|  |
| --- |
| >> 实例 1 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example1.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example2.html) |

基本的XPath语法类似于在一个文件系统中定位文件,如果路径以斜线 / 开始, 那么该路径就表示到一个元素的绝对路径

|  |
| --- |
| **/AAA** |
| 选择根元素AAA |
| **<AAA>            <BBB/>            <CCC/>            <BBB/>            <BBB/>            <DDD>                 <BBB/>            </DDD>            <CCC/>       </AAA>** |

|  |
| --- |
| **/AAA/CCC** |
| 选择AAA的所有CCC子元素 |
| **<AAA>            <BBB/>            <CCC/>            <BBB/>            <BBB/>            <DDD>                 <BBB/>            </DDD>            <CCC/>       </AAA>** |

|  |
| --- |
| **/AAA/DDD/BBB** |
| 选择AAA的子元素DDD的所有子元素 |
| **<AAA>            <BBB/>            <CCC/>            <BBB/>            <BBB/>            <DDD>                 <BBB/>            </DDD>            <CCC/>       </AAA>** |

|  |
| --- |
| >> 实例 2 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example1.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example3.html) |

如果路径以双斜线 // 开头, 则表示选择文档中所有满足双斜线//之后规则的元素(无论层级关系)

|  |
| --- |
| **//BBB** |
| 选择所有BBB元素 |
| **<AAA>            <BBB/>            <CCC/>            <BBB/>            <DDD>                 <BBB/>            </DDD>            <CCC>                 <DDD>                      <BBB/>                      <BBB/>                 </DDD>            </CCC>       </AAA>** |

|  |
| --- |
| **//DDD/BBB** |
| 选择所有父元素是DDD的BBB元素 |
| **<AAA>            <BBB/>            <CCC/>            <BBB/>            <DDD>                 <BBB/>            </DDD>            <CCC>                 <DDD>                      <BBB/>                      <BBB/>                 </DDD>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 3 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example2.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example4.html) |

星号 \* 表示选择所有由星号之前的路径所定位的元素

|  |
| --- |
| **/AAA/CCC/DDD/\*** |
| 选择所有路径依附于/AAA/CCC/DDD的元素 |
| **<AAA>            <XXX>                 <DDD>                      <BBB/>                      <BBB/>                      <EEE/>                      <FFF/>                 </DDD>            </XXX>            <CCC>                 <DDD>                      <BBB/>                      <BBB/>                      <EEE/>                      <FFF/>                 </DDD>            </CCC>            <CCC>                 <BBB>                      <BBB>                           <BBB/>                      </BBB>                 </BBB>            </CCC>       </AAA>** |

|  |
| --- |
| **/\*/\*/\*/BBB** |
| 选择所有的有3个祖先元素的BBB元素 |
| **<AAA>            <XXX>                 <DDD>                      <BBB/>                      <BBB/>                      <EEE/>                      <FFF/>                 </DDD>            </XXX>            <CCC>                 <DDD>                      <BBB/>                      <BBB/>                      <EEE/>                      <FFF/>                 </DDD>            </CCC>            <CCC>                 <BBB>                      <BBB>                           <BBB/>                      </BBB>                 </BBB>            </CCC>       </AAA>** |

|  |
| --- |
| **//\*** |
| 选择所有元素 |
| **<AAA>            <XXX>                 <DDD>                      <BBB/>                      <BBB/>                      <EEE/>                      <FFF/>                 </DDD>            </XXX>            <CCC>                 <DDD>                      <BBB/>                      <BBB/>                      <EEE/>                      <FFF/>                 </DDD>            </CCC>            <CCC>                 <BBB>                      <BBB>                           <BBB/>                      </BBB>                 </BBB>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 4 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example3.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example5.html) |

方块号里的表达式可以进一步的指定元素, 其中数字表示元素在选择集里的位置, 而last()函数则表示选择集中的最后一个元素.

|  |
| --- |
| **/AAA/BBB[1]** |
| 选择AAA的第一个BBB子元素 |
| **<AAA>            <BBB/>            <BBB/>            <BBB/>            <BBB/>       </AAA>** |

|  |
| --- |
| **/AAA/BBB[last()]** |
| 选择AAA的最后一个BBB子元素 |
| **<AAA>            <BBB/>            <BBB/>            <BBB/>            <BBB/>       </AAA>** |

|  |
| --- |
| >> 实例 5 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example4.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example6.html) |

属性通过前缀 @ 来指定

|  |
| --- |
| **//@id** |
| 选择所有的id属性 |
| **<AAA>            <BBB id = "b1"/>            <BBB id = "b2"/>            <BBB name = "bbb"/>            <BBB/>       </AAA>** |

|  |
| --- |
| **//BBB[@id]** |
| 选择有id属性的BBB元素 |
| **<AAA>            <BBB id = "b1"/>            <BBB id = "b2"/>            <BBB name = "bbb"/>            <BBB/>       </AAA>** |

|  |
| --- |
| **//BBB[@name]** |
| 选择有name属性的BBB元素 |
| **<AAA>            <BBB id = "b1"/>            <BBB id = "b2"/>            <BBB name = "bbb"/>            <BBB/>       </AAA>** |

|  |
| --- |
| **//BBB[@\*]** |
| 选择有任意属性的BBB元素 |
| **<AAA>            <BBB id = "b1"/>            <BBB id = "b2"/>            <BBB name = "bbb"/>            <BBB/>       </AAA>** |

|  |
| --- |
| **//BBB[not(@\*)]** |
| 选择没有属性的BBB元素 |
| **<AAA>            <BBB id = "b1"/>            <BBB id = "b2"/>            <BBB name = "bbb"/>            <BBB/>       </AAA>** |

|  |
| --- |
| >> 实例 6 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example5.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example7.html) |

属性的值可以被用来作为选择的准则, normalize-space函数删除了前部和尾部的空格, 并且把连续的空格串替换为一个单一的空格

|  |
| --- |
| **//BBB[@id='b1']** |
| 选择含有属性id且其值为'b1'的BBB元素 |
| **<AAA>            <BBB id = "b1"/>            <BBB name = " bbb "/>            <BBB name = "bbb"/>       </AAA>** |

|  |
| --- |
| **//BBB[@name='bbb']** |
| 选择含有属性name且其值为'bbb'的BBB元素 |
| **<AAA>            <BBB id = "b1"/>            <BBB name = " bbb "/>            <BBB name = "bbb"/>       </AAA>** |

|  |
| --- |
| **//BBB[normalize-space(@name)='bbb']** |
| 选择含有属性name且其值(在用normalize-space函数去掉前后空格后)为'bbb'的BBB元素 |
| **<AAA>            <BBB id = "b1"/>            <BBB name = " bbb "/>            <BBB name = "bbb"/>       </AAA>** |

|  |
| --- |
| >> 实例 7 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example6.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example8.html) |

count()函数可以计数所选元素的个数

|  |
| --- |
| **//\*[count(BBB)=2]** |
| 选择含有2个BBB子元素的元素 |
| **<AAA>            <CCC>                 <BBB/>                 <BBB/>                 <BBB/>            </CCC>            <DDD>                 <BBB/>                 <BBB/>            </DDD>            <EEE>                 <CCC/>                 <DDD/>            </EEE>       </AAA>** |

|  |
| --- |
| **//\*[count(\*)=2]** |
| 选择含有2个子元素的元素 |
| **<AAA>            <CCC>                 <BBB/>                 <BBB/>                 <BBB/>            </CCC>            <DDD>                 <BBB/>                 <BBB/>            </DDD>            <EEE>                 <CCC/>                 <DDD/>            </EEE>       </AAA>** |

|  |
| --- |
| **//\*[count(\*)=3]** |
| 选择含有3个子元素的元素 |
| **<AAA>            <CCC>                 <BBB/>                 <BBB/>                 <BBB/>            </CCC>            <DDD>                 <BBB/>                 <BBB/>            </DDD>            <EEE>                 <CCC/>                 <DDD/>            </EEE>       </AAA>** |

|  |
| --- |
| >> 实例 8 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example7.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example9.html) |

name()函数返回元素的名称, start-with()函数在该函数的第一个参数字符串是以第二个参数字符开始的情况返回true, contains()函数当其第一个字符串参数包含有第二个字符串参数时返回true.

|  |
| --- |
| **//\*[name()='BBB']** |
| 选择所有名称为BBB的元素(这里等价于//BBB) |
| **<AAA>            <BCC>                 <BBB/>                 <BBB/>                 <BBB/>            </BCC>            <DDB>                 <BBB/>                 <BBB/>            </DDB>            <BEC>                 <CCC/>                 <DBD/>            </BEC>       </AAA>** |

|  |
| --- |
| **//\*[starts-with(name(),'B')]** |
| 选择所有名称以"B"起始的元素 |
| **<AAA>            <BCC>                 <BBB/>                 <BBB/>                 <BBB/>            </BCC>            <DDB>                 <BBB/>                 <BBB/>            </DDB>            <BEC>                 <CCC/>                 <DBD/>            </BEC>       </AAA>** |

|  |
| --- |
| **//\*[contains(name(),'C')]** |
| 选择所有名称包含"C"的元素 |
| **<AAA>            <BCC>                 <BBB/>                 <BBB/>                 <BBB/>            </BCC>            <DDB>                 <BBB/>                 <BBB/>            </DDB>            <BEC>                 <CCC/>                 <DBD/>            </BEC>       </AAA>** |

|  |
| --- |
| >> 实例 9 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example8.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example10.html) |

string-length函数返回字符串的字符数,你应该用&lt;替代<, 用&gt;代替>

|  |
| --- |
| **//\*[string-length(name()) = 3]** |
| 选择名字长度为3的元素 |
| **<AAA>            <Q/>            <SSSS/>            <BB/>            <CCC/>            <DDDDDDDD/>            <EEEE/>       </AAA>** |

|  |
| --- |
| **//\*[string-length(name()) < 3]** |
| 选择名字长度小于3的元素 |
| **<AAA>            <Q/>            <SSSS/>            <BB/>            <CCC/>            <DDDDDDDD/>            <EEEE/>       </AAA>** |

|  |
| --- |
| **//\*[string-length(name()) > 3]** |
| 选择名字长度大于3的元素 |
| **<AAA>            <Q/>            <SSSS/>            <BB/>            <CCC/>            <DDDDDDDD/>            <EEEE/>       </AAA>** |

|  |
| --- |
| >> 实例 10 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example9.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example11.html) |

多个路径可以用分隔符 | 合并在一起

|  |
| --- |
| **//CCC | //BBB** |
| 选择所有的CCC和BBB元素 |
| **<AAA>            <BBB/>            <CCC/>            <DDD>                 <CCC/>            </DDD>            <EEE/>       </AAA>** |

|  |
| --- |
| **/AAA/EEE | //BBB** |
| 选择所有的BBB元素和所有是AAA的子元素的EEE元素 |
| **<AAA>            <BBB/>            <CCC/>            <DDD>                 <CCC/>            </DDD>            <EEE/>       </AAA>** |

|  |
| --- |
| **/AAA/EEE | //DDD/CCC | /AAA | //BBB** |
| 可以合并的路径数目没有限制 |
| **<AAA>            <BBB/>            <CCC/>            <DDD>                 <CCC/>            </DDD>            <EEE/>       </AAA>** |

|  |
| --- |
| >> 实例 11 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example10.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example12.html) |

child轴(axis)包含上下文节点的子元素, 作为默认的轴,可以忽略不写.

|  |
| --- |
| **/AAA** |
| 等价于 /child::AAA |
| **<AAA>            <BBB/>            <CCC/>       </AAA>** |

|  |
| --- |
| **/child::AAA** |
| 等价于/AAA |
| **<AAA>            <BBB/>            <CCC/>       </AAA>** |

|  |
| --- |
| **/AAA/BBB** |
| 等价于/child::AAA/child::BBB |
| **<AAA>            <BBB/>            <CCC/>       </AAA>** |

|  |
| --- |
| **/child::AAA/child::BBB** |
| 等价于/AAA/BBB |
| **<AAA>            <BBB/>            <CCC/>       </AAA>** |

|  |
| --- |
| **/child::AAA/BBB** |
| 二者都可以被合并 |
| **<AAA>            <BBB/>            <CCC/>       </AAA>** |

|  |
| --- |
| >> 实例 12 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example11.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example13.html) |

descendant (后代)轴包含上下文节点的后代,一个后代是指子节点或者子节点的子节点等等, 因此descendant轴不会包含属性和命名空间节点.

|  |
| --- |
| **/descendant::\*** |
| 选择文档根元素的所有后代.即所有的元素被选择 |
| **<AAA>            <BBB>                 <DDD>                      <CCC>                           <DDD/>                           <EEE/>                      </CCC>                 </DDD>            </BBB>            <CCC>                 <DDD>                      <EEE>                           <DDD>                                <FFF/>                           </DDD>                      </EEE>                 </DDD>            </CCC>       </AAA>** |

|  |
| --- |
| **/AAA/BBB/descendant::\*** |
| 选择/AAA/BBB的所有后代元素 |
| **<AAA>            <BBB>                 <DDD>                      <CCC>                           <DDD/>                           <EEE/>                      </CCC>                 </DDD>            </BBB>            <CCC>                 <DDD>                      <EEE>                           <DDD>                                <FFF/>                           </DDD>                      </EEE>                 </DDD>            </CCC>       </AAA>** |

|  |
| --- |
| **//CCC/descendant::\*** |
| 选择在祖先元素中有CCC的所有元素 |
| **<AAA>            <BBB>                 <DDD>                      <CCC>                           <DDD/>                           <EEE/>                      </CCC>                 </DDD>            </BBB>            <CCC>                 <DDD>                      <EEE>                           <DDD>                                <FFF/>                           </DDD>                      </EEE>                 </DDD>            </CCC>       </AAA>** |

|  |
| --- |
| **//CCC/descendant::DDD** |
| 选择所有以CCC为祖先元素的DDD元素 |
| **<AAA>            <BBB>                 <DDD>                      <CCC>                           <DDD/>                           <EEE/>                      </CCC>                 </DDD>            </BBB>            <CCC>                 <DDD>                      <EEE>                           <DDD>                                <FFF/>                           </DDD>                      </EEE>                 </DDD>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 13 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example12.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example14.html) |

parent轴(axis)包含上下文节点的父节点, 如果有父节点的话

|  |
| --- |
| **//DDD/parent::\*** |
| 选择DDD元素的所有父节点 |
| **<AAA>            <BBB>                 <DDD>                      <CCC>                           <DDD/>                           <EEE/>                      </CCC>                 </DDD>            </BBB>            <CCC>                 <DDD>                      <EEE>                           <DDD>                                <FFF/>                           </DDD>                      </EEE>                 </DDD>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 14 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example13.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example15.html) |

ancestor轴(axis)包含上下节点的祖先节点, 该祖先节点由其上下文节点的父节点以及父节点的父节点等等诸如此类的节点构成,所以ancestor轴总是包含有根节点,除非上下文节点就是根节点本身.

|  |
| --- |
| **/AAA/BBB/DDD/CCC/EEE/ancestor::\*** |
| 选择一个绝对路径上的所有节点 |
| **<AAA>            <BBB>                 <DDD>                      <CCC>                           <DDD/>                           <EEE/>                      </CCC>                 </DDD>            </BBB>            <CCC>                 <DDD>                      <EEE>                           <DDD>                                <FFF/>                           </DDD>                      </EEE>                 </DDD>            </CCC>       </AAA>** |

|  |
| --- |
| **//FFF/ancestor::\*** |
| 选择FFF元素的祖先节点 |
| **<AAA>            <BBB>                 <DDD>                      <CCC>                           <DDD/>                           <EEE/>                      </CCC>                 </DDD>            </BBB>            <CCC>                 <DDD>                      <EEE>                           <DDD>                                <FFF/>                           </DDD>                      </EEE>                 </DDD>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 15 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example14.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example16.html) |

following-sibling轴(axis)包含上下文节点之后的所有兄弟节点

|  |
| --- |
| **/AAA/BBB/following-sibling::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <DDD/>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//CCC/following-sibling::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <DDD/>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 16 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example15.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example17.html) |

preceding-sibling 轴(axis)包含上下文节点之前的所有兄弟节点

|  |
| --- |
| **/AAA/XXX/preceding-sibling::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <DDD/>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//CCC/preceding-sibling::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <DDD/>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 17 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example16.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example18.html) |

following轴(axis)包含同一文档中按文档顺序位于上下文节点之后的所有节点, 除了祖先节点,属性节点和命名空间节点

|  |
| --- |
| **/AAA/XXX/following::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ>                      <DDD/>                      <DDD>                           <EEE/>                      </DDD>                 </ZZZ>                 <FFF>                      <GGG/>                 </FFF>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//ZZZ/following::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ>                      <DDD/>                      <DDD>                           <EEE/>                      </DDD>                 </ZZZ>                 <FFF>                      <GGG/>                 </FFF>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 18 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example17.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example19.html) |

following轴(axis)包含同一文档中按文档顺序位于上下文节点之前的所有节点, 除了祖先节点,属性节点和命名空间节点

|  |
| --- |
| **/AAA/XXX/preceding::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ>                      <DDD/>                 </ZZZ>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//GGG/preceding::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ>                      <DDD/>                 </ZZZ>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 19 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example18.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example20.html) |

descendant-or-self 轴(axis)包含上下文节点本身和该节点的后代节点

|  |
| --- |
| **/AAA/XXX/descendant-or-self::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ>                      <DDD/>                 </ZZZ>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//CCC/descendant-or-self::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ>                      <DDD/>                 </ZZZ>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 20 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example19.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example21.html) |

ancestor-or-self 轴(axis)包含上下文节点本身和该节点的祖先节点

|  |
| --- |
| **/AAA/XXX/DDD/EEE/ancestor-or-self::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ>                      <DDD/>                 </ZZZ>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//GGG/ancestor-or-self::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ>                      <DDD/>                 </ZZZ>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <DDD/>                      <CCC/>                      <FFF/>                      <FFF>                           <GGG/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 21 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example20.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example22.html) |

ancestor, descendant, following, preceding 和self轴(axis)分割了XML文档(忽略属性节点和命名空间节点), 不能交迭, 而一起使用则包含所有节点

|  |
| --- |
| **//GGG/ancestor::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ/>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <FFF>                           <HHH/>                           <GGG>                                <JJJ>                                     <QQQ/>                                </JJJ>                                <JJJ/>                           </GGG>                           <HHH/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//GGG/descendant::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ/>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <FFF>                           <HHH/>                           <GGG>                                <JJJ>                                     <QQQ/>                                </JJJ>                                <JJJ/>                           </GGG>                           <HHH/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//GGG/following::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ/>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <FFF>                           <HHH/>                           <GGG>                                <JJJ>                                     <QQQ/>                                </JJJ>                                <JJJ/>                           </GGG>                           <HHH/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//GGG/preceding::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ/>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <FFF>                           <HHH/>                           <GGG>                                <JJJ>                                     <QQQ/>                                </JJJ>                                <JJJ/>                           </GGG>                           <HHH/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//GGG/self::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ/>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <FFF>                           <HHH/>                           <GGG>                                <JJJ>                                     <QQQ/>                                </JJJ>                                <JJJ/>                           </GGG>                           <HHH/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| **//GGG/ancestor::\* | //GGG/descendant::\* | //GGG/following::\* | //GGG/preceding::\* | //GGG/self::\*** |
|  |
| **<AAA>            <BBB>                 <CCC/>                 <ZZZ/>            </BBB>            <XXX>                 <DDD>                      <EEE/>                      <FFF>                           <HHH/>                           <GGG>                                <JJJ>                                     <QQQ/>                                </JJJ>                                <JJJ/>                           </GGG>                           <HHH/>                      </FFF>                 </DDD>            </XXX>            <CCC>                 <DDD/>            </CCC>       </AAA>** |

|  |
| --- |
| >> 实例 22 << | [前页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example21.html) | [后页](http://www.zvon.org/xxl/XPathTutorial/Output_chi/example1.html) |

div运算符做浮点除法运算, mod运算符做求余运算, floor函数返回不大于参数的最大整数(趋近于正无穷), ceiling返回不小于参数的最小整数(趋近于负无穷)

|  |
| --- |
| **//BBB[position() mod 2 = 0 ]** |
| 选择偶数位置的BBB元素 |
| **<AAA>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <CCC/>            <CCC/>            <CCC/>       </AAA>** |

|  |
| --- |
| **//BBB[ position() = floor(last() div 2 + 0.5) or position() = ceiling(last() div 2 + 0.5) ]** |
| 选择中间的BBB元素 |
| **<AAA>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <CCC/>            <CCC/>            <CCC/>       </AAA>** |

|  |
| --- |
| **//CCC[ position() = floor(last() div 2 + 0.5) or position() = ceiling(last() div 2 + 0.5) ]** |
| 选择中间的CCC元素 |
| **<AAA>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <BBB/>            <CCC/>            <CCC/>            <CCC/>       </AAA>** |