

# Quiz 3: Data Processing

**Due** Sep 19, 2016 at 11:59pm **Points** 100 **Questions** 4

**Available** Sep 14, 2016 at 8am - Sep 19, 2016 at 11:59pm 6 days

**Time Limit** 60 Minutes

This quiz was locked Sep 19, 2016 at 11:59pm.

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	50 minutes	100 out of 100

Score for this quiz: **100** out of 100

Submitted Sep 19, 2016 at 10:57pm

This attempt took 50 minutes.

### Question 1

25 / 25 pts

What are the five XQuery constructs that are denoted by the acronym FLWOR?

Your Answer:

The five constructs of FLWOR are for, let, where, order by and return.

For construct iterates the elements of sequence which is defined by xpath expression.

Let construct binds new local variable and evaluate a query expression in local variable context.

Where construct adds a condition for filtering the sequence that is defined by query expression.

Order by construct orders the results based on xpath expression relatively to the XML dom tree.

Return construct allows the return of a query result.

### Question 2

25 / 25 pts

1. What is the advantage of tree-processing XML data over stream-processing XML data?
2. What is the advantage of stream-processing XML data over tree-processing XML data?

Your Answer:

1. Advantage of tree processing over stream processing is

- In tree processing, it builds a data structure representing a document in memory. So any XML data can be accessed directly and randomly. In Stream-processing, XML data can only be accessed sequentially.

2. Advantage of stream processing XML data over tree processing is

- stream processing of XML is fast and also have a very small memory footprint. Tree-processing is slow and also uses a very big space in memory drive. So Stream processing xml is more scalable approach than tree processing.

### Question 3

25 / 25 pts

1. What is the difference between pull and push stream processing?
2. What is the difference between cursor-based and iterator-based pull stream processing?

Your Answer:

1, Pull and push stream processing:

In push method, the application processes the XML data in serial streams, content is pushed into the application event handlers as soon as the XML data are parsed. And in pull method, the thread which is reading the input data only advances as the application requests the next token.

2. Cursor-based model provides a cursor based system for navigating a totally virtual xml tree in both top-down and left-right directions. Iterator-based model just reports attributes as events in the stream. It also reports namespaces as events. And each event has a specific interface.

### Question 4

25 / 25 pts

What is wrong with the following XQuery? Give a fixed version of this code.

```
for $s in doc("personnel.xml")/Personnel/Student
where $s/gpa > 3.0
return <result>
<name>$s/name</name>
<gpa>$s/gpa</gpa>
</result>
```

Your Answer:

for \$s in

doc("personnel.xml")/n:Personnel/n:Student

where \$s/@gpa > 3.0

return

<result>

<name> { \$s/n:name/text() } </name>

<gpa> { \$s/n:gpa/text() } </gpa>

</result>

Just the brackets would have been sufficient <name> { \$s/name } </name> <gpa> { \$s/gpa } </gpa>

Quiz Score: **100** out of 100