

XSLT and XPath Quick Reference

XSLT Functions [§12, §15]

node-set **document**(*object*, *node-set*?)

node-set **key**(*string*, *object*)

string **format-number**(*number*, *string*, *string*?)

node-set **current**()

string **unparsed-entity-uri**(*string*)

string **generate-id**(*node-set*?)

object **system-property**(*string*)

boolean **element-available**(*string*)

boolean **function-available**(*string*)

Node Types [XPath §5]

Root Processing Instruction

Element Comment

Attribute Text

Namespace

Object Types [§11.1, XPath §1]

boolean True or false

number Floating-point number

string UCS characters

node-set Set of nodes selected by a path

Result tree XSLT only. Fragment of the result tree
fragment

Expression Context [§4, XPath §1]

Context node (a node)

Context position (a number)

Context size (a number)

Variable bindings in scope

Namespace declarations in scope

Function library

Built-in Template Rules [§5.8]

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

```
  <xsl:apply-templates/>
```

```
</xsl:template>
```

```
<xsl:template match="*/" mode="m">
```

```
  <xsl:apply-templates mode="m"/>
```

```
</xsl:template>
```

```
<xsl:template match="text()|@*">
```

```
  <xsl:value-of select="."/>
```

```
</xsl:template>
```

```
<xsl:template
```

```
  match="processing-instruction()|comment()"/>
```

Built-in template rule for namespaces is to do nothing

XSLT Elements

Stylesheet Element [§2.2]

```
<xsl:stylesheet version="1.0" id="id"
  extension-element-prefixes="tokens"
  exclude-result-prefixes="tokens"
  xmlns:xsl="http://www.w3.org/1999/XSL/
  Transform">
  xsl:import*, top-level elements
</xsl:stylesheet>
```

xsl:transform is a synonym for xsl:stylesheet

Combining Stylesheets [§2.6]

```
<xsl:include href="uri-reference"/>
<xsl:import href="uri-reference"/>
```

Whitespace Stripping [§3.4]

```
<xsl:strip-space elements="tokens"/>
<xsl:preserve-space elements="tokens"/>
```

Defining Template Rules [§5.3]

```
<xsl:template match="pattern" name="qname"
  priority="number" mode="qname">
  xsl:param* followed by text, literal result elements
  and/or XSL elements </xsl:template>
```

Applying Template Rules [§5.4]

```
<xsl:apply-templates select="node-set-exp"
  mode="qname"/>
<xsl:apply-templates select="node-set-exp"
  mode="qname">
  (xsl:sort | xsl:with-param)* </xsl:apply-templates>
```

Overriding Template Rules [§5.6]

```
<xsl:apply-imports/>
```

Named Templates [§6]

```
<xsl:call-template name="qname"/>
<xsl:call-template name="qname">
  xsl:with-param* </xsl:call-template>
```

Namespace Alias [§7.1.1]

```
<xsl:namespace-alias result-prefix="prefix"#default"
  stylesheet-prefix="prefix"#default"/>
```

Creating Elements [§7.1.2]

```
<xsl:element name="{qname}"
  namespace="{uri-reference}"
  use-attribute-sets="qnames">...</xsl:element>
```

Creating Attributes [§7.1.3]

```
<xsl:attribute name="{qname}"
  namespace="{uri-reference}">...</xsl:attribute>
```

Named Attribute Sets [§7.1.4]

```
<xsl:attribute-set name="qname"
  use-attribute-sets="qnames">
  xsl:attribute* </xsl:attribute-set>
```

Creating Text [§7.2]

```
<xsl:text disable-output-escaping="yes|no">
  #PCDATA </xsl:text>
```

Processing Instructions [§7.3]

```
<xsl:processing-instruction name="{ncname}">
  ...</xsl:processing-instruction>
```

Creating Comments [§7.4]

```
<xsl:comment>...</xsl:comment>
```

Copying [§7.5]

```
<xsl:copy use-attribute-sets="qnames">
  ...</xsl:copy>
```

Generating Text [§7.6.1]

```
<xsl:value-of select="string-expr"
  disable-output-escaping="yes|no"/>
```

Attribute Value Templates [§7.6.2]

```
<element attribute="{expr}"/>
```

Numbering [§7.7]

```
<xsl:number level="single|multiple|any"
  count="pattern" from="pattern"
  value="number-expr" format="{string}"
  lang="{nmtoken}"
  letter-value="{alphabetic|traditional}"
  grouping-separator="{char}"
  grouping-size="{number}"/>
```

Repetition [§8]

```
<xsl:for-each select="node-set-expr">
  xsl:sort*, ...</xsl:for-each>
```

Conditional Processing [§9]

```
<xsl:if test="boolean-expr">...</xsl:if>
```

```
<xsl:choose>
```

```
<xsl:when test="expr">...</xsl:when>+
```

```
<xsl:otherwise>...</xsl:otherwise>?
```

```
</xsl:choose>
```

Sorting [§10]

```
<xsl:sort select="string-expr" lang="{nmtoken}"
  data-type="{text|number|qname-but-not-ncname}" order="{ascending|descending}"
  case-order="{upper-first|lower-first}"/>
```

Variables and Parameters [§11]

```
<xsl:variable name="qname" select="expr"/>
<xsl:variable name="qname">...</xsl:variable>

<xsl:param name="qname" select="expr"/>
<xsl:param name="qname">...</xsl:param>
```

Using Values [§11.3]

```
<xsl:copy-of select="expr"/>
```

Passing Parameters [§11.6]

```
<xsl:with-param name="expr" select="expr"/>
<xsl:with-param name="expr">...</xsl:with-param>
```

Keys [§12.2]

```
<xsl:key name="qname" match="pattern"
  use="expr"/>
```

Number Formatting [§12.3]

```
<xsl:decimal-format name="qname"
  decimal-separator="char"
  grouping-separator="char" infinity="string"
  minus-sign="char" NaN="string"
  percent="char" per-mille="char"
  zero-digit="char" digit="char"
  pattern-separator="char"/>
```

Messages [§13]

```
<xsl:message terminate="yes|no">
  ...</xsl:message>
```

Fallback [§15]

```
<xsl:fallback>...</xsl:fallback>
```

Output [§16]

```
<xsl:output
  method="xml|html|text|qname-but-not-ncname"
  version="nmtoken" encoding="string"
  omit-xml-declaration="yes|no"
  doctype-public="string" doctype-system="string"
  standalone="yes|no" indent="yes|no"
  cdata-section-elements="qnames"
  media-type="string"/>
```

Key

xsl:stylesheet	Element
version=	Required attribute
version=	Optional attribute
{ <i>expr</i> }	Attribute value template. Text between any { and } is evaluated as an expression. Attribute value must evaluate to indicated attribute type.
...	Anything allowed in a template
	Separates alternative values
?	Zero or one occurrences
*	Zero or more occurrences
+	One or more occurrences
#PCDATA	Character data

Attribute Value Types

1.0	Literal value
<i>boolean-expr</i>	Expression returning boolean value
<i>char</i>	Single character
<i>expr</i>	Expression
<i>id</i>	XML name used as identifier
<i>ncname</i>	XML name not containing a colon (:)
<i>node-set-expr</i>	Expression returning a node set
<i>number-expr</i>	Expression returning a number
<i>pattern</i>	XSLT pattern
<i>prefix</i>	Namespace prefix
<i>qname</i>	Namespace-qualified XML name comprising local part and optional prefix
<i>qname-but-not-ncname</i>	Namespace-qualified name comprising local part and prefix
<i>token</i>	Meaning varies with context. See Rec.
<i>uri-reference</i>	Reference to Universal Resource Identifier

Location Paths [XPath §2]

Optional ‘/’, zero or more **location steps**, separated by ‘/’

Location Steps [XPath §2.1]

Axis specifier, **node test**, zero or more **predicates**

Axis Specifiers [XPath §2.2]

ancestor::	following-sibling::
ancestor-or-self::	namespace::
attribute::	parent::
child::	preceding::
descendant::	preceding-sibling::
descendant-or-self::	self::
following::	

Node Tests [XPath §2.3]

<i>name</i>	node()
<i>prefix:name</i>	text()
*	comment()
<i>prefix:*</i>	processing-instruction()
	processing-instruction(<i>literal</i>)

Abbreviated Syntax for Location Paths

(nothing)	child::
@	attribute::
//	/descendant-or-self::node()/
.	self::node()
..	parent::node()
/	Node tree root

Predicate [XPath §2.4]

[*expr*]

Variable Reference [XPath §3.7]

\$qname

Literal Result Elements [§7.1.1]

Any element not in the xsl: namespace and not an extension element

XSLT

<http://www.w3.org/TR/xslt>

XPath

<http://www.w3.org/TR/xpath>

XPath Operators

Parentheses may be used for grouping.

Node-sets [XPath §3.3]

| [*expr*] / //

Booleans [XPath §3.4]

<=, <, >=, > =, != and or

Numbers [XPath §3.5]

-*expr* *, div, mod +, -

XPath Core Function Library

Node Set Functions [XPath §4.1]

number last()
number position()
number count(*node-set*)
node-set id(*object*)
string local-name(*node-set*?)
string namespace-uri(*node-set*?)
string name(*node-set*?)

String Functions [XPath §4.2]

string string(*object*?)
string concat(*string*, *string*, *string**)
boolean starts-with(*string*, *string*)
boolean contains(*string*, *string*)
string substring-before(*string*, *string*)
string substring-after(*string*, *string*)
string substring(*string*, *number*, *number*?)
number string-length(*string*?)
string normalize-space(*string*?)
string translate(*string*, *string*, *string*)

Boolean Functions [XPath §4.3]

boolean boolean(*object*)
boolean not(*object*)
boolean true()
boolean false()
boolean lang(*string*)

Number Functions [XPath §4.4]

number number(*object*?)
number sum(*node-set*)
number floor(*number*)
number ceiling(*number*)
number round(*number*)