XSLT Improvements

Octavian Nadolu, Syncro Soft

octavian_nadolu@oxygenxml.com
@OctavianNadolu

schematron
Structured
editing
XML
review
XQuery
Publish
PDF
DTD DocBook
oXygen
authoring
XML Editor
XSD SCH XSD
XPR RNC FO
frameworks
Profiling
WSDL
styles
visual
WebHelp
DITA
TEI
XSL
PHP
Ant
Js

JS
KML
XSLT
SVN
JSON
SVG
IDREFS
WebDAV
Single
Sourc
Datab
XHTML
Cha
Col
W

syncro soft

XML Editor

Overview

- XSLT 3.0 updates

- XPath/XQuery 3.1

- Checks for the XSLT code

- Saxon update

Updated the XSLT 3.0 Support

- Text Value Templates

- Initial Template

- Shadow Attributes

w3.org/TR/xslt-30

XSLT 3.0 Text Value Templates

- Oxygen offers built-in support for XSLT 3.0 Text Value Templates

- Content completion to present the variables and parameters

- Syntax highlighting

```xml
<xsl:function name="f:sum" expand-text="yes" as="xs:integer">
    <xsl:param name="x" as="xs:integer"/>
    <xsl:param name="y" as="xs:integer"/>
    {$x + $y}
</xsl:function>
```

w3.org/TR/xslt-30/#text-value-templates

XSLT 3.0 Initial Template

- Support for xsl:initial-template

```
<xsl:template name="xsl:initial-template">
    <xsl:value-of select="f:sum(4, 5)"/>
</xsl:template>
```

w3.org/TR/xslt-30/#invoking-initial-template

XSLT 3.0 Shadow Attributes

- Support for shadow attributes

- Content completion

- Documentation

```
<xsl:param name="output-method" static="yes" select="'xml'"/>
<xsl:output _method="{$output-method}"/>
```

w3.org/TR/xslt-30/#shadow-attributes

XPath/XQuery 3.1

- Validation

- Execution

- Syntax highlight

    - Maps: w3.org/TR/xpath-31/#id-maps

    - Arrays: w3.org/TR/xpath-31/#id-arrays

    - Lookup operator (?): w3.org/TR/xpath-31/#id-lookup

    - Simple Map operator (!):
      w3.org/TR/xpath-31/#id-map-operator

```
map { 'first' : 'Jenna', 'last' : 'Scott' }?first
array { "licorice", "ginger" }(1)
```

XSLT Code Checks

- Code quality assurance

  – [XSLTFramework]/sch/xsltCodeQA.sch

- Bad practice checks

  – [XSLTFramework]/sch/xsltBadPractices.sch

- Documentation checks

  – [XSLTFramework]/sch/xsltDocCheck.sch

XSLT Code Quality Assurance

- Check if an xsl:attribute contains variables or parameters in the text part

- Fixes
    - Insert 'xsl:value-of' element (for XSLT 1.0/2.0)
    - Insert Text Value Template (for XSLT 3.0)

```
<xsl:attribute name="margin-right">$page-margin-inside</xsl:attribute>
```

XSLT Bad Practice Checks

- XPath expression from attributes references elements with the same name as variables/params defined in the context

```
<xsl:param name="lang" select="'en'"/>
....
<xsl:variable name="persons" select="person/name[@language=lang]"/>
```

- XPath expression from the text value template references elements with the same name as variables/params defined in the context

```
<xsl:variable name="persons" select="//person/name"/>
...
<xsl:message expand-text="true">{persons/given}</xsl:message>
```

XSLT Documentation Checks

- Report the undocumented template

  – Add documentation for parameter(s)

  – Add documentation for parameter(s) in the whole document

- Report the parameters that are documented but not present in the template

  – Add missing parameter(s)
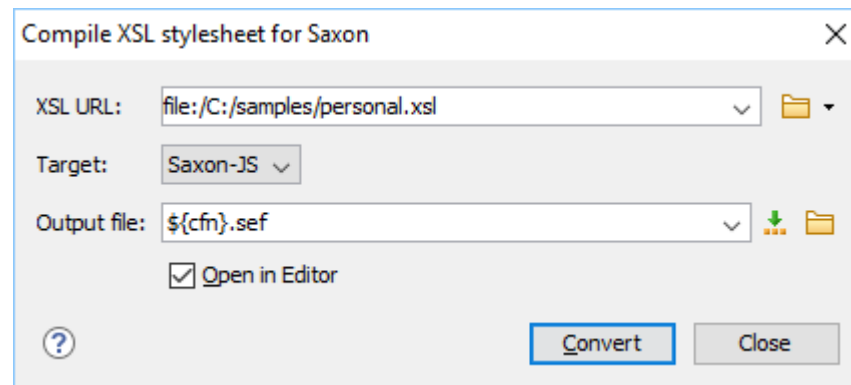
  – Delete unbound documentation parameter(s)

Improved Refactoring Support

Extract template - detects parameters more accurately

Extract function - allows you to use parts of an XPath expression to create new functions

- **Convert xsl:if into xsl:choose -** converts one or more xsl:if element blocks into one or more xsl:when blocks

oxygenxml.com/doc/ug-editor/topics/xslt-refactoring-actions.html

Compile XSL Stylesheet

- Tool to Compile XSL Stylesheet Export Files as an XML file called a *stylesheet export file (sef)*

oxygenxml.com/ug-editor/topics/compile-xsl-for-saxon.html

Debugger Editors are Dockable

- XSLT and XQuery Debugger editors and views are now dockable

- You can rearrange the workspace according to your preference

- *Debugger layout* option allows you to stack the editors horizontal or vertical

Saxon Update

- We keep updating Saxon

  - Saxon 9.7.0.19 in **<oXygen/>** 19.1

  - Saxon 9.8.0.5 available as **<oXygen/>** add-on

  - Saxon 9.8.0.8 *update in progress* **<oXygen/>** 20.0

www.saxonica.com

THANK YOU!

Any questions?

<oXygen/> XML Editor
http://www.oxygenxml.com
octavian_nadolu@oxygenxml.com
@OctavianNadolu