

# JSON Support in Oxygen

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Structured  
editing  
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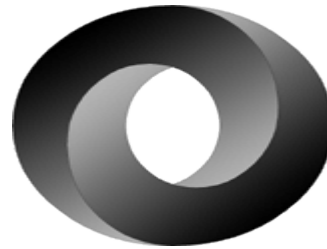


# Overview

- Editing JSON Documents
- Validating JSON Documents
- Querying and Transforming JSON Documents
- Converting JSON Documents
- Future Plans

# JSON

- JSON (JavaScript Object Notation) is a lightweight data-interchange format



<http://json.org>

# JSON Schema

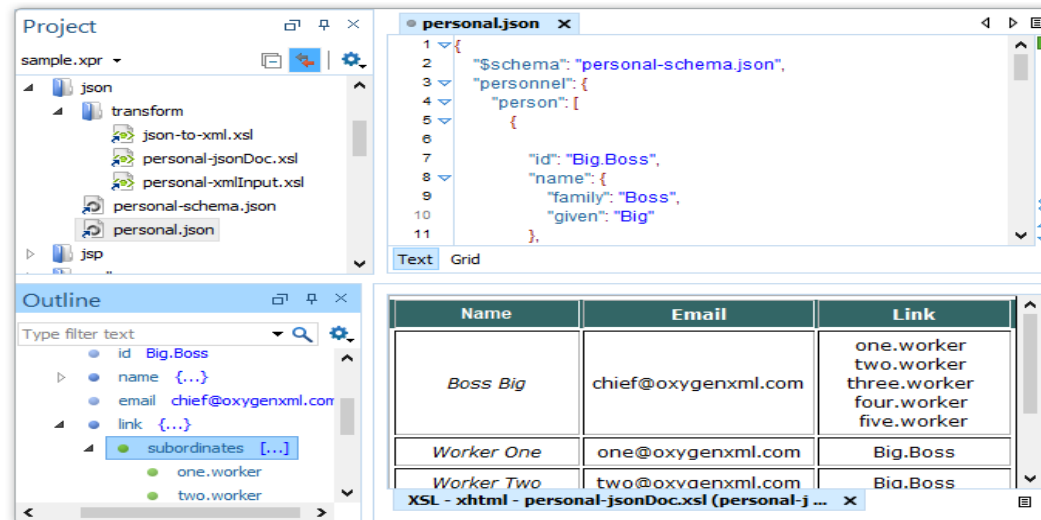
- JSON Schema is a vocabulary that allows you to annotate and validate JSON documents



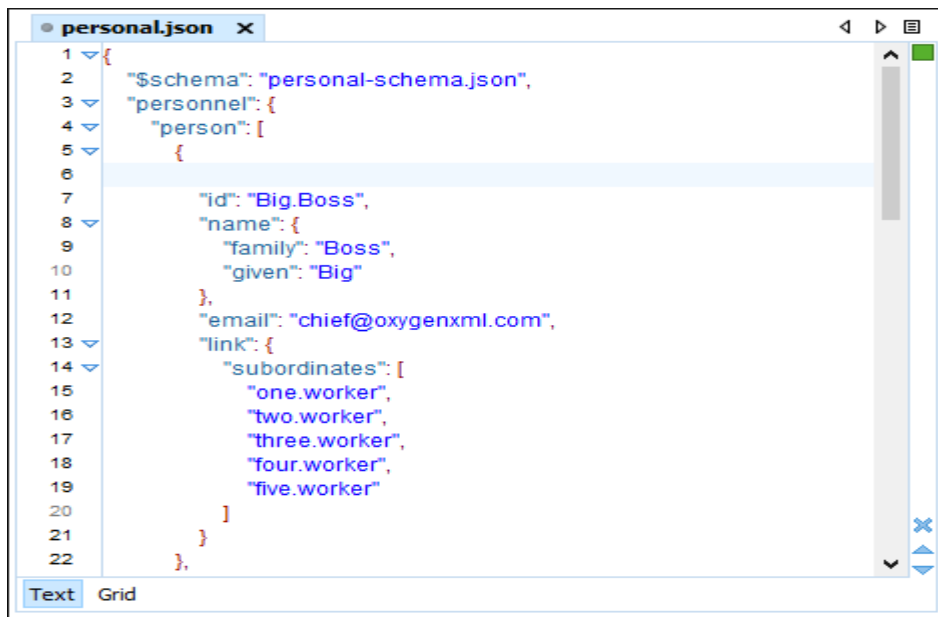
<http://json-schema.org>

# 1. Editing JSON Documents

- JSON Text and Grid Editing Mode
- JSON Outline View
- Associate JSON Schema to JSON Documents
- Content Completion Assistant in JSON



# Text and Grid Editing Mode



The screenshot shows the Oxygen XML Editor interface with a file named 'personal.json' open. The editor is in 'Text' mode, displaying the following JSON content:

```
1 {  
2   "$schema": "personal-schema.json",  
3   "personnel": {  
4     "person": [  
5       {  
6         "id": "Big.Boss",  
7         "name": {  
8           "family": "Boss",  
9           "given": "Big"  
10        },  
11        "email": "chief@oxygenxml.com",  
12        "link": {  
13          "subordinates": [  
14            "one.worker",  
15            "two.worker",  
16            "three.worker",  
17            "four.worker",  
18            "five.worker"  
19          ]  
20        }  
21      }  
22    ]  
23  }  
24 }
```

At the bottom of the editor window, there are two tabs: 'Text' (selected) and 'Grid'.

The screenshot shows the Oxygen XML Editor interface with the same 'personal.json' file open, but now in 'Grid' mode. The editor displays a hierarchical tree view on the left and a corresponding table view on the right. The table view shows the data for the 'personnel' object, which is a list of 6 rows (3 visible in the screenshot). The table has columns for 'id', 'name', and 'email'. The 'name' column is further expanded to show 'family' and 'given' sub-objects. The 'email' column shows the email address for each person. At the bottom of the editor window, there are two tabs: 'Text' and 'Grid' (selected).

# Format and Indent

- Formats and indents the whole document
- Different indent size
- Minify/compress by setting an indent size to zero

# Structure Folding

- Collapse/expand data enclosed between brackets
- Actions:
  - Collapse Other Folds
  - Collapse Child Folds
  - Expand Child Folds
  - Expand All

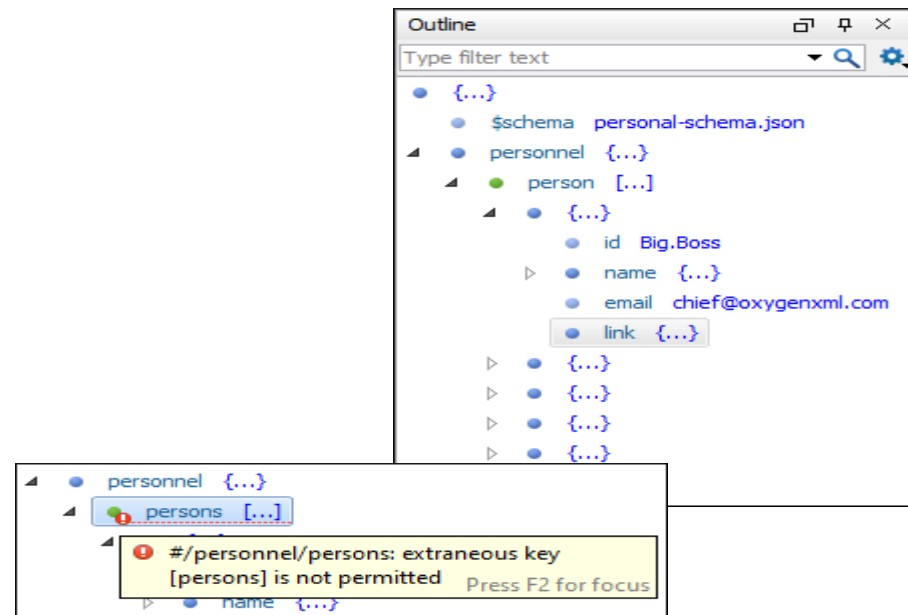


# Search and Refactor

- Use the “Find/Replace” dialog to search in JSON files
- Use “Manage Highlighted Content” to modify (in-place) all the occurrences of the selected content

# JSON Outline View

- Document Overview
- Synchronization with Editor
- Filtering
- Error Markers



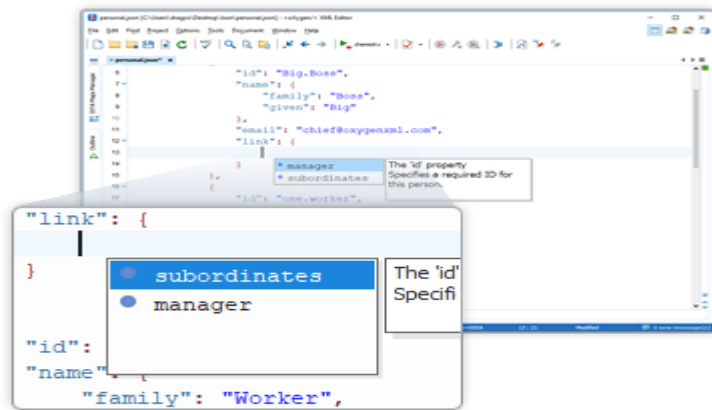
# Associate JSON Schema

- Associating a Schema to JSON Documents
  - Directly in JSON Documents
  - Through a Validation Scenario



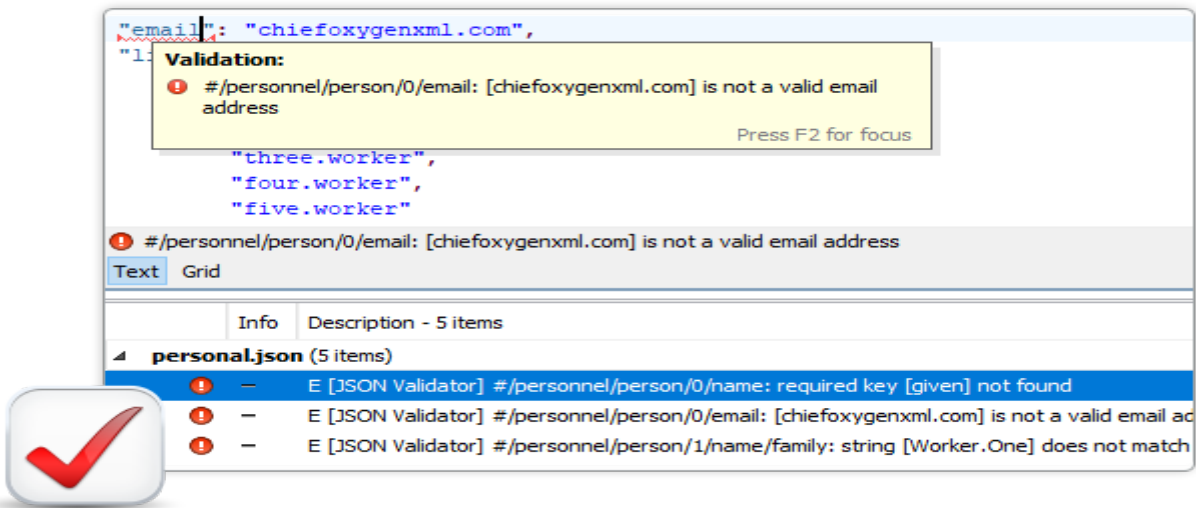
# Content Completion

- Context-Sensitive
- Valid Proposals
- Documentation from Schema
- Code Templates



## 2. Validating JSON Documents

- Checking Well-Formedness in JSON Documents
- Validating JSON Documents Against JSON Schema
- Validating JSON Schema According to the Specification
- Batch Validate

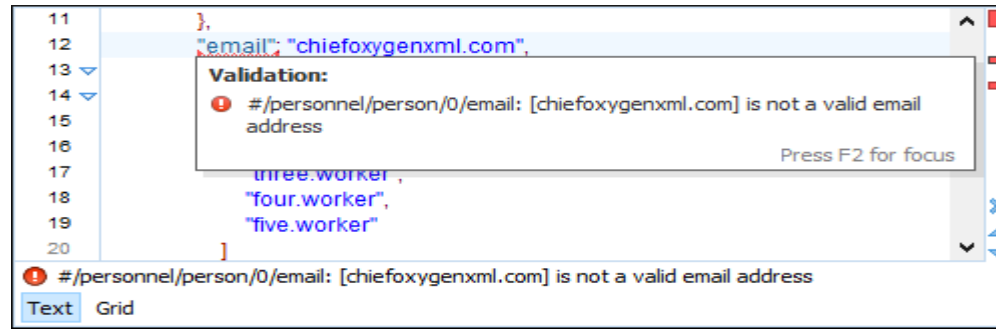


# Checking Well-Formedness

- Built-in JSON Well-Formedness Scanner
- Automatically Check for Problems
- Manually Check for Problems

# Validating Against JSON Schema

- Associating a JSON Schema
- Automatic Validation
- Manual Validation Actions
- Presenting Validation Errors in JSON Documents



# Validating JSON Schema

- Check for Well-Formedness
- Validate Accordingly to the Specification
  - Draft 4
  - Draft 6
  - Draft 7
- JSON Schema Validator

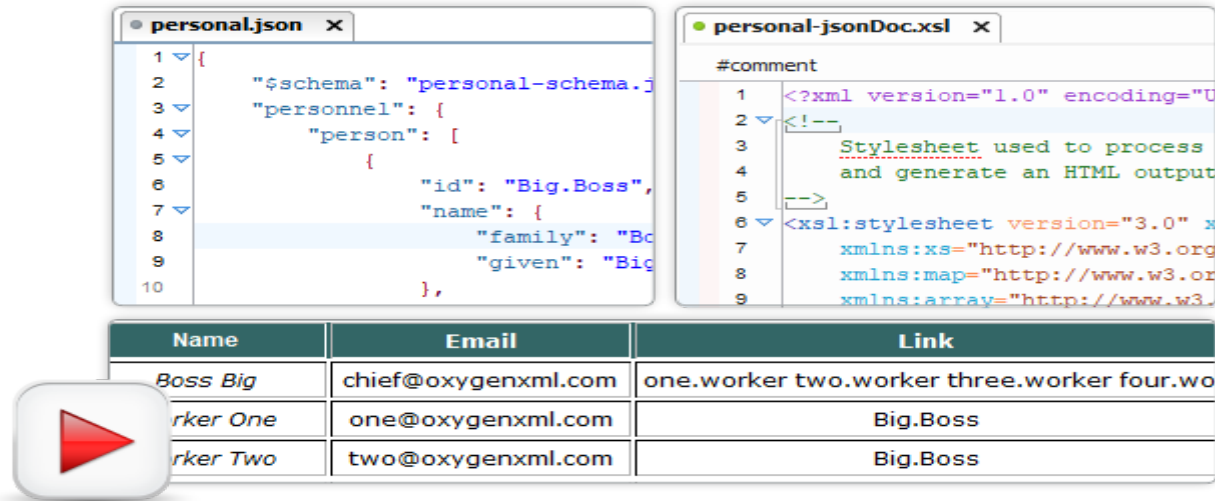


# Batch Validate

- Validate Multiple JSON Files from Project

# 3. Querying and Transforming

- XPath Support
- Transform JSON using XSLT
- Transform JSON using XQuery



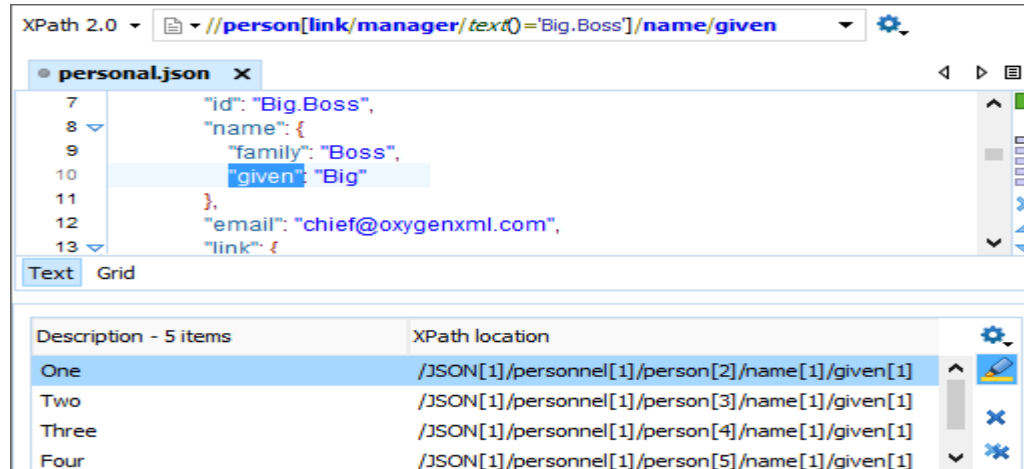
```
personal.json
1 {
2   "$schema": "personal-schema.json",
3   "personnel": {
4     "person": [
5       {
6         "id": "Big.Boss",
7         "name": {
8           "family": "Boss",
9           "given": "Big"
10        }
11      }
12    ]
13  }
```

```
personal-jsonDoc.xsl
#comment
1 <?xml version="1.0" encoding="UTF-8" ?>
2 <!--
3   Stylesheet used to process
4   and generate an HTML output
5 -->
6 <xsl:stylesheet version="3.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
7   xmlns:xs="http://www.w3.org/2001/XMLSchema"
8   xmlns:map="http://www.w3.org/2005/xpath-functions"
9   xmlns:array="http://www.w3.org/2005/xpath-functions/array">
```

Name	Email	Link
Boss Big	chief@oxygenxml.com	one.worker two.worker three.worker four.worker
Worker One	one@oxygenxml.com	Big.Boss
Worker Two	two@oxygenxml.com	Big.Boss

# XPath Support

- XPath Toolbar and XPath Builder View
- Content Completion
- XPath Over Multiple Files

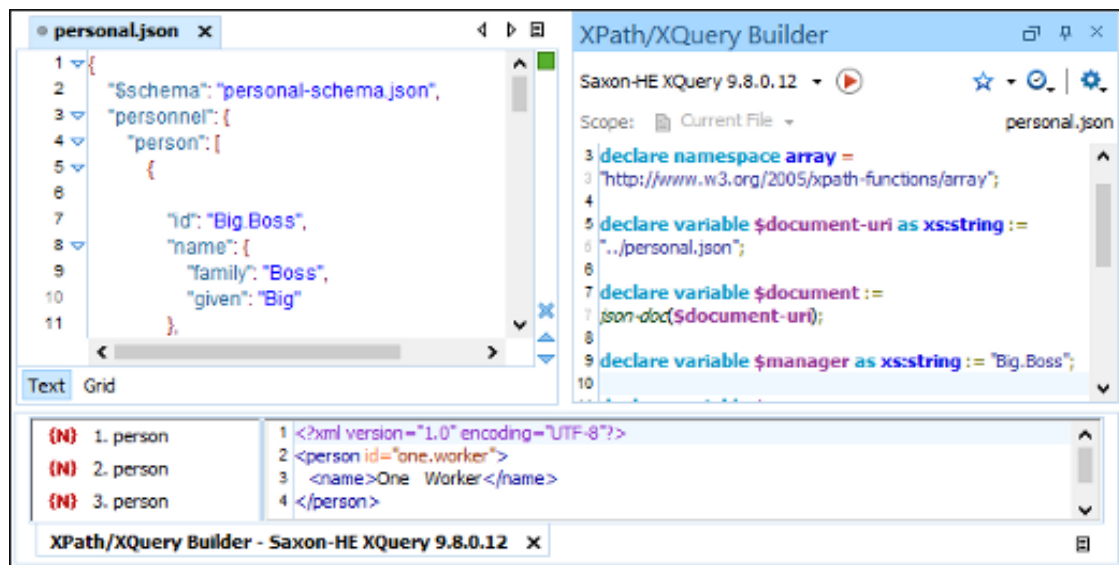


# Transform JSON using XSLT

- Transform JSON Documents to Different Formats
- Create XSLT Transformation Scenario for JSON
- Built-in Document Templates
  - XSLT Stylesheet for JSON – uses `json-doc()` function
  - XSLT Stylesheet for JSON to XML – uses `json-to-xml()` function

# Transform JSON using XQuery

- Create XQuery Transformation Scenario for JSON
- XQuery Builder view



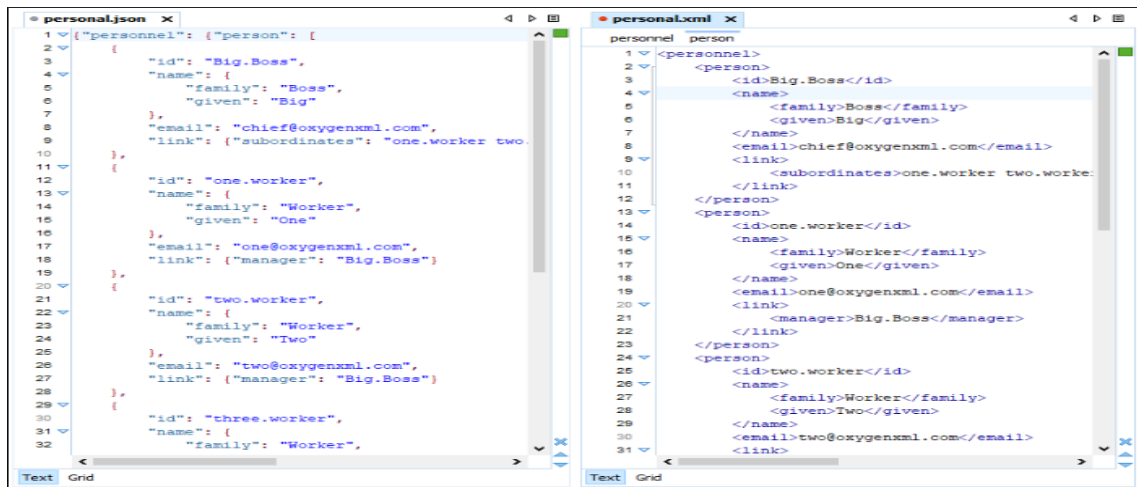
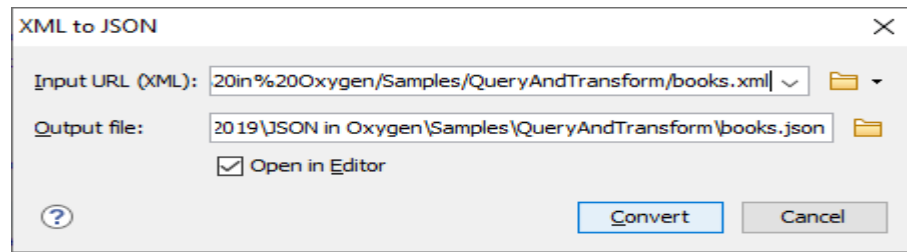
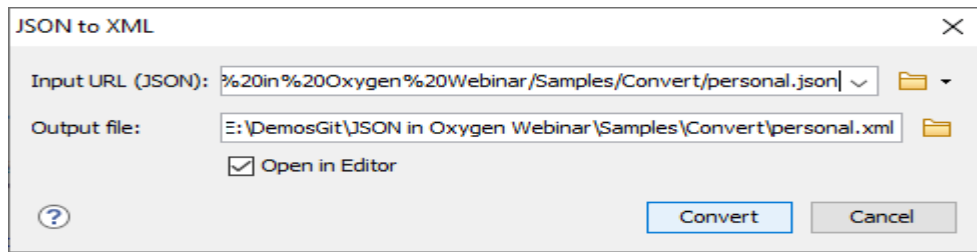
# JSON in Database

- Open and Edit JSON documents
- Query and Transform

## 4. Converting JSON Documents

- JSON to XML and XML to JSON
- Batch Conversions
- Online Converter

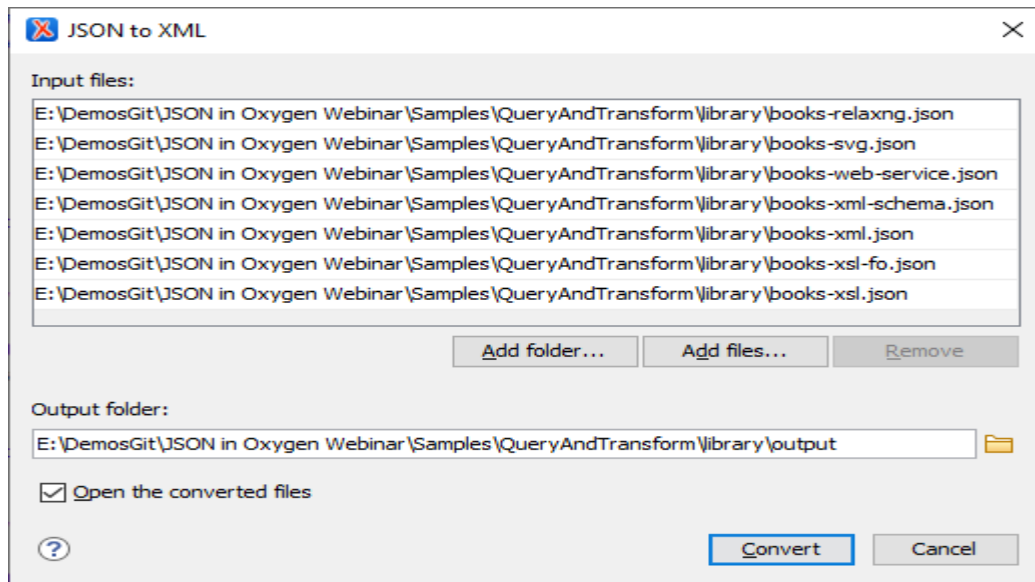
# JSON to XML and XML to JSON





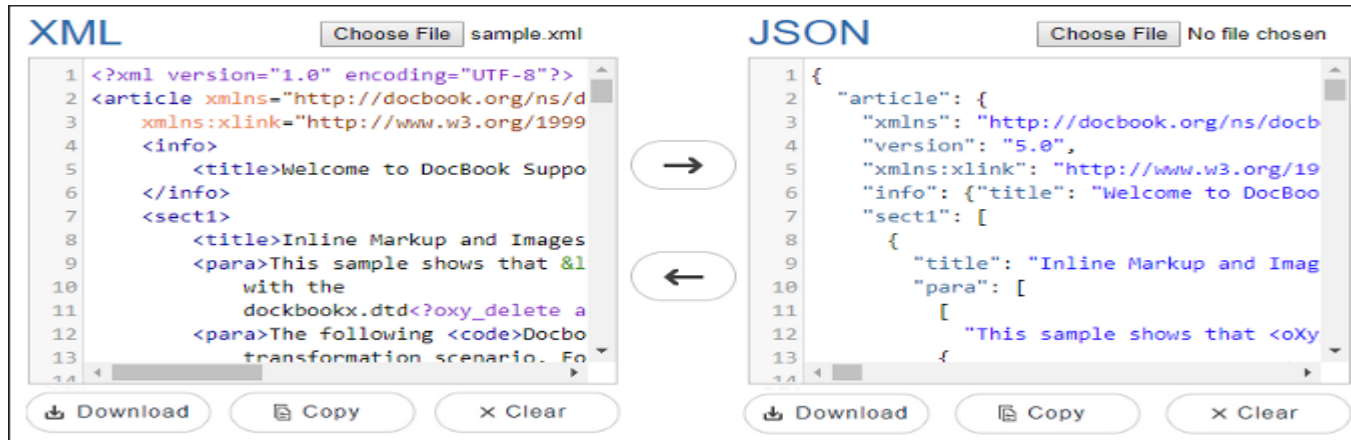
# Batch Conversions

- Convert Multiple JSON Files to XML or Vice Versa
- Batch Converter Add-on
  - [oxygenxml.com/doc/ug-editor/topics/batch-converter-addon.html](https://oxygenxml.com/doc/ug-editor/topics/batch-converter-addon.html)



# Online Converter

- Oxygen Online XML to JSON Converter



[oxygenxml.com/xml\\_json\\_converter.html](http://oxygenxml.com/xml_json_converter.html)

A low-angle, upward-looking photograph of several modern skyscrapers with glass facades, set against a bright blue sky with scattered white clouds. The buildings are curved and cylindrical in shape, creating a sense of height and architectural grandeur.

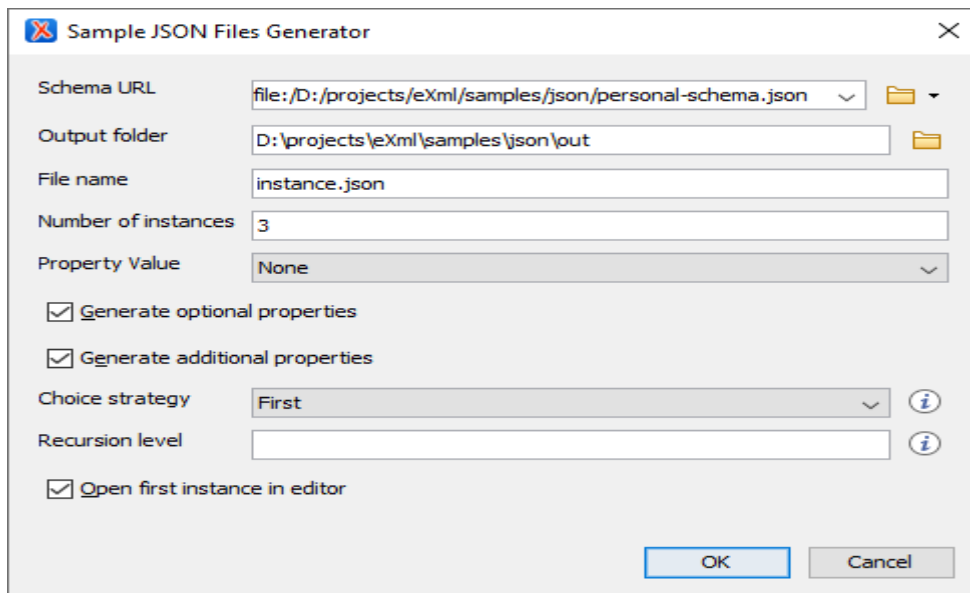
# Future Plans

# Future Plans

- JSON Instance Generator\*
- New JSON template using JSON Schema\*
- Content completion improvements
- JSON Schema editing
- JSON Schema visual editor

# JSON Instance Generator

- Generate sample JSON files based on JSON Schema



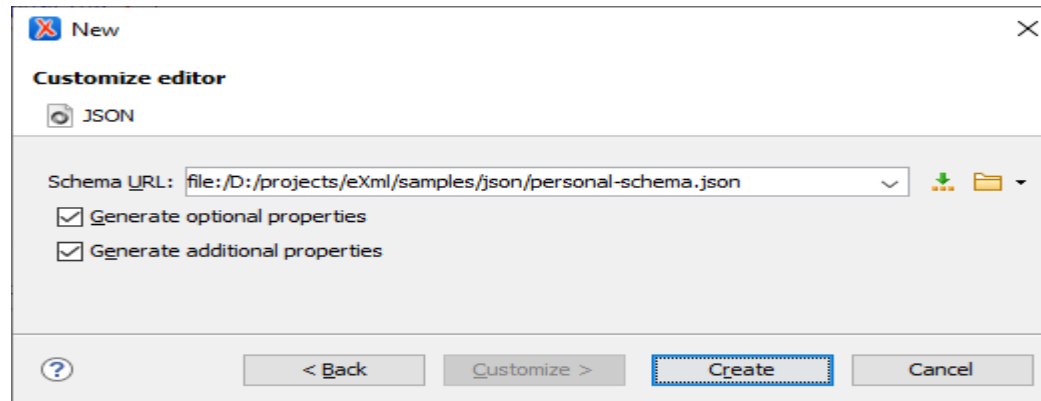
The screenshot shows a dialog box titled "Sample JSON Files Generator" with the following fields and options:

- Schema URL:** file:/D:/projects/eXml/samples/json/personal-schema.json
- Output folder:** D:\projects\exml\samples\json\out
- File name:** instance.json
- Number of instances:** 3
- Property Value:** None
- ☒ Generate optional properties
- ☒ Generate additional properties
- Choice strategy:** First
- Recursion level:** (empty field)
- ☒ Open first instance in editor

Buttons: OK, Cancel

# New JSON using JSON Schema

- Customize JSON file creation
- Create a new JSON file based on a JSON Schema



# THANK YOU!

**Any  
questions?**

**<oxygen/> XML Editor**

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