



TK1: Distributed Systems - Programming & Algorithms

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By handing in a solution you confirm that you are the exclusive author(s) of all the materials. Additional information can be found here: <https://www.informatik.tu-darmstadt.de/de/sonstiges/plagiarismus/>

Task 1: WSDL elements (6P)

The web service is given in illustration 1. Assume that the Class “Location” has the attributes “int x” and “int y”.

Write down the WSDL definitions (types, messages, portType and operations) for this web service in XML format.

```
package de.tu_darmstadt.informatik.tk;

import javax.jws.WebService;
import javax.jws.soap.SOAPBinding;

@WebService(targetNamespace="http://tk.informatik.tu-darmstadt.de",
name="LocationService")
@SOAPBinding(style=SOAPBinding.Style.RPC)
public class LocationServiceImpl{
    public Location getLocation(int id){ ... }
}
```

Illustration 1: LocationServiceImpl.java

Task 2: Servlet Container (4P)

Discuss the differences between REST and SOAP web services. Identify the advantages and disadvantages. Discuss especially the following attributes: transport protocol, typing, data format, addressing and states.