XPath Functions

Updated: 1/21/2011
Based on Goldberg, Chapter 4
Common Uses of XPath Functions

- Select a subset of a node set
- Compare values
- Test the position of a node within a node set
- Perform arithmetic using node values
- Round and Format numbers
- Extract substrings
- Translate characters within strings
- Count and total node values

visit [www.w3.org/TR/xpath#corelib](http://www.w3.org/TR/xpath#corelib) to see the complete list
position and last

- `position()` -- returns the position of the current node within a list of nodes
- `last()` – returns the integer position of the last node in a list

Sample usage:

```
  test="position()=last()"
```
Arithmetic

• Add, subtract, multiply, or divide node values
  operators: +, −, *, div, mod
• Sample usage:
  "history/year_built − history/year_destroyed"
Formatting Numbers

• `format-number(value, format-string)`

• Sample usage:

  `format-number(height * 0.3, '#0.0')`

• Format strings:

  0 -- forces a digit to appear.

  # -- suppresses leading zeros.
Rounding Numbers

• Syntax: \( f(expression) \)

• `ceiling` – round up
  – example: ceiling(2.1) returns 3

• `floor` – truncate to integer
  – example: floor(2.9) returns 2

• `round` – round to nearest integer
  – example: round(2.5) returns 3
  – example: round(2.2) returns 2
String Functions

• **substring-after(source,delim)** – returns all characters from source following a delimiter character

• **substring-before(source,delim)** – returns all characters from source in front of a delimiter

• Sample usage:

```
substring-before(location, ',', ')
```
Other String functions

- **contains(str1, str2)** – returns true if str1 contains str2
- **string-length(str)** – returns length of the string; or if there is no parameter, returns the length of the current node value
- **normalize-space(str)** – removes all leading and trailing white space
Translate Characters

• Replaces each character from one string with a corresponding character in a second string
• Syntax: translate(target, st1, st2)
• Sample usage:

```
translate(accountNum, 'abcde', 'ABCDE')
```

(converts letters a-e in the account number to upper case)
Totaling Values

• The sum() function adds up all the values of the nodes in a node set

• Example usage:
  
  \texttt{sum(height)}