

No Classroom lab: Content Representation Languages (XML)

In this activity we want to build an XML-Schema and XSL associated to an XML document provided to you (xc.xml). The XML-Schema will be called xc.xsd and the XSL transformation will be called xc.xsl.

Previous requirement to the edition of XML, XSL and XML-Schema:

We will use the Editix tool (<http://free.editix.com>), in its non commercial edition, in order to edit and validate the XML document.

This tool can be downloaded from <http://free.editix.com/download.html>

References:

- Anders Møller and Michael I. Schwartzbach. *An Introduction to XML and Web Technologies*, Addison-Wesley , 2006.
- <http://www.brics.dk/~amoeller/XML/overview.html>
- <http://www.w3schools.com/xml>

Additional references:

- <http://www.w3.org/TR/2008/REC-xml-20081126/>
- <http://www.w3.org/TR/xslt20/>
- <http://www.w3.org/TR/2007/REC-xpath20-20070123/>

Construction of the XML-Schema:

The XML document has entries containing the information of a library. Each library has books and each book has authors and information about the edition. From this document and the following instructions you must derive a XML-Schema restrictions file:

- In the document provided you have the firsts 3 books that satisfy the XML-Schema.
- The 4 books in the end do not satisfy the restrictions from some reason. The reason is provided in the comments of the document.

In order to check the validity of an XML document with Editix, use the link "XML->Validate this document".

Once you have defined the XML-Schema, remove the entries that are not correct from the XML document, and check that your XML-Schema validates the document.

Construction of the XSL transformation (XSLT):

Upon opening the XML document with Firefox or Internet Explorer, you must obtain something similar to:

My book collection

Book	Authors
El Aleph	Jorge Luis Borges,
Rayuela	Julio Cortazar,
A Top-Down Approach Featuring the Internet	James F. Kurose, Keith W. Ross,

In order to write the XSLT, take the following into account:

- "My book collection" is a first level HTML header.
- The first row in the table is green, RGB code "9acd32".
- You must use the XSLT commands: `xsl:for-each` and `xsl:value-of`

Evaluation

Nothing must be delivered. The session will be evaluated the same day of the final lab exam, by means of a quiz. In the following you have some examples of the type of questions that you will find in the quiz.

Example of the type of questions that might be used in the evaluation of the sockets lab:

Given the following XML document:

```
<?xml version="1.0" encoding="UTF-8" ?>
<?xml-stylesheet href="missatges.xsl" type="text/xsl"?>
<bústia>
  <missatge>
    <domini> xca.com </domini>
    <destinatari>joan@hotmail.com</destinatari >
    <remitent>pep@xca.com</remitent>
    <dades>
      <capçalera nom="subject">Viatge a mallorca</capçalera>
      <capçalera nom="From">Pep Maragall</capçalera>
      <capçalera nom="To">Joan Noguera</capçalera>
      <cos>
        <part tipus="text/plain">
          Aquí tens les fotos que vam fer l'altre dia a mallorca!
        </part>
        <part tipus="image/jpeg" codi="base64">
          (...) cGhvdG8gbW9sdCB4dWxh (...)
        </part>
      </cos>
    </dades>
  </missatge>
  <missatge>
    <domini> xca.com </domini>
    <destinatari>joan@hotmail.com</destinatari >
    <remitent>manel@xca.com</remitent>
    <dades>
      <capçalera nom="subject">Sopar</capçalera >
      <capçalera nom="From">Manel Groc</capçalera>
      <capçalera nom="To">Joan Noguera</capçalera>
      <cos>
        <part tipus="text/plain">
          Avui a les 8pm.
        </part>
      </cos>
    </dades>
  </missatge>
</bústia>
```

Say which of the following statements are true:

- 1) It is well formed (true)
- 2) `<xsl:for-each select="bústia/missatge">` allows iterating through all messages in the document (true)
- 3) `<xsl:for-each select="bústia/missatge"> <xsl:value-of select="dades/capçalera[1]" /> </xsl:for-each>` Mostrarà el “subject” dels dos missatges (cert)
- 4) `<xsl:for-each select="bústia/missatge"> </xsl:for-each>` will generate a document with the content of the two messages (false)