

Data Store Examples

```
<?xml version="1.0"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:sc="http://utdallas/semclass/elements/1.1/"
  xmlns:ext="http://www.example.org/terms/">
  <rdf:Description rdf:about="http://www.example.org/declaration">
    <ext:creation-date>July 4, 1776</ext:creation-date>
    <sc:location>Philadelphia</mine:location>
    <sc:creator rdf:resource="http://www.example.org/staffid#georgew"/>
    <sc:creator rdf:resource="http://www.example.org/staffid#thomasj"/>
    <sc:creator rdf:resource="http://www.example.org/staffid#benf"/>
  </rdf:Description>
</rdf:RDF>
```

```
@prefix mfg: <http://utdallas/semclass#>
@prefix exterm: <http://www.example.org/terms/>

mfg:document10245 exterm:cost _:cost ;
                 exterm:date "2010" .
_:cost rdf:value 1050 .
_:cost exterm:units exterm:Pesos .
mfg:document10245 exterm:location "Joe's Place" .
```

```
<?xml version="1.0"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:dc="http://purl.org/dc/elements/1.1/"
  xmlns:exterm="http://www.example.org/terms/">
  <rdf:Description rdf:about="http://www.example.org/index.html">
    <exterm:creation-date>August 16, 1999</exterm:creation-date>
    <dc:language>en</dc:language>
    <dc:creator rdf:resource="http://www.example.org/staffid/85740"/>
  </rdf:Description>
</rdf:RDF>
```

```
<?xml version="1.0"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:s="http://example.org/students/vocab#">
  <rdf:Description rdf:about="http://example.org/courses#dance1">
    <s:students>
      <rdf:Seq>
        <rdf:li rdf:resource="http://example.org/students/Zack"/>
        <rdf:li rdf:resource="http://example.org/students/Al"/>
        <rdf:li rdf:resource="http://example.org/students/Johanna"/>
      </rdf:Seq>
    </s:students>
    <s:dude> Wildflower </s:dude>
  </rdf:Description>
</rdf:RDF>
```

```
<?xml version="1.0"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:s="http://example.org/students/vocab#">
  <rdf:Description rdf:about="http://example.org/courses#dance1">
    <s:students rdf:parseType="Collection">
      <rdf:li rdf:resource="http://example.org/students/Zack"/>
      <rdf:li rdf:resource="http://example.org/students/Al"/>
      <rdf:li rdf:resource="http://example.org/students/Johanna"/>
    </s:students>
    <s:dude> Wildflower </s:dude>
  </rdf:Description>
</rdf:RDF>
```

```

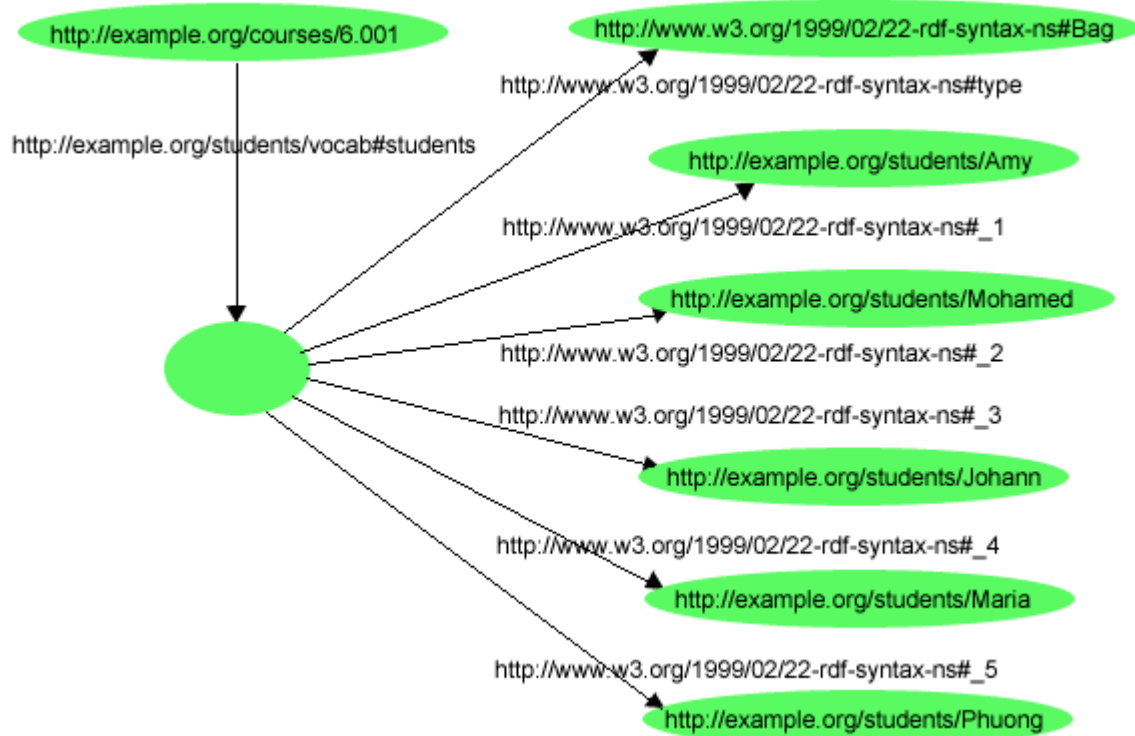
1
2
3 <?xml version="1.0"?>
4 <rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
5     xmlns:dc="http://purl.org/dc/elements/1.1/"
6     xmlns:extterms="http://www.example.org/terms/">
7     <rdf:Description rdf:about="http://www.example.org/index.html">
8         <extterms:creation-date>August 16, 1999</extterms:creation-date>
9         <dc:language>en</dc:language>
10        <dc:creator rdf:resource="http://www.example.org/staffid/85740"/>
11    </rdf:Description>
12</rdf:RDF>
13
14
15 <?xml version="1.0"?>
16 <rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
17     xmlns:s="http://example.org/students/vocab#">
18     <rdf:Description rdf:about="http://example.org/courses/6.001">
19         <s:students rdf:parseType="Collection">
20             <rdf:Description rdf:about="http://example.org/students/Amy"/>
21             <rdf:Description rdf:about="http://example.org/students/Mohamed"/>
22             <rdf:Description rdf:about="http://example.org/students/Johann"/>
23         </s:students>
24     </rdf:Description>
25</rdf:RDF>
26
27
28 AllStarPlayer a owl:Class;
29               subClassOf
30                 [ a owl:Restriction;
31                   owl:onProperty :playsFor;
32                   owl:someValuesFrom :AllStarTeam ] .
33
34 .....
35 AllStarPlayer owl:equivalentClass
36                 [ a owl:Restriction;
37                   owl:onProperty :playsFor;
38                   owl:someValuesFrom :AllStarTeam ] .
39
40 .....
41 <owl:Restriction>
42     <owl:onProperty rdf:resource=":playsFor"/>
43     <owl:someValuesFrom rdf:resource=":AllStarTeam"/>
44 </owl:Restriction>
45
46 .....
47 <?xml version="1.0"?>
48 <!DOCTYPE rdf:RDF[
49 <!ENTITY owl "http://www.w3.org/2002/07/owl#">
50 ]>
51 <rdf:RDF xmlns="file:/tmp/tmpAhx6iu-rdfconverter#"
52     xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
53     xmlns:owl="&owl;">
54     <owl:Class rdf:about=";AllStarPlayer">
55         <owl:equivalentClass rdf:parseType="Resource">
56             <rdf:type rdf:resource="&owl;Restriction"/>
57             <owl:onProperty rdf:resource=";playsFor"/>
58             <owl:someValuesFrom rdf:resource=";AllStarTeam"/>
59         </owl:equivalentClass >
60     </owl:Class>
61 </rdf:RDF>
62
63

```

```
1
2
3 <owl:Class rdf:about="http://nwalsh.com/rdf/vCard#Address">
4   <rdfs:comment>Resources that are vCard (postal) addresses.</rdfs:comment>
5   <rdfs:label>vCard Address Class</rdfs:label>
6   <rdfs:subClassOf rdf:parseType="Resource">
7     <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#Restriction"/>
8     <owl:maxCardinality rdf:datatype="http://www.w3.org/2001/XMLSchema#nonNegativeInteger">
9       1
10    </owl:maxCardinality>
11    <owl:onProperty rdf:resource="http://nwalsh.com/rdf/vCard#post-office-box"/>
12  </rdfs:subClassOf>
13  <rdfs:subClassOf rdf:parseType="Resource">
14    <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#Restriction"/>
15    <owl:maxCardinality rdf:datatype="http://www.w3.org/2001/XMLSchema#nonNegativeInteger">
16      1
17    </owl:maxCardinality>
18    <owl:onProperty rdf:resource="http://nwalsh.com/rdf/vCard#extended-address"/>
19  </rdfs:subClassOf>
20 </owl:Class>
```

SPARQL Examples

Presume this basic structure is repeated for every course at the school (i.e. a lot of courses with students).



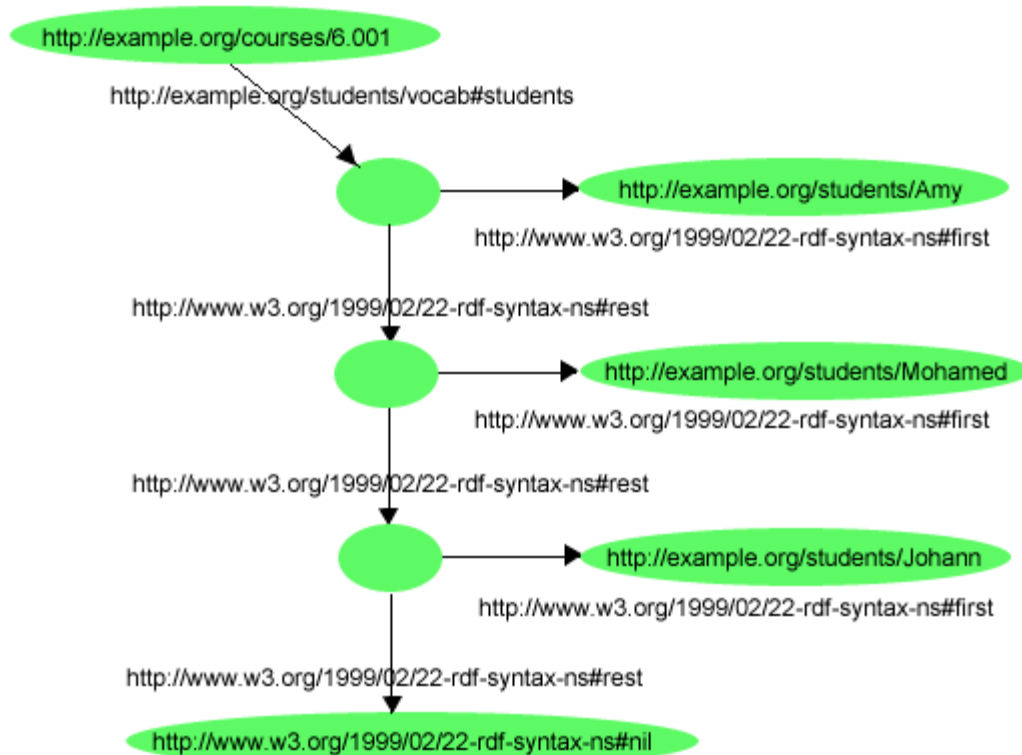
Complete the following query to yield the URI of the first student in the course.

```
PREFIX sc: <http://example.org/courses/>
SELECT ?o
WHERE {
```

Complete the following query to yield the URI of the second and third students in the course.

```
PREFIX sc: <http://example.org/courses/>
SELECT ?o
WHERE {
```

Presume this basic structure is repeated for every course at the school (i.e. a lot of courses with students).



Complete the following query to yield the URI of the first student in the course.

```

PREFIX sc: <http://example.org/courses/>
SELECT ?o
WHERE {

```

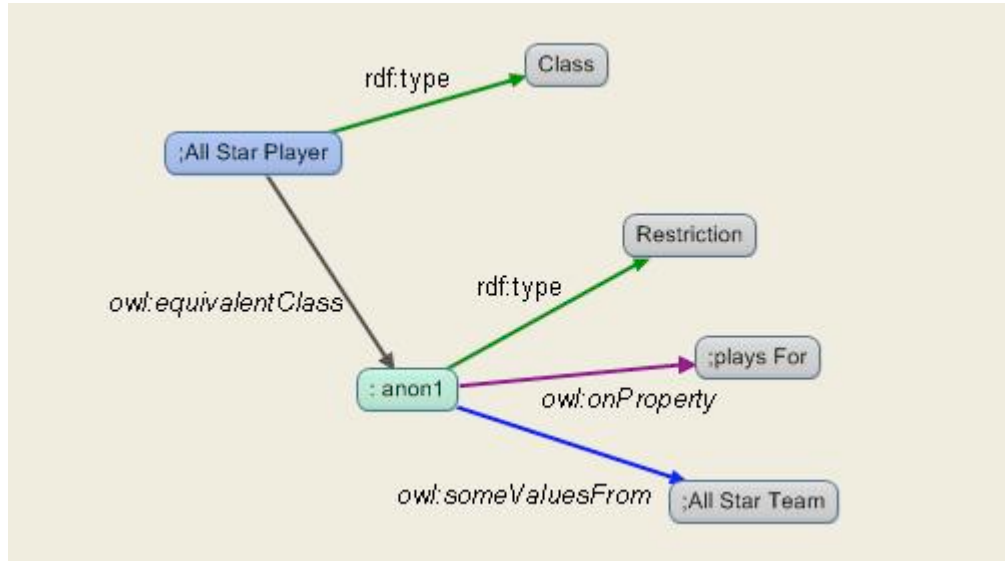
Complete the following query to yield the URI of the second and third students in the course.

```

PREFIX sc: <http://example.org/courses/>
SELECT ?o
WHERE {

```

1 Presume there are other uses of owl:equivalentClass in your knowledge store and the “;All Star Player”
 2 also has other equivalent classes.
 3



4
 5
 6 Complete the following query to yield all properties (i.e. pointed to by onProperty) involved in
 7 equivalent class relationships with “;All Star Player”.
 8

9 PREFIX sc: <http://example.org/courses/>
 10 SELECT ?o
 11 WHERE {
 12
 13
 14
 15
 16
 17
 18
 19
 20 }
 21
 22
 23
 24

25 What do you add to make certain the equivalent class relationship involves a property restriction?
 26
 27
 28
 29
 30
 31
 32
 33