

# XPath Cheat Sheet

There's More than One Way to Groom a Cat(alog): Technologies for Data Analysis and Manipulation. OLAC Preconference October 26, 2017

## Node Types

- Element, Attribute, Text, Namespace, Processing-instruction, Comment, Document nodes

## Node Relationships

- Parent, Child, Siblings, Ancestors, Descendants

## Selectors

XPath Expression	Selects
<i>node-name</i>	All nodes with the name <i>node-name</i>
/	Root node
/first-element	Root element
//	Nodes anywhere in the document
.	Current node
..	Parent node
@	Attribute node
*	Any element node
@*	Any element attribute
node()	Any node of any kind
text()	Text node

## Axes

Name	Selects
ancestor	All ancestors (parent, grandparent, etc.) of the current node
ancestor-or-self	All ancestors (parent, grandparent, etc.) of the current node and the current node itself
attribute	All attributes of the current node
child	All children of the current node
descendant	All descendants (children, grandchildren, etc.) of the current node
descendant-or-self	All descendants (children, grandchildren, etc.) of the current node and the current node itself
following	Everything in the document after the closing tag of the current node
following-sibling	All siblings after the current node
namespace	All namespace nodes of the current node
parent	Parent of the current node
preceding	All nodes that appear before the current node in the document, except ancestors, attribute nodes and namespace nodes
preceding-sibling	All siblings before the current node
self	Current node

## Predicates

XPath Expression	Selects
[1]	First element
[last()]	Last element
[position() > 2]	Elements whose positions are greater than 2
[@attribute-name]	Elements that have the attribute <i>attribute-name</i>

## Operators

Operator	Description
	Computes two node-sets
+	Addition
-	Subtraction
*	Multiplication
div	Division
=	Equal
!=	Not equal
<	Less than
<=	Less than or equal to
>	Greater than
>=	Greater than or equal to
or	or
and	and
mod	Modulus (division remainder)

## String Functions

Function	Pattern
substring()	substring( <i>string</i> , <i>start</i> , <i>len</i> ) or substring( <i>string</i> , <i>start</i> )
string-length()	string-length( <i>string</i> )
contains()	contains( <i>string1</i> , <i>string2</i> )
normalize-space()	normalize-space( <i>string</i> )
starts-with()	starts-with( <i>string1</i> , <i>string2</i> )
ends-with()	ends-with( <i>string1</i> , <i>string2</i> )
substring-before()	substring-before( <i>string1</i> , <i>string2</i> )
substring-after()	substring-after( <i>string1</i> , <i>string2</i> )
concat()	concat( <i>string</i> , <i>string</i> ,...)
matches()	matches( <i>string</i> , <i>pattern</i> )
replace()	replace( <i>string</i> , <i>pattern</i> , <i>replace</i> )
tokenize()	tokenize( <i>string</i> , <i>pattern</i> )

Adapted from XPath Tutorial ([https://www.w3schools.com/xml/xpath\\_intro.asp](https://www.w3schools.com/xml/xpath_intro.asp)) by Annie Glerum  
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