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DTU Informatics
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Homework week 8
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02267: Software Development of Web Services

8.1 White Pages Service as a REST Service

- The White Pages Service from week 4 should now be implemented as a RESTful service. At the moment, don't bother with erronous situations, like that a person resource has not yet been created, e.t.c. In week 9, we will talk about handling errors in RESTful Web services.

  1. The service has as a resource the list of persons (i.e. path is whitepages/persons).
     a) One can search for all persons in the whitepages directory that match a given name. The list returned should be a list of URL's representing the resources for the found persons (c.f. point 2). The search syntax should be whitepages/persons?name=Johan, for a search for a person whose name contains Johan
     a) One can add a new person to the list of persons
  2. A person is represented as a resource whitepages/persons/{id} where id is a unique id for a person in the white pages.
     a) Provide access to a specific person resources, returning an XML description or a JSON description of that person, depending on MIME Type accepted by the request
     b) Provide an operation to update a specific person resource. The result should be the string "OK"
     c) Provide an operation to delete a specific person resource.

- Tasks

  i. Implement a REST Service representing the resources for the list of persons and for each person. A Person has a name and an Address, and an Address has a city and a street.
  ii. Implement the operations mentioned in 1. and 2. using the appropriate access methods for the operations
  iii. Create a JUnit client to test the Web service using the Jersey RS client libraries.
  iv. Observe the traffic between client and server using the TCP monitor

(v.) If you like, you can test your services also with the curl (Command line URL) program (can be downloaded from `http://curl.haxx.se/download.html` if not present on your computer). Alternatively, you can use the Postman Google Chrome plugin, which provides a nicer interface to play around with HTTP than curl.

Tips on using Netbeans

- Please have a look at the course's Web page (`http://www2.imm.dtu.dk/courses/02267/`) to see how to implement a RESTful service and a client using that service
- To automatically use JAXB for representing user defined classes (like Person or Address) in XML, you need to remember to preceded the classes with the annotation @javax.xml.bind.annotation.XmlRootElement().
- Instead of the datatype Person[], one should use the datatype List<Person> (with ArrayList<Person> implementation), as this is recognized by the JAXB framework to have an XML representation. The course Web page has more on this.