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 exterms: <http://www.example.org/terms/>

mfg:document10245 exterms:cost _:cost ;
                  exterms:date “2010” .
_:cost rdf:value 1050 .
_:cost exterms:units exterms:Pesos .
mfg:document10245 exterms: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:exterms="http://www.example.org/terms/">

    <rdf:Description rdf:about="http://www.example.org/index.html">
        <exterms:creation-date>August 16, 1999</exterms: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>
```

```
<?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:exterms="http://www.example.org/terms/">
    <rdf:Description rdf:about="http://www.example.org/index.html">
        <exterms:creation-date>August 16, 1999</exterms: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/6.001">
        <s:students rdf:parseType="Collection">
            <rdf:Description rdf:about="http://example.org/students/Amy"/>
            <rdf:Description rdf:about="http://example.org/students/Mohamed"/>
            <rdf:Description rdf:about="http://example.org/students/Johann"/>
        </s:students>
    </rdf:Description>
</rdf:RDF>
```

```
AllStarPlayer a owl:Class;
              subClassOf
                  [ a owl:Restriction;
                    owl:onProperty :playsFor;
                    owl:someValuesFrom :AllStarTeam ] .
```

```
AllStarPlayer owl:equivalentClass
                [ a owl:Restriction;
                  owl:onProperty :playsFor;
                  owl:someValuesFrom :AllStarTeam ] .
```

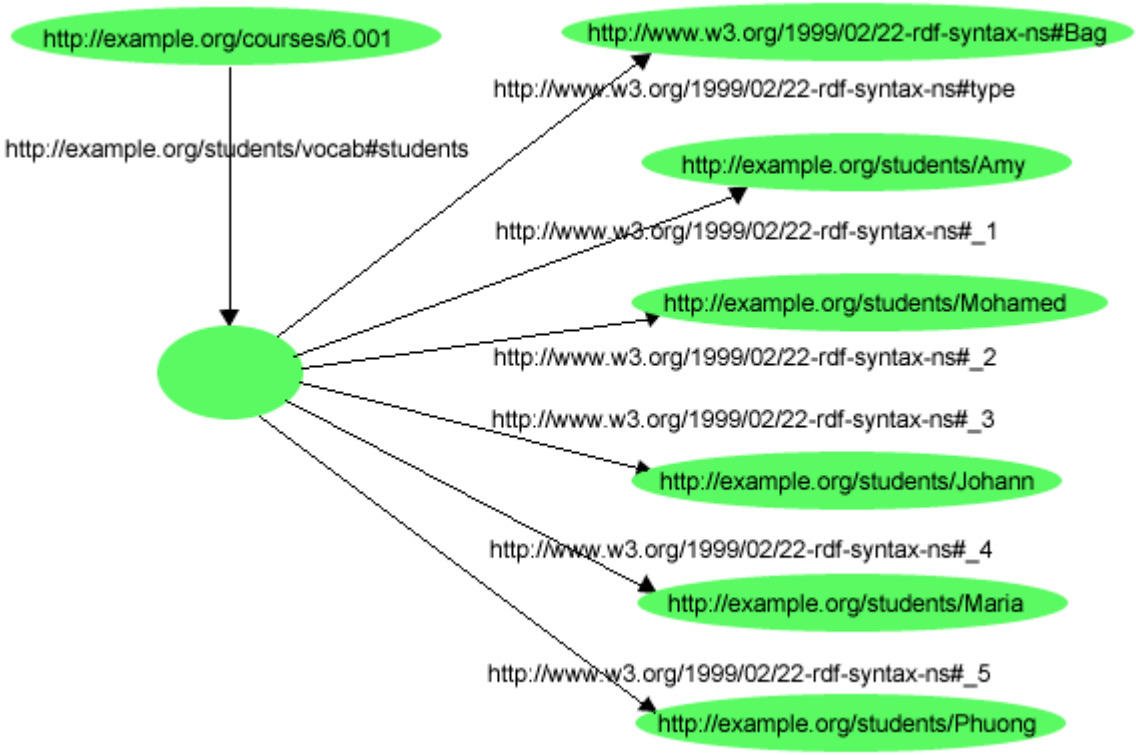
```
<owl:Restriction>
    <owl:onProperty rdf:resource=":playsFor"/>
    <owl:someValuesFrom rdf:resource=":AllStarTeam"/>
</owl:Restriction>
```

```
<?xml version="1.0"?>
<!DOCTYPE rdf:RDF[
<!ENTITY owl "http://www.w3.org/2002/07/owl#">
]>
<rdf:RDF  xmlns="file:/tmp/tmpAhx6iu-rdfconverter#"
          xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
          xmlns:owl="&owl;">
    <owl:Class rdf:about=";AllStarPlayer">
        <owl:equivalentClass rdf:parseType="Resource">
            <rdf:type rdf:resource="&owl;Restriction"/>
            <owl:onProperty rdf:resource=";playsFor"/>
            <owl:someValuesFrom rdf:resource=";AllStarTeam"/>
        </owl:equivalentClass >
    </owl:Class>
</rdf:RDF>
```

```
<owl:Class rdf:about="http://nwalsh.com/rdf/vCard#Address">
    <rdfs:comment>Resources that are vCard (postal) addresses.</rdfs:comment>
    <rdfs:label>vCard Address Class</rdfs:label>
    <rdfs:subClassOf rdf:parseType="Resource">
        <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#Restriction"/>
        <owl:maxCardinality rdf:datatype="http://www.w3.org/2001/XMLSchema#nonNegativeInteger">
            1
        </owl:maxCardinality>
        <owl:onProperty rdf:resource="http://nwalsh.com/rdf/vCard#post-office-box"/>
    </rdfs:subClassOf>
    <rdfs:subClassOf rdf:parseType="Resource">
        <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#Restriction"/>
        <owl:maxCardinality rdf:datatype="http://www.w3.org/2001/XMLSchema#nonNegativeInteger">
            1
        </owl:maxCardinality>
        <owl:onProperty rdf:resource="http://nwalsh.com/rdf/vCard#extended-address"/>
    </rdfs:subClassOf>
</owl:Class>
```

SPARQL Examples

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



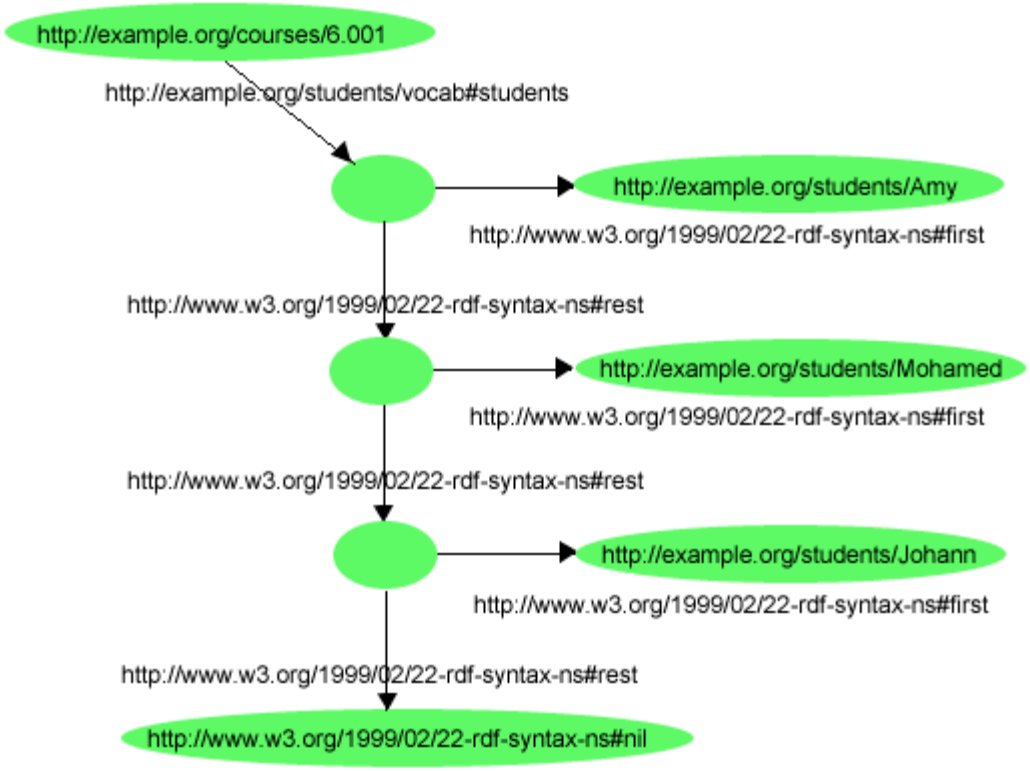
Complete the following query to yield the URI of the first student in the course.

```
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.



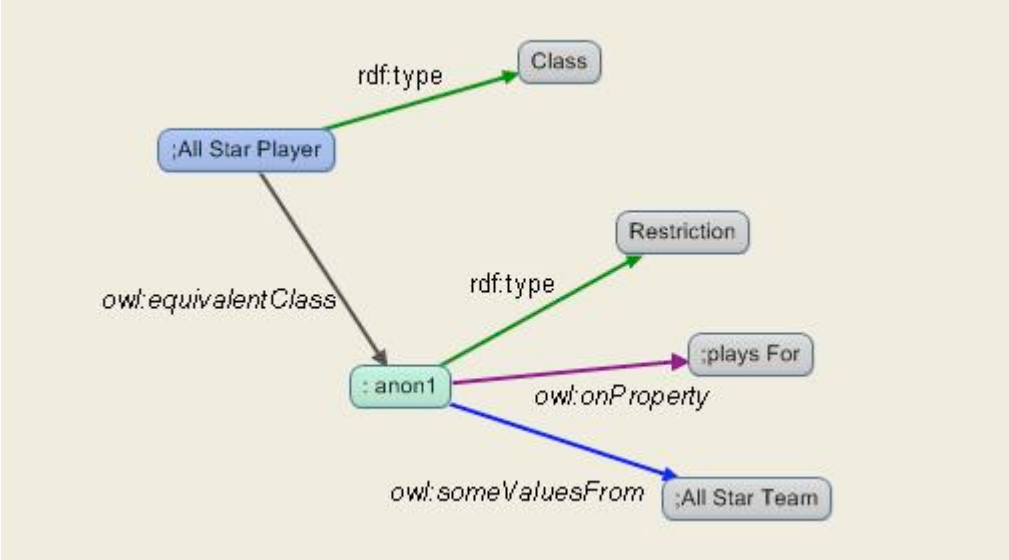
Complete the following query to yield the URI of the first student in the course.

```
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 {









}
```

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



Complete the following query to yield all properties (i.e. pointed to by onProperty) involved in equivalent class relationships with ";All Star Player".

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









}
```

What do you add to make certain the equivalent class relationship involves a property restriction?