1. Unit: Warm-up Exercises

Information about the XML course can be found at
`http://www.stud.informatik.uni-goettingen.de/xml-lecture`

Exercise 1.1 (XML-Tree vs Directory-Tree)

Load `mondial-europe.xml` into *xmllint* and browse through the directory structure. First, change into the `country` element of Germany, then into the city of Göttingen. Then, change into the next city in the document.
Links to *xmllint* and the Mondial database can be found at
`http://www.stud.informatik.uni-goettingen.de/xml-lecture`.

Exercise 1.2

- Write a DTD for XML documents with student data:
  name, address and a student id, one or more subjects (computer science, law, chemistry, sociology etc)
- Write an XML document containing student data conforming to the DTD, and check it for validity using *xmllint*.

Exercise 1.3 (HTML-XHTML)

- Find a simple HTML document (e.g. your own personal student homepage) and convert it by hand from HTML to XHTML.
- Check the XHTML document for validity using the XHTML validator
  (`http://validator.w3.org/detailed.html`).

Hint: In your home directory in the CIP pool, there is a directory `public_html` which is your personal web directory. Files there are accessible via
`http://student.ifi.informatik.uni-goettingen.de/~`*<username>*`/`*<filename>*.

Exercise 1.4 (DFAs and DTDs)

Consider the following DTD:

```
<!ELEMENT date (day,month,year?)>
<!ELEMENT day (#PCDATA)>
<!ELEMENT month (#PCDATA)>
<!ELEMENT year (#PCDATA)>
<!ELEMENT a (date*)>
<!ELEMENT b (#PDCATA)>
<!ELEMENT c (b+|(b?,a)*)>
```

Define a finite automaton for each element definition which accepts the corresponding *content model*.