

**Darwin Information Typing  
Architecture (DITA) Version 2.0  
Working draft 01  
To be determined  
DITA Version 2.0 Specification**



# Contents

|                                |              |
|--------------------------------|--------------|
| <b>Specification URIs.....</b> | <b>.....</b> |
| <b>Notices.....</b>            | <b>.....</b> |

|  |          |
|--|----------|
| <b>Chapter 1: LwDITA elements.....</b> | <b>5</b> |
| <alt>.....                             | 7        |
| <b>.....                               | 7        |
| <body>.....                            | 7        |
| <data>.....                            | 8        |
| <dd>.....                              | 9        |
| <desc>.....                            | 9        |
| <dl>.....                              | 10       |
| <dlentry>.....                         | 11       |
| <dt>.....                              | 11       |
| <fig>.....                             | 11       |
| <fn>.....                              | 12       |
| <i>.....                               | 14       |
| <image>.....                           | 15       |
| <keydef>.....                          | 16       |
| <li>.....                              | 17       |
| <linktext>.....                        | 18       |
| <map>.....                             | 19       |
| <navtitle>.....                        | 20       |
| <note>.....                            | 21       |
| <ol>.....                              | 22       |
| <p>.....                               | 22       |
| <ph>.....                              | 22       |
| <pre>.....                             | 23       |
| <prolog>.....                          | 23       |
| <section>.....                         | 24       |
| <shortdesc>.....                       | 25       |
| <simpletable>.....                     | 26       |
| <stentry>.....                         | 27       |
| <sthead>.....                          | 27       |
| <strow>.....                           | 27       |
| <sub>.....                             | 28       |
| <sup>.....                             | 28       |
| <title>.....                           | 28       |
| <topic>.....                           | 29       |
| <topicmeta>.....                       | 29       |
| <topicref>.....                        | 30       |
| <u>.....                               | 31       |
| <ul>.....                              | 31       |
| <xref>.....                            | 31       |

|   |           |
|---|-----------|
| <b>Appendix A: Formatting expectations.....</b> | <b>33</b> |
|---|-----------|



---

# Chapter 1

---

## LwDITA elements

---

### Topics:

- [alt](#)
- [b](#)
- [body](#)
- [data](#)
- [dd](#)
- [desc](#)
- [dl](#)
- [dentry](#)
- [dt](#)
- [fig](#)
- [fn](#)
- [i](#)
- [image](#)
- [keydef](#)
- [li](#)
- [linktext](#)
- [map](#)
- [navtitle](#)
- [note](#)
- [ol](#)
- [p](#)
- [ph](#)
- [pre](#)
- [prolog](#)
- [section](#)
- [shortdesc](#)
- [simpletable](#)
- [stentry](#)
- [sthead](#)
- [strow](#)
- [sub](#)
- [sup](#)
- [title](#)
- [topic](#)
- [topicmeta](#)
- [topicref](#)

- [u](#)
- [ul](#)
- [xref](#)



## <alt>

---

Alternate text is a textual description of an image. Systems can display the alternate text when the image cannot be rendered or viewed by the reader.

### Attributes

The following attributes are available on this element: .

### Example

The following code sample shows how alternate text is associated with an image of a marketing banner:

```
<image href="newCampaign.jpg">
  <alt>Marketing banner for new product campaign</alt>
</image>
```

## <b>

---

Bold text is used to draw a reader's attention to a phrase without otherwise adding meaning to the content.

### Specialization hierarchy

The <b> element is specialized from <ph>. It is defined in the highlighting-domain module.

### Attributes

The following attributes are available on this element: .

### Example

The following code sample shows bold highlighting used to draw a reader's attention to a phrase:

```
<p>Use the bold tag for visual emphasis only; do not use it if
  another phrase-level
  element better signifies the reason for the emphasis.</p>
```

## <body>

---

The body contains the main content of a topic.

### Attributes

The following attributes are available on this element: .

### Example

The following code sample shows a DITA topic that contains a title and a body.

```
<topic>
  <title>Mycompany Style Guide: the <xmlelement>b</xmlelement> element</
  title>
  <body><p>Use the bold tag for visual emphasis only; do not use it
  if another
  phrase-level element better signifies the reason for the emphasis.</p></
  body>
</topic>
```

## <data>

---

Data is a generic component that represents metadata within a topic or map. Complex metadata is represented by nested data structures.

### Usage information

The primary purpose of the <data> element is as a specialization base. Because it can nest, it can be used to create complex metadata structures. Since it is available in both block and inline contexts, the <data> element can specify properties for most element types.

A metadata property specified using a <data> element usually applies to the element that contains the <data> element. When located in <prolog> and <metadata> elements, the property applies to the topic as a whole. When located in the <topicmeta> element, the property applies to the referenced topic. The <data-about> element can be used to identify the subject of the property with an explicit reference.



**CAUTION:** By default, processors do not render the content of the <data> element. Use the <data> element only for properties; do not use it to embed text as part of the content flow. For example, while it is possible to specialize <data> to create a special kind of paragraph where <p> is not allowed, when the content is shared, other tools or processors will ignore the specialized <data> element.

### Rendering expectations

By default, processors *SHOULD* treat <data> elements as unknown metadata; the contents of <data> elements *SHOULD NOT* be rendered.

Processors that recognize a particular <data> element *MAY* make use of that element to trigger specialized rendering.

### Attributes

The following attributes are available on this element: , , , and @keyref.

### Examples

The following code sample shows how the <data> element can be used to provide metadata. Rendering tools that recognize this metadata can automatically apply highlighting to the code.

```
<codeblock>
  <data name="codestyle" value="javascript"/>
  <!-- JavaScript code block -->
</codeblock>
```

**Figure 1: Using the @name attribute on unspecialized <data> elements**

The following code sample shows how nested <data> elements can provide complex inventory metadata for a part that is described in the topic.

```
<topic id="sample">
  <title>How to purchase items from the warehouse</title>
  <prolog>
    <data name="inventory">
      <data name="aisle" value="4"/>
      <data name="bin" value="13"/>
      <data name="restock" value="weekly"/>
    </data>
  </prolog>
  <body>
    <!-- ... -->
  </body>
```



```
</topic>
```

### Figure 2: Nesting <data> elements for complex metadata

The following code sample contains specializations of the <data> element: <change-item>, <change-completed>, and <change-summary>. These specialized elements each provide a default for @name inside the grammar files, so that processors can work with the data without authors having to specify the attribute.

```
<topic id="data">
  <title><xmlelement>data</xmlelement></title>
  <prolog>
    <change-historylist>
      <change-item>
        <change-completed>2017-08-20</change-completed>
        <change-summary>Refactored topic to use new template</change-
summary>
      </change-item>
      <change-item>
        <change-completed>2018-06-06</change-completed>
        <change-summary>Created new examples</change-summary>
      </change-item>
    </change-historylist>
  </prolog>
  <body>
    <!-- ... -->
  </body>
</topic>
```

### Figure 3: Specializing <data> for structured metadata

## <dd>

---

The definition description is the definition for a term in a definition list entry.

### Attributes

The following attributes are available on this element: .

### Example

See [dl](#) on page 10.

## <desc>

---

A description is a statement that describes or contains additional information about an object.

### Usage information

The following list outlines common uses of the <desc> element:

|                   |  |
|-------------------|--|
| <table> and <fig> | Provides more information than can be contained in the title                             |
| <xref> and <link> | Provides a description of the target   |
| <object>          | Provides alternate content to use when the context does not permit displaying the object |

## Rendering expectations

When used in conjunction with `<fig>` or `<table>` elements, processors *SHOULD* consider the content of `<desc>` elements to be part of the content flow.

When used in conjunction with `<xref>` or `<link>` elements, processors *MAY* choose to render the content of `<desc>` elements as hover help.

## Attributes

The following attributes are available on this element: .

## Examples

In the following code sample, the `<figure>` element contains a reference to an image of a famous painting by Leonardo Da Vinci. The title `<title>` provides the name of the painting, while the `<desc>` element contains information about when the portrait is thought to have been painted.

```
<fig>
<title>Mona Lisa</title>
<desc>Circa 1503-06, perhaps continuing until 1517</desc>
<image href="mona-lisa.jpg">
  <alt>Photograph of Mona Lisa painting</alt>
</image>
</fig>
```

### Figure 4: Description of a figure

In the following code sample, the `<link>` element contains a `<desc>` element. Some processors might render the content of the `<desc>` element as hover help.

```
<link keyref="dita-13-02">
  <linktext>DITA 1.3 Errata 02</linktext>
  <desc>Final errata version of DITA 1.3, published 19 June 2018</desc>
</link>
```

### Figure 5: Description of a cross reference

## <dl>

---

A definition list is a list of terms and corresponding definitions.

## Attributes

The following attributes are available on this element: [Universal attribute group](#), [compact](#), and [spectitle](#).

## Examples

The following code sample shows how a definition list can be used to describe the message levels that are generated by a monitoring application. The `@compact` attribute instructs processors to tighten the vertical spacing.

```
<dl compact="yes">
  <dlentry>
    <dt>Warning</dt>
    <dd>Problems were detected, but the software will continue to monitor
activity.</dd>
  </dlentry>
  <dlentry>
    <dt>Error</dt>
    <dd>Problems were detected, and the software is in danger of shutting
down.</dd>
  </dlentry>
</dl>
```

```

</dentry>
<dentry>
  <dt>Severe</dt>
  <dd>Monitoring activity has ceased.</dd>
</dentry>
</dl>

```

## <dentry>

---

A definition list entry is a group within a definition list. It associates a term with its definition.

### Attributes

The following attributes are available on this element: .

### Example

See [dl](#) on page 10.

## <dt>

---

A definition term is the term or phrase that is defined in a definition list entry.

### Attributes

The following attributes are available on this element: [Universal attribute group](#) and [@keyref](#).

### Example

See [dl](#) on page 10.

## <fig>

---

A figure is a container for a variety of objects, including artwork, images, code samples, equations, and tables.

### Attributes

The following attributes are available on this element: , , and .

### Example

The following code sample shows how a <fig> element can associate a title and a description with an image.

```

<fig>
<title>The handshake</title>
<desc>This image shows two hands clasped in a formal,
business-like handshake.</desc>
<image href="59j0p66.jpg">
  <alt>A handshake</alt>
</image>
</fig>

```

## <fn>

---

A footnote is ancillary information that typically is rendered in the footer of a page or at the end of an online article. Such content is usually inappropriate for inline inclusion.

### Usage information

There are two types of footnotes: *single-use footnote* and *use-by-reference footnote*.

#### Single-use footnote

This is produced by a <fn> element that does not specify a value for the @id attribute.

#### Use-by-reference footnote

This is produced by a <fn> element that specifies a value for the @id attribute. It must be used in conjunction with an <xref> element with @type set to "fn."

To reference a footnote that is located in another topic, the conref mechanism is used.

### Rendering expectations

The two footnote types typically produce different types of output:

#### Single-use footnote

When rendered, a superscript symbol (numeral or character) is produced at the location of the <fn> element. The superscript symbol is hyperlinked to the content of the footnote, which is placed at the bottom of a PDF page or the end of an online article. The superscript symbol can be specified by the value of the @callout attribute. When no @callout value is specified, footnotes are typically numbered.

#### Use-by-reference footnote

Nothing is rendered at the location of the <fn> element. The content of a use-by-reference footnote is only rendered when it is referenced by an <xref> with the @type attribute set to "fn". If an <xref> with the @type attribute set to "fn" is present, a superscript symbol is rendered at the location of the <xref> element. Unless conref is used, the <fn> and <xref> must be located in the same topic.

However, the details of footnote processing and formatting are implementation dependent. For example, a tool that renders DITA as PDF might lack support for the @callout attribute, or footnotes might be collected as end notes for certain types of publications.

### Attributes

The following attributes are available on this element: and the attribute defined below.

#### @callout

Specifies the character that is used for the footnote link, for example, a number or an alphabetical character. The attribute also can specify a short string of characters.

### Examples

The following code sample shows a single-use footnote. It contains a simple <fn> element, with no @id or @callout attribute.

```
The memory storage capacity of the computer is
```

```
2 GB<fn>A GB (gigabyte) is equal to
1000 million bytes</fn> with error correcting support.
```

When rendered, typically a superscript symbol is placed at the location of the `<fn>` element; this superscript symbol is hyperlinked to the content of the `<fn>`, which is typically placed at the bottom of a PDF page or the end of an online article. The type of symbol used is implementation specific.

The above code sample might produce output similar to the following:

The memory storage capacity of the computer is 2 GB<sup>1</sup> with error correcting support.

.....

<sup>1</sup> A GB (gigabyte) is equal to 1000 million bytes

----- [bottom of page] -----

### Figure 6: Example of a single-use footnote

The following code sample shows a single-use footnote that uses a `@callout` attribute:

```
The memory storage capacity of the computer is
2 GB<fn callout="#">A GB (gigabyte) is equal to
1000 million bytes</fn> with error correcting support.
```

The rendered output is similar to that of the previous example, although processors that support it will render the footnote symbol as # (hashtag).

### Figure 7: Example of a single-use footnote with a `@callout` attribute

The following code sample shows use-by-reference footnotes. The `<fn>` elements have `@id` attributes, and inline `<xref>` elements reference those `<fn>` elements:

```
<fn id="dog-name">Fido</fn>
<fn id="cat-name">Puss</fn>
<fn id="llama-name">My llama</fn>
...
<p>I like pets. At my house, I have a dog<xref href="#topic/dog-name"
  type="fn"/>, a
cat<xref href="#topic/cat-name" type="fn"/>, and a
llama<xref href="#topic/llama-name" type="fn"/>.</p>
```

The code sample might produce output similar to the following:

.....

I like pets. At my house, I have a dog<sup>1</sup>, a cat<sup>2</sup>, and a llama<sup>3</sup>.

.....

<sup>1</sup>Fido

<sup>2</sup>Puss

<sup>3</sup>My llama

----- [bottom of page] -----

### Figure 8: Example of a use-by-reference footnote

The following code sample shows footnotes stored in a shared topic (`footnotes.dita`):

```
<!-- Content from footnotes.dita -->
<topic id="footnotes">
...
  <fn id="strunk">Elements of Style</fn>
```

```
<fn id="DQTI">Developing Quality Technical Information, 2nd edition</fn>
...
</topic>
```

To use those footnotes, authors conref them into the relevant topics:

```
<p>See the online resource<fn conref="footnotes.dita#footnotes/DQTI"/> for
more
  information about how to assess the quality of technical
documentation ...</p>
```

### Figure 9: Example of a single-use footnote that uses conref

The following code sample shows a use-by-reference footnote that uses conref:

```
<topic id="evaluating-quality">
  <title>Evaluating documentation quality</title>
  <body>
    ...
    <fn conref="footnotes.dita#footnotes/DQTI" id="dqti"/>
    ...
    <p>See the online resource<xref="./evaluating-quality/dqti" type="fn"/>
for more
  information about how to assess the quality of technical
documentation ...</p>
    ...
  </body>
</topic>
```

### Figure 10: Example of a use-by-reference footnote that uses conref

## <i>

Italic text is a way to emphasize the key points in printed text, or whenn quoting a speaker, a way to show which words the speaker stressed.

### Specialization hierarchy

The <i> element is specialized from <ph>. It is defined in the highlighting-domain module.

### Attributes

The following attributes are available on this element: .

### Example

The following code sample shows italic highlighting that is used to emphasize the importance of unplugging the unit before using the screwdriver:

```
<p>Unplug the unit <i>before</i> placing the metal screwdriver
against the terminal screw.</p>
```

## <image>

---

An image is a reference to artwork that is stored outside of the content.

### Rendering expectations

The image addressed by the @keyref or @href attribute on <image> typically is rendered in the main flow of the content.

Processors *SHOULD* scale images when values are provided for the @height and @width attributes. The following expectations apply:

- If a height value is specified and no width value is specified, processors *SHOULD* scale the width by the same factor as the height.
- If a width value is specified and no height value is specified, processors *SHOULD* scale the height by the same factor as the width.
- If both a height value and width value are specified, implementations *MAY* ignore one of the two values when they are unable to scale to each direction using different factors.

### Attributes

The following attributes are available on this element: [Universal attribute group](#), @keyref, and the attributes defined below.

|                |   |
|----------------|---|
| <b>@href</b>   | Provides a reference to the image. See <a href="#">for detailed information on supported values and processing implications</a> .   |
| <b>@scope</b>  | Identifies the closeness of the relationship between the current document and the target resource. Allowable values are local, peer, external, and -dita-use-conref-target. See <a href="#">for more information on values</a> .  |
| <b>@format</b> | Identifies the format of the resource that is referenced. See <a href="#">The format attribute</a> for details on supported values.   |
| <b>@height</b> | Indicates the vertical dimension for the resulting image display. The value of this attribute is a real number (expressed in decimal notation) optionally followed by a unit of measure from the set of pc, pt, px, in, cm, mm, em (picas, points, pixels, inches, centimeters, millimeters, and ems respectively). The default unit is px (pixels). Possible values include: "5", "5in", and "10.5cm".   |
| <b>@width</b>  | Indicates the horizontal dimension for the resulting image display. The value of this attribute is a real number (expressed in decimal notation) optionally followed by a unit of measure from the set of pc, pt, px, in, cm, mm, em (picas, points, pixels, inches, centimeters, millimeters, and ems respectively). The default unit is px (pixels). Possible values include: "5", "5in", and "10.5cm". |
| <b>@align</b>  | Controls the horizontal alignment of an image when placement is specified as "break". Common values include left, right, and center.  |
| <b>@scale</b>  | Specifies a percentage as an unsigned integer by which to scale the image in the absence of any specified image height or width; a value of 100 implies that the image should be presented at its intrinsic size. If a value has  |

been specified for the @height or @width attribute (or both), the @scale attribute is ignored.

It is an error if the value of this attribute is not an unsigned integer. In this case, the implementation might give an error message and might recover by ignoring this attribute.

#### @scalefit

Allows an image to be scaled up or down to fit within available space. Allowable values are yes, no, and -dita-use-conref-target. If, for a given image, any one of @height, @width, or @scale is specified, those attributes determine the graphic size, and any setting of @scalefit is ignored. If none of those attributes are specified and scalefit="yes", then the image is scaled (the same factor in both dimensions) so that the graphic will just fit within the available height or width (whichever is more constraining).

The available width would be the prevailing column (or table cell) width - that is, the width a paragraph of text would have if the graphic were a paragraph instead. The available height is implementation dependent, but if feasible, it is suggested to be the page (or table cell) height or some other reasonable value.

#### @placement

Indicates whether an image is displayed inline or on a separate line. The default value is inline. Allowable values are: inline, break, or and -dita-use-conref-target.

### Example

The following code sample shows how an image is referenced. The @placement attribute is set to "break"; this ensures that the image is not rendered inline.

```
<image href="bike.gif" placement="break">
  <alt>Two-wheeled bicycle</alt>
</image>
```

## <keydef>

---

The key definition convenience element provides a simple way to define a key without making the definition itself a part of rendered content. As with any key definition, the resource will still be rendered when the key is referenced.

### Usage information

The <keydef> element is a convenience element. Anything that the <keydef> element does can also be accomplished with a <topicref> element. Attributes defaulted on the <keydef> element ensure that key definitions do not appear in the TOC, do not add extra links, and are not rendered as topics .

### Specialization hierarchy

The <keydef> element is specialized from <topicref>. It is defined in the mapgroup-domain module.

### Attributes

The following attributes are available on this element: [Universal attribute group](#), [Link relationship attribute group](#) (with a narrowed definition of @href, given below), [Attributes common to many map elements](#) (with a narrowed



definition of `@processing-role`, given below), [Topicref element attributes group](#), `@keyref`, and the attributes defined below.

|                         |  |
|-------------------------|--|
| <b>@keys (REQUIRED)</b> | Defines a key and is required. Otherwise, the attribute is the same as that described in <a href="#">The keys attribute</a> .  |
| <b>@href</b>            | Points to the resource that is represented by the <code>&lt;topicref&gt;</code> . See <a href="#">for detailed information on supported values and processing implications</a> . References to DITA content cannot be below the topic level: that is, you cannot reference individual elements inside a topic. References to content other than DITA topics should use the <code>@format</code> attribute to identify the kind of resource being referenced. |
| <b>@processing-role</b> | Defines how the the default value for <code>@processing-role</code> is "resource-only". Otherwise, the definition matches the one found in <a href="#">. </a>  |

### Example

The following code sample shows several different types of key definitions:

```
<map>
  <title>Possible keys for use in the DITA specification</title>

  <keydef keys="dita-tc" scope="external" format="html"
    href="https://www.oasis-open.org/committees/tc_home.php?
wg_abbrev=dita">
    <topicmeta><linktext>DITA Technical Committee</linktext></topicmeta>
  </keydef>

  <keydef keys="addressing" href="dita-addressing.dita"/>

  <keydef keys="dita-version">
    <topicmeta><linktext>2.0</linktext></topicmeta>
  </keydef>

</map>
```

1. The first `<keydef>` defines a key that links to a Web page. It contains link text; it also specifies the necessary `@scope` and `@format` attributes, so that authors do not need to include them when they reference this key.
2. The second `<keydef>` defines a key for a local DITA topic about addressing in DITA; that topic is available to resolve link text.
3. The third `<keydef>` defines a text-only key that specifies the current DITA version number.

## <li>

---

A list item is an item in either an ordered or unordered list.

### Attributes

The following attributes are available on this element: .

### Example

See [ol](#) on page 22 or [ul](#) on page 31

## <linktext>

Link text is the label for a link or resource.

### Usage information

For links to local DITA topics, the text of a link typically can be resolved during processing. Use the <linktext> element only when the target cannot be reached, such as when it is a peer or external link, or when the target is local but not in DITA format. When used inside of a <link> element inside a topic, <linktext> is used as the text for the specified link; when used within a map, <linktext> is used as the text for generated links that refer to the specified topic.

### Attributes

The following attributes are available on this element: .

### Examples

See [keydef](#) on page 16 for an example of <linktext> used with key definitions.

#### Figure 11: Link text with key definitions

The following code sample shows a <linktext> element used in a relationship table. The generated link from `maintenance.dita` to `installation.dita` will use the specified link text, while the link from `installation.dita` to `maintenance.dita` will use link text based on the title of the topic.

```
<map>
  <title>Relationship map</title>
  <reltable>
    <relrow>
      <relcell>
        <topicref href="installation.dita">
          <topicmeta>
            <linktext>Initial set-up information</linktext>
          </topicmeta>
        </topicref>
      </relcell>
      <relcell>
        <topicref href="maintenance.dita"/>
      </relcell>
    </relrow>
  </reltable>
</map>
```

#### Figure 12: Link text in a map

The following code sample shows a <linktext> element used within a topic to provide text for a related link to a non-DITA resource:

```
<related-links>
  <link href="SQLJ-example.html" format="html" scope="local">
    <linktext>Accessing relational data with SQLJ</linktext>
  </link>
</related-links>
```

#### Figure 13: Link text within a topic

## <map>

---

A DITA map is the mechanism for aggregating topics. It consists of references to topics, maps, and other resources; these references are organized into hierarchies, groups, and tables.

### Usage information

A map describes the relationships among a set of DITA topics. The following are types of relationships that can be described in a map:

|                     |   |
|---------------------|---|
| <b>Hierarchical</b> | Nested topics create a hierarchical relationship. The topic that does the nesting is the parent, and the topics that are nested are the children. |
| <b>Ordered</b>      | Child topics can be labeled as having an ordered relationship, which means they are referenced in a definite sequence.                            |
| <b>Family</b>       | Child topics can be labeled as having a family relationship, which means they all refer to each other.  |

### Rendering expectations

When rendering a map, processors might make use of the relationships defined in the map to create a Table of Contents (TOC), aggregate topics into a PDF document, or create links between topics in the output.

The <title> element can be used to provide a title for the map. In some scenarios the title is purely informational; it is present only as an aid to the author. In other scenarios, the title might be useful or even required. In a map referenced by another map, the title might be discarded as topics from the submap are aggregated into a larger publication.

### Attributes

The following attributes are available on this element: (with a narrowed definition of @id, given below), , , and the attributes defined below. This element also uses @type, @scope, and @format from .

|                   |  |
|-------------------|--|
| <b>@id</b>        | Allows an ID to be specified for the map. Note that maps do not require IDs (unlike topics), and the map ID is not included in references to elements within a map. This attribute is defined with the XML Data Type ID.   |
| <b>@anchorref</b> | Identifies a location within another map document where this map will be anchored. Resolution of the map is deferred until the final step in the delivery of any rendered content. For example, anchorref="map1.ditamap#a1" allows the map with @anchorref to be pulled into the location of the anchor point "a1" inside map1.ditamap when map1.ditamap is rendered for delivery. |

### Example

The following code sample contains six <topicref> elements. The <topicref> elements are nested and have a hierarchical relationship. The file bats.dita is the parent topic and the other topics are its children. The hierarchy could be used to generate a PDF, a navigation pane in an information center, a summary of the topics, or related links between the parent topic and its children.

```
<map id="mybats">
  <title>Bats</title>
```

```

<topicref href="bats.dita">
  <topicref href="batcaring.dita"/>
  <topicref href="batfeeding.dita"/>
  <topicref href="batsonar.dita"/>
  <topicref href="batguano.dita"/>
  <topicref href="bathistory.dita"/>
</topicref>
</map>

```

## <navtitle>

---

A navigation title is an alternate title for a resource; this alternate title is optimized for situations where the topic title is unsuitable for use in a table of contents or navigation pane.

### Usage information

Navigation titles can be used in both topics and maps. When used in maps, a navigation title can serve as an alternate title or simply as an aid to understanding the DITA map.

Because the <navtitle> element is available within <topicmeta>, a <navtitle> element might occur in contexts where a navigation title does not make sense, for example, on a <topicgroup> element. In those situations, the <navtitle> element has no defined purpose.

### Processing expectations

When the <navtitle> element is used in a topic, processors *SHOULD* use the contents of the element to generate the navigation title.

When the <navtitle> element is used in a map, processors *SHOULD* retrieve the navigation title in the following order:

1. From the content of a <navtitle> element in the map, if the containing <topicref> element sets the value of the @locktitle attribute to "yes"
2. From the contents of a <navtitle> element in the referenced topic
3. From the title of the referenced topic

### Attributes

The following attributes are available on this element: [Universal attribute group](#).

### Examples

The following code sample shows a <navtitle> element used in a topic. The <navtitle> element contains a shorter title that processors render in a TOC or navigation pane when the topic is published.

```

<task id="publishing-dita">
  <title>Publishing a DITA information set in PDF</title>
  <titlealts>
    <navtitle>Publishing in PDF</navtitle>
  </titlealts>
  <shortdesc>You can quickly publish your DITA information to PDF.
</shortdesc>
  <!-- ... -->
</task>

```

**Figure 14: <navtitle> in a topic**

The following code sample shows <navtitle> elements used in a DITA map. The first <navtitle> is not locked; its content simply serves to indicate information about the content of the referenced DITA topic. When the DITA map is published, the navigation title is retrieved from GUID-gibberish.dita. However, the second

`<navtitle>` is locked, so when the DITA map is published, processors render “Publishing to ePub” as the navigation title.

```
<map xml:lang="en">
  <title>Publishing a DITA information set</title>
  <topicref href="GUID-gibberish.dita">
    <topicmeta>
      <navtitle>Publishing to PDF</navtitle>
    </topicmeta>
  </topicref>
  <topicref href="publishing-ePub.dita" locktitle="yes">
    <topicmeta>
      <navtitle>Publishing to ePub</navtitle>
    </topicmeta>
  </topicref>
</map>
```

**Figure 15: `<navtitle>` in a map**

## `<note>`

---

A note contains information that expands on or calls attention to a particular point.

### Usage information

Variant types of `<note>` (tip, caution, danger, restriction, etc.) can be indicated through values selected on the `@type` attribute.

### Attributes

The following attributes are available on this element: , , and the attributes defined below.

#### `@type`

Defines the type of a note. For example, if the note is a tip, the word **Tip** might be used to draw the reader's attention to it. Note that this differs from the `@type` attribute on many other DITA elements. See for detailed information on supported values and processing implications. Available values are note, tip, fastpath, restriction, important, remember, attention, caution, notice, danger, warning, trouble, other, and -dita-use-conref-target.

#### `@othertype`

Indicates an alternate note type, when the type is not available in the `@type` attribute value list. This value is used as the user-provided note title when the `@type` attribute value is set to "other".

### Example

The following code sample shows a `<note>` with `@type` set to "tip":

```
<note type="tip">Thinking of a seashore, green meadow, or cool
mountain overlook can help you to relax and be more
patient.</note>
```

## <ol>

---

An ordered list is a list of items that are sorted by sequence or order of importance.

### Attributes

The following attributes are available on this element: [Universal attribute group](#), [compact](#), and [spectitle](#).

### Example

The following code sample shows the use of an ordered list:

```
<p>Here are Rotten Tomatoes' five best movies of all time:</p>
<ol>
  <li>The Wizard of Oz (1939)</li>
  <li>Citizen Kane (1941)</li>
  <li>Get Out (2017)</li>
  <li>The Third Man (1949)</li>
  <li>Mad Max: Fury Road (2015)</li>
</ol>
```

## <p>

---

A paragraph is a single unit of text that contains a main idea.

### Attributes

The following attributes are available on this element: .

### Example

The following code sample contains a paragraph:

```
<p>A paragraph is a group of related sentences that support a central
idea. Paragraphs typically consist of three parts: a topic sentence, body
sentences,
and a concluding or bridging sentence.</p>
```

## <ph>

---

A phrase is a small group of words that stand together as a unit, typically forming a component of a clause.

### Usage information

The <ph> element often is used to enclose a phrase for reuse or conditional processing.

The <ph> element frequently is used as a specialization base, to create phrase-level markup that can provide additional semantic meaning or trigger specific processing or formatting. For example, all highlighting domain elements are specializations of <ph>.

### Attributes

The following attributes are available on this element: [and](#) and [@keyref](#).

## Example

The following code sample shows `<ph>` elements that are used for conditional processing:

```
<p>The Style menu is the <ph product="Software1000"/>third item</ph>
<ph product="Software9000"/>fourth item</ph> from the left on the menu
bar.</p>
```

## <pre>

---

Preformatted text is text that contains line breaks and spaces that are intended to be preserved at publication time.

### Rendering expectations

Processors *SHOULD* preserve line the breaks and spaces that are present in a `<pre>` element.

### Attributes

The following attributes are available on this element: , , , and .

### Example

The following code sample shows preformatted text that contains white space and line breaks. When the following code sample is published, the white space and line breaks are preserved.

```
<pre>
    MEMO: programming team fun day
Remember to bring a kite, softball glove, or other favorite
outdoor accessory to tomorrow's fun day outing at Zilker Park.
Volunteers needed for the dunking booth.
</pre>
```

## <prolog>

---

The prolog contains metadata about the topic, for example, author information or subject category.

### Attributes

The following attributes are available on this element: .

### Example

The following code sample shows a `<prolog>` element that contains common metadata items:

```
<prolog>
  <author>Paul Norman</author>
  <copyright>
    <copyyear year="1930"/>
    <copyrholder>Paul Norman</copyrholder>
  </copyright>
</prolog>
```

## <section>

---

A section is an organizational division in a topic. Sections are used to organize subsets of information that are directly related to the topic; they can have titles.

### Usage information

Multiple <section> elements within a single topic do not represent a hierarchy, but rather peer divisions of that topic. Sections cannot be nested.

**Note:** For maximum flexibility in creating specialization, sections allow plain text as well as phrase and block level elements. Because of the way XML grammars are defined within a DTD, any element that allows plain text cannot restrict the order or frequency of other elements. As a result, the <section> element allows <title> to appear anywhere as a child of <section>. However, the intent of the specification is that <title> should only be used once in any <section>, and when used, it should precede any other text or element content.

### Rendering expectations

Processors *SHOULD* treat the presence of more than one <title> element in a <section> element as an error.

### Attributes

The following attributes are available on this element: and .

### Example

The following code sample shows how element-reference topics in the DITA specification use titled sections to provide a consistent structure for grouping information:

```
<reference id="sub" xml:lang="en-us">
  <title>p</title>
  <shortdesc conkeyref="library-short-descriptions/p"/>
  <refbody>
    <section><title>Usage information</title>
      <p>...</p>
    </section>
    <section><title>Formatting expectations</title>
      <p>...</p>
    </section>
    <section><title>Processing expectations</title>
      <p>...</p>
    </section>
    <section><title>Specialization hierarchy</title>
      <p>...</p>
    </section>
    <section><title>Attributes</title>
      <p>...</p>
    </section>
    <example><title>Example</title>
      <p>...</p>
    </example>
  </refbody>
</reference>
```



## <shortdesc>

---

A short description describes the purpose or main point of a topic.

### Usage information

When present in topics, the content of the <shortdesc> element is the first paragraph of the topic. It also is used for link previews and search results.

When present in maps, the <shortdesc> element is associated with <topicref> elements. This enables map authors to accomplish the following goals:

- Associate a short description with a non-DITA object.
- Provide a short description that is specific to the map context and used for link previews.
- Override the short description located in the associated DITA topic, when the @copy-to attribute is specified. Processors might not implement this behavior.

When a <shortdesc> element applies to an entire DITA map, it serves as description only.

### Rendering expectations

Processors *SHOULD* render the content of the <shortdesc> element as the initial paragraph of the topic.

When processors generate link previews that are based on the map context, they *SHOULD* use the content of the <shortdesc> that is located in the map rather than the <shortdesc> that is located in the DITA topic. However, processors *SHOULD* use the content of the <shortdesc> element in the DITA topic when they render the topic itself, unless the @copy-to attribute is specified on the topic reference to the element.

### Attributes

The following attributes are available on this element: .

### Examples

The following code sample shows how a <shortdesc> element can be used in a topic:

```
<topic id="concept">
  <title>Introduction to bird calling</title>
  <shortdesc>If you want to attract more birds to your Acme Bird Feeder,
  learn the art of bird calling. Bird calling is an efficient way
  to alert more birds to the presence of your bird feeder.</shortdesc>
  <body>
    <p>Bird calling requires learning:</p>
    <ul>
      <li>Popular and classical bird songs</li>
      <li>How to whistle like a bird</li>
    </ul>
  </body>
</topic>
```

**Figure 16: Short description in a topic**

The following code sample shows how a short description can be used in a DITA map to provide information about a non-DITA resource. The content of the <shortdesc> element is used when a link preview to the Web site for the American Birding Association is generated.

```
<map>
  <title>Enjoying birds</title>
  ...
  <topicref href="birds-in-colorado.dita"/>
  <topicref href="bird-calling.dita"/>
```

```

    <topicref href="https://www.birding.example.com/" format="external"
    type="html">
      <topicmeta>
        <shortdesc>The American Birding Association is only organization
        in North America that specifically caters to recreational birders.
        Its mission is to "inspire all people to enjoy and protect wild
birds."
      </topicmeta>
    </topicref>
    ...
</map>

```

**Figure 17: Short description in a map**

## <simpletable>

---

Simple tables are tables that are regular in structure and do not need a caption.

### Usage information

Choose the `<simpletable>` element when you want to show information in regular rows and columns. For example, multi-column tabular data such as phone directory listings or parts lists are good candidates for `<simpletable>`. Another good use of `<simpletable>` is for information that seems to beg for a three-part definition list; the `@keycol` attribute can be used to indicate which column represents the "key" or term-like column of the structure.

The `@keycol` attribute indicates which column represents the "key" or term-like column of the structure.

The close match of `<simpletable>` to tabular, regular data makes `<simpletable>` suitable as the basis for specialized structures such as `<properties>` (for programming information) and choice tables (for tasks).

### Attributes

The following attributes are available on this element: `,` `,` `,` and `.`

### Examples

The following code sample shows a simple table that is used to represent a truth table from Boolean logic:

```

<simpletable>
  <sthead>
    <stentry>P</stentry>
    <stentry>not P</stentry>
  </sthead>
  <strow>
    <stentry>>true</stentry>
    <stentry>>false</stentry>
  </strow>
  <strow>
    <stentry>>false</stentry>
    <stentry>>true</stentry>
  </strow>
</simpletable>

```

**Figure 18: Example of a simple table**

The following code sample shows how the `@keycol` attribute can be used. The value of the `@keycol` attribute specifies that the first column is the header column. This indicates that items in the first column are headers for the row. Rendering of the header column is left up to the implementation.

```

<simpletable keycol="1">

```

```

<sthead>
  <stentry>Term</stentry>
  <stentry>Categorization</stentry>
  <stentry>Definition</stentry>
</sthead>
<strow>
  <stentry>Widget</stentry>
  <stentry>noun</stentry>
  <stentry>Thing that is used for something</stentry>
</strow>
<strow>
  <stentry>Frustration</stentry>
  <stentry>noun</stentry>
  <stentry>What you feel when you drop the widget</stentry>
</strow>
</simpletable>

```

**Figure 19: Example using @keycol**

## <stentry>

---

A simple table entry represents a single cell within a simple table.

### Attributes

The following attributes are available on this element: and .

### Example

See [simpletable](#) on page 26.

## <sthead>

---

A simple table header is an optional header row for a simple table.

### Attributes

The following attributes are available on this element: .

### Example

See [simpletable](#) on page 26.

## <strow>

---

A simple table row is a single row in a simple table.

### Attributes

The following attributes are available on this element: .

### Example

See [simpletable](#) on page 26.

## <sub>

---

A subscript is text that is printed below the line. It is frequently used in chemical and mathematical formulas.

### Specialization hierarchy

The <sub> element is specialized from <ph>. It is defined in the highlighting-domain module.

### Attributes

The following attributes are available on this element: .

### Example

The following code sample shows how the <sub> element is used in a chemical formula:

```
<note>When cleaning, be sure to dilute the baking soda (NaHCO<sub>3</sub>)
with water
(H<sub>2</sub>O) before mixing in the vinegar (CH<sub>3</sub>COOH).</note>
```

## <sup>

---

A superscript is text that is printed above the line. It is frequently used in chemical and mathematical formulas.

### Specialization hierarchy

The <sup> element is specialized from <ph>. It is defined in the highlighting-domain module.

### Attributes

The following attributes are available on this element: .

### Example

The following code sample shows a <sup> element used to ensure proper formatting of the exponent in the number ten to the power of ten:

```
<p>The power produced by the electrohydraulic dam was 10<sup>5</sup> more
than
the older electric plant.</p>
```

## <title>

---

A title is a heading or label for an object. Titles can be associated with topics, maps, sections, examples, figures, tables, and other structures.

### Attributes

The following attributes are available on this element: [Universal attribute group](#) (without the Metadata attribute group), plus @base and @rev from the [Metadata attribute group](#).

### Example

The following code sample shows how titles are used for both the topic and a figure within the topic:

```
<topic id="topicid">
  <title>Monitoring your heart rate with ThisDevice</title>
  <body>
```

```

<!-- ... -->
<fig id="adjust-the-monitor">
  <title>Adjusting your monitor</title>
  <p>If the monitor is not reporting, follow the directions
    in the video to adjust your equipment.</p>
  <!-- ... -->
</fig>
</body>
</topic>

```

## <topic>

---

A topic is a standalone unit of information.

### Attributes

The following attributes are available on this element: (with a narrowed definition of @id, given below) and .

|                       |   |
|-----------------------|---|
| <b>@id (REQUIRED)</b> | Provides an anchor point. This ID is usually required as part of the @href or @conref syntax when cross referencing or reusing content within the topic; it also enables <topicref> elements in DITA maps to optionally reference a specific topic within a DITA document. This attribute is defined with the XML Data Type ID. |
|-----------------------|---|

### Example

The following code sample shows the primary structural components of a topic: title, short description, prolog, body, and related links.

```

<topic id="topic">
  <title>The basic structure of a topic</title>
  <shortdesc/>
  <prolog/>
  <body/>
  <related-links/>
</topic>

```

## <topicmeta>

---

Topic metadata is metadata that applies to a topic based on its context in a map.

### Usage information

The metadata specified in a <topicmeta> element is specific to a given context within a map. If a reference to a single resource appears more than once in a map or set of maps, unique metadata can be specified in each instance. For example, when the parent <topicref> element results in a link, elements within the <topicmeta> element can be used to provide context-specific information about the link, such as link text or a short description.

### Attributes

The following attributes are available on this element: and the attribute defined below.

|                  |  |
|------------------|--|
| <b>@lockmeta</b> | Determines whether the metadata that is specified in the map supplements or overrides the metadata that is specified in the topic. When the @lockmeta attribute is |
|------------------|--|

set to "yes", the topic metadata is overridden. Allowable values are "yes", "no", and .

## Example

The following example shows how the `<topicmeta>` element can contain a navigation title:

```
<map>
  <title>Highlighting domain elements</title>
  <topicref href=sub.dita">
    <topicmeta>
      <navtitle>Subscript</navtitle>
    </topicmeta>
  </topicref>
</map>
```

Because the `@lockmeta` is not specified, if the `sub.dita` topic also contains a navigation title, the navigation title from the topic is used.

## <topicref>

---

A topic reference is the mechanism for referencing a topic (or another resource) from a DITA map. It can nest, which enables the expression of navigation and table-of-content hierarchies, as well as containment hierarchies and parent-child relationships.

### Attributes

The following attributes are available on this element: , (with a narrowed definition of `@href`, given below), , , `@keys`, and `@keyref`.

#### `@href`

Points to the resource that is represented by the `<topicref>`. See for detailed information on supported values and processing implications. References to DITA content cannot be below the topic level: that is, you cannot reference individual elements inside a topic. References to content other than DITA topics should use the `@format` attribute to identify the kind of resource being referenced.

### Example

The following code sample shows a simple map that organizes several topics about the software product `ExampleToolBuilder`. The `<topicref>` that refers to `setup.dita` uses the `@collection-type` attribute to indicate that the order of three sub-topics in that section is important.

```
<map>
  <title>ExampleToolBuilder version 1.2.3</title>
  <topicref href="setup.dita" collection-type="sequence">
    <topicref href="prerequisites.dita"/>
    <topicref href="installing.dita"/>
    <topicref href="validating.dita"/>
  </topicref>
  <topicref href="everyday-use.dita">
    <!-- ... -->
  </topicref>
  <topicref href="troubleshooting.dita">
    <!-- ... -->
  </topicref>
```

```
</map>
```

**Figure 20: Common map hierarchy using `<topicref>` elements**

## `<u>`

---

An underline, also called an underscore, is a line immediately below a portion of text.

### Specialization hierarchy

The `<u>` element is specialized from `<ph>`. It is defined in the highlighting-domain module.

### Attributes

The following attributes are available on this element: .

### Example

The following code sample shows underlining used to provide emphasis in a marketing blurb, without giving any extra meaning to the underlined phrase:

```
<p>Using our patented SuperFast BitSpeed Technology, our product  
will answer all of your questions only a few nanoseconds after you ask!</p>
```

## `<ul>`

---

An unordered list is a list in which the order of items is not significant.

### Attributes

The following attributes are available on this element: [Universal attribute group](#), [compact](#), and [spectitle](#).

### Example

The following code sample shows a list in which the order of items is unimportant:

```
<p>Here are the countries that I have visited:</p>
<ul>
  <li>Germany</li>
  <li>France</li>
  <li>Japan</li>
  <li>Mexico</li>
</ul>
```

## `<xref>`

---

A cross reference is an inline link. A cross reference can link to a different location within the current topic, another topic, a specific location in another topic, or an external resource such as a PDF or Web page.

### Attributes

The following attributes are available on this element: , , and `@keyref`.

## Examples

The following code sample shows a cross reference to another topic; link text is not provided. Processor typically use the topic title as the link text.

```
<p>Background information about DITA is provided in  
<xref href="overview-of-dita.dita"/>.</p>
```

The same cross reference could be created using @keyref instead of @href; using @keyref allows the link to be redirected to different resources when the topic is used in different contexts.

### Figure 21: Cross reference to another topic, without link text

The following code sample shows a cross reference that specifies link text:

```
<p>While this set of tutorials gives several simple examples of  
<xref keyref="markup-examples">common DITA features</xref>, a comprehensive  
list of DITA features is available in the DITA specification  
<xref keyref="dita-conformance">conformance clause</xref>.</p>
```

### Figure 22: Cross references with link text specified

The following code sample shows a cross reference that contains an ampersand:

```
<xref href="https://www.example.com/docview.wss?rs=757&context=SSVNX5"  
scope="external" format="html">Part number SSVNX5</xref>
```

Because the @href attribute value needs to be a valid URI, the ampersand must be escaped, as shown in the revised code sample below:

```
<xref href="https://www.example.com/docview.wss?rs=757&amp;context=SSVNX5"  
scope="external" format="html">Part number SSVNX5</xref>
```

Although the entity is in the DITA source, the entity might not show up when the link target is displayed in an editor or a Web browser; the URI might be shown as the following:

```
https://www.example.com/docview.wss?rs=757&context=SSVNX5
```

### Figure 23: Cross reference to a URI that contains an ampersand



---

# Appendix

# A

---

## Formatting expectations

---

DITA is a standard that supports the creation of human-readable content. Accordingly, DITA defines fundamental document components. Since there is a reasonable expectation that such document components be rendered consistently, we suggest the following formatting conventions.

**Table 1: Formatting expectations for DITA elements**

| Element | Suggested formatting   |
|---------|--|
| <b>     | Apply bold highlighting to the contents of the <b> element.  |
| <dd>    | See <dl>.  |
| <dl>    | Apply the following conventions: <ul style="list-style-type: none"><li>• The term (&lt;dt&gt;) is against the starting margin of the page or column.</li><li>• The description or definition (&lt;dd&gt;) is either indented and on the next line or on the same line after the term.</li><li>• The &lt;dlhead&gt; looks like a table heading row.</li></ul> |
| <dt>    | See <dl>.  |
| <i>     | For Western languages, apply italic highlighting to the contents of the <i> element.   |
| <li>    | Apply the following conventions: <ul style="list-style-type: none"><li>• In ordered lists, list items are indicated by numbers or alphabetical characters.</li><li>• In unordered lists, list items are indicated by bullets or dashes.</li></ul>  |
| <note>  | Render a label for notes. The content of the label depends on the values of the @type attribute. A note typically is formatted in a way that stands out from the surrounding content.  |
| <ol>    | See <li>.  |
| <pre>   | Render the content of a <pre> element in a monospaced font.  |
| <sub>   | Render the contents of the <sub> element lower in relationship to the surrounding text. Subscripted text often is a smaller font than the surrounding text.  |

| <b>Element</b> | <b>Suggested formatting</b>  |
|----------------|--|
| <sup>          | Render the contents of the <sup> element higher in relationship to the surrounding text. Superscript text often is a smaller font than the surrounding text. |
| <u>            | Apply underlining to the contents of the <u> element.  |