

Oxygen PDF Chemistry

XML + CSS = PDF

Presenter:

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CSS-based PDF publishing

Advantages:

- Lots more people are comfortable with CSS
- Use CSS both for XHTML and PDF styling
- CSS is much easier to learn than XSL-FO
- Majority of users do not need completely different styling for the Web or print outputs
- Consistent editing/publishing solution

Oxygen PDF Chemistry

XML + CSS = PDF

- Works on any operating system.
- Install and use separately to build publishing scripts.
- Bundled and free to use from inside the Oxygen application.
- Right now free to use outside of Oxygen, in future available as commercial distribution.

Other CSS PDF Processors

- Antenna House
- Prince XML
- PDFReactor
- Vivliostyle Formatter (HTML + CSS)

Installing “Oxygen PDF Chemistry”

- Download:

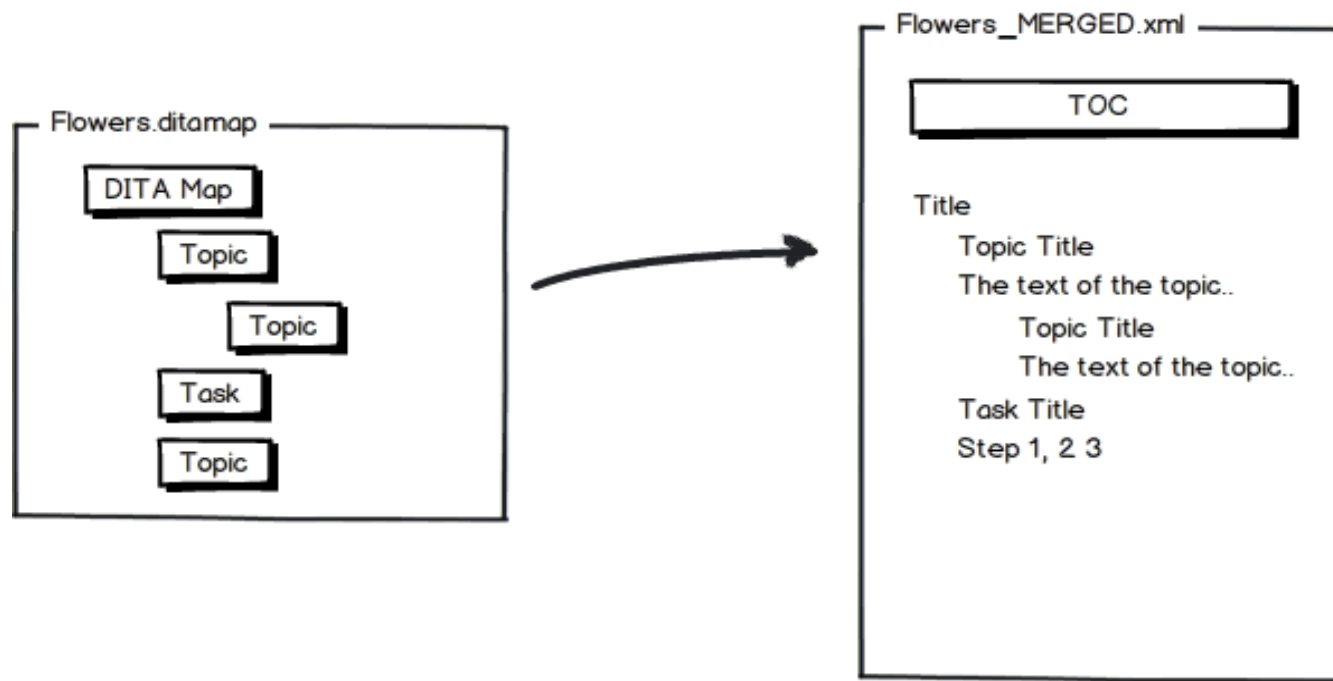
https://www.oxygenxml.com/pdf_chemistry/download.html

- Unpack.
- Run the [chemistry.bat](#) or [chemistry.sh](#) script depending on your platform.

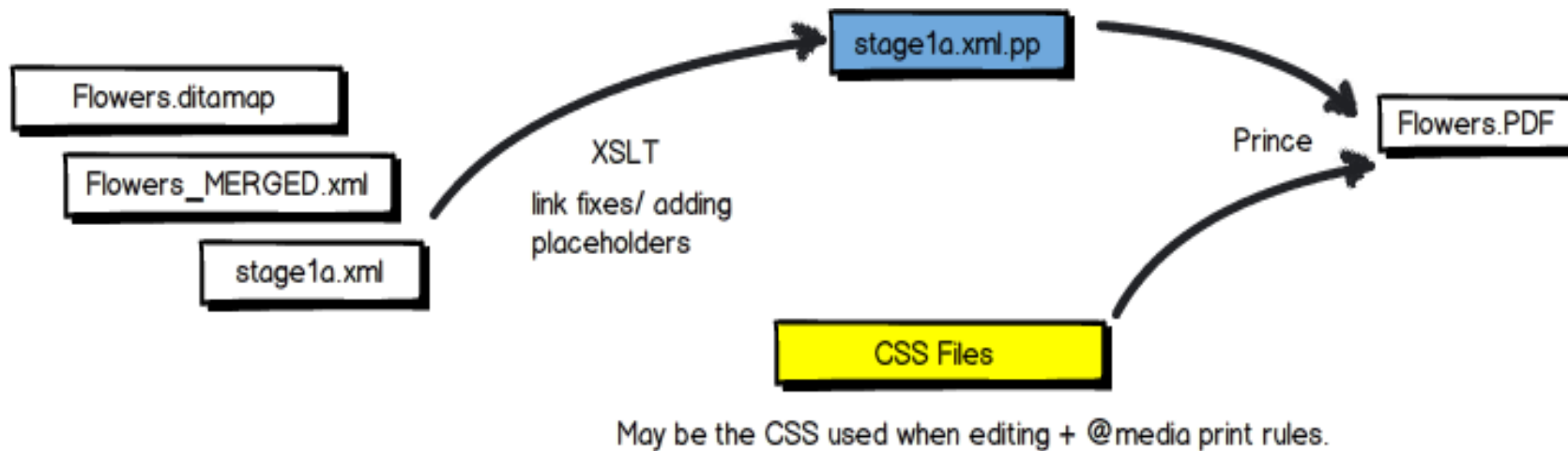
DITA + CSS = PDF

1. Creates a single file containing the resolved, or **merged** DITA map with all its topics
2. Apply XSLT post-processing.
3. Apply CSS styles and obtain the PDF output using either Antenna House, Prince XML or Oxygen Chemistry.

Create a single file containing the resolved, or "merged" DITA map with all its topics



Add CSSs to the merged XML output and process to PDF - DEMO



Fonts

- Dynamically load fonts
- Specify fallback fonts

```
@font-face {  
  font-family:"roboto";  
  font-style:normal;  
  src:url("../fonts/RobotoCondensed-Regular.ttf");  
}
```

```
front-page-title {  
  .....  
  font-size:2em;  
  font-family:roboto, serif;  
  font-weight:bold;  
}
```

Using Web fonts

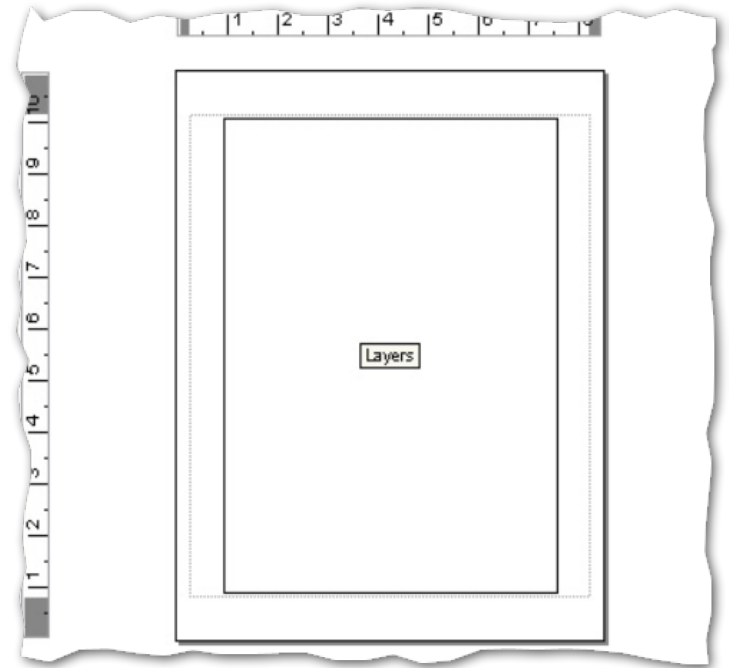
- Using Google fonts:

```
@import url('https://fonts.googleapis.com/css?
family=Montserrat:300,300i,400,500,700i');
```

```
section title {
  font-family: Montserrat, Serif;
  font-weight:500;
}
```

Setting page margins and size: <https://www.w3.org/TR/css3-page/>

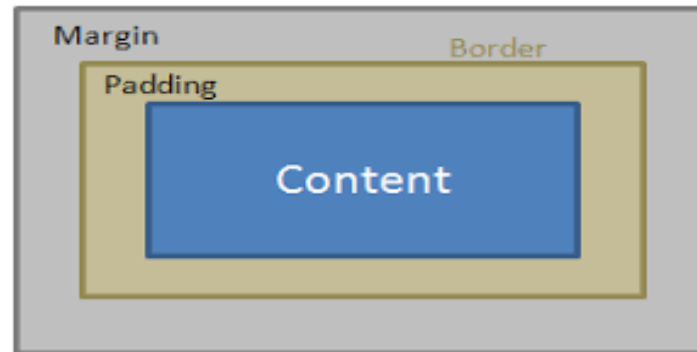
```
@page {  
  padding-top:0.2em;  
  padding-bottom:0.2em;  
  /* Letter */  
  size: us-letter;  
  margin: 1in;  
}
```



So what's the difference between padding and margin?

Padding is space inside the border.

Margin is space outside the border.



Using named pages:

```
@page table-landscape {  
    size:landscape;  
}  
@page table-portrait {  
    size:portrait;  
}  
table[orient='land'] {  
    page: table-landscape;  
}  
table[orient='port'] {  
    page: table-portrait;  
}
```

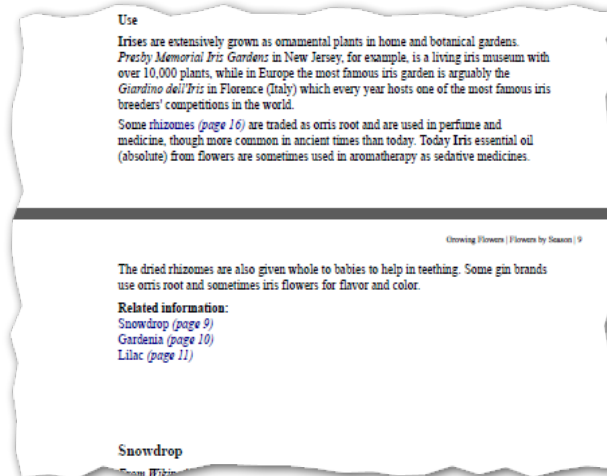
Changing the column count:

```
@page two-columns{
    column-count: 2;

    column-gap: 1in;
}
topic[outputclass='two-columns'] {
    page: two-columns;
}
topic[outputclass='two-columns'] title {
    column-span: all;
}
```

Page breaks:

<https://www.w3.org/TR/css-break-3/>



```
*[outputclass= "break-before" ] {  
    page-break-before:always;  
}
```

Avoid breaking pages

```
title {  
    page-break-after:avoid;  
}  
row {  
    page-break-inside:avoid;  
}  
fig {  
    page-break-inside:avoid;  
}
```


Page mirroring

<https://www.w3.org/TR/css3-page/#spread-pseudos>

```
@page :left {  
  margin-left: 3cm;  
  margin-right: 4cm;  
}
```

```
@page :right {  
  margin-left: 4cm;  
  margin-right: 3cm;  
}
```

First page, last page and blank pages

<https://www.w3.org/TR/css3-page/#spread-pseudos>

```
@page :first {  
  border-top: 5pt solid yellow;  
}
```

```
@page :last {  
  border-bottom: 5pt solid yellow;  
}
```

```
@page :blank {  
  background-color: gray;  
}
```

Page Margin Boxes

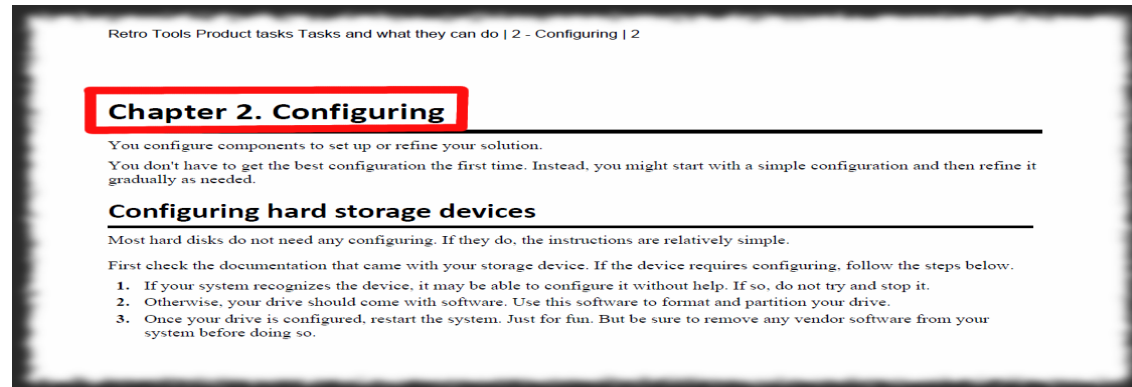
https://www.oxygenxml.com/doc/versions/19.1/ug-chemistry/topics/ch_page_formatting.html



Counters

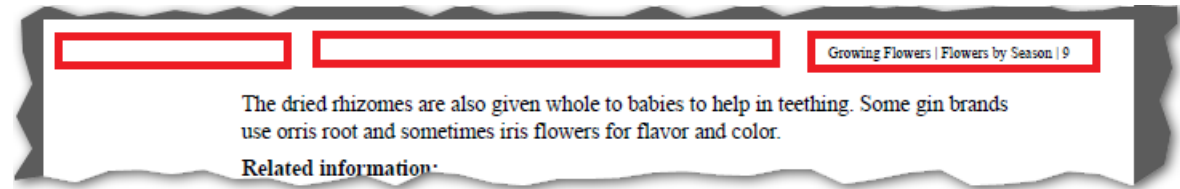
<https://www.w3.org/TR/CSS2/generate.html>

Counting chapters:



```
chapter {  
  counter-increment:chapter;  
}  
chapter > title:before {  
  content: "Chapter " counter(chapter) ". ";  
}
```

Counting pages

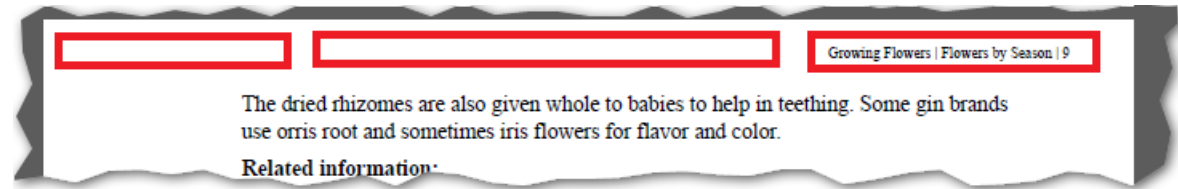


First page starts after the table of contents:

```
map > toc + topic{  
  counter-reset: page 1;  
}
```

Generating static content

<https://www.w3.org/TR/css-gcpm-3/>



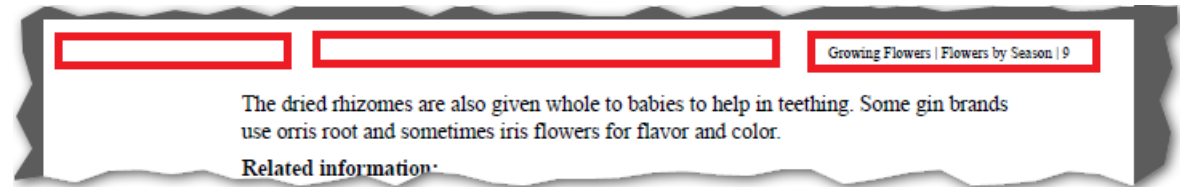
```
/* Collect the chapter titles. */
```

```
chapter > title {
```

```
  string-set: chaptertitle " | " counter(chapter) " - " content();
```

```
}
```

Page headers



```
@page {  
  @top-right {  
    content: string(maptitle) " | " string(chaptertitle) " | " counter(page);  
    font-size:8pt;  
  }  
}
```

Front Cover Page

```
front-page {  
    page: front-page;  
}  
front-page-title {  
    display: block;  
    text-align: center;  
    margin-top: 3in;  
    font-size: 2em;  
    font-family: arial, helvetica, sans-serif;  
    font-weight: bold;  
}  
@page front-page {  
    @top-left { content: none }  
    @top-center { content: none }  
    @top-right { content: none }  
    @bottom-left { content: none }  
    @bottom-center { content: none }  
    @bottom-right { content: none }  
}
```


Custom background image in the front page

<https://github.com/radu-pisoi/com.oxygenxml.pdf.css.customization.sample>

// Background image for the cover page.

```
@page front-page{  
    background-image: url("images/author_cover_background.svg");  
    background-size: 8.5in 11in;  
    background-position: right bottom;  
}
```

Table of Contents Layout

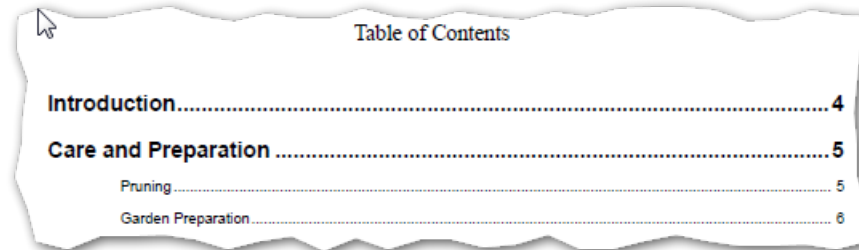


Table of Contents	
Introduction.....	4
Care and Preparation	5
Pruning	5
Garden Preparation	6

```
@page table-of-contents {
  @top-left { content: none; font-size:8pt;}
  @top-center { content: none }
  @top-right { content: none; font-size:8pt;}
  @bottom-left { content: none }
  @bottom-right { content: none }
}

@page table-of-contents {
  @top-left {
    content: "Contents | " counter(page, lower-roman);
  }
}

*[class ~= "map/map"] > map {
  display: block;
  page: table-of-contents;
}
```

Table of contents Composition

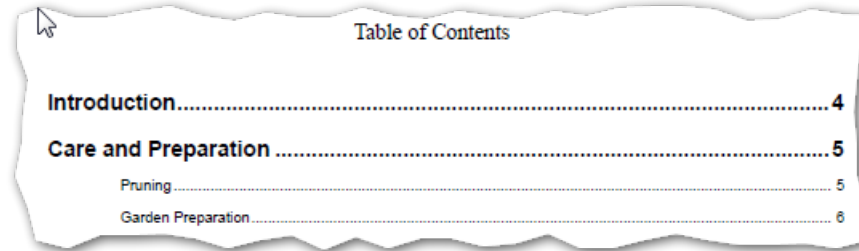


Table of Contents	
Introduction.....	4
Care and Preparation	5
Pruning	5
Garden Preparation.....	6

```
topicref navtitle:after {  
  display:inline;  
  content: leader('.') target-counter(attr(href), page);  
  link:attr(href);  
  -ah-link:attr(href);  
  -oxy-link: attr(href);  
}
```

- CSS Leaders: <https://www.w3.org/TR/css-content-3/>
- Target Counter: <https://www.w3.org/TR/css-gcpm-3/#target-counter>
- Links

Front and Back Matter

```
front-matter, back-matter {  
  page: matter-page;  
}
```

```
/* Put the topics on a separate page. */  
front-matter > topic, back-matter > topic {  
  page-break-before: always;  
}
```

```
@page matter-page {  
  @top-left { content:none }  
  @top-center { content:none }  
  @top-right { content:none }  
  @bottom-left { content:none }  
  @bottom-center { content:none }  
  @bottom-right { content:none }  
}
```

Image handling

```
image {  
  content: attr(href, url);  
}
```

```
image[placement="inline"] {  
  display: inline;  
}
```

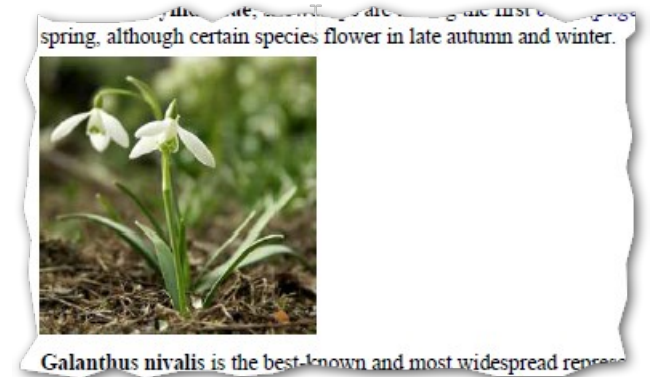
```
image[placement="break"] {  
  display: block;  
}
```

```
/*https://www.w3.org/TR/css3-images/#image-resolution*/
```

```
image {  
  prince-image-resolution: 120dpi;  
  -ah-image-resolution: 120dpi;  
  image-resolution: 120dpi;  
}
```

```
image [width] {  
  width: attr(width, px);  
}
```

```
image [height] {  
  height: attr(height, px);  
}
```



Handling Tables

<https://www.w3.org/TR/css-tables-3/#layout-principles>

```
entry[colspan] {  
    table-column-span:attr(colspan);  
}  
entry[rowspan] {  
    table-row-span:attr(rowspan);  
}  
table {  
    display:block ;  
}  
table > tgroup {  
    display:table;  
    table-layout: fixed;  
}  
table > title {  
    display:block;  
}  
colspec {  
    display:table-column;  
    width:attr(colwidth) !important;  
}
```

Handling Table Borders

Installing	Configuring
Install hard drive	Configuring hard drive
Remove cover	Configuring cover

```
row:not(:last-child) > entry[rowsep = '1']{  
  border-bottom:1pt solid black;  
}
```

Links

All species of **Galanthus** are perennial (*page 17*), herbaceous plants
bulbs. The flower has no petals; it consists of six tepals, the outer three

```
xref[href]:after {  
  content: " (page " target-counter(attr(href), page) )";  
  link: attr(href);  
}
```

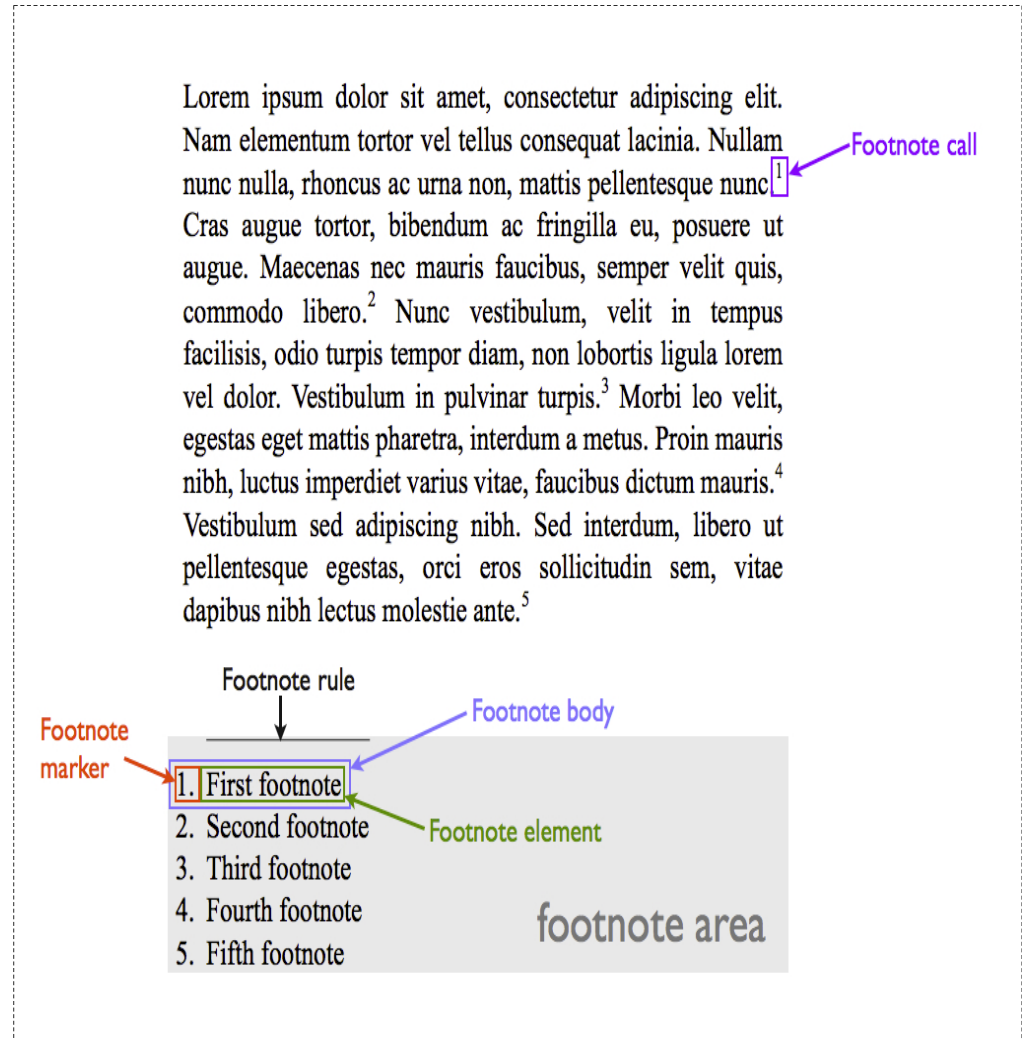

Index Page

```
@page index {  
    column-count: 2;  
    column-fill: auto;  
}  
index\.groups index-link {  
    content: target-counter(attr(href), page) ",";  
    link:attr(href);  
    -ah-link: attr(href);  
    -oxy-link: attr(href);  
}  
  
index\.groups index-link:last-child {  
    content: target-counter(attr(href), page);  
}
```

Footnotes

<https://www.w3.org/TR/css-gcpm-3/#creating-footnotes>

```
fn {  
  float: footnote;  
  counter-increment: footnote;  
}  
fn::footnote-call {  
  content: counter(footnote);  
  font-size: 83%;  
  vertical-align: super;  
  line-height: none;  
}  
@page {  
  @footnote {  
    border-top: solid black thin;  
    padding-top: 8pt;  
  }  
}
```



Metadata

```
map > title {  
  -oxy-pdf-meta-title: content();  
}  
  
booktitle > booktitlealt {  
  -oxy-pdf-meta-description: content();  
}  
  
bookmeta isbn {  
  -oxy-pdf-meta-custom: "ISBN" content();  
}
```

Document Properties

Description Security Fonts Custom Advanced

Description

File: taskbook.pdf

Title: Product tasks

Author: Howe Tudit

Subject: Tasks and what they can do

Keywords:

Hyphenation

<https://www.w3.org/TR/css-text-3/#hyphens-property>

```
entry{  
  hyphens:auto;  
}
```

Param3	Param4
	ThisIsAVeryLongWord- WhichWouldNeedToBe- WrappedOtherwiseItWillExit- TheTable

Support for multiple languages

- Fallback fonts
- Static texts depending on the language
- Right to left writing

Support for multiple languages

```
* {  
  font-family: Calibri, SimSun, "Malgun Gothic";  
}
```

```
note:lang(de):before {  
  content: url('../..img/note.png') " Anmerkung: ";  
  font-weight: bold;  
}
```

```
*[dir='rtl'] {  
  direction: rtl;  
  unicode-bidi: embed;  
}
```

Oxygen-specific CSS extensions

```
section:after {  
  contents: "Number of words: "  
    oxy_xpath("count(tokenize(normalize-  
space(string-join(text(), ""), ' '))");  
}
```

Useful links

<https://www.oxygenxml.com/doc/versions/19.1/ug-chemistry/>

<https://www.smashingmagazine.com/2015/01/designing-for-print-with-css/>

Thank You!

Questions?

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