



# XQUERY

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“**[XQUERY]** is designed to be a language in which queries are concise and easily understood. It is also flexible enough to query a broad spectrum of XML information sources, including both databases and documents....”

— XQuery 3.1: An XML Query Language

# Path Expressions

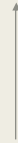
- axis : “defines the ‘direction of movement’ for the step”
- node test: “selects nodes based on their kind, name, and/or type annotation”
- optionally: a predicate, which filters results according to some Boolean test

`/descendant::usc:uscDoc/descendant::usc:meta[dc:title/text() = "Title 17" ]`

axis

node test

predicate



# FLWOR Expression

- for *iterating*
- let *binding*
- where *filtering*
- order by *changing order*
- return *provide results*

Also...

- count *counting*
- group by *grouping*

```
xquery version "3.1";  
  
for $num in 1 to 10  
let $remainder := $num mod 2  
where $remainder = 0  
order by $num descending  
return $num
```

## Creating CSV

```
<csv>
{
  for $i in 1 to 10
  return
    <record>
      {
        for $j in 1 to 10
        return
          <field>
            {$j}
          </field>
      }
    </record>
}
</csv>
```

```
<csv>
  <record>
    <field>1</field>
    <field>2</field>
    <field>3</field>
    <field>4</field>
    <field>5</field>
    <field>6</field>
    <field>7</field>
    <field>8</field>
    <field>9</field>
    <field>10</field>
  </record>
  <record>
    <field>1</field>
```

Goal:

## Write a CSV with Metadata and Data for Text Mining

```
declare namespace output = "http://www.w3.org/2010/xslt-xquery-serialization";  
declare option output:method "csv";  
declare option output:csv "header=yes, separator=comma";
```

```
<csv>  
{  
  for $doc in fn:collection("bpp-quarterly")  
  let $fullText := $doc/Record/FullText/text()  
  let $title := $doc/Record/Publication/Title/text()  
  let $articleTitle := $doc/Record/RecordTitle/text()  
  return  
    <record>  
      <title>{$articleTitle}</title>  
      <journal>{$title}</journal>  
      <text>{$fullText}</text>  
    </record>  
}  
</csv>
```

# CSV Structure for Textual Analysis

	A	B	C	D	E	F	G
1	bookTitle	poemTitle	poemText				
2	The Ascent of Man	PRELUDE.WINGS.	prelude. wings. ascend , oh my soul, with the wings of the lark asc				
3	The Ascent of Man	CHAUNTS OF LIFE.	chaunts of life. i. struck out of dim fluctuant forces and shock of ele				
4	The Ascent of Man	A SYMBOL.	a symbol. hurrying for ever in their restless flight the generations o				
5	The Ascent of Man	TIME,ÃS SHADOW.	time,Ãs shadow. thy life, o man, in this brief moment lies: time,Ã				
6	The Ascent of Man	THE PILGRIM SOUL.	the pilgrim soul. through the winding mazes of windy streets blind				
7	The Ascent of Man	SAVING LOVE.	saving love. would we but love what will not pass away! the sun th				
8	The Ascent of Man	NIRVANA.	nirvana. divest thyself, o soul, of vain desire! bid hope farewell, dis				
9	The Ascent of Man	MOTHERHOOD.	motherhood. from out the font of being, undefiled, a life hath beer				
10	The Ascent of Man	THE LEADING OF SORROW.	the leading of sorrow. through a twilight land, a moaning region, tl				
11	The Ascent of Man	THE SOWER.	the sower. the winds had hushed at last as by command; the quiet				
12	The Ascent of Man	A SPRING SONG.	a spring song. dark sod pierced by flames of flowers, dead wood fr				
13	The Ascent of Man	APRIL RAIN.	april rain. the april rain, the april rain, comes slanting down in fitfu				
14	The Ascent of Man	THE SLEEPING BEAUTY.	the sleeping beauty. there was intoxication in the air; the wind, kee				
15	The Ascent of Man	APPLE,ÃBLOSSOM.	apple,Ãblossom. blossom of the apple trees! mossy trunks all gna				
16	The Ascent of Man	THE MUSIC,ÃLESSON.	the music,Ãlesson. a thrush alit on a young,Ãleaved spray, and, l				
17	The Ascent of Man	THE TEAMSTER.	the teamster. with slow and slouching gait sam leads the team; he				
18	The Ascent of Man	A HIGHLAND VILLAGE.	a highland village. clear shining after the rain, the sun bursts the cl				

Ready to Code?

<https://git.io/text-mining-4>