Exercise – A Web Service Customer Orders Retrieval System

In this exercise you will have to create a customer order retrieval system. The clients will access the system by sending messages to the remote Web service application. The Web Service has local data containing customer orders (temporary objects). The data shall include a customer name and for each name a list of orders.

e.g: Koehler: {headphones, laptop},{book, tablet} , Safar: {book2}, {notebook, usb cable}

More specifically the Web service provides two different operations:

Operation: get Customers()
Description: The Web Service returns a list of all customer names.

Operation: Order[] getOrders(String name)
Description: The Web Service returns a list of orders from this customer.

Operation: boolean addOrder(Order order)
Description: The Web Service adds this order to the list of orders. If the customer does not exist, the order shall not be added.

Operation: boolean addCustomer(Customer customer)
Description: The Web Service adds this customer to the list of customers.

Operation: boolean deleteOrder(Order order)
Description: The Web Service deletes this order from the list of orders.

Operation: boolean deleteCustomer(Customer customer)
Description: The Web Service deletes this customer from the list of customers. All order from this customer shall be deleted as well.

Implement the Web Service and host it locally. Implement a Client Application which enables invoking the Web Service. The Client application shall be able to display the list all customers, and to display the orders for each customer. There shall be some possibility to invoke the operations and update the data.

Note: Package the required files for server/client/common separately via ANT (or similar) tool and document the requested command lines to deploy/start/test your application incl. the client!

Exercise – A RESTful Customer Orders Retrieval System

In this exercise you will have to create a simple customer order retrieval system. The clients will access the system by sending messages to the remote Web service application. The Web Service has local data containing customer orders. The data shall include a customer name and for each name a list of orders. Reuse the code from your Web Service Example.

e.g: Koehler: {headphones, laptop},{book, tablet} , Safar: {book2}, {notebook, usb cable}

Implement a RESTful service enabling the following functionality:

- Get information about customers
- Get orders from specific customer
- Delete an order of a customer
- Delete a customer
- Create a new customer to the system
- Add a new order to the system

Remember: URIs should be meaningful when building RESTful services. Think about a meaningful and RESTful interface for the system.

Write a Client enabling requests against the REST service and meaningfully visualizing the response.

Write a documentation of your Services. The documentation has to describe all design decision. Explain the RESTful service design and include sample HTTP Requests and Responses (e.g. Firefox Addon RESTClient). Compare them with the WSDL and SOAP messages from the Web Service. (Hint: use TCP Monitor, e.g. http://code.google.com/p/tcpmon/).

Deadline: 19.12.2014