

Schematron & Schematron Quick Fixes in <oxygen/>



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Overview

- Support for XPath/XSLT 3.0 in Schematron
- Multilingual support in Schematron (*)
- Schematron Quick Fixes in Other Documents
- User Entries in Schematron Quick Fixes
- Displaying Quick Fixes
- Improved Performance for SQF Execution

* Available in next <oxygen/> version

XSLT 3.0 in Schematron

- ISO Schematron
 - `queryBinding="xslt3"`
- Embedded Schematron rules
- Schematron 1.5

XML / XML Parser / Schematron

ISO Schematron

- Optimize (visit-no-attributes)
- Allow foreign elements (allow-foreign)
- Use Saxon EE (schema aware) for xslt2/xslt3 query language binding
- Enable Schematron Quick Fixes (SQF) support

Embedded rules query language binding: xslt1 xslt2 xslt3

Schematron 1.5

XPath version: 1.0 2.0 3.0

Multilingual support in Schematron

- Based on the Schematron diagnostic element
- A diagnostic element is used for each language
- Multilingual support in **Schematron specification**

```
<sch:assert test="bone" diagnostics="d_en d_de">
  A dog should have a bone.
</sch:assert>

....
<sch:diagnostics>
  <sch:diagnostic id="d_en" xml:lang="en">
    A dog should have a bone.
  </sch:diagnostic>
  <sch:diagnostic id="d_de" xml:lang="de">
    Das Hund muss ein Bein haben.
  </sch:diagnostic>
</sch:diagnostics>
```

Simple example of multilingual schema

Schematron Messages Language

- Schematron messages options:
 - Use the application language
 - Use the “xml:lang” attribute set on the Schematron root
 - Ignore the language and show all messages
 - Use a custom language

Schematron Messages

- Separate files for each language
- Include files from the main Schematron
- Support for included diagnostics
 - Validation
 - Content completion
 - Search and rename

SQF in Other Documents

- Quick fixes can be executed over the nodes referred with XInclude and external entities
 - You can access them as the nodes in the current document
- Apply quick fixes also over other document using `doc()` function

SQF User Entries

- An sqf:user-entry defines a value that can be set manually by the user

```
<sqf:fix id="fix1">
  <sqf:description>
    <sqf:title>Fix 1</sqf:title>
  </sqf:description>

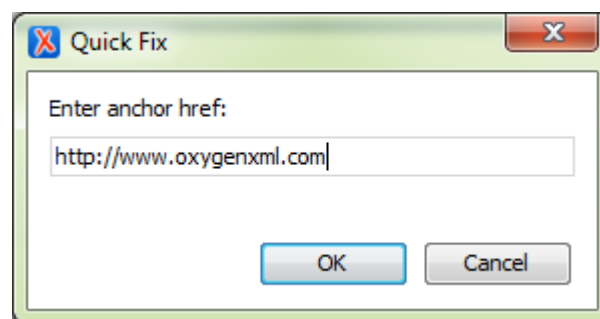
  <sqf:user-entry name="ue">
    <sqf:description>sqf:title>User Entry</sqf:title></sqf:description>
  </sqf:user-entry>

  <sqf:replace target="@attr" node-type="element" select="$ue"/>
</sqf:fix>
```


SQF User Entries

- You can add multiple User Entries in a quick fix
- Example:

An anchor element is required
 Insert the @href attribute value

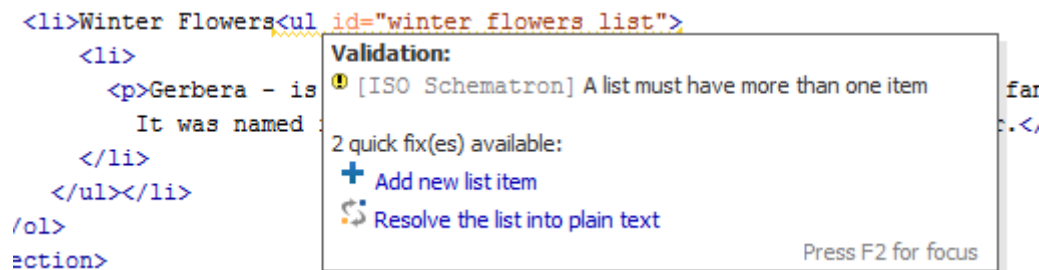


SQF Execution Performance

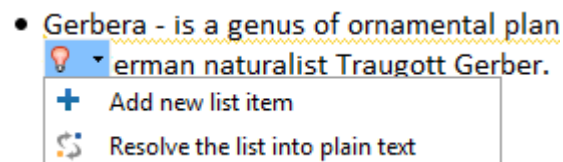
- Quick fixes are generated and executed faster
- Example:
 - For a quick fix that adds @id attribute on each section
 - Performance improved from 4-5 minutes to 4.5 seconds
- XML validation against Schematron with SQF performs faster

Displaying Quick Fixes

- In a Tooltip Window



- Quick drop-down menu in the Author page



Thank you!

Questions?

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