**Variables in XPath expressions**

XPath allows you to reference variables in your XPath expressions, using the $somevariable syntax. This is somewhat similar to parameterized queries or prepared statements in the SQL world where you replace some arguments in your queries with placeholders like ?, which are then substituted with values passed with the query.

Here’s an example to match an element based on its “id” attribute value, without hard-coding it (that was shown previously):

**>>>** *# `$val` used in the expression, a `val` argument needs to be passed*

**>>>** response.xpath('//div[@id=$val]/a/text()', val='images').extract\_first()

u'Name: My image 1 '

Here’s another example, to find the “id” attribute of a <div> tag containing five <a> children (here we pass the value 5 as an integer):

**>>>** response.xpath('//div[count(a)=$cnt]/@id', cnt=5).extract\_first()

u'images'

All variable references must have a binding value when calling .xpath() (otherwise you’ll get a ValueError: XPath error: exception). This is done by passing as many named arguments as necessary.

[parsel](https://parsel.readthedocs.io/), the library powering Scrapy selectors, has more details and examples on [XPath variables](https://parsel.readthedocs.io/en/latest/usage.html#variables-in-xpath-expressions).