Mulberry Classes Guide to Using the Oxygen XML Editor (v21.1)

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Exhibits

Exhibit 1

Guide to Using Oxygen XML Editor (v21.1)

NOTE: This is a reference, not a list of instructions!

Oxygen is both an XML editor and a development tool. We will be using it to run XML transforms using XSLT, to validate documents according to a DTD or schema, and to run Schematron, XQuery, XSLT-FO, and other processes.

Key Oxygen Icons

 check well-formedness (blue checkmark)

 validate document (red checkmark)
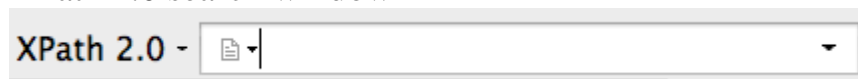
 associate schema (red push pin)

 apply transformation scenario (triangle in circle)

 configure transformation scenario (wrench)

XPath 2.0 search window

Open Oxygen XML Editor

- Double click the icon

Naming Files

When you create a file, it is considered best practice to name your files using the following file extensions:

- XML filenames end in ".`xml`"

- XSLT filenames end in ".`xsl`"

- XML Schema filenames end in ".`xsd`"

- DTD filenames end in ".dtd"

- DTD modules (DTD fragments) end in ".ent" or ".mod"

- Schematron filenames end in ".sch"

- PDF files end in ".pdf"

- HTML an XHTML files end in ".html" or ".htm"

- RELAXNG files end in ".rng"

Create a New XML Document

1. *First Time Opening Oxygen*

    - If a "Welcome to Oxygen" screen appears, under Create New

        - Choose New Document

        - Choose XML Document

        - Then finish as explained below

    - If there is no "Welcome to Oxygen" screen, on the top bar choose File

        - Choose New

        - Under New Document, choose XML Document

        - Then finish as explained below

2. *If Oxygen is Already Open*

    - On the top bar choose File

    - Choose New

    - Under New Document, choose XML Document

    - Then finish as explained below

3. *Finish New Document: Associate a Schema*

    - Click Customize

        - On the fill-in line Schema URL:, click the small down arrow 📁 ▾

        - Choose Browse for local file

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- An `Open` window will pop up

- Select the DTD, RNG, or XSD schema you want

- Click `Open`

- The `Schema type` and the `Root element:` should fill in automatically (If the `Root element:` does not show the correct root element, use the drop-down menu to scroll to the root.)

- Click `Create`

Outline View (See the Tree)

The Outline view shows the tree view of your document, and collapses and expands like a word-processing outliner by clicking on the plus right-facing triangles.

- Open your `.xml` document in Oxygen

- From the top line options choose `Window`

- Pull down to `Show View`

- Choose `Outline`

Check XML Document for Well-formedness

A well-formed XML document, follows all the syntax rules of XML

- Open your `.xml` document in Oxygen

- To the right of the red check mark ☑ is a tiny down-pointing arrow. Click that arrow and then choose the Well-formedness icon ☑

- Test results show at the very bottom of the screen:

  - A green box with the words "`Document is well formed`" tells you that the document is well-formed.

  - A red box with words like "`Wellformed test - failed`" says there are errors. Each error will be described in the error window below the screen and by a red bar on the vertical status line. Clicking on the error message or the red bar will take you to the location of the error.

Check XML Document for Validity

- If there is a schema associated with your document, click on the Validation icon ☑. For DTD validation, this means there is a DOCTYPE declaration.

- If there is no schema associated, associate an XSD, RNG, or DTD schema with the document as follows:

  - Click the Associate Schema ⚲ icon just above the document

  - Click on the folder icon 📁 ▾ the right of the `URL:` fill-in box

  - Choose `Browse for local file`

  - An `Open` window will pop up

  - Select the DTD, RNG, or XSD schema you want

  - Click `Open`

  - Click `OK` to choose your DTD or Schema

  - Click on the Validation icon ☑

- Validation messages

  - A green box on the bottom line with the words "`Validation success-ful`" will tell you that there were no parsing errors.

  - A red box on the bottom line with words like "`Validation failed`" will tell you that you have errors. Each error will be described in the error window below the screen and by a red bar on the vertical the status line. Clicking on the error message or the red bar will take you to the location of the error.

GO TO an Error in an XML File

Each error is described at the bottom of the screen in an error window and as a red bar on the status bar to the right of the main window. Go directly to the error by:

- Clicking on the error message, or

- Clicking on the red bar

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See All of an Error Message

Each error is described at the bottom of the screen in an error window and as a red bar on the status bar to the right of the main window. To see the full message you may:

• Right click on the error message and choose `Show message`, or

• Scroll the error bar

Associate a Stylesheet (Run XSLT transform through Oxygen)

To run a XSLT transformation (for example, to transform your XML into HTML that you can see in a browser):

• Open your XML document in Oxygen

• *First time setup* —The first time you create the transform: Click on the Configure Transformation Scenario icon [a crescent wrench with small right-pointing red triangle] 🔧▶

  • Click the `New` button near the bottom of the menu

  • Then choose `XML transformation with XSLT`

  • A `New scenario` window will pop up

  • In the `Name:` fill-in, give your scenario a name

  • Under the `XSLT` tab:

    • Leave the `XML URL` alone (`${currentFileURL}` names the file that you have open)

    • In the `XSL URL` box, click on the open folder 📁▾ and choose the appropriate `.xsl` stylesheet file

  • Ignore the `FO Processor` tab

  • Under the `Output` tab:

    • Click `Prompt for file`

    • Click `OK`

  • Click the button `Apply associated(1)`

- You will be prompted for a file name (which will have your results in it) and a preview of your results will show in the bottom window

- ***Run an existing transform*** — *Two* ways to run a transform that has already been set up:

  1. For the *last scenario used* (where the scenario still has a check mark next to its name):

     - Click on the Apply Transformation Scenario icon [large right pointing red triangle]

     - The previously selected scenario will run

  2. For a scenario listed among Oxygen's transforms, but *not previously selected* (no check mark next to the scenario name):

     - Click on the Apply Transformation Scenario icon [large right pointing red triangle]

     - A `Transform With` window will appear

     - Choose the scenario you want (click on the name)

     - Click `Edit`

     - Look at the scenario to see what it is doing, then click `OK`

     - Add a check mark to the left of the scenario you have selected (click in the box to the left of the name)

     - Click the button `Apply associated(1)`

Checking Selected Aspects using Schematron

(This is one way; there are many others, including techniques for running Schematron against many files at one time.)

- Open your XML file in Oxygen

- Click on the small gray down-arrow just to the right of the Validate Document red check mark . Choose `Validate with`.

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- Choose the folder icon 📁 ▾ to the right of the URL box and navigate to the file that is your Schematron schema. Double click on that filename to choose the `.sch` file. Use relative paths.

- In the `Schema type` tab, select `Schematron`.

- Click `OK`

- Any Schematron error (`E [ISO Schematron]`) and warning (`W [ISO Schematron]`) messages will appear in a window at the bottom of your screen; otherwise, you will see a green box and "`Validation successful`" message.
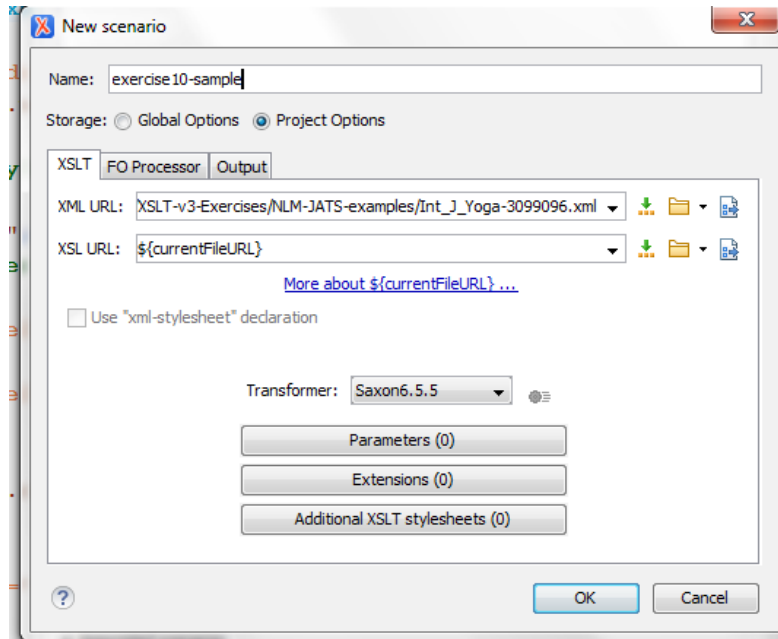
Turn Content Completion On/OFF in Oxygen

- Select `Options` in the top bar

- Choose `Preferences`

- Scroll down to and click on `Editor`, then find `Content Completion`

  - To turn `Content Completion` on: Select the top three items (other options will appear), select `Apply`, and then select `OK`

  - To turn `Content Completion` off: Deselect the top three items (other options in the pane will then also be grayed out), select `Apply`, and then select `OK`
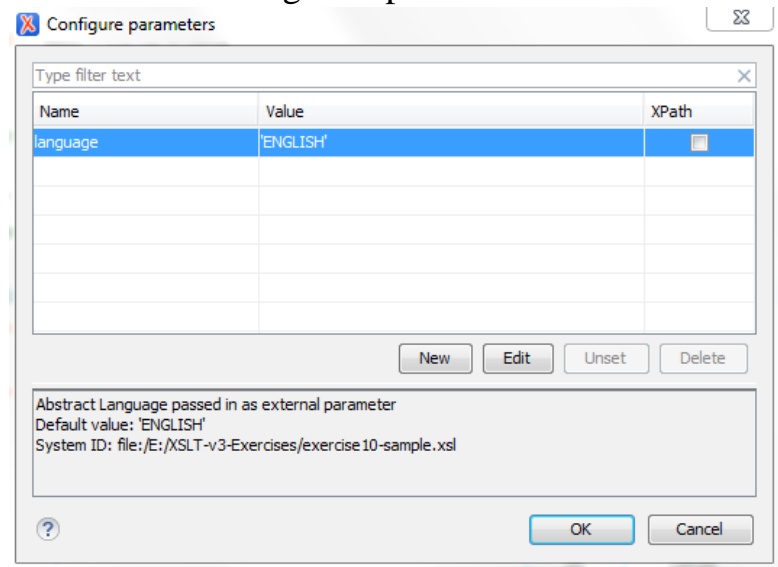
To Pass a Global Parameter to a Stylesheet in Oxygen

Often, we wish to pass global, externally-supplied parameters to XSLT transformations. This can be done when setting up or editing an Oxygen XSLT transformation.
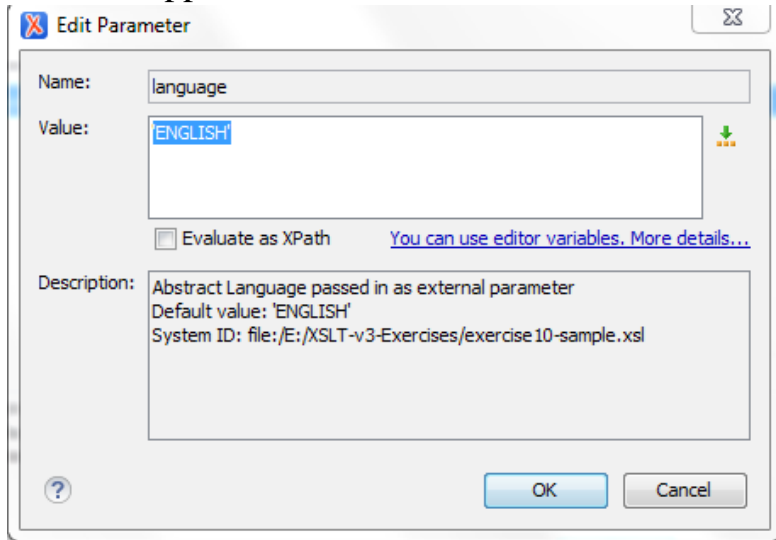
- When constructing the transformation, select the `Parameters` button (near the bottom of the `New Scenario` window).
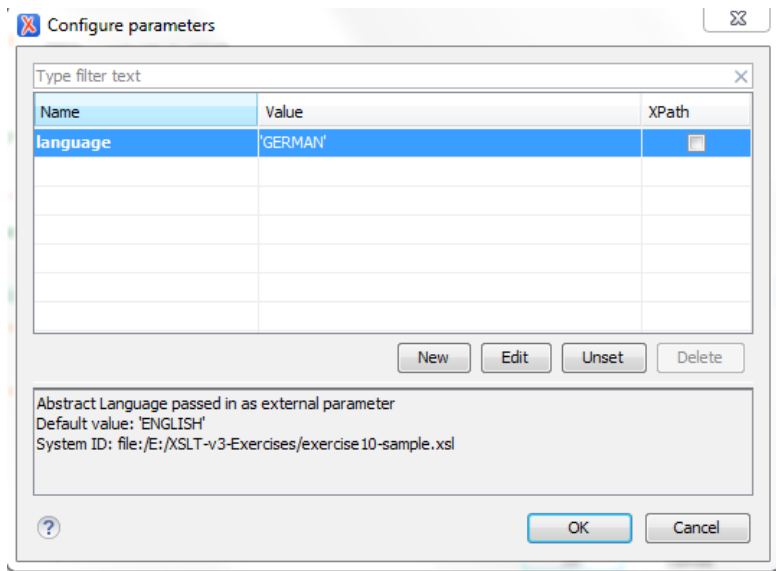

- A `Configure parameters` window will appear. If supplied in the XSLT code, the name of a parameter and its default value will be listed. (Oxygen knows to read the global parameter values from the XSLT code.)

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- To change the value of the parameter, place the cursor on the desired pa-
rameter line, select it, and click the `Edit` button. An `Edit parameter` win-
dow will appear:

- In the `Value:` pane, select the text and type the desired value over the ex-
isting value, e.g., type the new value "GERMAN" over the existing value
"ENGLISH". (The value does NOT need quotation marks — Oxygen will
add those.) Click `OK`.

- The `Configure parameters` window will reappear and include the new de-
fault value. Click `OK`.

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- The `Edit scenario` window will reappear and indicate that one parameter is now being passed in from Oxygen. Click `OK` to exit the transformation setup.

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