

## LESSON 8



### DITA Map Structure

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DITA maps use a small set of elements to help you create a topic collection and arrange topics into a useful hierarchy.

The map elements allow you to reference topics, create groups of topics, create navigational headings, add map metadata, and more. Map elements dictate the structure of the topics in your final deliverables. Although the number of elements needed to create a map is significantly less than the number used to create topics, the map elements play a special role. The topic reference element builds the structure of the DITA map and is the most widely used map element. The topic reference points to a single topic and includes it in the deliverable.

Topic reference elements create the hierarchical relationships needed to format the deliverable with more than one heading level. By embedding topic references in one another, you can create a hierarchy as many levels deep as you believe necessary.

Metadata in the map allows you to further customize deliverables. You can include the same metadata in your map that you include in your topic. When you include metadata in a map, it is applied to a specific topic reference. However, when you include the metadata in a map, you can change the metadata based on the deliverable and manage the topic metadata in the map rather than in the topic. If you manage the metadata in the topic, it makes the topic less flexible. For example, if you want to include information about an audience, you might assign different audiences to a topic reference depending on the deliverable you are building. But, if you include one specific audience in your topic-level metadata, you may find it difficult to use that topic in more than one map. Some metadata you might include in a DITA map are author, publisher, audience, category, copyright, critical dates, keywords, permissions, and product information.

Lesson 8 contains four exercises:

- Starting a DITA map
- Adding topic references
- Adding topic metadata
- Creating a basic hierarchy

## Starting a DITA map

This exercise explains the standard XML markup included in a DITA map.

In this exercise, you learn to add the XML declaration, DTD declaration, and the root `<map>` element in your DITA map.

1. Start a new DITA map.

You can start a new DITA map in a text editor or in an XML editor. In most XML editors, you can choose **file > new > DITA map**. The XML tool usually includes a DTD declaration and XML declaration automatically. If you choose to use a text editor, type the markup shown here. Enter the XML declaration as the first line of your file. The DITA map, like other XML files, must have an XML declaration, doctype declaration, and a root element to contain the rest of your structured information.

```
<?xml version="1.0" encoding="utf-8"?>
```

2. Enter the document type declaration.

The document type declaration identifies the DTD you will validate against. For this example, add the path to the folder in which you stored the DITA map DTD.

```
<!DOCTYPE map PUBLIC "-//OASIS//DTD DITA Map//EN"
"map.dtd">
```

3. Add the `<map>` start and end element tags.

The map element container is the root element that you use to start your DITA map.

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE map PUBLIC "-//OASIS//DTD DITA Map//EN"
"map.dtd">
<map>
</map>
```

4. Add a *title* attribute and value to your map element.

The processor uses the map element title to create a cover page for your print output or add a window name to your online output.

```
<map title="Comstar Phone Guide">
</map>
```

5. Add an *id* attribute to your map element.

The ID must be unique. A unique ID allows you to easily identify the map you want to process. The ID can contain numbers, letters, and underscores, but it must start with a letter or a number.

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```
<map title="Comstar Phone Guide"
      id="Comstaruserguide">
</map>
```

6. Save this file with a .ditamap extension.

**Comstaruserguide.ditamap**

The following example shows how every DITA map must start.

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE map PUBLIC "-//OASIS//DTD DITA Map//EN"
      "map.dtd">
<map title="Comstar Phone Guide" id="Comstaruserguide">
</map>
```

**Adding topic references**

This exercise explains how to add topic references to your DITA map.

In this exercise, you learn to

- add the `<topicref>` element
- apply an *href* attribute and value to your topic references
- add the *navtitle* and *locktitle* attributes

1. Open the DITA map you started creating in the previous exercise in this lesson.

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE map PUBLIC "-//OASIS//DTD DITA Map//EN"
      "map.dtd">
<map title="Comstar Phone Guide" id="Comstaruserguide">
</map>
```

2. Insert `<topicref>` element start and end tags between the `<map>` start and end tags.
3. Assign the *href* attribute the value `ComstarOverview.dita` in the `<topicref>` element's start tag.

The *href* attribute is the most important attribute in a DITA map, pointing to the location of the DITA topic file you want to reference. The *href* attribute value accepts absolute or relative path names to the location of your topic. Your topics may be named with a .dita or a .xml extension. Remember to include this file extension when referencing your file.

The following example shows what a topic reference looks like. The value of the *href* attribute points to a DITA topic file located in the same folder as the DITA map.

```
<map>
```

```
  <topicref href="ComstarOverview.dita"></topicref>
</map>
```

You can also create empty `<topicref>` elements if you are not going to nest any topic references as child topics between the start and end `<topicref>` tags. Using empty topic references helps you create a more maintainable map to work with. If you use multiple open and close tags, you are more likely to create an error nesting your topic references. You can find out more about nesting topic references in the exercise covering Creating a Basic Hierarchy later in this lesson.

```
<map>
  <topicref href="ComstarOverview.dita" />
</map>
```

4. Under the `ComstarOverview.dita` (reference) `topicref`, add two more `<topicref>` element containers.

Assign the `href` attributes the values `QuickGuide.dita` (concept) and `AboutHold.dita` (task) respectively. Your map now points to three topics and puts them in the order in which you want them to appear in the table of contents. At this point, all the topic references are at the same level in the hierarchy.

```
<map title="Comstar User Guide" id="Comstaruserguide">
  <topicref href="ComstarOverview.dita" />
  <topicref href="QuickGuide.dita" />
  <topicref href="AboutHold.dita"></topicref>
</map>
```

5. Add a `navtitle` attribute to your `AboutHold.dita` topic reference container.

A `navtitle` provides an optional alternative title for different output types. Normally, the default output uses the referenced topic titles for the navigation or table of contents.

In the example below, the `AboutHold.dita` topic title is "About Hold," but using the `navtitle` attribute, you shorten the navigation title to "Hold".

```
<map>
  <topicref href="AboutHold.dita"
    navtitle="Hold" />
</map>
```

6. Add a `locktitle` attribute to the `<topicref>` element.

In some situations, you may want to use the title you assigned the `navtitle` attribute value instead of the title you originally included in your topic. By default, the processor uses the title from your topic, but you can override this