

## Exercise Sheet 5

# XML Schema and XML Data Models (InfoSet, PSVI, XDM)

### Exercise 1: Comparing data models

1.1. Describe the main properties/features of the XQuery Data Model. Why do you think it was designed this way?

1.2. What is the main difference between Infoset and the XQuery Data Model?

### Exercise 2: Infoset

2.1. Look at the following document. Why is the prefix xml used, although it has not been bound?

```
<?xml version="1.0"?>
<dc:metadata xmlns:dc="http://www.systems.ethz.ch">
  <dc:title
    xml:lang="en"
    year="2008"
  >Systems Group</dc:title>
</dc:metadata>
```

2.2. Describe the Information Set of this document.

Hint: use the Information Set specification which is available under the following URL: <http://www.w3.org/TR/xml-infoset>.

It is sufficient to cover a representative subset of properties and nodes!

### Exercise 3: Validation and Post-Schema-Validation Infoset (PSVI)

3.1. What is the main difference between Infoset and PSVI?

3.2. Write a simple XML Schema for the document of exercise 2, using a named type for the root element and an anonymous type for the title. Validate the document using oXygen or Eclipse.

Hint: a schema for the XML namespace (for xml:lang) can be imported from the following URL with <xs:import/>: <http://www.w3.org/2001/xml.xsd>

3.3. What does the PSVI of the document look like after the validation? For each element and attribute, specify the following properties: [type definition type], [type definition namespace], [type definition anonymous], [type definition name].