

XML Syntax: Documents

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Basic Document Structure

- Element tags
 - Elements have associated attributes
- Text content
- Miscellaneous
 - Encoding, document type declarations
 - Entity references
 - Comments, processing instructions, etc...

Example XML Document (1 of 6)

- XML declaration

```
01  <?xml version='1.0' encoding='Shift_JIS'?>
02  <!DOCTYPE order SYSTEM 'grammar.dtd'>
03  <?xml-stylesheet type='text/xsl' href='style.xsl'?>
04  <order>
05      <item code='BK123'>
06          <name>Care and Feeding of Wombats</name>
07          <price currency='USD'>42.00</price>
08      </item>
09  </order>
```

Example XML Document (2 of 6)

- Document type declaration

```
01 <?xml version='1.0' encoding='Shift_JIS'?>
02 <!DOCTYPE order SYSTEM 'grammar.dtd'>
03 <?xml-stylesheet type='text/xsl' href='style.xsl'?>
04 <order>
05   <item code='BK123'>
06     <name>Care and Feeding of Wombats</name>
07     <price currency='USD'>42.00</price>
08   </item>
09 </order>
```

Example XML Document (3 of 6)

- Processing instructions

```
01 <?xml version='1.0' encoding='Shift_JIS'?>
02 <!DOCTYPE order SYSTEM 'grammar.dtd'>
03 <?xml-stylesheet type='text/xsl' href='style.xsl'?>
04 <order>
05   <item code='BK123'>
06     <name>Care and Feeding of Wombats</name>
07     <price currency='USD'>42.00</price>
08   </item>
09 </order>
```

Example XML Document (4 of 6)

- Element tags

```
01 <?xml version='1.0' encoding='Shift_JIS'?>
02 <!DOCTYPE order SYSTEM 'grammar.dtd'>
03 <?xml-stylesheet type='text/xsl' href='style.xsl'?>
04 <order>
05   <item code='BK123'>
06     <name>Care and Feeding of Wombats</name>
07     <price currency='USD'>42.00</price>
08   </item>
09 </order>
```

Example XML Document (5 of 6)

- Attributes of element tags

```
01 <?xml version='1.0' encoding='Shift_JIS'?>
02 <!DOCTYPE order SYSTEM 'grammar.dtd'>
03 <?xml-stylesheet type='text/xsl' href='style.xsl'?>
04 <order>
05   <item code='BK123'>
06     <name>Care and Feeding of Wombats</name>
07     <price currency='USD'>42.00</price>
08   </item>
09 </order>
```

Example XML Document (6 of 6)

- Text content

```
01 <?xml version='1.0' encoding='Shift_JIS'?>
02 <!DOCTYPE order SYSTEM 'grammar.dtd'>
03 <?xml-stylesheet type='text/xsl' href='style.xsl'?>
04 <order>
05   <item code='BK123'>
06     <name>Care and Feeding of Wombats</name>
07     <price currency='USD'>42.00</price>
08   </item>
09 </order>
```


Differences with HTML

- Elements must be balanced, properly nested
 - e.g. `
` OK
 - e.g. `bold <i> and italic </i> text` OK
 - e.g. `bold <i> and italic text</i>` BAD!
 - e.g. ` list item ` BAD!
- Attributes must be specified, quoted
 - e.g. `` OK
 - e.g. `` BAD!
 - e.g. `<ul compact> list item ` BAD!

Other Important Points

- Documents *must* be well-formed
 - Document contains single root element
 - Elements are balanced and properly nested
 - Attributes are specified and quoted
 - Text content contains legal XML characters
- Documents *may* be valid
 - Document structure and content follows rules specified by grammar (e.g. DTD, XML Schema)

Useful Links

- XML 1.0 Specification
 - <http://www.w3.org/TR/REC-xml>
- Annotated XML 1.0 Specification
 - <http://www.xml.com/axml/testaxml.htm>
- Informational web sites
 - <http://www.xml.com/>
 - <http://www.xmlhack.com/>

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