

# Introduction To XPath

# XPath

**XSLT uses XPath (a W3C spec) to address and locate parts of XML.**

# XPath

XPath uses the term **node** to refer to any part of the XML document. To begin an XPath search, you will first define a starting point. There are two possibilities.

1) The document root is specified with `"/`. If you want to match the document root, using XPath, declare:

```
<xsl:template match="/">
```

2) To begin from another node of the document, the starting node is called the context node.

There are two possibilities to define the location path:

# XPath

**First, an absolute path, for when you start from the document root, as in:**

**`/company/name`**

**which reads, the select node name, is a child of company, which is a child of document root.**

**`//flight`**

**selects all `flight` elements in the document.**

**NOTE: this can be time consuming, especially with large documents, because the XSLT processor must search the entire document.**

# XPath

**Second, using context node, removes the sign "/" for document roots such as:**

**`location`**

**which reads, all elements will be selected which are children of `location`, which is a child of the context node.**

**The expression:**

**`location/temperature`**

**selects all `temperature` elements that are children of `location`, which is a child of the context node.**

# XPath

**XPath allows selection of attributes using the @ sign in front of an attribute name.**

**//@color**

**selects any attribute in the XML document, with the name color**

**@color**

**selects attributes with the name color, from the context node.**

# XPath

**With XPath, you can also use a more specific location path to satisfy conditions. This more specific selection takes place using [ ].**

**`flight [ company ]`**

**selects all `flight` elements which are children of the context node and have `company` as a child element.**

**`flight [ @status ]`**

**selects all `flight` elements which are children of the context node and have a `status` attribute.**

**`flight [ company=' AirFrance ' ]`**

**selects all `flight` elements which are children of the context node and which have a child, `company`, with a value, `AirFrance`.**

# Node Functions

**name ()** returns the name of the node.

**processing-instruction** returns the contents of a PI

**comment ()** returns the text in the comment element.

**text ()** returns the content of an XML element.

**position ()** -defines the position of the node in the node set.

**last ()** -returns the position of the last node in the node set.

**count ()** -returns the number of node elements with a specified name

# XSLT and XPath

To transform an XML document to an XHTML document, using XSLT:

1) write XSLT code to transform the XML document. Save the file as `.xsl`

2) to reference the XML source document add:

```
<?xml-stylesheet type="text/xsl"
```

```
href="fileName.xsl"?>
```

3) Use Xpath to get to the right parts of the document

4) Use XSLT to transform