

**Solution Exercise – 3**  
**XML and Semantic Web Technologies – SoSe 2012**  
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1.1

- eth and Rektor had a wrong closing tag
- / was missing for the president tag
- the DOCTYPE should be introduced with <! and the root element should not be quoted.

```
<?xml version="1.0"?>
<!DOCTYPE eth SYSTEM "eth.dtd">
<eth xmlns="http://www.ethz.ch"
xmlns:xmldb="http://www.dbis.ethz.ch"
date="11.11.2006"
xmldb:date="12.11.2006">
<date>13.11.2006</date>
<president number="1">Empty</president>
<Rektor>Name 2</Rektor>
</eth>
```

1.2

```
<eth xmlns="http://www.ethz.ch"
eth is in the namespace http://www.ethz.ch
  xmlns:xmldb="http://www.dbis.ethz.ch"
  date="11.11.2006"
```

date does not inherit the namespace from the root element, so it is in no namespace.

**Unlike elements, an attribute with no prefix is in no namespace, even if there is a default namespace.**

```
xmldb:date="12.11.2006">
this attribute is in the http://www.dbis.ethz.ch namespace - it is allowed to have two attributes
with the same local name if their namespaces are different
```

```
<date>13.11.2006</date>
<president number="1">Empty</president>
the number attribute is in no namespace
<Rektor>Name 2</Rektor>
All children elements are in the namespace of the root, i.e. http://www.ethz.ch
</eth>
```

### 1.3

DTDs are not aware of namespaces. They see prefix bindings as normal attributes. This means that the bindings in the document have to be explicitly declared in the DTD (as #FIXED attribute values).

The following DTD could be used:

```
<!ELEMENT eth (date, president, Rektor)>
<!ATTLIST eth xmlns CDATA #FIXED "http://www.ethz.ch"
              xmlns:xmldb CDATA #FIXED "http://www.dbis.ethz.ch"
              date CDATA #IMPLIED
              xmldb:date CDATA #IMPLIED>

<!ELEMENT date (#PCDATA)>
<!ELEMENT president (#PCDATA)>
<!ATTLIST president number CDATA #IMPLIED>
<!ELEMENT Rektor (#PCDATA)>
```