MIDDLESEX Community College

## Tools and Technologies for Tech Writers 2020

### Week 11

# DITA

# Notices

This document was prepared as a handout for the Middlesex Community College Tools and Technologies for Technical Writers class, Winter semester 2020.

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# DITA Resources

A few sites to look at about DITA.

DITA 1.3 Specification: http://docs.oasis-open.org/dita/dita/v1.3/dita-v1.3-part3-all-inclusive.html

DITA Open Toolkit: https://www.dita-ot.org/

Oxygen XML DITA Authoring: https://www.oxygenxml.com/doc/versions/22.0/ug-author/topics/author-dita.html

DITA Best Practices: https://www.amazon.com/DITA-Best-Practices-Roadmap-Architecting-ebook/dp/B005FEOU48/ref=sr_1_1?crid=2HXA23N0U4QW8&dchild=1&keywords=dita+best+practices&qid=1586399477&s=books&sprefix=DITA+Best%2Cstripbooks%2C208&sr=1-1

Boston DITA User Group (DITA BUG): http://bostondita.org

DITA XML (May not work in Firefox): http://dita.xml.org/home

DITA Users mailing list: https://dita-users.groups.io/g/main

## Structured authoring resources

Structured authoring is an important concept in technical writing you should understand.

I recommend you review these articles to get a better grasp on structured authoring.

- Structured Authoring and XML
- https://flowtime.be/wp-content/uploads/2016/01/what_is_structured_authoring.pdf

# Working with maps

A ditamap is how you organize your content.

There are two major types of ditamaps.

| | |
|---|---|
| **Map style** | A map style ditamap is just a table of contents. You can add a title, but not much else. You can create a hierarchy of topics.<br><br>Used with non-PDF content, such as HTML output, or to reuse. |
| **Bookmap style** | Intended for use with books. Bookmaps contain a lot of metadata to create all the front and back matter of a book, such as titles, sub-titles, publisher information, copyright information. You can also add specific references for chapters, appendicies, table of contents, index, and so on. |

There are other styles of maps, but 95% of the time you only work with bookmaps and maps.

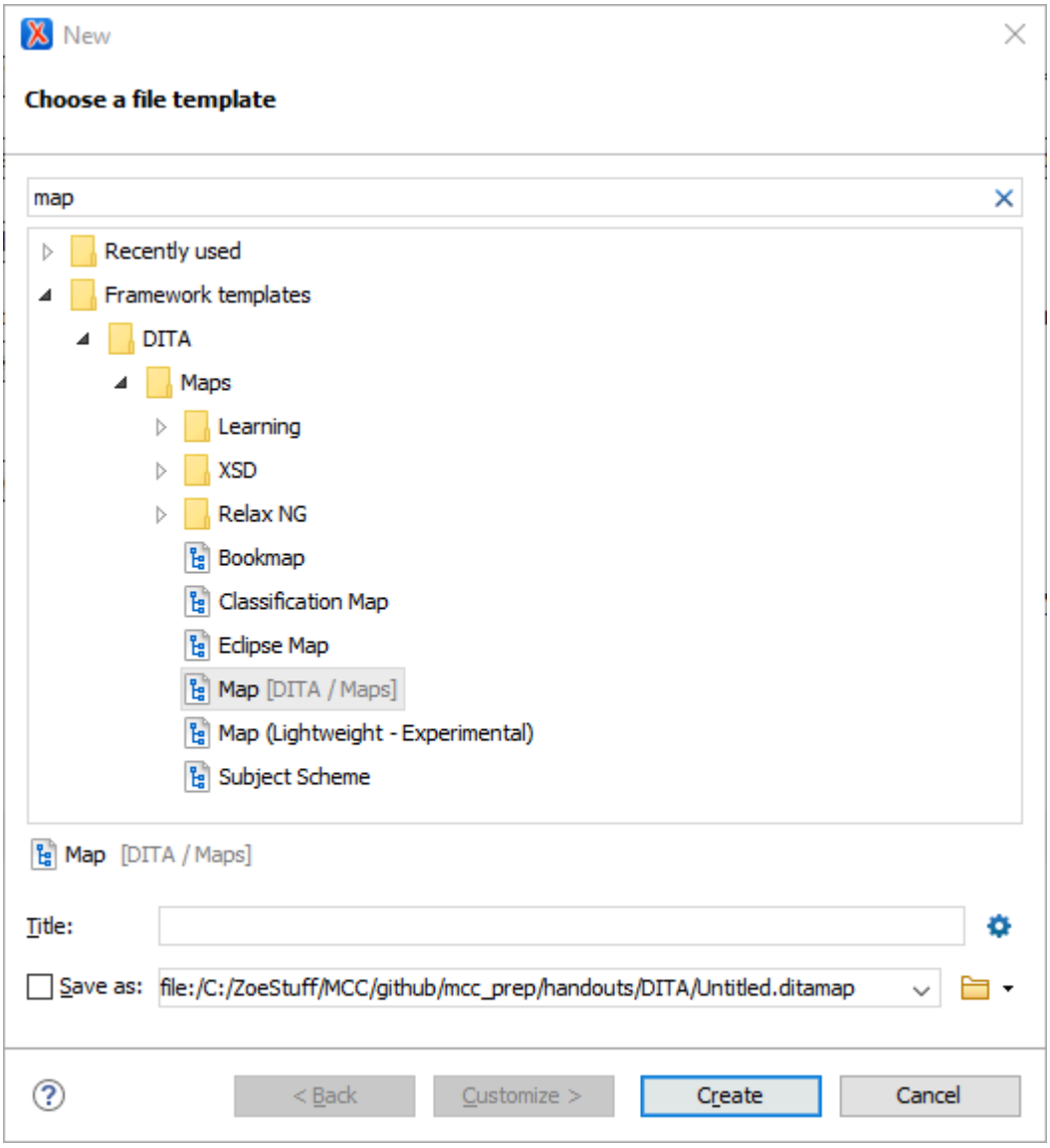
## Create a map in Oxygen

You rarely make maps, but they are how you get started.

Akin to learning how to cast on in knitting, you spend much more time working in maps than making new maps.

1. Use your favorite method to make a new file in Oxygen.
   - Select **File** > **New**
   - Press `CTRL+N`

   The **New** dialog opens.




2. In the **Filter** field, enter `map`.
   This filters the list of available templates to just the map style templates.
3. Select **Framework templates** > **DITA** > **Maps** > **Map [DITA/Maps]**.
4. Enter a **Title**.
5. Confirm the path and file name.
   The file name is auto-generated based on the title for the map.
   For example, the title `My first map` becomes `my_first_map.ditamap`.

6. Click **Create**.

Oxygen creates your new map file.

Oxygen prompts whether you want to open the map in the editor or the DITA Maps Manager. I recommend you open the map in the DITA Maps Manager.

# About the Oxygen DITA Maps Manager

This is a glorious panel in Oxygen that makes working with the topics in your map much easier.

The major function of a map file is to be your table of contents. The **DITA Maps Manager** displays your map file in a hierarchical way. You can easily add new topics, reorganize your topics, and open topics to edit them from the **DITA Maps Manager**.

# Add a new topic from the Maps Manager

This is one of many ways you can add a topic to a map.

1. Select a node in your map.
2. Select where you want to add the new topic.
   - **Append child** > **New** — This is the only option available when you select the root node of the map. This adds a new topic as a child of the selected node.
   - **Insert before** > **New** — Adds a new topic before the selected node.
   - **Insert after** > **New** — Adds a new topic after the selected node.

   The **New** dialog opens.
3. In the **Filter** field, enter the topic type you want to create.
   - `concept`
   - `task`
   - `reference`
4. Select the topic type from **Framework templates** > **DITA** > **Maps**.
   To add a concept type topic, select **Framework templates** > **DITA** > **Maps** > **Concept [DITA/Topics]**.
5. Enter a **Title**.
6. Confirm the path and file name.

   The file name is auto-generated based on the title for the topic.

   For example, the title `My first concept` becomes `my_first_concept.dita`.
7. Click **Create**.

Oxygen creates the new topic, which opens in the Editor. The new topic is also added to the map where you requested.

# Maps - behind the scenes

Oxygen is lovely that it provides a graphical representation of your map, but remember, it's just an XML file.

Maps are very powerful, and there are a lot of different things you can do, but generally, table of contents maps are just a hierarchical set of topic references.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE map PUBLIC "-//OASIS//DTD DITA Map//EN" "map.dtd">
<map>
    <title>test</title>
    <topicref href="h1_test.dita">
        <topicref href="h2_topic.dita"/>
        <topicref href="h2_topic2.dita">
            <topicref href="h3_topic.dita"/>
            <topicref href="h3_another_topic.dita"/>
        </topicref>
    </topicref>
    <topicref href="h1_section2.dita">
        <topicref href="h2_moretopic.dita"/>
    </topicref>
</map>
```

# Working with topics

Topics are the heart and soul of your content.

DITA is a many layered onion. It can do many, many things, but you don't need to learn all of it all at once.

## Basic authoring

DITA uses many authoring structures similar to HTML.

For the majority of your writing, you use elements that should be familiar. The following elements work exactly the same as HTML.

- `<p>`
- `<ul>`
- `<ol>`
- `<li>`

There are several elements that are not exactly the same as HTML, but are very similar.

- `<image>` — for inserting references to images.
- `<note>` — for notes, tips, warnings, etc.
- `<xref>` — for inserting links.

Tables are also similar to HTML, but not quite the same:

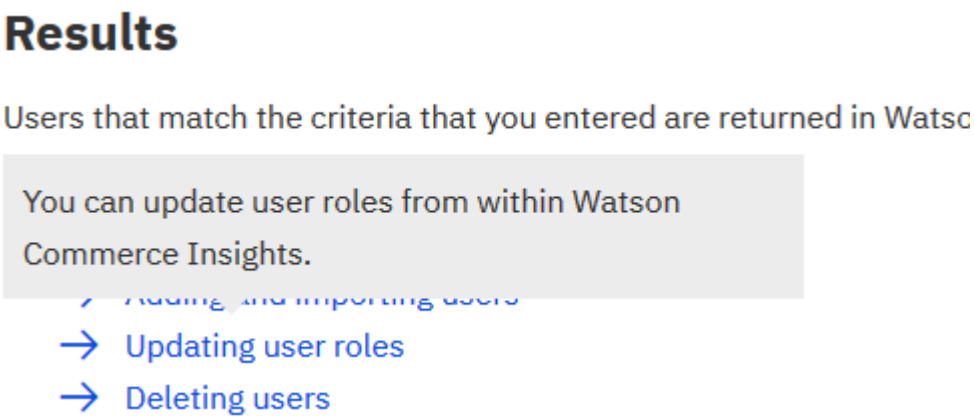
```
<table>
  <tgroup cols="2">
    <colspec colwidth="1*"/>
    <colspec colwidth="2*"/>
    <thead>
      <row>
        <entry>Animal</entry>
        <entry>Gestation</entry>
      </row>
    </thead>
    <tbody>
      <row>
        <entry>Elephant (African and Asian)</entry>
        <entry>19-22 months</entry>
      </row>
      <row>
        <entry>Giraffe</entry>
        <entry>15 months</entry>
      </row>
      <row>
        <entry>Rhinoceros</entry>
        <entry>14-16 months</entry>
      </row>
      <row>
        <entry>Hippopotamus</entry>
```

```
        <entry>7 1/2 months</entry>
      </row>
    </tbody>
  </tgroup>
</table>
```

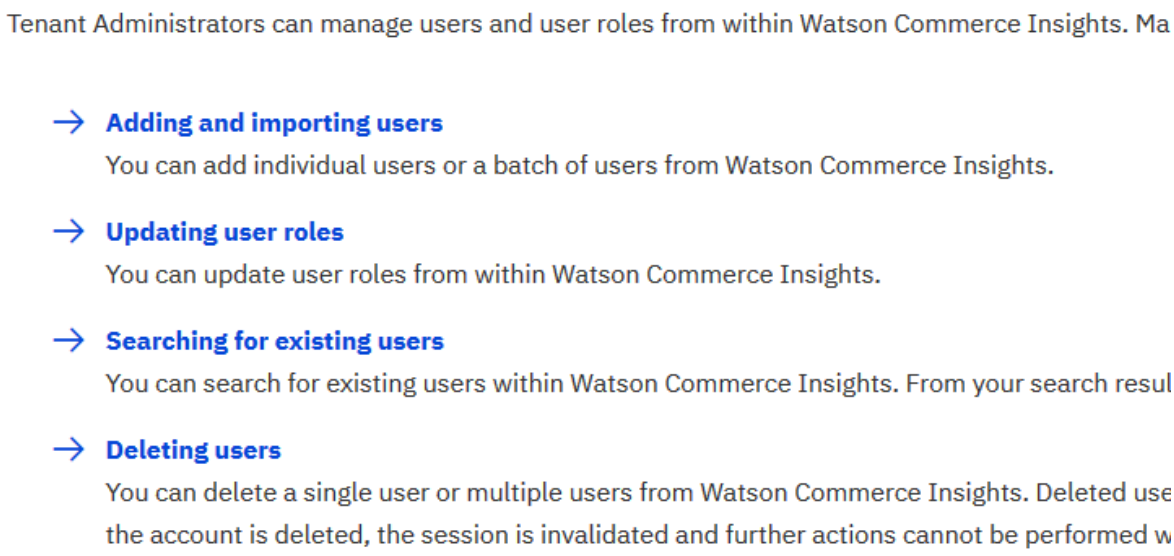
# About short descriptions

Every topic can have a short description, and should.

Use the <shortdesc> element to provide a short description of your topic. It's more than just the introduction to your topic. Many DITA processors take the short description and use it with links. For example, if you transform your content into HTML, the short description content could be a popup when you hover over a link.




You can also configure DITA topics to generate various types of automatic links. These links can also pull in the short description.




Learning to write short descriptions is an artform, similar to a first paragraph in a news story. It is well worth practicing.

- https://www.oxygenxml.com/dita/styleguide/webhelp-feedback/Artefact/Syntax_and_Markup/c_Guidelines_for_Crafting_Short_Descriptions.html
- https://www.oasis-open.org/committees/download.php/57803/DITA-Adoption_2016_Writing-Effective-Short-Descriptions.pdf
-

# Semantic tagging

Instead of generic bold or italic, identify content by its intent.

There are dozens of semantic elements that you can learn about using the DITA 1.3 Specification or the OxygenXML DITA Reference, but here is a smattering of elements I use documenting software.

| Element | Description |
|---|---|
| `<apiname>` | The name of an API |
| `<cmdname>` | The name of a command line tool |
| `<codeblock>` | For code samples |
| `<codeph>` | For inline code snippets |
| `<filepath>` | For file names and paths |
| `<keyword>` | Used for keyrefs |
| `<msgblock>` | Long "messages" from the software |
| `<msgph>` | Short inline "messages" from the software. |
| `<parmname>` | For parameters |

| Element | Description |
|---|---|
| `<ph>` | For phrases - inline content for reuse or conditions |
| `<screen>` | Examples of command line or terminal windows |
| `<tm>` | Marking words that require a trademark (® or ™) |
| `<uicontrol>` | A label of an item on a screen or dialog you do something with. |
| `<userinput>` | Text a user needs to enter |
| `<varname>` | A variable. Often used with paths or things you need to enter like *myServer* or *port number* |
| `<wintitle>` | The name of a window, screen, dialog, panel, etc. |
| `<xmlatt>` | An XML attribute |
| `<xmlelement>` | An XML element |

# Insert an image

Inserting images in DITA is similar to adding an image in HTML.

1. Add an `<image>` element.
2. Add the `@href` attribute, providing the relative path to the image file you want to include.
3. If this is a large image, add the `@placement` attribute and set it to `break`.

# Insert a link to another topic

Links to other topics are also known as "local" links.

1. Add an `<xref>` element.
2. Add the `@href` attribute with the relative path to the topic you want to link to.

For example, here's a link to Working with topics on page 9. The source is `<xref href="working_with_topics.dita"/>`.

# Insert a link to external content

If you want to link to anything on the internet, use an external cross-reference.

1. Add an `<xref>` element.
2. Add the `@href` attribute with the relative path to the topic you want to link to.
3. Add the `@scope` attribute and set it to `external`.

4. Add the `@format` attribute and set it to the type of content you are pointing to. In general, if you are pointing to a web page, use `html`.
5. Provide text for the link as the contents of the `<xref>` element.

For example, here's a link to Google. The source is `<xref href="http://www.google.com" scope="external" format="html">Google</xref>`.

# Set up content for a conref

You can reference almost any content using a content reference. Before you can, you have to provide an `@id` attribute.

There are many different types of content references. The basic `@conref` lets you reuse a single element. You can also use `@conrefend` to reference several elements in a row.

One difficulty with `@conref` is that you have to provide a path to the file that contains the element you are referencing. If you decide to move that file, you have to update every reference. This can be onerous in large content sets. Therefore you can use `@conkeyref` instead. This is a combination of `@conref` and `@keyref` so you can reference a DITA key as the path to the file.

No matter the type of content you are referencing, the element you are referencing needs an `@id` attribute.

- All `@id` must be unique.
- Human readable values are much easier to work with

1. Confirm the root `@id` attribute is unique and human readable.
2. Select the element you want to reuse and add a unique and human readable `@id` attribute.

The following paragraph is ready to be referenced.

My first referenced content.

The source looks like this:

```
<p id="example_conref">My first referenced content.</p>
```

# Inserting a conref

You must use the same element that you are referencing.

1. Insert the same element you are referencing.

   For example, if you are referencing a <p>, insert a <p> element.
2. Add the `@conref` attribute.
3. Set the value of the `@conref` attribute as follows:

   *`Path/to/topic#root_id_value/element_id`*

The following paragraph is an example conref.

My first referenced content.

The source looks like this:

```
<p
 conref="set_up_content_for_a_conref.dita#set_up_content_for_a_conref/
example_conref"/>
```

# Create a key definition

Keys must be defined in a map file.

You can use DITA keys for short phrases or references, that is, paths to other files.

Short phrases are great for product names and other short variables.

Paths to files let you set up links to files that contain content to be referenced or images. Since you can reference maps from maps, you can set up one map that has paths to all of your high-resolution images and another map that has low-resolution images. Then you can use the high-resolution images in a bookmap that builds a PDF, and the low-resolution for HTML.

- Use the following format for short string.

```
<keydef keys="sample_string">
    <topicmeta>
        <keywords>
            <keyword>Words from a key</keyword>
        </keywords>
    </topicmeta>
</keydef>
```

- Us the following format for a path to a file. This could be an image, another DITA topic, or an external website.

```
<keydef keys="sample_path" href="path/to/file.png"/>
```

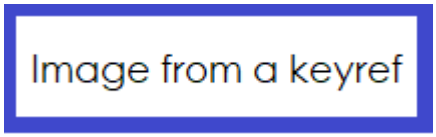
# Insert a keyref

Key references are easier to use than content references.

- Add the `@keyref` attribute to an element set to the value of the `@keys` attribute of the value you want to use.

Here is the sample string: Words from a key. The source is `<ph keyref="sample_string"/>`.

The following image uses the `@keyref`.




The source is `<image placement="break" keyref="sample_path"/>`.

# Week 11 homework

Document a thing using DITA

Download a trial of Oxygen Author: https://www.oxygenxml.com/xml_author/download_oxygenxml_author.html

Create a ditamap.

Add at least 3 topics to the ditamap. Write one task topic, one concept topic, and one reference topic.

Include some semantic tagging.

Include a conref or a keyref.

# Oxygen trial extension

I contacted OxygenXML, and we have access to 31 days of OxygenXML.

I believe this license started on 4/14.

You can find below a 31-day trial license extension for the Academic-Classroom license, that covers 25 seats.

```
 ------START-LICENSE-KEY------
Registration_Name=Tools and Technologies for Tech Writers course
Company=Middlesex Community College
Category=Academic-Classroom
Component=XML-Editor, XSLT-Debugger, Saxon-SA
Version=22
Number_of_Licenses=1
Date=04-14-2020
Trial=31
SGN=MCwCFD3SQwiHZm+3rUh8ezYHAJg++SGiAhQvHtB8YpQ7TYlhCKj0OsdgG7Mu/w\=\=
-------END-LICENSE-KEY-------
```

Use **Help** > **Register** to open the License dialog and paste in all 9 lines of the license key.