Assignment 5

Anusha Kothapally

XML file:

<?xml version="1.0" encoding="UTF-8"?>

<Employees>

<Employee>

<Name>

<Firstname>Anderson</Firstname>

<Lastname>Susan</Lastname>

<MidInitial>L</MidInitial>

</Name>

<Street>108th</Street>

<City>Omaha</City>

<Gender>F</Gender>

</Employee>

<Employee>

<Name>

<Firstname>Brady</Firstname>

<Lastname>Dan</Lastname>

<MidInitial>L</MidInitial>

</Name>

<Street>P street</Street>

<City>Lincoln</City>

<Gender>M</Gender>

</Employee>

<Employee>

<Name>

<Firstname>Chen</Firstname>

<Lastname>Peter</Lastname>

<MidInitial>K</MidInitial>

</Name>

<Street>124th</Street>

<City>Omaha</City>

<Gender>M</Gender>

</Employee>

<Employee>

<Name>

<Firstname>Clemson</Firstname>

<Lastname>Ann</Lastname>

<MidInitial>M</MidInitial>

</Name>

<Street>O</Street>

<City>Lincoln</City>

<Gender>F</Gender>

</Employee>

<Employee>

<Name>

<Firstname>Dale</Firstname>

<Lastname>Mary</Lastname>

<MidInitial>K</MidInitial>

</Name>

<Street>132th</Street>

<City>Omaha</City>

<Gender>F</Gender>

</Employee>

<Employee>

<Name>

<Firstname>Gill</Firstname>

<Lastname>Mary</Lastname>

<MidInitial>L</MidInitial>

</Name>

<Street>P street</Street>

<City>Lincoln</City>

<Gender>F</Gender>

</Employee>

<Employee>

<Name>

<Firstname>Harrison</Firstname>

<Lastname>Susan</Lastname>

<MidInitial>M</MidInitial>

</Name>

<Street>Old Mill</Street>

<City>Omaha</City>

<Gender>F</Gender>

</Employee>

<Employee>

<Name>

<Firstname>Jackson</Firstname>

<Lastname>Kim</Lastname>

<MidInitial>A</MidInitial>

</Name>

<Street>178th</Street>

<City>Omaha</City>

<Gender>F</Gender>

</Employee>

<Employee>

<Name>

<Firstname>Jason</Firstname>

<Lastname>Pat</Lastname>

<MidInitial>M</MidInitial>

</Name>

<Street>8th</Street>

<City>C.Bluffs</City>

<Gender>M</Gender>

</Employee>

<Employee>

<Name>

<Firstname>Kumar</Firstname>

<Lastname>Paul</Lastname>

<MidInitial>T</MidInitial>

</Name>

<Street>Dodge</Street>

<City>Omaha</City>

<Gender>M</Gender>

</Employee>

<Works>

<Name>

<Firstname>Anderson</Firstname>

<Lastname>Susan</Lastname>

<MidInitial>L</MidInitial>

</Name>

<Company\_name>Mutual of Omaha</Company\_name>

<Salary>48000</Salary>

</Works>

<Works>

<Name>

<Firstname>Brady</Firstname>

<Lastname>Dan</Lastname>

<MidInitial>L</MidInitial>

</Name>

<Company\_name>FDR</Company\_name>

<Salary>42000</Salary>

</Works>

<Works>

<Name>

<Firstname>Chen</Firstname>

<Lastname>Peter</Lastname>

<MidInitial>K</MidInitial>

</Name>

<Company\_name>FDR</Company\_name>

<Salary>53000</Salary>

</Works>

<Works>

<Name>

<Firstname>Clemson</Firstname>

<Lastname>Ann</Lastname>

<MidInitial>M</MidInitial>

</Name>

<Company\_name>First Bank</Company\_name>

<Salary>39000</Salary>

</Works>

<Works>

<Name>

<Firstname>Dale</Firstname>

<Lastname>Mary</Lastname>

<MidInitial>K</MidInitial>

</Name>

<Company\_name>Mutual of Omaha</Company\_name>

<Salary>58000</Salary>

</Works>

<Works>

<Name>

<Firstname>Gill</Firstname>

<Lastname>Mary</Lastname>

<MidInitial>L</MidInitial>

</Name>

<Company\_name>Union Pacific</Company\_name>

<Salary>48700</Salary>

</Works>

<Works>

<Name>

<Firstname>Harrison</Firstname>

<Lastname>Susan</Lastname>

<MidInitial>M</MidInitial>

</Name>

<Company\_name>Union Pacific</Company\_name>

<Salary>54320</Salary>

</Works>

<Works>

<Name>

<Firstname>Jackson</Firstname>

<Lastname>Kim</Lastname>

<MidInitial>A</MidInitial>

</Name>

<Company\_name>FDR</Company\_name>

<Salary>68000</Salary>

</Works>

<Works>

<Name>

<Firstname>Jason</Firstname>

<Lastname>Pat</Lastname>

<MidInitial>M</MidInitial>

</Name>

<Company\_name>FDR</Company\_name>

<Salary>83000</Salary>

</Works>

<Works>

<Name>

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<Lastname>Paul</Lastname>

<MidInitial>T</MidInitial>

</Name>

<Company\_name>FDR</Company\_name>

<Salary>44000</Salary>

</Works>

<Company>

<Company\_name>First Bank</Company\_name>

<City>Omaha</City>

</Company>

<Company>

<Company\_name>FDR</Company\_name>

<City>Omaha</City>

</Company>

<Company>

<Company\_name>Lincoln Star</Company\_name>

<City>Lincoln</City>

</Company>

<Company>

<Company\_name>Mutual of Omaha</Company\_name>

<City>Omaha</City>

</Company>

<Company>

<Company\_name>Union Pacific</Company\_name>

<City>Omaha</City>

</Company>

</Employees>

DTD file:

<!DOCTYPE Employees [

<!ELEMENT Employees (Employee+,Works+,Company+)>

<!ELEMENT Employee (Name,Street,City,Gender)>

<!ELEMENT Works (Name,Company\_name,Salary)>

<!ELEMENT Company (Company\_name,City)>

<!ELEMENT Street (#PCDATA)>

<!ELEMENT Gender (#PCDATA)>

<!ELEMENT Salary (#PCDATA)>

<!ELEMENT Name (Firstname,Lastname,MidInitial)>

<!ELEMENT Firstname (#PCDATA)>

<!ELEMENT Lastname (#PCDATA)>

<!ELEMENT MidInitial (#PCDATA)>

<!ELEMENT City (#PCDATA)>

<!ELEMENT Company\_name (#PCDATA)>

]>

Q1: Find the name of an employee who lives in Lincoln and works in Omaha.

Query:

for $x in doc("Employees.xml")/Employees

let $company := $x/Company[City="Omaha"]

let $works :=$x/Works[Company\_name=$company/Company\_name]

let $emp := $x/Employee[City='Lincoln']

let $result :=$emp[Name=$works/Name]

return $result/Name

Result:

<Name>

<Firstname>Brady</Firstname>

<Lastname>Dan</Lastname>

<MidInitial>L</MidInitial>

</Name>

<Name>

<Firstname>Clemson</Firstname>

<Lastname>Ann</Lastname>

<MidInitial>M</MidInitial>

</Name>

<Name>

<Firstname>Gill</Firstname>

<Lastname>Mary</Lastname>

<MidInitial>L</MidInitial>

</Name>

Q2: Find salaries of employees who live in the same cities as the companies for which they work.

Query:

for $x in doc("Employees.xml")/Employees,

$emp in $x/Employee,

$company in $x/Company,

$works in $x/Works

where

$works/Name=$emp/Name and

$works/Company\_name=$company/Company\_name

and $emp/City=$company/City

return $works/Name

Result:

<Salary>48000</Salary>

<Salary>53000</Salary>

<Salary>58000</Salary>

<Salary>54320</Salary>

<Salary>68000</Salary>

<Salary>44000</Salary>