How to create a presentation using XSL Transformations

Dominik Vasko

2019-04-11

What you will need

* **Saxon**, a xslt processor

* FOP, a xml:fo processor

* *Stylesheets*, for your xslt transformation

* XML, XSL editor, you can also use <u>VIM, Emacs</u>

Saxon

* Input: xml file and xsl tranformation
* Output: another xml file(xml, xml:fo, xhtml, etc.)
* Linting
* Version 9.9
* Java version, Windows, Linux

Logo of Saxonica

FOP

* Input: xml:fo file

* Output: pdf

* Old

Logo of Apache

Used constructs

* Title

* Lists

* Images

* Mixture of Picture and Image

Lists

* List-item construct in xml:fo

* Unordered lists in xhtml

```
<fo:list-block font-family="{$pdf-item-font-face}"
  <xsl:for-each select="item">
    <fo:list-item>
      <fo:list-item-label>
        <fo:block>
          *
        </fo:block>
      </fo:list-item-label>
      <fo:list-item-body start-indent="22pt">
        <fo:block>
          <xsl:value-of select="." />
        </fo:block>
      </fo:list-item-body>
    </fo:list-item>
  </xsl:for-each>
</fo:list-block>
```

XML:FO List

Pictures

*   External-graphics in xml:fo (png, gif, jpg)
*   XHTML - <img> tag

```
<xsl:template match="picture">
  <fo:block text-align="center" span="all">
    <fo:external-graphic width="257mm" height="auto" content-width="scale-to-fit"
  </fo:block>
</xsl:template>
```
Using external images

Multicol

* Document body has 2 columns by default fo:block
* Span="all" can be used
* For XHTML - <div> tags with floats

```
<xsl:template match="multicol/itemize">
  <fo:list-block font-family="Arial" font-size="22pt">
    <xsl:for-each select="item">
      <fo:list-item>
        <fo:list-item-label>
          <fo:block>
            *
          </fo:block>
        </fo:list-item-label>
        <fo:list-item-body start-indent="22pt">
          <fo:block>
            <xsl:value-of select="." />
          </fo:block>
        </fo:list-item-body>
      </fo:list-item>
    </xsl:for-each>
  </fo:list-block>
</xsl:template>
<xsl:template match="picture">
  <fo:block text-align="center" span="all">
    <fo:external-graphic width="257mm" height="auto" content-width="scale-to-fit" sr
  </fo:block>
</xsl:template>
<xsl:template match="multicol/picture">
  <fo:block text-align="center">
    <fo:external-graphic width="120mm" height="200mm" content-width="scale-to-fit" s
  </fo:block>
</xsl:template>
</xsl:stylesheet>
```
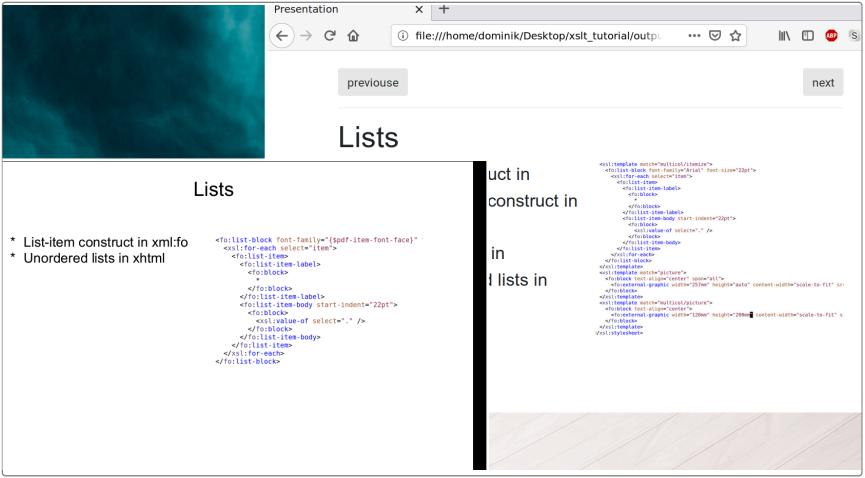
Multiple columns

Validation

* Relax NG
* shemas
* data types from XSD?
* Jing

Custom parameters

* Font size

* Font face

* Default page height

```
<!-- XHTML -->
<xsl:param name="xhtml-title-font-size" select="'40pt'"/>
<xsl:param name="xhtml-title-font-face" select="'Arial'"/>

<xsl:param name="xhtml-item-font-size" select="'18pt'"/>
<xsl:param name="xhtml-item-font-face" select="'Arial'"/>

<xsl:param name="xhtml-footer-font-size" select="'11pt'"/>
<xsl:param name="xhtml-footer-font-face" select="'Times'"/>

<xsl:param name="xhtml-default-slide-height" select="'500px'"/>
```
Customizable parameters

Files

* xhtml for each slide

* pdf

* makefile for linux

* .bat for windows

The result

Same content in pdf and xhtml form