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CSE5011-Database Systems and Design

EMBEDDED LAB

XML

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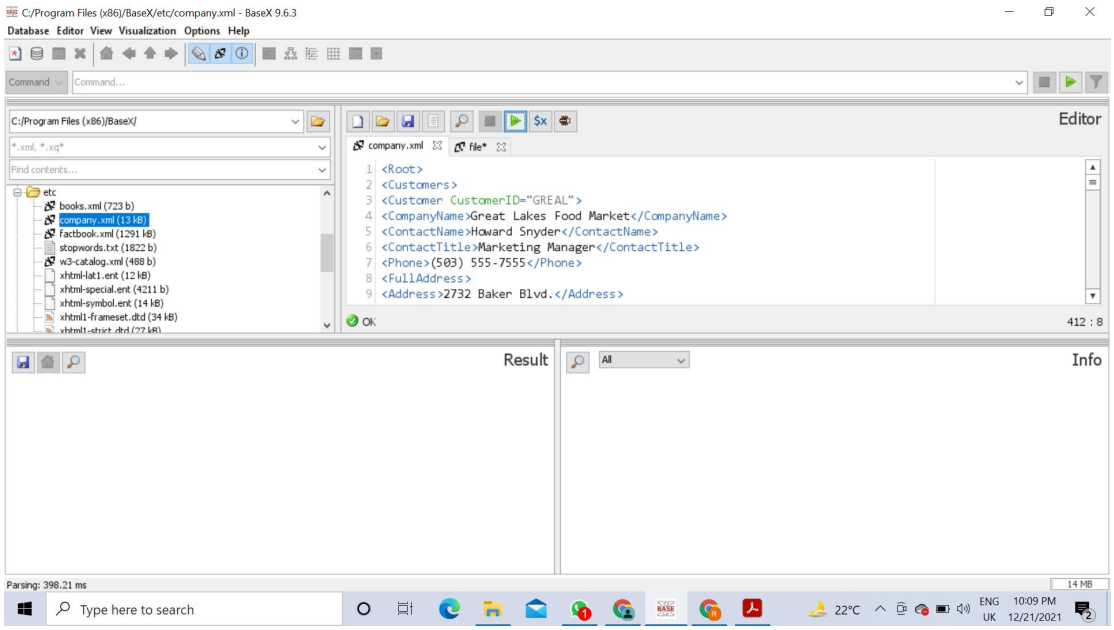
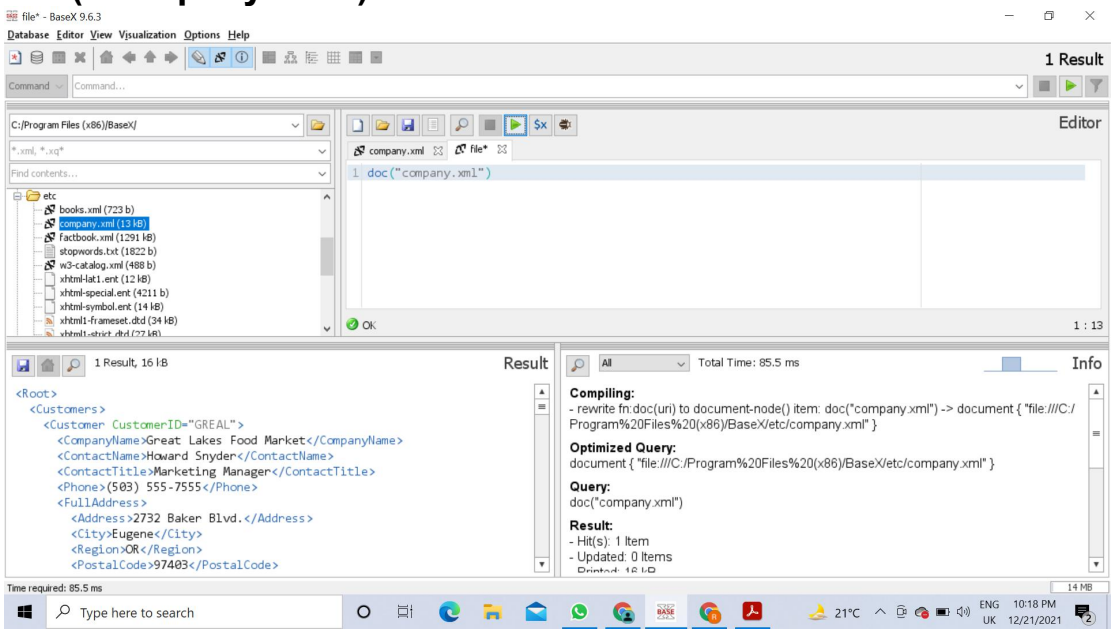
Consider the following XML data for solving the queries:
https://docs.google.com/document/d/1y6x7q6OCdFqKfdcCjRkEPthEVL6b_gVQEAzxs4Q
qB7w/edit?usp=sharing



Based on the XML data given write XML Query for the following:

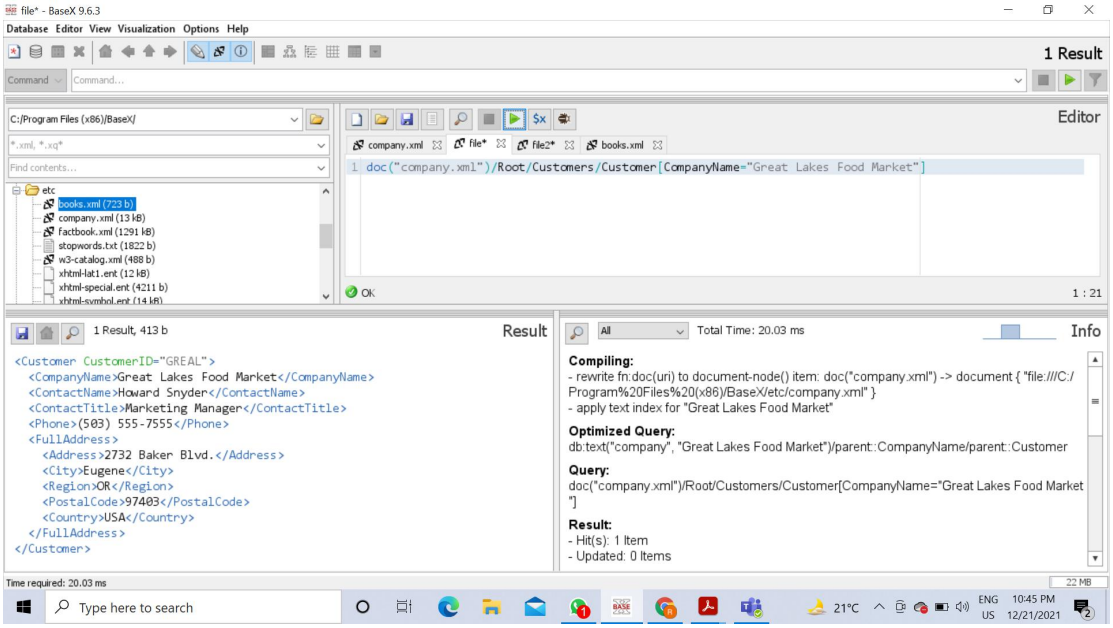
1. Read an XML file and its tags

doc("company.xml")



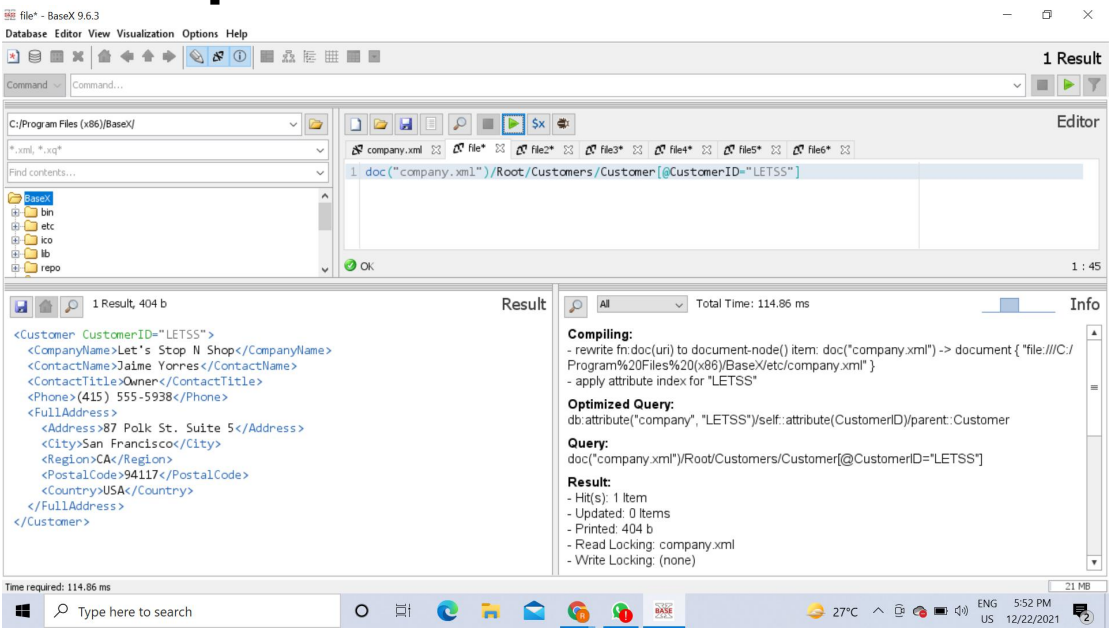
2. Apply Inline filter of an XML file and retrieve the details of 'Great Lakes Food Market'

doc("company.xml")/Root/Customers/Customer[CompanyName="Great Lakes Food Market"]



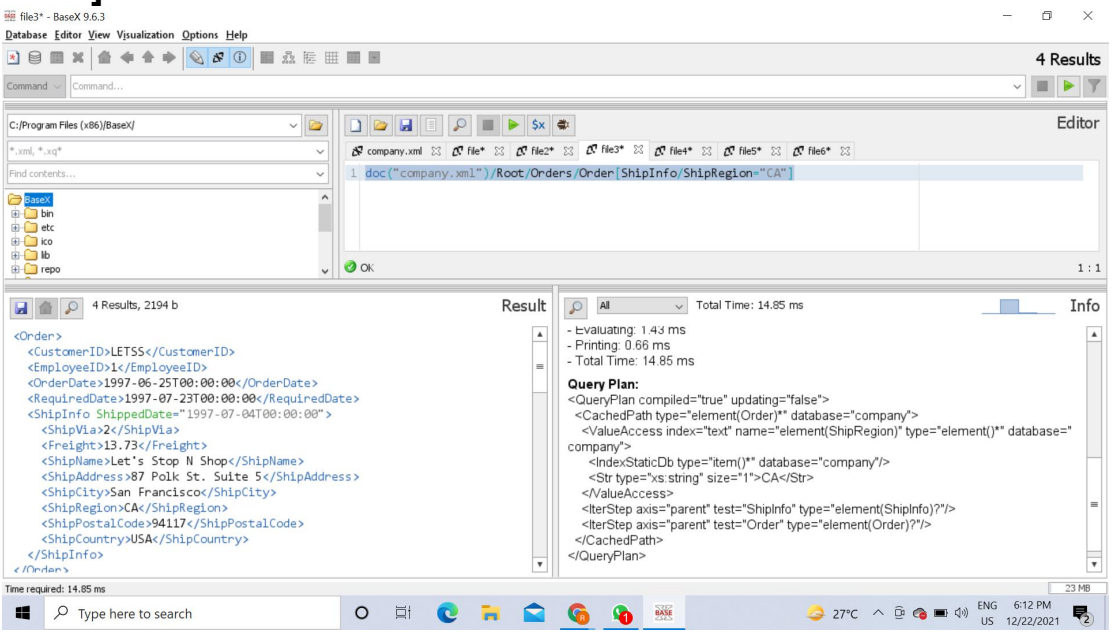
3. Apply Inline filter of an XML file and retrieve the details of 'LETSS'

doc("company.xml")/Root/Customers/Customer[@CustomerID = 'LETSS']



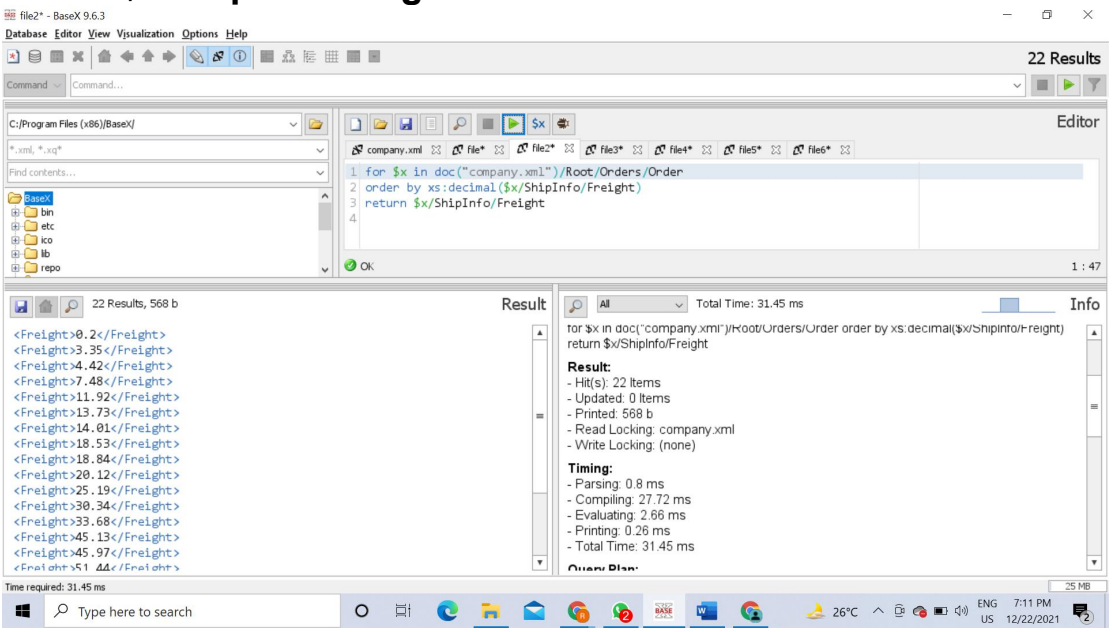
4. Find all the orders for the CA region

doc("company.xml")/Root/Orders/Order[ShipInfo/ShipRegion="CA"]



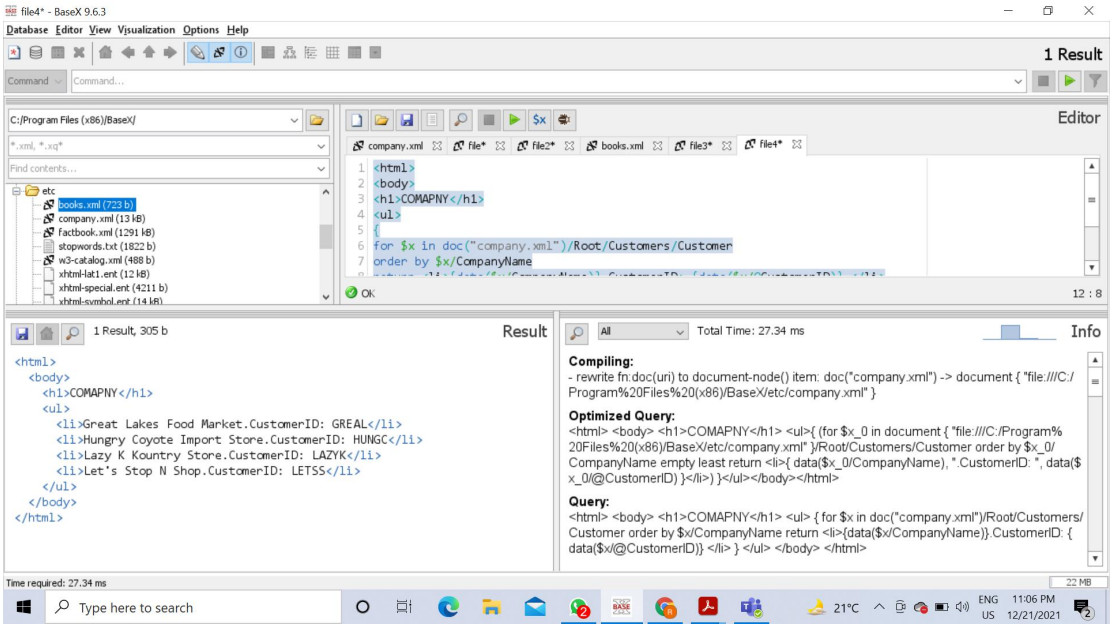
5. Order the output by the freight(Weight of the cargo)

for $x in doc("company.xml")/Root/Orders/Order
order by xs:decimal($x/ShipInfo/Freight)
return $x/ShipInfo/Freight



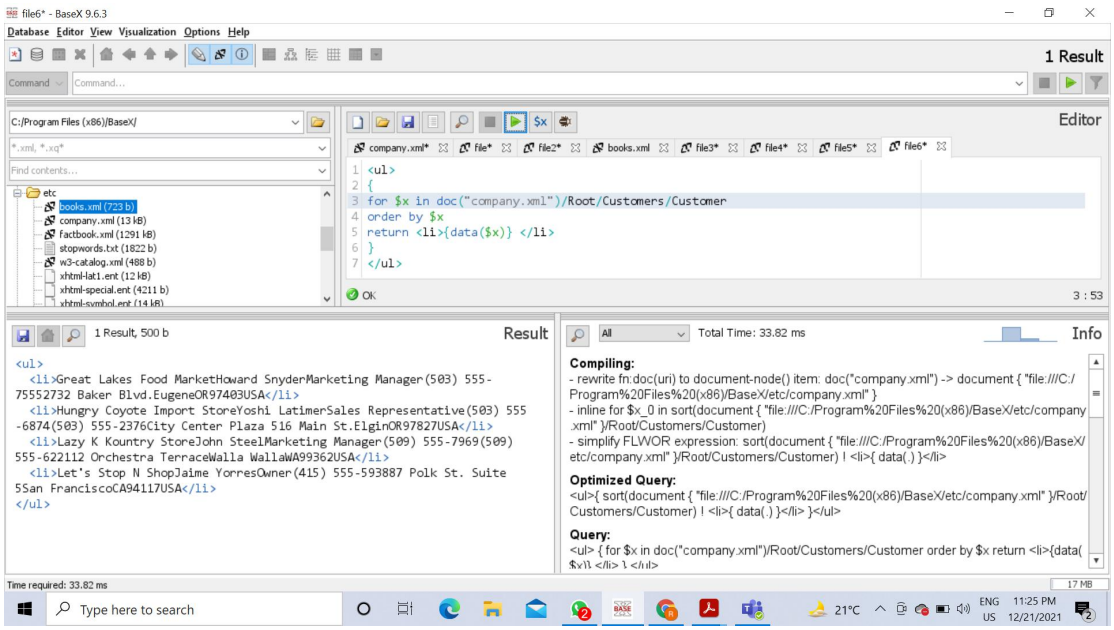
6. Insert xml data in html format for presentation by using a list

```
<html>
<body>
<h1>COMAPNY</h1>
<ul>
{
for $x in doc("company.xml")/Root/Customers/Customer
order by $x/CompanyName
return <li>{data($x/CompanyName)}.CustomerID:
{data($x/@CustomerID)} </li>
}
</ul>
</body>
</html>
```



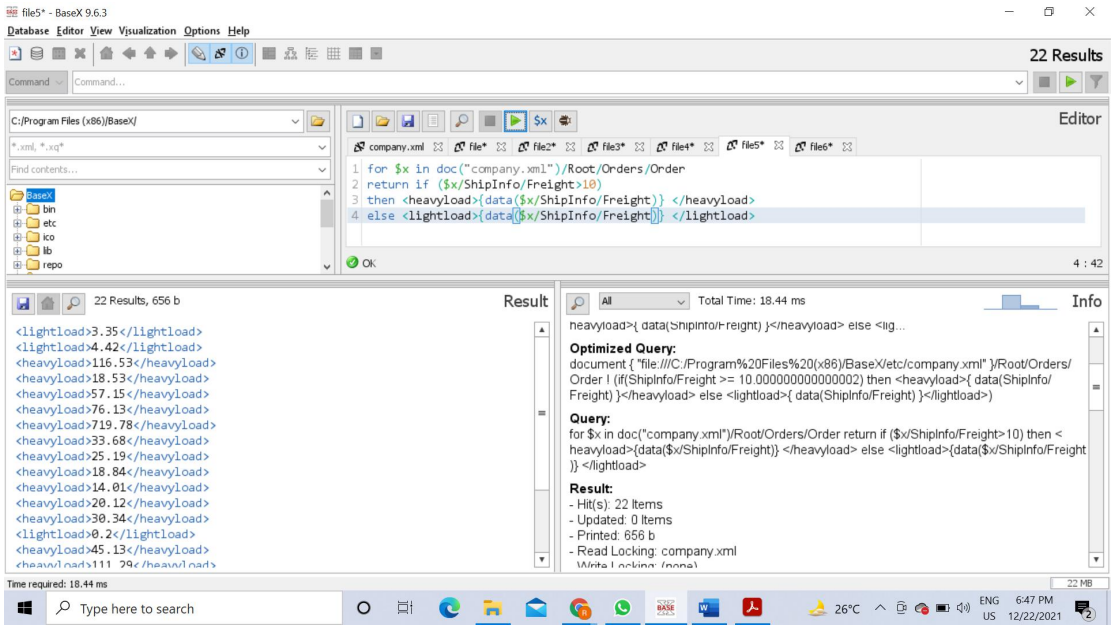
7. Insert only the data from the xml ignoring the xml tags. Hine: USe data() function

```
<ul>
{
for $x in doc("company.xml")/Root/Customers/Customer
order by $x
5return <li>{data($x)} </li>
}
</ul>
```



8. Use Conditional statement and retrieve the results for if the freight weight is above 10
(10000 Metric Tons)then it is tagged as a heavy load else a light load

```
for $x in doc("company.xml")/Root/Orders/Order
return if ($x/ShipInfo/Freight>10)
then <heavyload>{data($x/ShipInfo/Freight)} </heavyload>
else <lightload>{data($x/ShipInfo/Freight)} </lightload>
```


file5* - BaseX 9.6.3
Database Editor View Visualization Options Help
22 Results
Command...
C:/Program Files (x86)/BaseX/
*.xml, *.xq*
Find contents...
BaseX
bin
etc
ico
lib
repo
Editor
company.xml
file*
file2*
file3*
file4*
file5*
file6*
1 for $x in doc("company.xml")/Root/Orders/Order
2 return if ($x/ShipInfo/Freight>10)
3 then <heavyload>{data($x/ShipInfo/Freight)} </heavyload>
4 else <lightload>{data($x/ShipInfo/Freight)} </lightload>
OK
4 : 42
22 Results, 656 b
Result
<lightload>3.35</lightload>
<lightload>4.42</lightload>
<heavyload>116.53</heavyload>
<heavyload>18.53</heavyload>
<heavyload>57.15</heavyload>
<heavyload>76.13</heavyload>
<heavyload>719.78</heavyload>
<heavyload>33.68</heavyload>
<heavyload>25.19</heavyload>
<heavyload>18.84</heavyload>
<heavyload>14.01</heavyload>
<heavyload>20.12</heavyload>
<heavyload>30.34</heavyload>
<lightload>0.2</lightload>
<heavyload>45.13</heavyload>
All
Total Time: 18.44 ms
Info
heavyload>{ data(ShipInfo/Freight) }</heavyload> else <lig...
Optimized Query:
document { "file:///C:/Program%20Files%20(x86)/BaseX/etc/company.xml" }/Root/Orders/Order ! (if(ShipInfo/Freight >= 10.000000000000002) then <heavyload>{ data(ShipInfo/Freight) }</heavyload> else <lightload>{ data(ShipInfo/Freight) }</lightload>)
Query:
for $x in doc("company.xml")/Root/Orders/Order return if ($x/ShipInfo/Freight>10) then <heavyload>{data($x/ShipInfo/Freight)} </heavyload> else <lightload>{data($x/ShipInfo/Freight)} </lightload>
Result:
- Hit(s): 22 Items
- Updated: 0 Items
- Printed: 656 b
- Read Locking: company.xml
Time required: 18.44 ms
22 MB
Type here to search
26°C
ENG
US
6:47 PM
12/22/2021