Member>Ringo</Member>
    </Members>
  </Rockband>
  <Rockband>
    <Name>Rolling Stones</Name>
    <Country>England</Country>
    <YearFormed>1962</YearFormed>
    <Members>
      <Member>Mick</Member>
      <Member>Keith</Member>
      <Member>Charlie</Member>
      <Member>Bill</Member>
    </Members>
  </Rockband>
  <Rockband>
    <Name>Queen</Name>
    <Country>England</Country>
    <YearFormed>1970</YearFormed>
    <Members>
      <Member>Freddie</Member>
      <Member>Brian</Member>
      <Member>Roger</Member>
      <Member>John</Member>
    </Members>
  </Rockband>
  <Rockband>
    <Name>Pink Floyd</Name>
    <Country>England</Country>
    <YearFormed>1965</YearFormed>
    <Members>
      <Member>Nick</Member>
      <Member>Syd</Member>
      <Member>David</Member>
      <Member>Roger</Member>
      <Member>Richard</Member>
    </Members>
  </Rockband>
</Rockbands>
```

Exercise 4 (JSON (2)) (5 points)

Create a JSON representation, both text and XML of the data exchanged between the VTA application and the bus transportation company service. The VTA is the client, the bus transportation company is the service in this particular interaction. The information returned by the bus transportation company includes: the start and end city of the trip, the price for the ticket and a list of departure hours. The bus transportation company offers trips from multiple cities of Austria.