

Due on: Thursday 16.06.2005 by 14:00 (in class)

Exercise 1

- a) The current Book.java (available online) only returns the title of the book correctly if the book element contains exactly one author. Modify Book.java such that it would return the title for book elements that contain more than one author. (e.g. using book.xml (below) -- if theName = "R.E.", then it should return the title "XML und DM").
- b) Write a Java SAX program which reads in an XML document and outputs:
- For each element: the start of the element and its name; and the end of the element and its name.
 - For each attribute: the name and value of the attribute.
 - For each text node: the text contents of the text node.

Can we access this information again after parsing the document? (e.g. print the information twice, one after the other, without parsing the document twice; assuming no storing available) If not, how can we make this possible?

Exercise 2

- a) Write the Java DOM version of Book.java (ex.1a) (e.g. write a java program BookDom.java, which outputs the title of any given author)
- b) Write the Java DOM version for 1b (i.e. print out the xml document). In addition, also implement methods to append and remove a new/old book element for book.xml.

book.xml:

```
<?xml version="1.0"?>
<books>
  <book number = "1">
    <author>R.E.</author>
    <author>S.E.</author>
    <title lang="en">XML und DM</title>
  </book>
  <book number = "2">
    <author>E.R.</author>
    <title lang="de">Learning XML</title>
  </book>
  <book number = "3">
    <author>N.W.</author>
    <author>L.M.</author>
    <title lang="de">DocBook</title>
  </book>
</books>
```