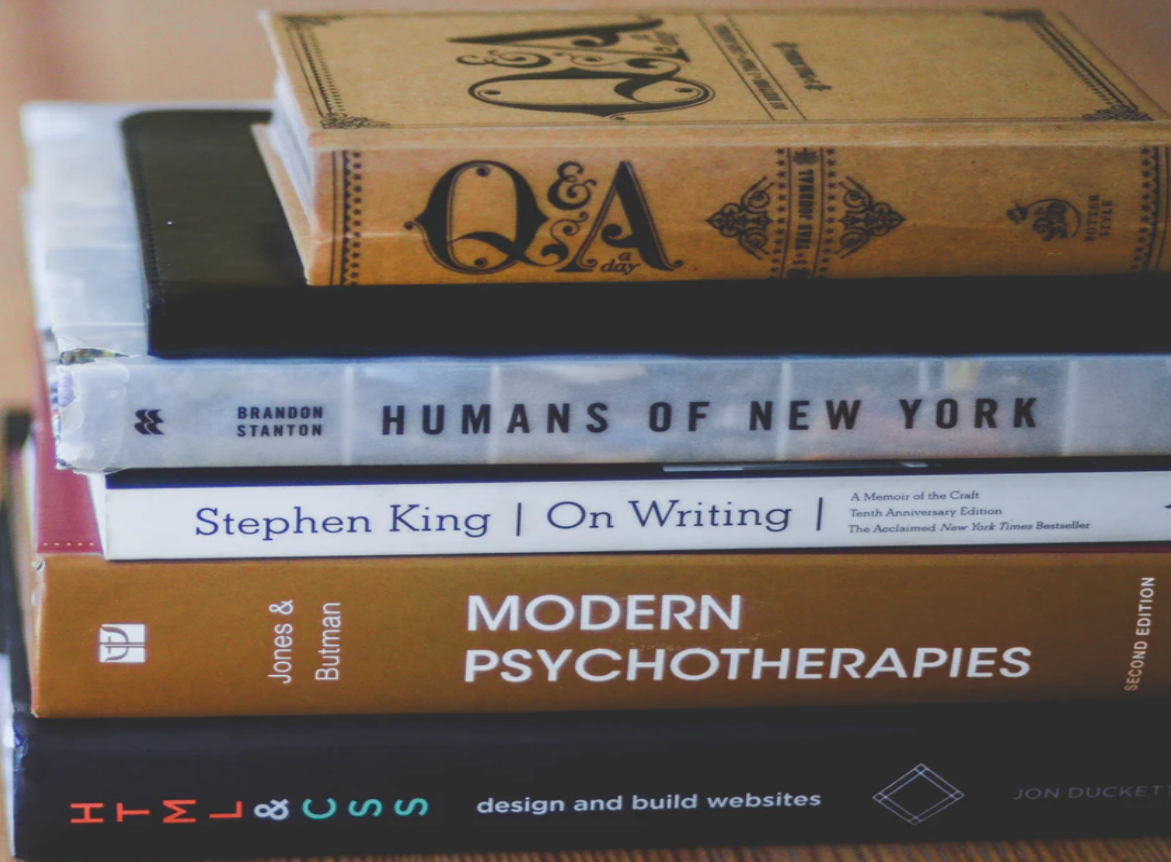


HTML5 in <oXygen/>

Octavian Nadolu, Syncro Soft
octavian_nadolu@oxygenxml.com
@OctavianNadolu

© 2020 Syncro Soft SRL. All rights reserved.



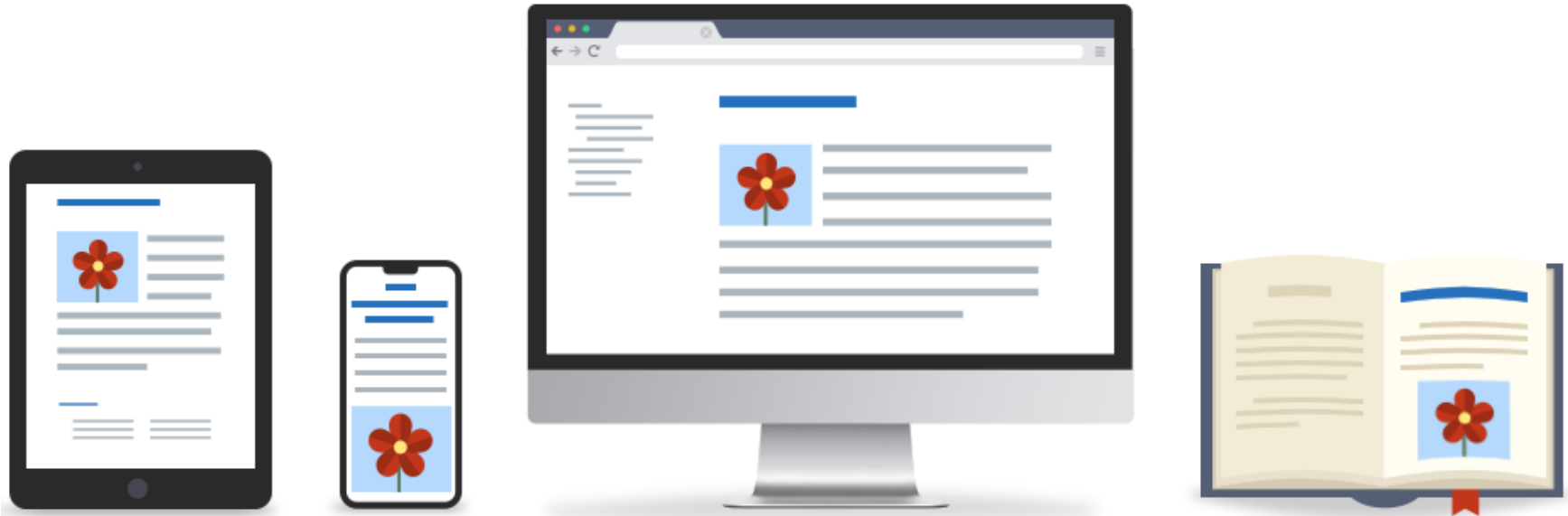
HTML5

- HTML is the World Wide Web's core markup language
- HTML5 was the fifth and last major version of HTML



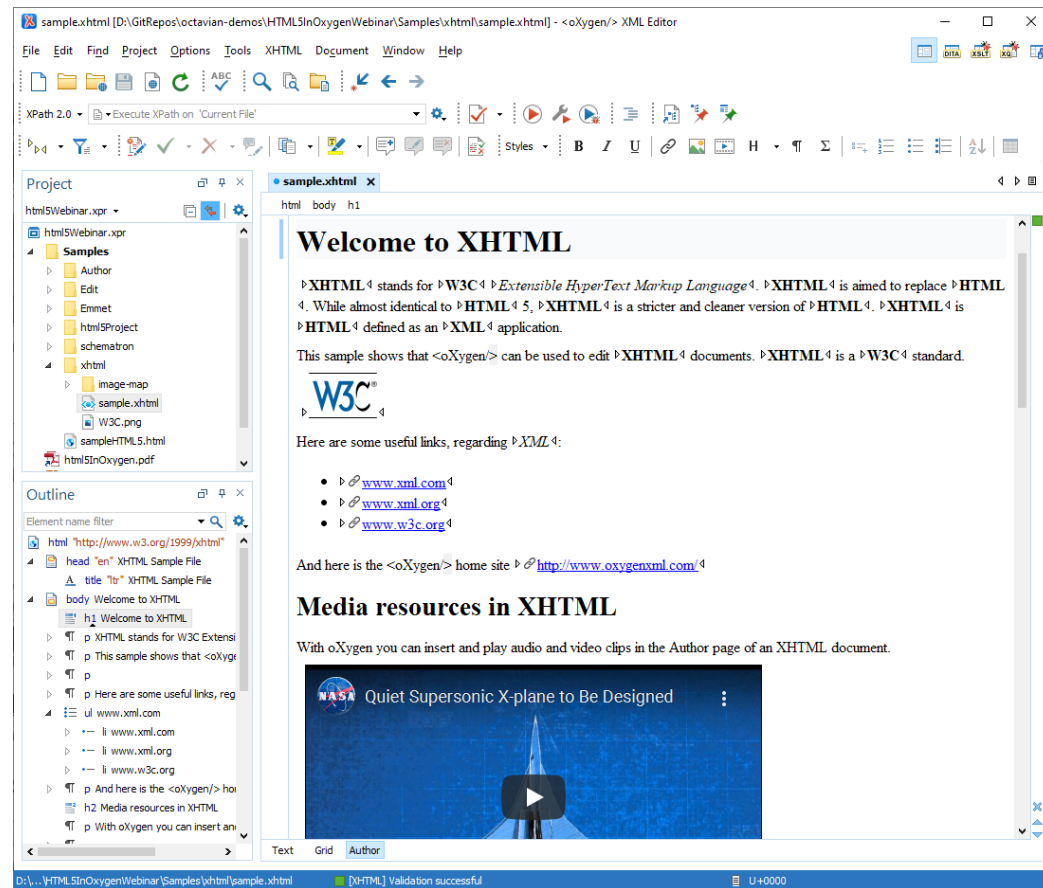
Publishing HTML in Oxygen

- Tools used to generate output in XHTML and HTML



Full Support for XHTML

- Author mode for visual editing
- Text editing mode with powerful Content Completion Assistant
- Validation as-you type
- XHTML in **Web Author**
- More details on the **XHTML** page



Agenda

- Specialized **text-based** and **visual-based** editing
- **Syntax highlights** based on the HTML5 specification
- **Content completion** based on the HTML5 schema
- **Outline view** that displays the document structure
- **Validation** against the **W3C validation engine**, including batch validation



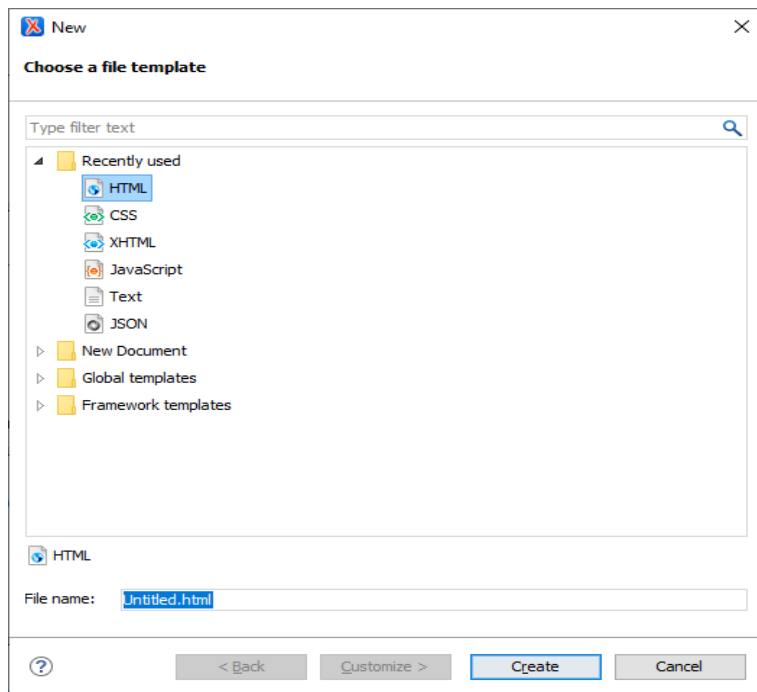
Creating HTML5 Documents

- New document template
- Content completion
- Documentation and link to specification
- Code templates



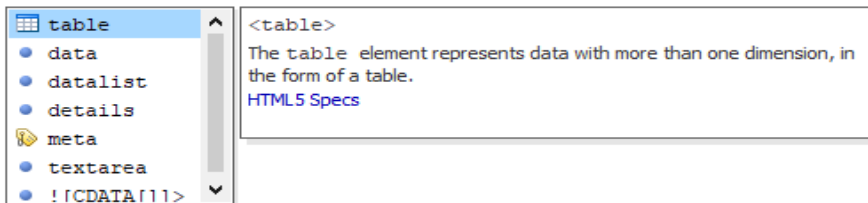
New document template

- New document template helps you get started creating HTML content
- Define your own document templates



Content Completion

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



Editing HTML5

- Support to edit HTML5 documents (not XML wellformed)
- HTML5 syntax highlight
- HTML5 Outline View
- Format an Indent
- Folding
- Embedded CSS and JavaScript support



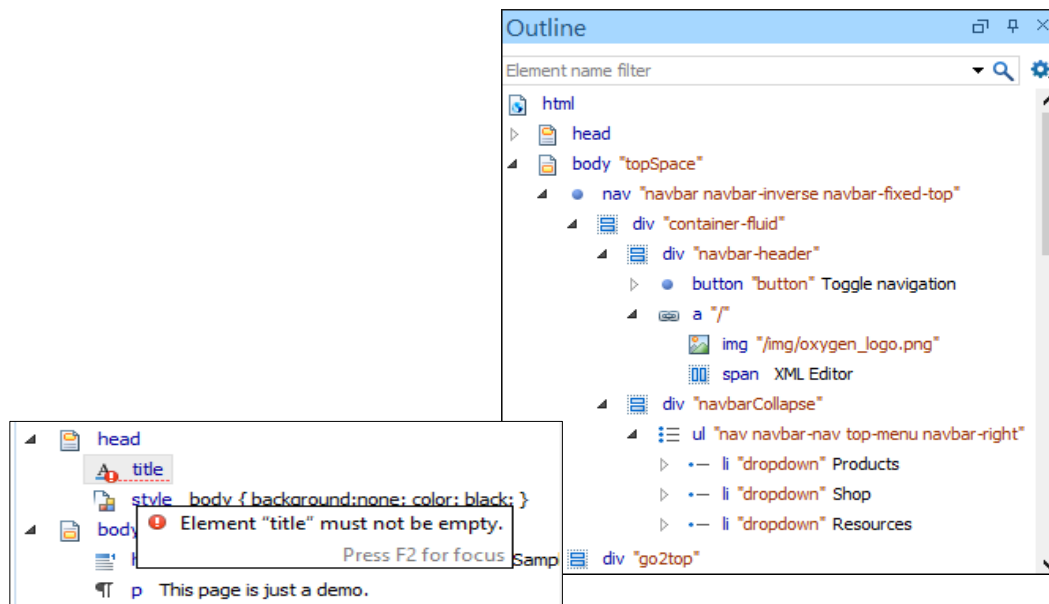
Syntax Highlighting

- Syntax highlighting for HTML5 handles attributes without quotes, unclosed or void elements
- Highlighting for embedded CSS or JavaScript content
- Customize colors

```
<!DOCTYPE html>
<html>
  <head>
    <title>Sample styled page</title>
    <style> body { background:none; color: black; }</style>
  </head>
  <body>
    <h1 onmouseover="bgChange(this.style.backgroundColor)">Sample styled page</h1>
    <p>This page is just a demo.
    <table>
      <tr><th rowspan=2>Grade. <th rowspan=2>Yield Point. <th colspan=2>Ultimate tensile strength
        <th rowspan=2>Per cent elong. 50.8mm or 2 in.
        <th rowspan=2>Per cent reduct. area.
```


HTML5 Outline View

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



Format an Indent

- Format HTML5
- Format Embedded CSS an JavaScript

```
<table>
  <caption>Specification values: <b>Steel</b>, <b>Castings</b>, Ann. A.S.T.M. A27-16,
    Class B;* P max. 0.06; S max. 0.05.</caption>
  <tr>
    <th rowspan=2>Grade.
    <th rowspan=2>Yield Point.
    <th colspan=2>Ultimate tensile strength
    <th rowspan=2>Per cent elong. 50.8mm or 2 in.
    <th rowspan=2>Per cent reduct. area.
  <tr>
    <th>kg/mm<sup>2</sup>
    <th>lb/in<sup>2</sup>
  <tr>
```

HTML to XML Well-formed

- Make HTML5 documents XML well-formed

```
<table>
  <caption>Specification values: <b>Steel</b>, <b>Castings</b>, Ann. A.S.T.M. A27-16,
    Class B;* P max. 0.06; S max. 0.05.</caption>
  <tr>
    <th rowspan="2">Grade. </th>
    <th rowspan="2">Yield Point. </th>
    <th colspan="2">Ultimate tensile strength </th>
    <th rowspan="2">Per cent elong. 50.8mm or 2 in. </th>
    <th rowspan="2">Per cent reduct. area. </th>
  </tr>
  <tr>
    <th>kg/mm<sup>2</sup></th>
    <th>lb/in<sup>2</sup></th>
  </tr>
```

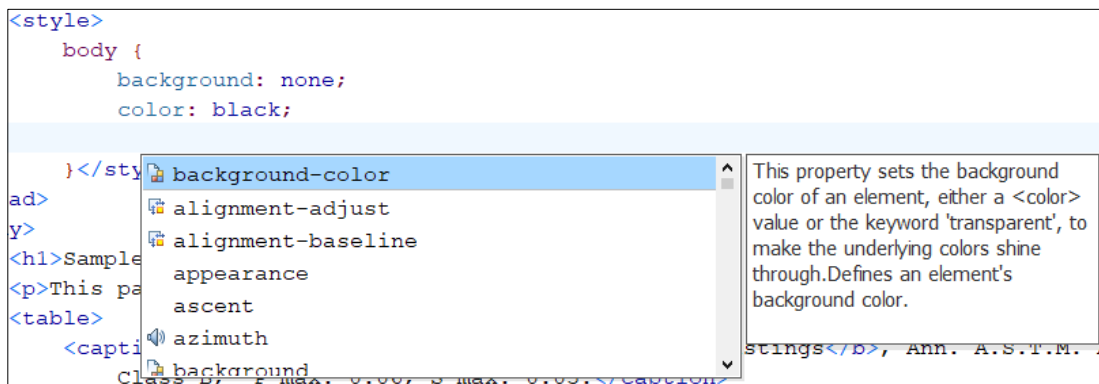

Folding

- In a large HTML document, elements can be collapsed so that only the needed data remains in focus

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <title>Sample styled page</title>
5      <style> [4 lines]
10   </head>
11   <body>
12     <h1>Sample styled page</h1>
13     <p>This page is just a demo.
14     <table> [33 lines]
48    <script> [10 lines]
59   </body>
60 </html>
```

Embedded CSS and JavaScript Support

- Content completion and documentation for embedded CSS and JavaScript



HTML5 Visual Editing

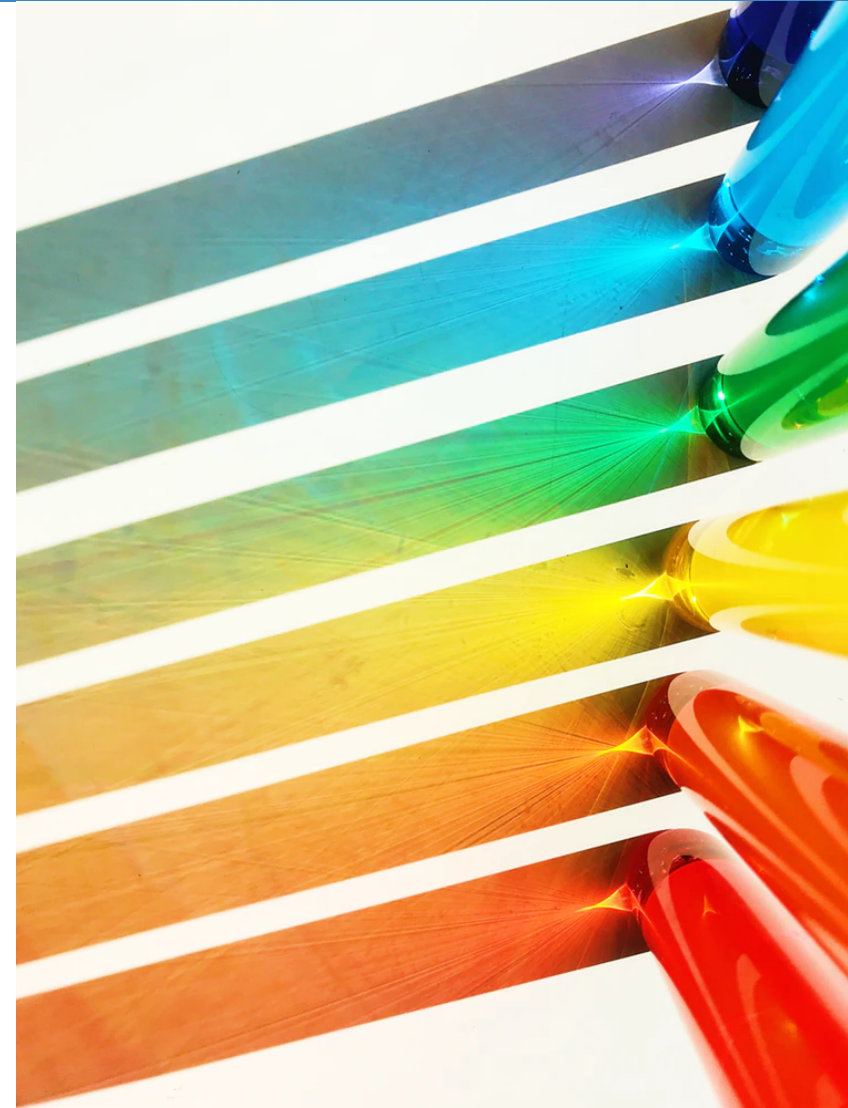
- HTML5 framework
- Specific actions
- Content completion



Figure 1

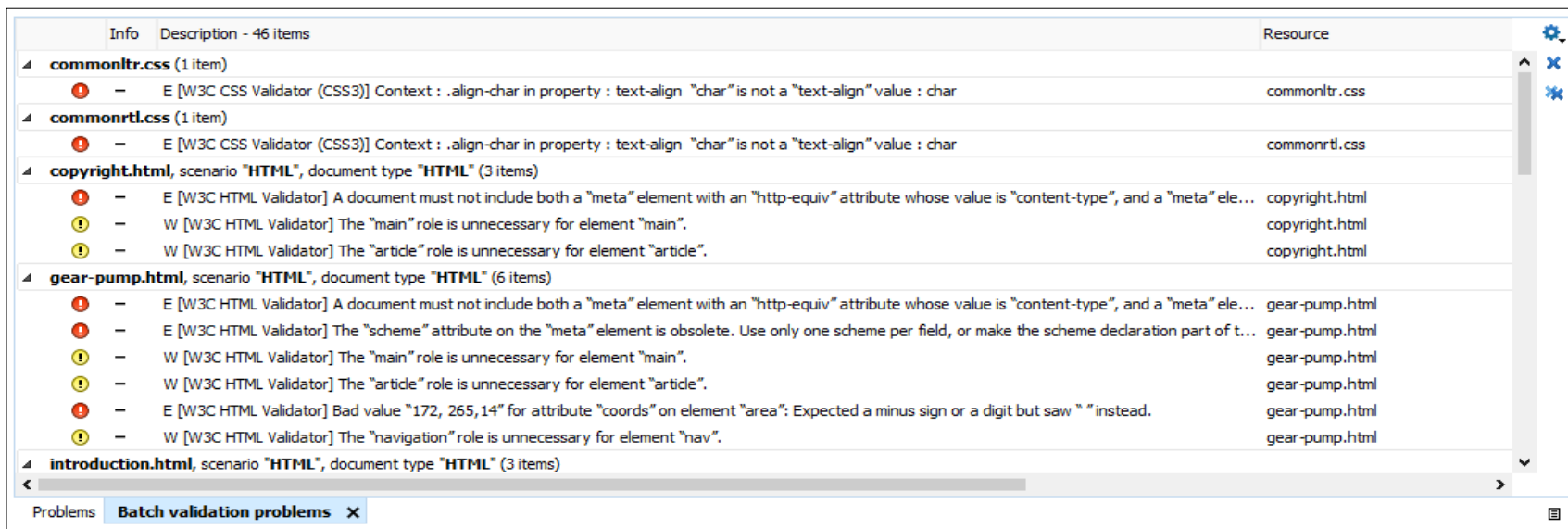
HTML5 Validation

- Validation using W3C “Nu Html Checker”
- Validate HTML5 project
- Validation as-you-type



Batch Validate HTML5 Project

- Validate entire project
- Validate HTML5, CSS, and JavaScript



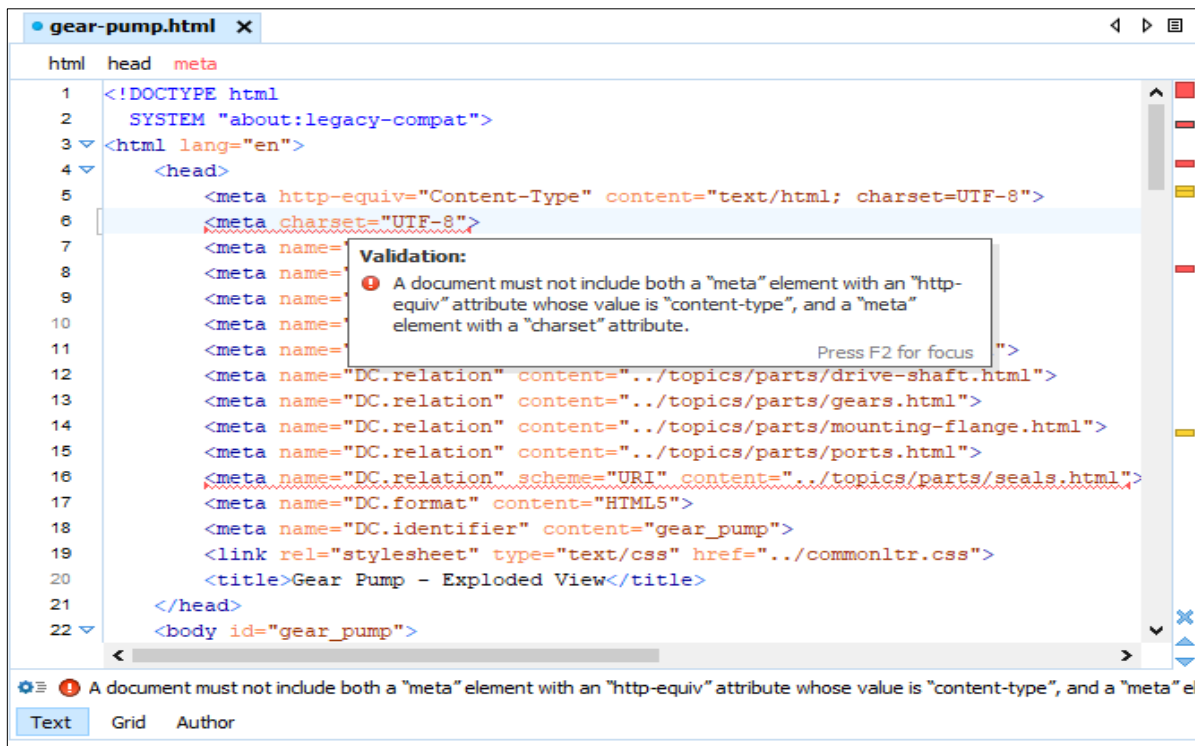
The screenshot shows the 'Problems' window in the Oxygen IDE, displaying the results of a batch validation. The window is titled 'Batch validation problems' and contains a table with three columns: 'Info', 'Description - 46 items', and 'Resource'.

Info	Description - 46 items	Resource
commonltr.css (1 item)		
❗	E [W3C CSS Validator (CSS3)] Context : .align-char in property : text-align "char" is not a "text-align" value : char	commonltr.css
commonrtl.css (1 item)		
❗	E [W3C CSS Validator (CSS3)] Context : .align-char in property : text-align "char" is not a "text-align" value : char	commonrtl.css
copyright.html, scenario "HTML", document type "HTML" (3 items)		
❗	E [W3C HTML Validator] A document must not include both a "meta" element with an "http-equiv" attribute whose value is "content-type", and a "meta" ele...	copyright.html
⚠	W [W3C HTML Validator] The "main" role is unnecessary for element "main".	copyright.html
⚠	W [W3C HTML Validator] The "article" role is unnecessary for element "article".	copyright.html
gear-pump.html, scenario "HTML", document type "HTML" (6 items)		
❗	E [W3C HTML Validator] A document must not include both a "meta" element with an "http-equiv" attribute whose value is "content-type", and a "meta" ele...	gear-pump.html
❗	E [W3C HTML Validator] The "scheme" attribute on the "meta" element is obsolete. Use only one scheme per field, or make the scheme declaration part of t...	gear-pump.html
⚠	W [W3C HTML Validator] The "main" role is unnecessary for element "main".	gear-pump.html
⚠	W [W3C HTML Validator] The "article" role is unnecessary for element "article".	gear-pump.html
❗	E [W3C HTML Validator] Bad value "172, 265, 14" for attribute "coords" on element "area": Expected a minus sign or a digit but saw " " instead.	gear-pump.html
⚠	W [W3C HTML Validator] The "navigation" role is unnecessary for element "nav".	gear-pump.html
introduction.html, scenario "HTML", document type "HTML" (3 items)		

At the bottom of the window, there is a tab labeled 'Batch validation problems' and a button with a close icon (X).

Validate HTML5 Document

- Validation highlights
- Tooltip with information about the problem



The screenshot shows the Oxygen XML Editor interface with a file named "gear-pump.html". The document is an HTML5 document. A validation error is highlighted on line 6, where a `<meta charset="UTF-8">` element is present. A tooltip is displayed over this element, providing the following information:

Validation:

❗ A document must not include both a "meta" element with an "http-equiv" attribute whose value is "content-type", and a "meta" element with a "charset" attribute.

Press F2 for focus

The document content is as follows:

```

1 <!DOCTYPE html
2   SYSTEM "about:legacy-compat">
3 <html lang="en">
4   <head>
5     <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
6     <meta charset="UTF-8">
7     <meta name="
8     <meta name="
9     <meta name="
10    <meta name="
11    <meta name="
12    <meta name="DC.relation" content="../topics/parts/drive-shaft.html">
13    <meta name="DC.relation" content="../topics/parts/gears.html">
14    <meta name="DC.relation" content="../topics/parts/mounting-flange.html">
15    <meta name="DC.relation" content="../topics/parts/ports.html">
16    <meta name="DC.relation" scheme="URI" content="../topics/parts/seals.html">
17    <meta name="DC.format" content="HTML5">
18    <meta name="DC.identifier" content="gear_pump">
19    <link rel="stylesheet" type="text/css" href="../commonltr.css">
20    <title>Gear Pump - Exploded View</title>
21  </head>
22  <body id="gear_pump">

```

The status bar at the bottom of the editor displays the same validation error message: "A document must not include both a "meta" element with an "http-equiv" attribute whose value is "content-type", and a "meta" el".

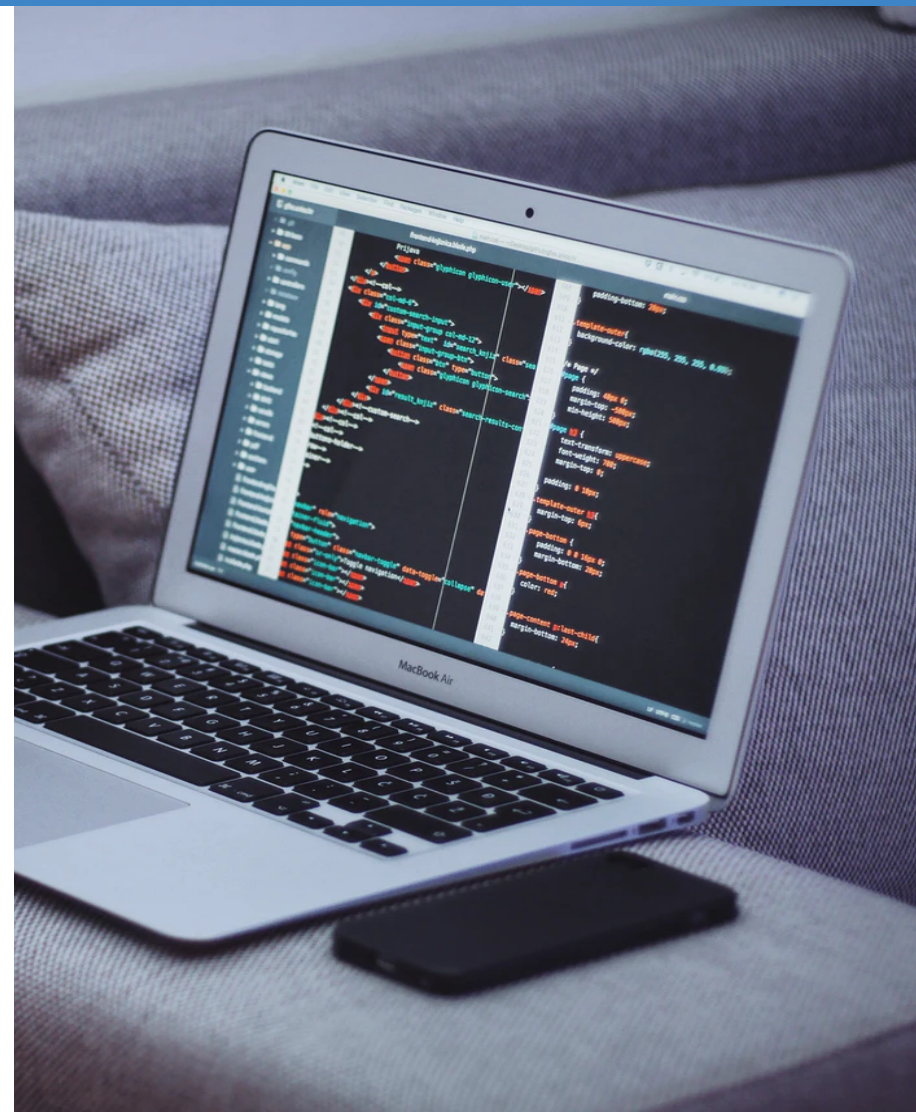
Validating HTML5 with Schematron

- Custom validation rules



Querying HTML5

- Query using XPath
- Run XPath on multiple HTML5 documents



XPath

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

XPath 3.1 `//*[@class='term']`

bushings.html

html body main article div section p dfn

```

1 TYPE html
2 TEM "about:legacy-compat">
3 lang="en"><head><meta http-equiv="Content-Type" content="text/html; charset=UTF-8"><meta
4 class="title topictitle1" id="ariaid-title1">Bushings</h1>
5 class="body">
6 ction class="section" id="bushings_topic__bushings"><h2 class="title sectiontitle">Bushings
7
8 class="p">A <dfn class="term">bushing</dfn>, also known as a <dfn class="term">bush</dfn>
9 hat is inserted into a housing to provide a bearing surface for rotary applications. The
10 ushings in the <strong class="ph b">gear pump</strong> provide a bearing surface for the <
11 ection>
12

```

Text Grid Author

Description - 12 items	XPath location	Resource
pumps	/html[1]/body[1]/main[1]/article[1]/div[1]/p[2]/dfn[1]	gear-pump.html
Gear pumps	/html[1]/body[1]/main[1]/article[1]/div[1]/p[2]/dfn[2]	gear-pump.html
bushing	/html[1]/body[1]/main[1]/article[1]/div[1]/section[1]/p[1]/dfn[1]	bushings.html
bush	/html[1]/body[1]/main[1]/article[1]/div[1]/section[1]/p[1]/dfn[2]	bushings.html
drive shaft	/html[1]/body[1]/main[1]/article[1]/div[1]/section[1]/p[1]/dfn[1]	drive-shaft.html
bushings	/html[1]/body[1]/main[1]/article[1]/div[1]/p[1]/a[1]/dfn[1]	gears.html

XPath - Project

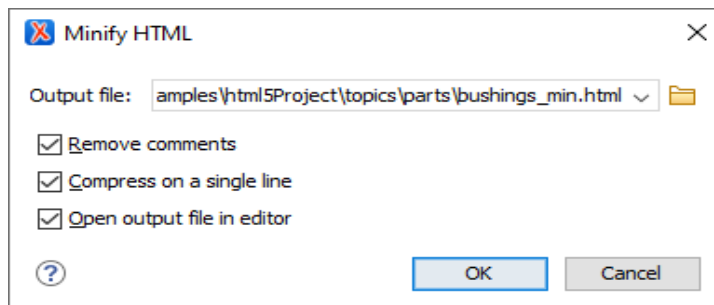
Minification/Compression

- Reduce the size of the HTML documents
- Available for HTML and CSS files



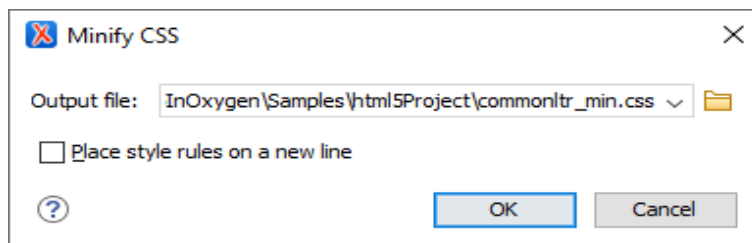
Minifying HTML5 Documents

- Remove unnecessary white spaces
- Remove comments
- Compress on a single line



Minifying CSS Stylesheets

- Removing unnecessary code without affecting the functionality
- Place each style rule on a new line



Emmet Plugin

- Oxygen supports Emmet snippets
- Toolkit for high-speed HTML coding and editing
- Type abbreviations, similar to CSS selectors, and expand them into full-fledged HTML code

`ul>li*5`



docs.emmet.io

oxygenxml.com/doc/ug-editor/topics/emmet-addon.html

CSS-like Editing

- **Expand abbreviation** - expands abbreviations into code snippets
- **Wrap with abbreviation** - expands it and places currently selected content in the last element of generated snippet
- Available for HTML and XML editors
- Specific abbreviations for CSS and XSLT

docs.emmet.io/cheat-sheet/

Expand Abbreviation

ul>li*5



```
<ul>
  <li></li>
  <li></li>
  <li></li>
  <li></li>
  <li></li>
</ul>
```

#page>div.logo+ul#navigation>li*5>a{Item \$}



```
<div id="page">
  <div class="logo"></div>
  <ul id="navigation">
    <li><a href="">Item 1</a></li>
    <li><a href="">Item 2</a></li>
    <li><a href="">Item 3</a></li>
    <li><a href="">Item 4</a></li>
    <li><a href="">Item 5</a></li>
  </ul>
</div>
```

Wrap With Abbreviation

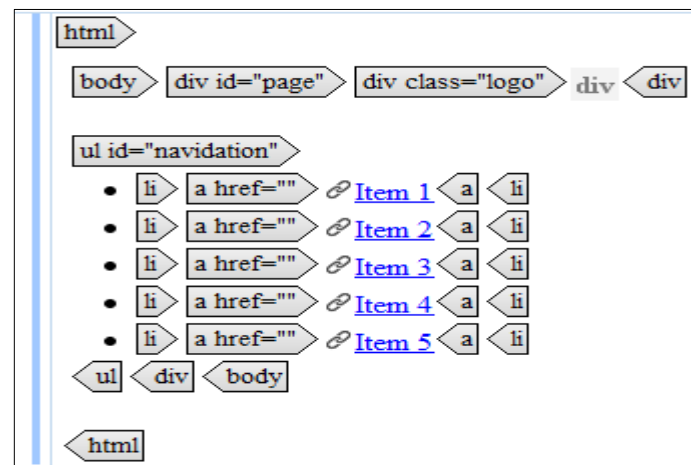
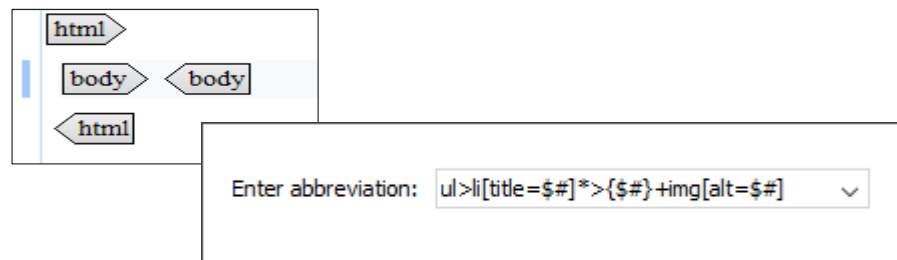
`ul>li[title=$#]*>{$#}+img[alt=$#]`

About
News
Products
Contacts



```
<ul>
  <li title="About">About<img src="" alt="About" class=""></li>
  <li title="News">News<img src="" alt="News" class=""></li>
  <li title="Products">Products<img src="" alt="Products" class=""></li>
  <li title="Contacts">Contacts<img src="" alt="Contacts" class=""></li>
</ul>
```

Emmet Abbreviations Author



CSS Expand Abbreviation

@f+



```
@font-face {  
  font-family: 'FontName';  
  src: url('FileName.eot');  
  src: url('FileName.eot?#iefix') format('embedded-opentype'),  
        url('FileName.woff') format('woff'),  
        url('FileName.ttf') format('truetype'),  
        url('FileName.svg#FontName') format('svg');  
  font-style: normal;  
  font-weight: normal;  
}
```

Conclusion

- HTML5 editing support
- Validation of HTML5 documents
- Query using XPath
- Compress HTML5 and CSS documents
- Emmet snippets



A long-exposure photograph of a multi-lane highway at night. The image shows curved lanes with prominent light trails from vehicles. White and yellow light trails from headlights and taillights curve along the road, while red light trails from taillights are visible in the adjacent lanes. The background is dark with some distant city lights and trees.

Questions?

Octavian Nadolu
Software Architect at Syncro Soft

octavian.nadolu@oxygenxml.com

Twitter: [@OctavianNadolu](https://twitter.com/OctavianNadolu)

LinkedIn: [octaviannadolu](https://www.linkedin.com/in/octaviannadolu)