

Semantic Web

XHTML / DTD

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Exercise 1: XHTML

Generate an XHTML document from the given HTML document.

```
<Html>
  <Body>
    <h1>Vorlesung</h1>
    <p>
      <ul>
        <li>XML
        <li>DTD
      </ul>
      <br>
    </p>
    <table cellpadding=0 cellspacing=0>
      <tr>
        <td nowrap>Dozent:</td>
        <td> Prof. Henze</td>
      </tr>
    </table>
  </Body>
</Html>
```

Exercise 1: XHTML

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
  "http://www.w3.org/TR/html4/strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>Vorlesung</title>
  </head>
  <body>
    <h1>Vorlesung</h1>
    <p>
      <ul>
        <li>XML</li>
        <li>DTD</li>
      </ul>
      <br/>
    </p>
    <table cellpadding="0" cellspacing="0">
      <tr>
        <td nowrap="nowrap">Dozent:</td>
        <td> Prof. Henze</td>
      </tr>
    </table>
  </body>
</html>
```

The university administration wants to store all student related data in a database. Could you help them to find an appropriate DTD to model these data?

- the university has students, departments and lectures
- every student has an attribute *startdate* where s/he started studying
- every student must have paid the fees (*feespaid*)
- every student belongs to at least one department
- every student can attend lectures
- departments have an id and a name and can have a head
- the lecture is given by a professor

Exercise 2: DTD

```
<!ELEMENT university (students, departments, lectures)>
<!ELEMENT student (belongsTo+,attendsLecture*)>
<!ATTLIST student
  startdate CDATA #REQUIRED
  feespaid (true|false) #FIXED "true">

<!ELEMENT belongsTo EMPTY>
<!ATTLIST belongsTo
  department ID #REQUIRED>

<!ELEMENT attendsLecture EMPTY>
<!ATTLIST attendsLecture
  lecture ID #REQUIRED>

<!ELEMENT department EMPTY>
<!ATTLIST department
  id ID #REQUIRED
  name CDATA #REQUIRED
  head CDATA #IMPLIED>

<!ELEMENT lecture (professor)>
<!ATTLIST lecture
  id ID #REQUIRED>

<!ELEMENT professor (#PCDATA)>
```