Saxon-JS - Bug #5081

Result of serialize($someElement, map{}) contains XML declaration although function spec suggest default value is to omit-xml-declaration

2021-09-06 12:32 - Martin Honnen

Status:	Resolved		**Start date:**	2021-09-06
Priority:	Low		**Due date:**	
Assignee:			**% Done:**	0%
Category:	XPath Conformance		**Estimated time:**	0:00 hour
Sprint/Milestone:	Saxon-JS 2.3		**Spent time:**	0:00 hour
Applies to JS Branch:	2		**SEF Generated with:**	
Fix Committed on JS Branch:	2		**Platforms:**	
Fixed in JS Release:				

Description

The fn:seriaiize spec at https://www.w3.org/TR/xpath-functions/#func-serialize defines that "If the second argument is supplied as a map ... The required type of each parameter, and its default value, are defined by the following table" saying

```
omit-xml-declaration xs:boolean? true() means "yes", false() means "no" yes
```

For some reason, however, Saxon-JS 2.3 on both the browser side as well as in Node.js outputs an XML declaration e.g.

```
<?xml version="1.0" encoding="utf-8"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  version="3.0"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  exclude-result-prefixes="#all"
  expand-text="yes">

  <xsl:output method="html" html-version="5.0" indent="yes"/>

  <xsl:template match="/" name="xsl:initial-template">
    <xsl:variable name="foo" as="element(foo)"><foo>test</foo></xsl:variable>
    <xsl:copy-of select="$foo"/>
    <section>
      <h2>serialize with empty map</h2>
      <pre>{serialize($foo, map{})}</pre>
    </section>
    <xsl:comment>
Run with {system-property('xsl:product-name')} {system-property('xsl:product-version')} {system-property('Q{http://saxon.sf.net/}platform')}</xsl:comment>
  </xsl:template>

</xsl:stylesheet>
```

outputs (for Saxon JS 2.3 browser)

```
<foo>test</foo>
<section>
   <h2>serialize with empty map</h2>
   <pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt;&lt;foo&gt;test&lt;/foo&gt;</pre>
</section>
<!--Run with Saxon-JS 2.3 Browser-->
```

History

#1 - 2021-10-26 13:19 - Norm Tovey-Walsh

- Status changed from New to Resolved

Indeed, the code that outputs an XML declaration was testing for true explicitly instead of trueOrAbsent. Fixed.

#2 - 2021-10-28 17:02 - Norm Tovey-Walsh

- Status changed from Resolved to In Progress

In code review, Debbie observed that my fix is *in the serializer* rather than in the fn:serialize() function. It's possible (likely?) that this has a broader impact than intended.

Curiously, there appear to be no QT3 tests for fn:serialize() that test the default behavior of omit-xml-declaration when the options are provided as a map.

Action: add some more tests and make sure we've put the fix in the right place.

#3 - 2021-10-28 17:19 - Michael Kay

Generally, coverage of serialization options in QT3 is very patchy indeed.

#4 - 2021-11-16 14:04 - Debbie Lockett

As predicted, the "fix" for this bug is causing regression in the XSLT3 test suite tests: in the output and result-document test sets. (Note that the XSLT 3.0 specification says that the default for xsl:output/@omit-xml-declaration is no.)

I have committed changes in Serializer.js to reverse the "fix" previously made.

Still TODO:

- Fix this specific bug in the implementation of fn:serialize (in CoreFn.js). (In fact, inspecting the code, I have spotted other issues relating to defaults in fn:serialize; to be raised in another bug issue.)
- Decide what the default for omit-xml-declaration should be for the SaxonJS API method SaxonJS.serialize. Previously the default was false() (aligning with the default for xsl:output/@omit-xml-declaration in the XSLT 3.0 spec), and the tests worked with this (however the documentation lacks information). Along with the code "fix" changes made for this bug, lots of the unit tests were changed. Should these changes also be reversed? Or do we want the default for SaxonJS.serialize to align with that for fn:serialize?

#5 - 2021-11-16 18:12 - Debbie Lockett

QT3 test serialize-xml-127a added in fn-serialize test set.

#6 - 2021-11-16 19:48 - Debbie Lockett

- Status changed from In Progress to Resolved

- Fix Committed on JS Branch 2 added

Changes to various unit tests committed, to reverse the previous changes. (The default for omit-xml-declaration in the underlying Serializer remains as false; in particular this remains the default for SaxonJS.serialize too.)

Bug fix committed in CoreFn.js, to add the omit-xml-declaration=true default for fn:serialize when called with a map as the 2nd argument.