

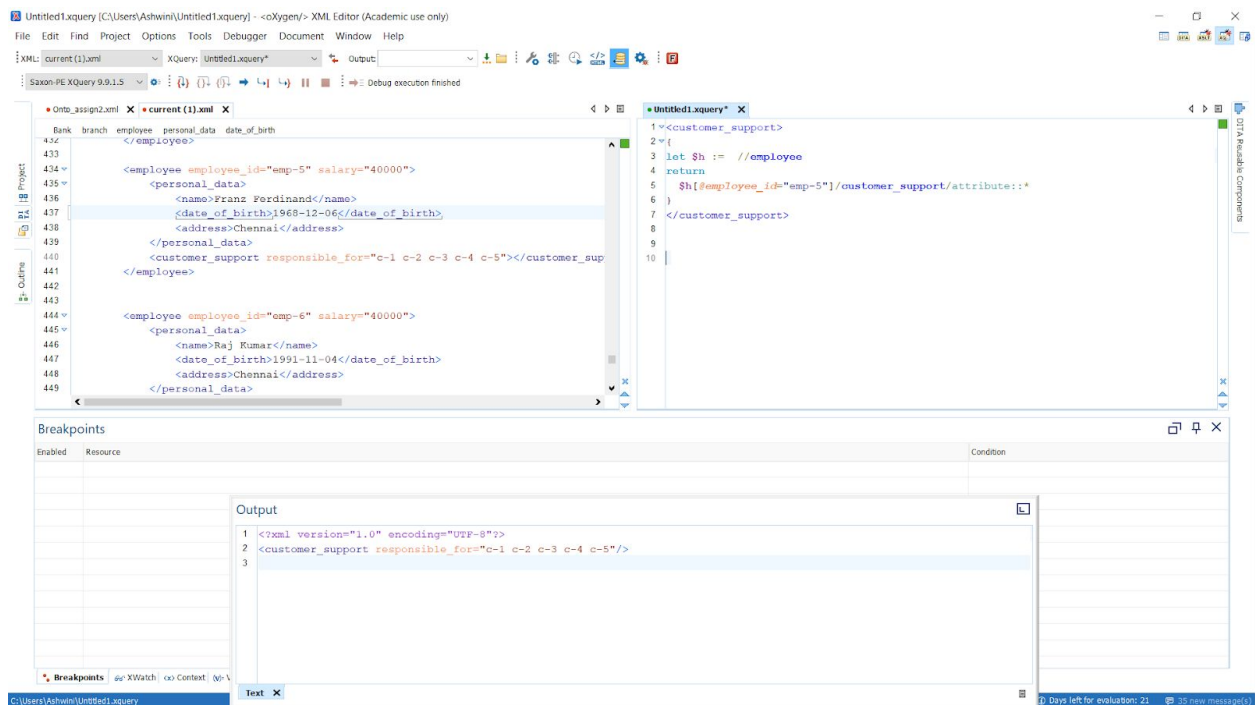
Ontology Assignment-2

Ashwini S Tagadghar
CS19M014

XQUERY:

Query1: Find the customer id of whose employee id is 5, is responsible for their customer support.

```
<customer_support>
{
let $h := //employee
return
  $h[@employee_id="emp-5"]/customer_support/attribute::*
}
</customer_support>
```



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Query2: Find the employee name whose salary is greater than the average salary

```
<High_Salary>
{
let $p := avg(//employee/@salary)
return
<emp_name>{
for $a in //employee
where $a/@salary > $p
return $a/personal_data/name,<avg>{$p}</avg>
}</emp_name>
}
</High_Salary>
```

The screenshot displays the Oxygen XML Editor interface. The main editor window shows an XQuery query named 'untitled1.xquery'. The query is designed to find employee names whose salary is greater than the average salary. The query is as follows:

```
1
2 <High_Salary>
3 {
4 let $p := avg(//employee/@salary)
5 return
6 <emp_name>{
7 for $a in //employee
8 where $a/@salary > $p
9 return $a/personal_data/name,<avg>{$p}</avg>
10 }</emp_name>
11 }
12 </High_Salary>
13
```

The left sidebar shows a project tree with files like 'Onto_assign2.xml' and 'current(1).xml'. The bottom panel shows the 'Output' window, which displays the result of the XQuery execution. The output is an XML document with the following structure:

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <High_Salary>
3   <emp_name>
4     <name>Max Mustermann</name>
5     <name>Stephan Cook</name>
6     <avg>58444.444444444445</avg>
7   </emp_name>
8 </High_Salary>
9
```

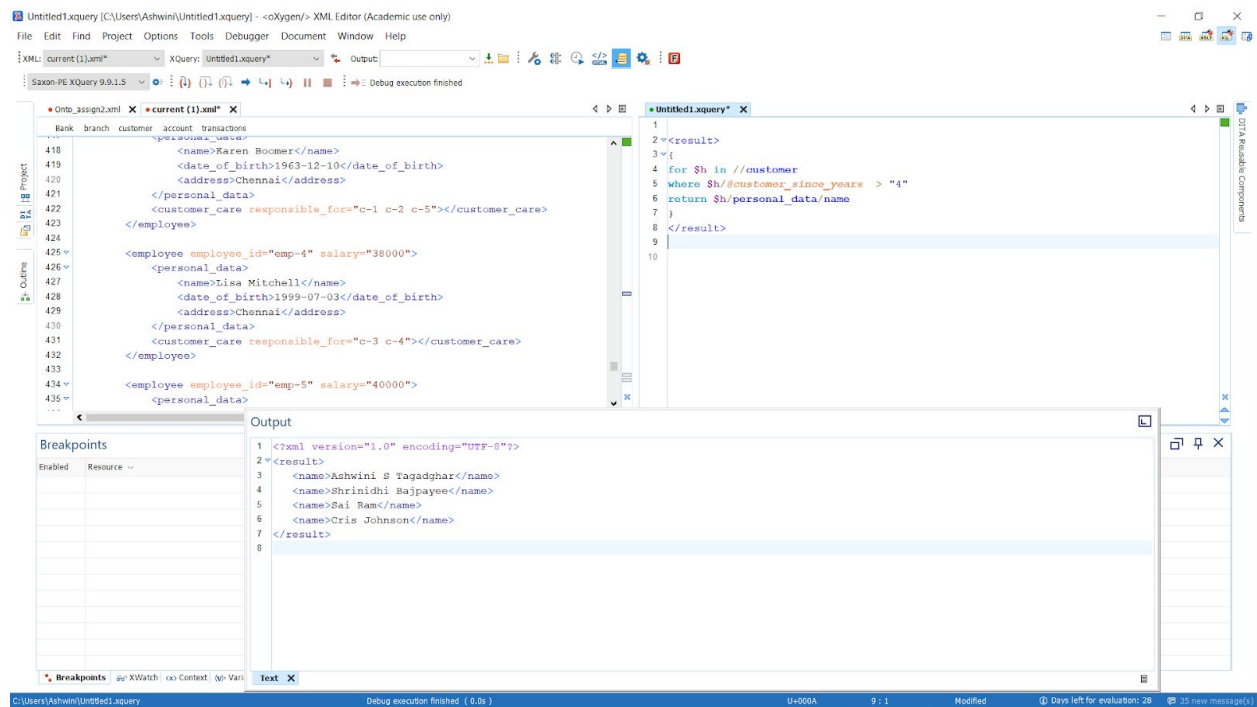
The status bar at the bottom indicates 'Debug execution finished (0.0s)' and 'U=000A 1:1 Modified 0 Days left for evaluation: 28 35 new messages(s)'.

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Query3: Name of the customers who are customer since more than 4 years

```
<result>
{
for $h in //customer
where $h/@customer_since_years > "4"
return $h/personal_data/name
}
</result>
```

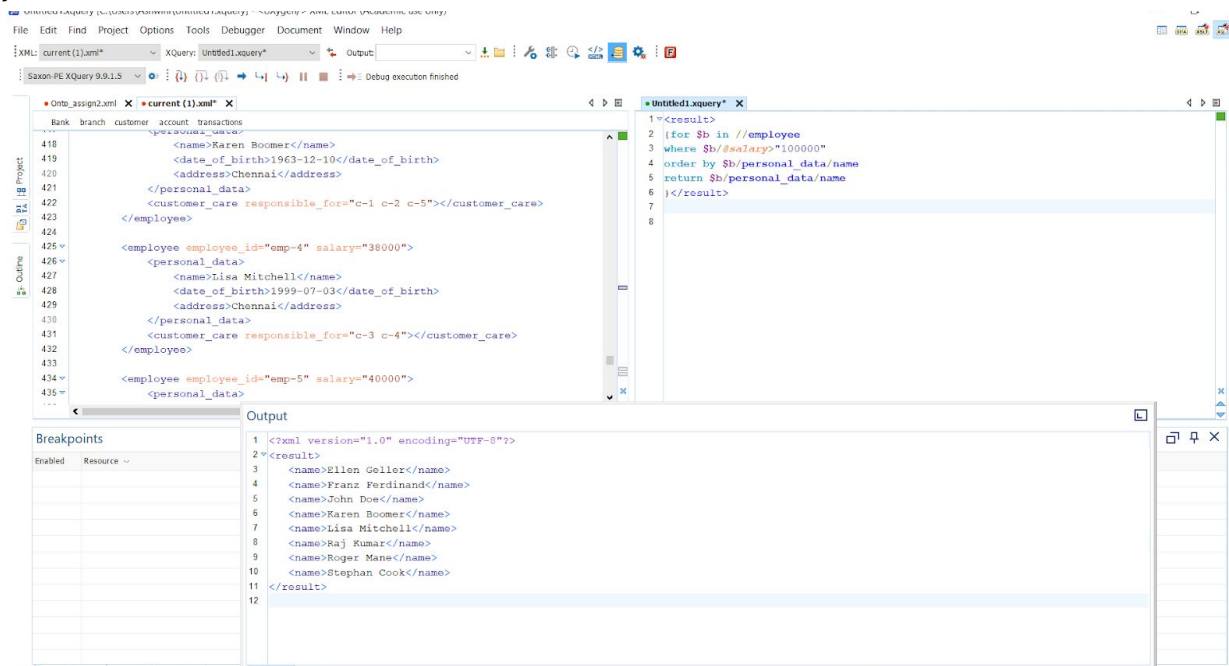


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Query4:Name of the employees whose salary is more than 100000

```
<result>
{for $b in //employee
where $b/@salary>"100000"
order by $b/personal_data/name
return $b/personal_data/name
}</result>
```

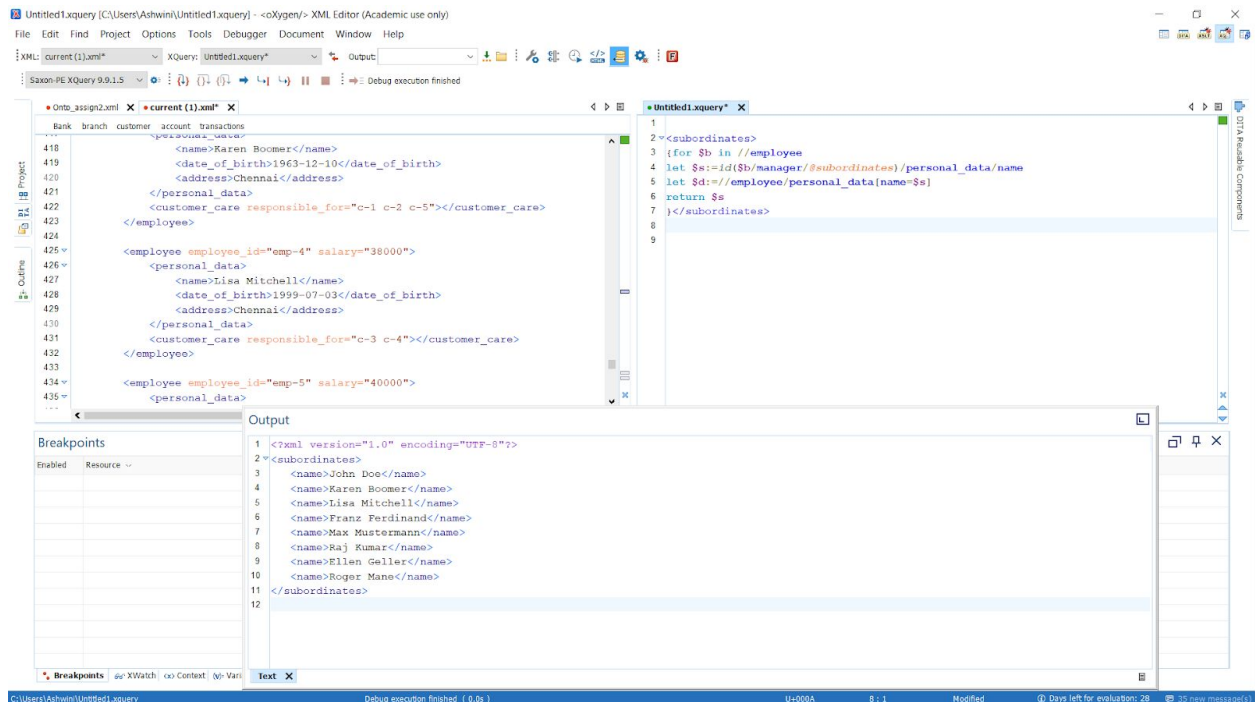


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Query5: Name of the employees who are subordinates of managers

```
<subordinates>
{for $b in //employee
let $s:=id($b/manager/@subordinates)/personal_data/name
let $d:=//employee/personal_data[name=$s]
return $s
}/</subordinates>
```

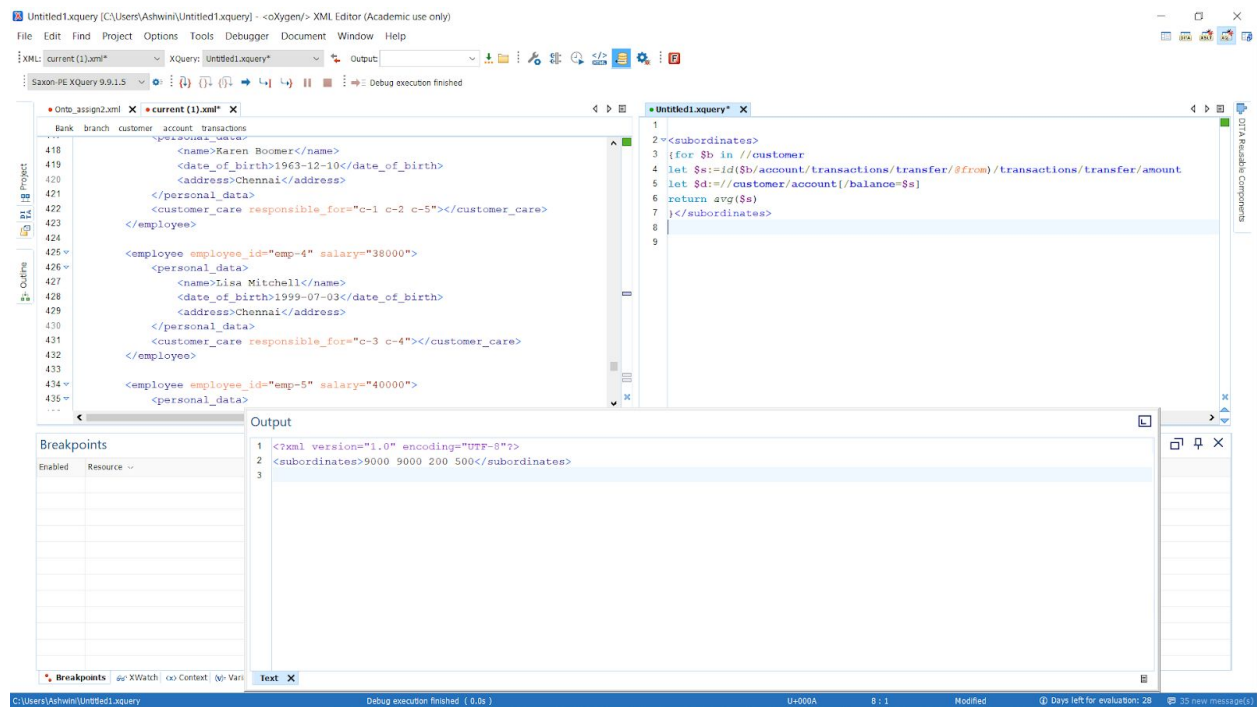


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Query6: Average Amount transferred to the accounts from customers

```
<subordinates>
{for $b in //customer
let $s:=id($b/account/transactions/transfer/@from)/transactions/transfer/amount
let $d:=//customer/account[/balance=$s]
return avg($s)
}</subordinates>
```

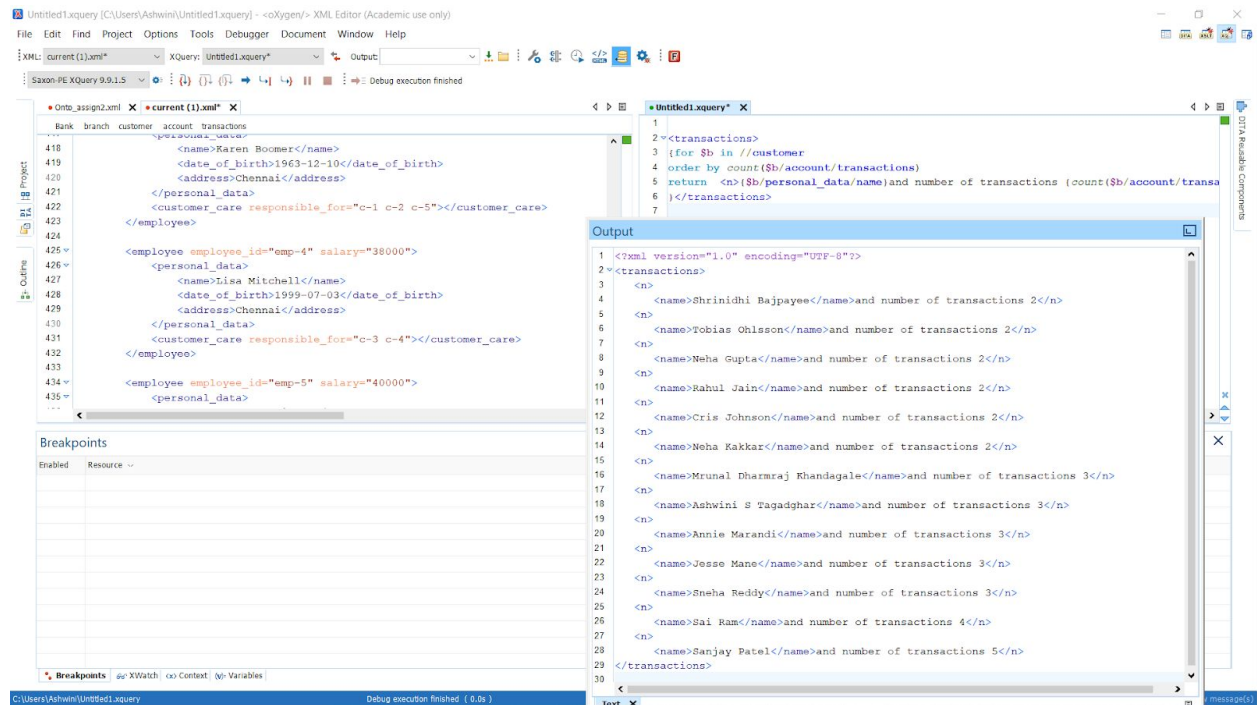


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Query7:Print the names of the customer with increasing order of the number of transactions made by each customer

```
<transactions>
{for $b in //customer
order by count($b/account/transactions)
return <n>{$b/personal_data/name}and number of transactions
{count($b/account/transactions)}</n>
}</transactions>
```



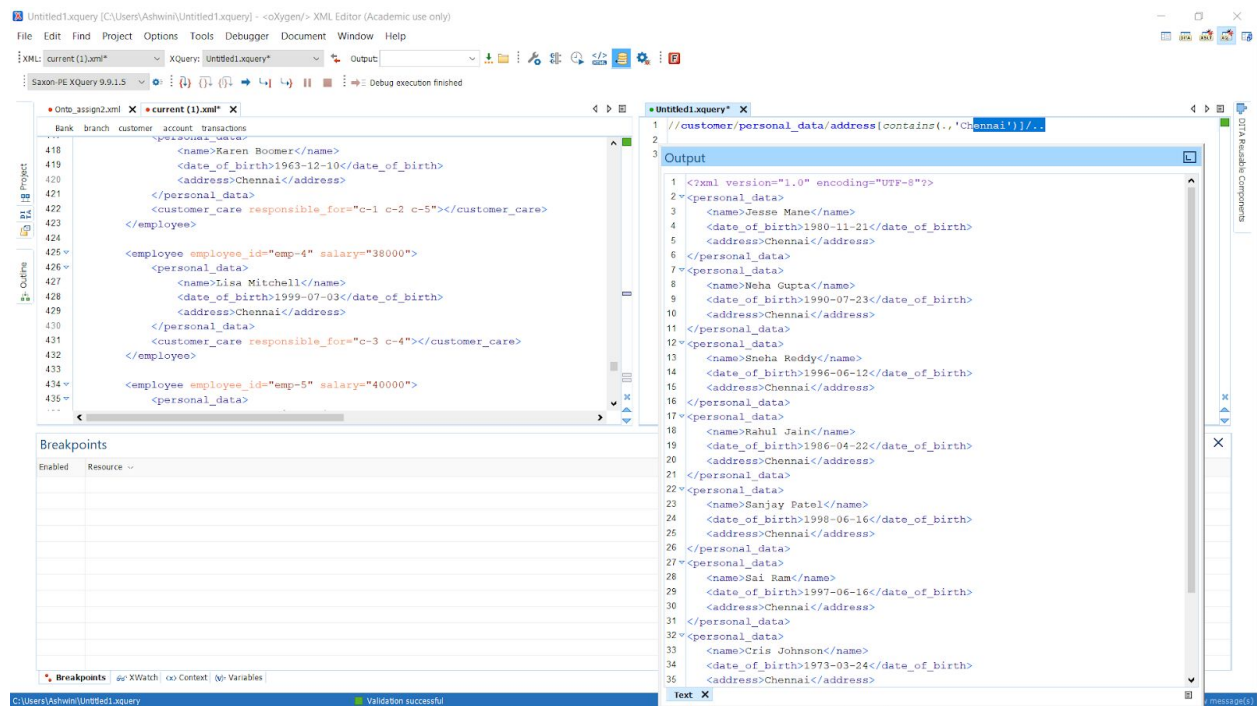
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XPATH

XPath1: Print the personal details of the customer who stays in Chennai

//customer/personal_data/address[contains(.,'Chennai')]/..

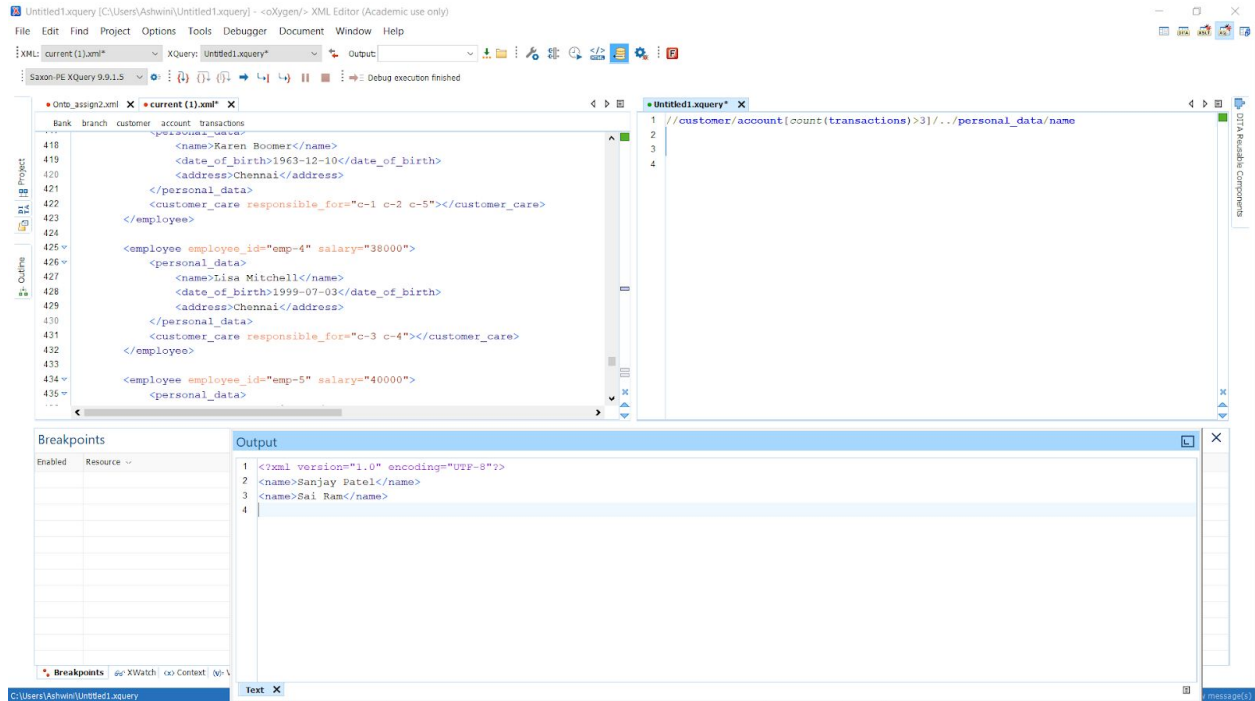


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XPath2: Print the customer names who have made more than 3 transactions

`//customer/account[count(transactions)>3]/../personal_data/name`

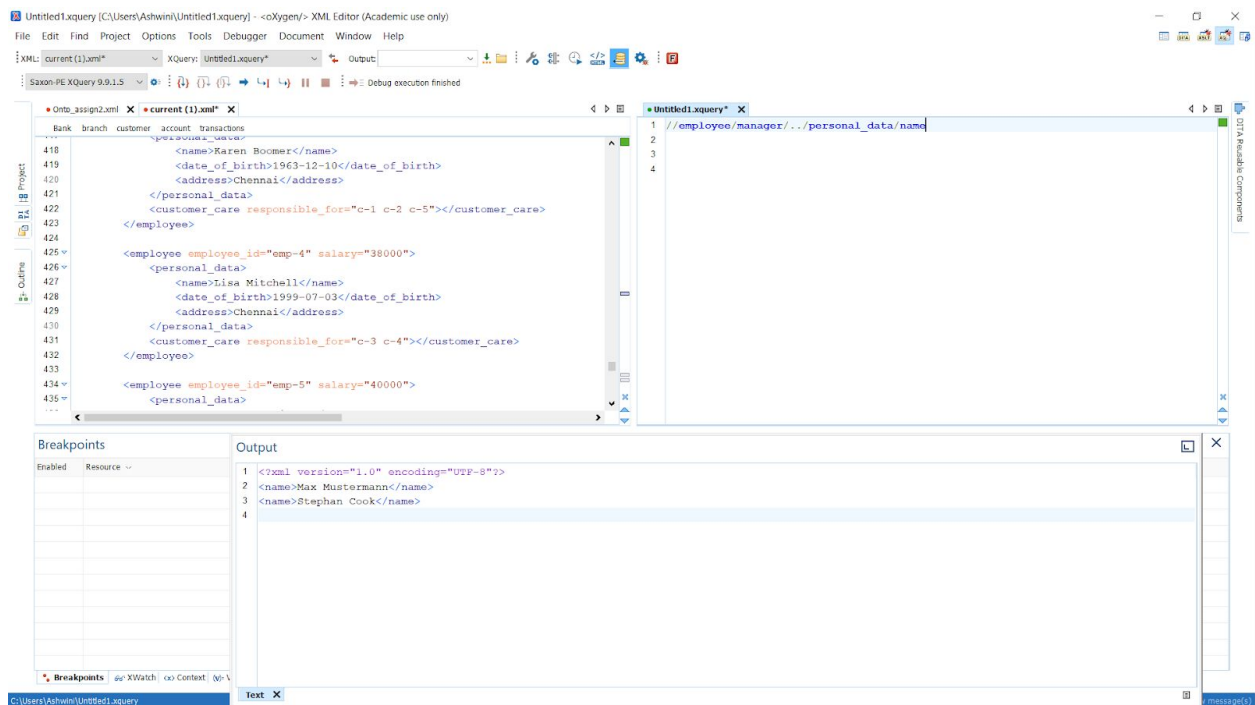


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XPath3:Print the employees names who are managers

//employee/manager/../../personal_data/name

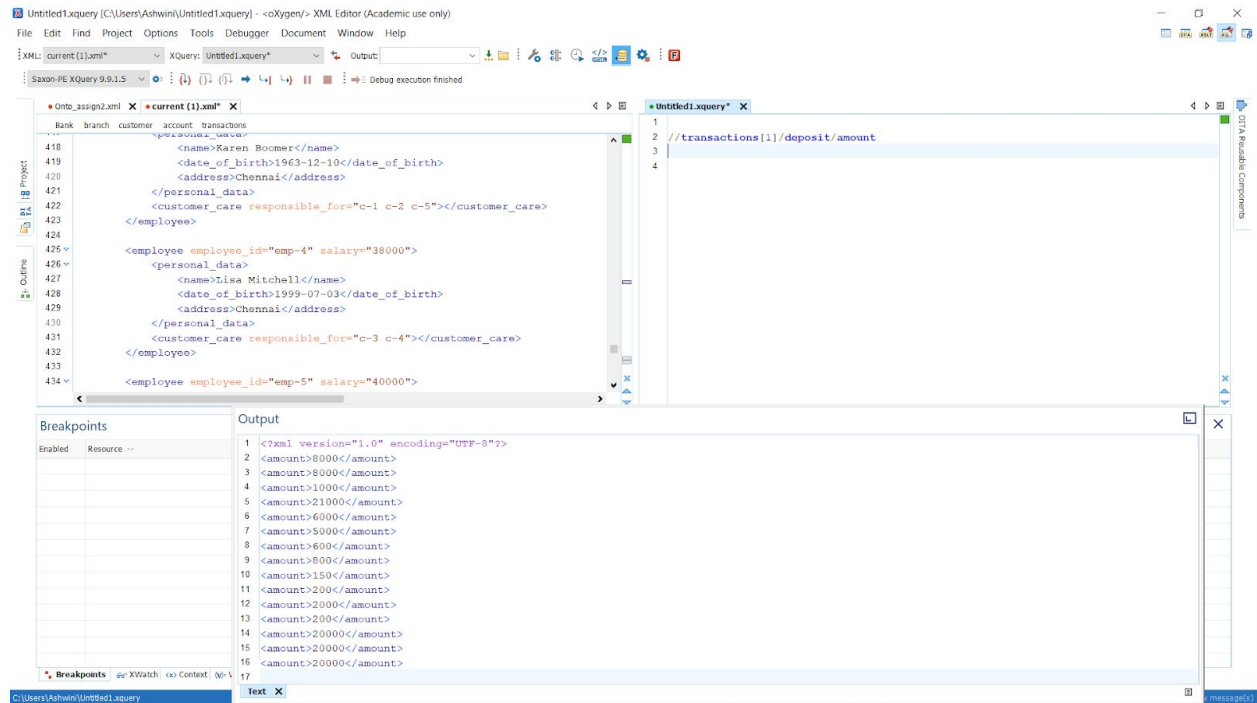


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XPath4:Print each customer's first transaction's amount

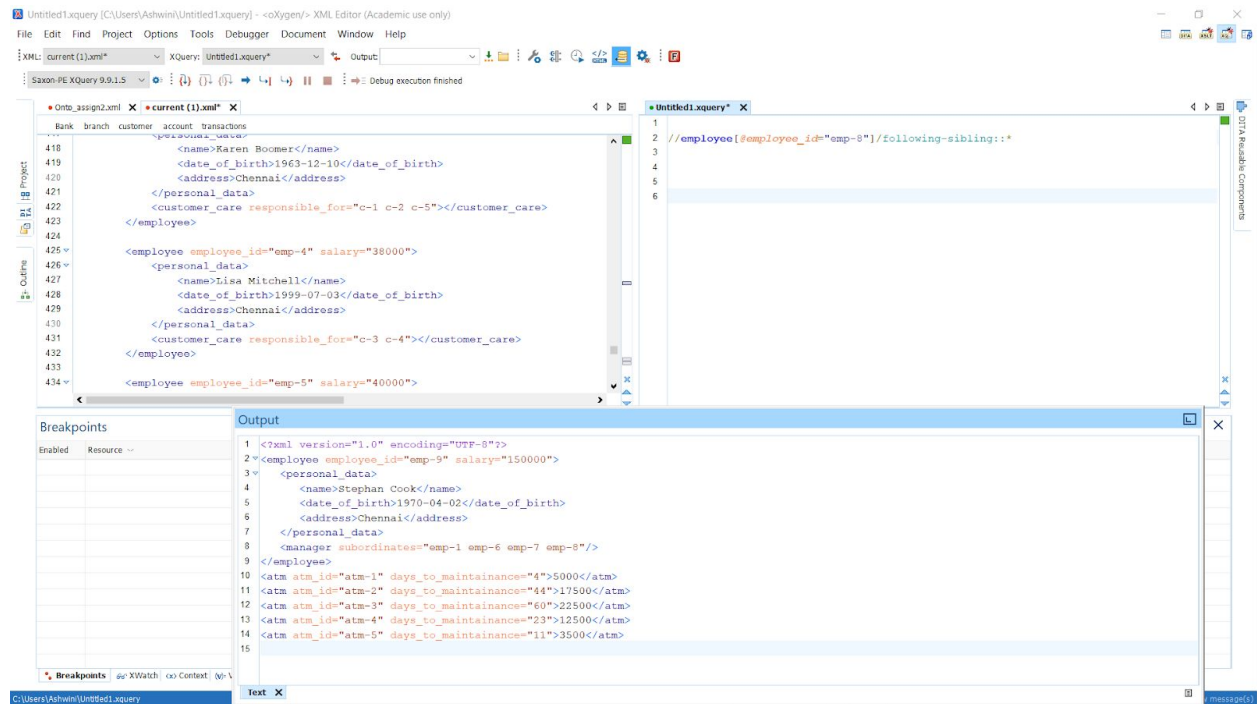
//transactions[1]/deposit/amount



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XPath5:Select all sibling nodes after the context node(employee_id="emp-8:")
//employee[@employee_id="emp-8"]/following-sibling::*

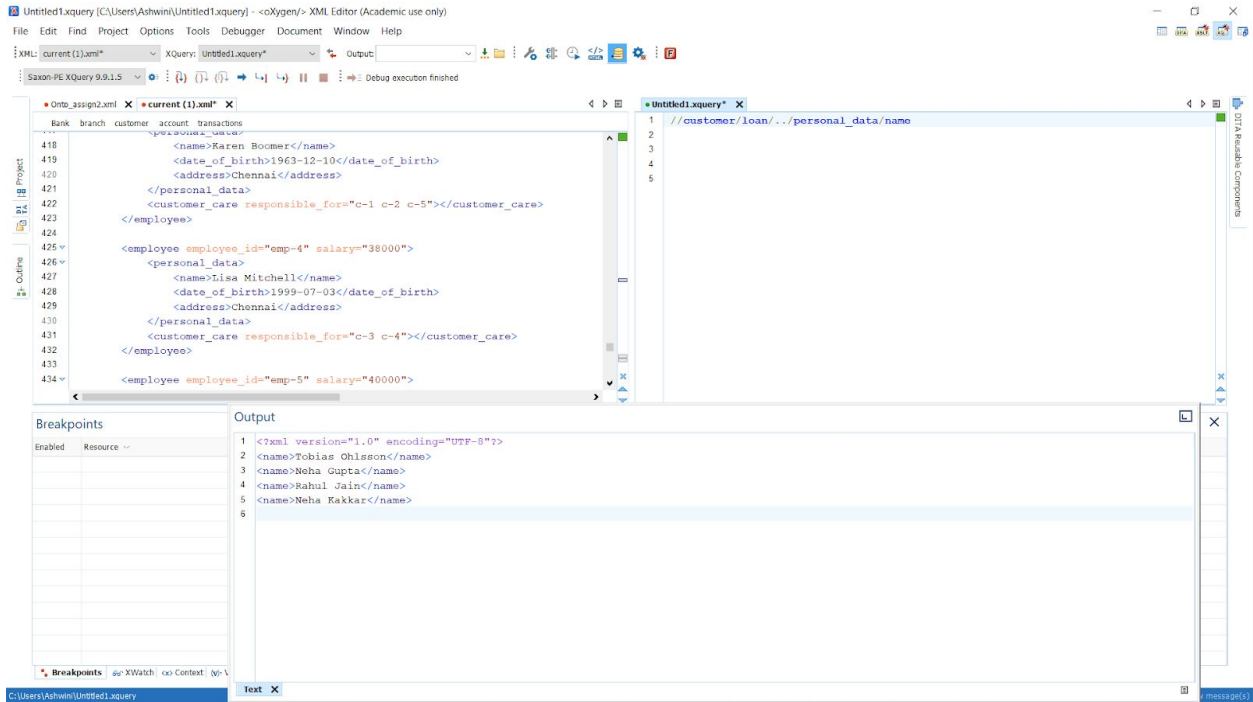


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XPath6:Print customer names who took loan

//customer/loan/../../personal_data/name



Ontology Assignment-2

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XPath7:Print customer name with customer id 2

```
//customer[@customer_id="c-2"]/self::*/personal_data/name
```

The screenshot displays the XML Editor interface with the following components:

- XML Document:** `Onto_assign2.xml` containing an XML structure with a `customer` element. The `customer` element has attributes `customer_id="c-3"` and `customer_since_years="6"`. It contains a `personal_data` element with `name`, `date_of_birth`, and `address` sub-elements, and an `account` element with `account_no="a-4"` and `balance` sub-elements.
- XQuery:** `Untitled1.xquery` with the query:

```
//customer[@customer_id="c-2"]/self::*/personal_data/name
```
- Output:** The output window shows the result of the query:

```
<?xml version="1.0" encoding="UTF-8"?>
<name>Shrinidhi Bajpayee</name>
```
- Breakpoints:** A table with columns `Enabled` and `Resource`.
- Text:** A text window at the bottom showing the file path: `C:\Users\Ashwini\Untitled1.xquery`.