4. XML schema refs, XSLT

PB138

Homework

- Deadline is 1.4.2013 23:59

Schema Uniqueness and Keys

```
<people>
   <person id="0" />
   <person id="1" parentId="0"/>
   <person id="2" />
</people>
```

xs:unique

Must be inside <xs:element>!

```
<xs:element name="people" >
        <xs:unique name="myUniq">
            <xs:selector xpath="./ns:person"/>
            <xs:field xpath="@id"/>
            <xs:field xpath="xxxx"/>
        </xs:unique>
...
```

xs:key

Must be inside <xs:element>!

```
<xs:element name="people" >
        <xs:key name="myPk">
            <xs:selector xpath="./ns:person"/>
            <xs:field xpath="@id"/>
            <xs:field xpath="xxxx"/>
        </xs:key>
...
```

xs:keyref

```
  <xs:keyref name="parentId"
                     refer="myPk">
   <xs:selector xpath="./ns:person"/>
       <xs:field xpath="@parentId"/>

...
```

Difference between key and unique

- The selector for unique doesnt need to contain the fields

Task

- Task1: Ensure the id is unique across messages. Create attribute "relatedMessage" which is a foreign key to uniqueId
- Task2: Ensure that message IDs are unique only across channels

XSLT

- messages.xml + messages.xslt = result.xml
- XSLT is composed of templates.

```
<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.
org/1999/XSL/Transform">
    <xsl:template  match="/">
```

Running the Transformation

- Try transformation from Netbeans and from Java
- HELLO WORLD

Basic Transformations

- **/** vs **/messages**
- Evaluation of the algorithm
  - apply-templates will again apply the whole template file to each child
  - text() matching
- The implicit templates
  - We can override them!

Implicit Templates

```
<xsl:template match="*|/">
  <xsl:apply-templates/>
</xsl:template>

<xsl:template match="text()|@*">
  <xsl:value-of select="."/>
</xsl:template>
```

Functional calling

- create a table "id, text"
  - sms text in red color
  - other text in blue

Modes, foreach and IFs

- Write out SMS first!
- <xsl:choose>
- <xsl:if>
- <xsl:for-each>

Other important concepts

- xsl:sort
- xsl:element
- xsl:call-template (with parameters)