Distributed Programming II

A.Y. 2015/16

Assignment n. 2 – part a)

The material for this assignment is in the zip archive where you have found this document. Extract it to an empty directory and copy the doc directory from the work area of Assignment 1 to the new work area for your reference.

1. Design an *XML* language similar to the one defined for Assignment 1 but based on the W3C Schema Language. The requirements are the same as for Assignment 1: the format must be such that all the information that can be extracted from the *Java* interfaces included in package `it.polito.dp2.WF` can be represented, without redundancies. As an additional requirement, the potential of XML schemas must be exploited, in order to accurately represent constraints on data types, and keep checks as much as possible within the XML processor (rather than in the application). The schema must be saved in the file `[root]/xsd/WFInfo.xsd`, where as usual `[root]` is the root of the work area.
2. Write a short documentation of the design choices made about the schema (max 1 page), and save it to the ASCII file `[root]/xsd/doc.txt`.
3. Write an *XML* document that is valid with respect to the *schema* that specifies the designed format. The document must be saved in file `[root]/xsd/WFInfo.xml`.

Correctness Verification

Before submitting your solution, you are required to check its correctness. In order to be considered acceptable, the solution must at least fulfill the following requirements:

- the file `WFInfo.xsd` must be syntactically correct (a valid W3C schema);
- the file `WFInfo.xml` must be valid with respect to the W3C schema stored in `WFInfo.xsd;`
- the file `doc.txt` must exist.

The validity of the XML file can be verified by an XML validator. For example, if you want to use the `DomParseVS` program (distributed along with the *XML* examples), the file can be validated by including a reference to the schema in the xml file and by running the command

`java DomParseVS WFInfo.xml`.

The solution will be submitted along with part b).