

COMP 790 Security and Multiagent Systems Spring 2004 Assignment 4

1. Suppose the XML document with URI
<http://www.pets.org/interest.xml>
is

```
<?xml version="1.0"?>
<doc xmlns:xi="http://www.w3.org/2003/XInclude">
  <title>Things of interest</title>
  <para>
    <xi:include href="list.xml"
      xpointer=
        "xpointer(string-range(list/item[2], 'c')/
          range-to(string-range(list/item[4], 'dog')))" />
  </para>
</doc>
```

- Suppose the document with URI
<http://www.pets.org/list.xml>
is

```
<?xml version="1.0"?>
<list>
  <item>gold fish</item>
  <item>tabby cats</item>
  <item>sperm whales</item>
  <item>dog fish</item>
</list>
```

Show the resulting document (that is, a document that has the same infoset as that produced by the above).

2. Now suppose we also have the following document with URI
<http://www.pets.org/list.xml>

```
<?xml version="1.0"?>
<data>
  <fish>
    <kind>
      <name>shark</name>
      <habitat>sea</habitat>
      <food>meat</food>
    </kind>
    <kind>
      <name>ray</name>
    </kind>
  </fish>
  <birds>
    <kind>
      <name>jay</name>
      <habitat>pine forests</habitat>
    </kind>
  </birds>
</data>
```

Modify the first document in problem 1 so that it includes the two `name` elements that are grandchildren of the `fish` element and `habitat` element that is the grandchild of the `birds` element.

3. From the same location where you got this assignment, you can download an XML document that is like the one on page 121 of the course notes but includes script to prompt for a FIXPtr range expression and return its value. You tell me what should be entered to specify the following ranges. Note that ID attribute `id` is defined (and used here) for `person` elements. Note also that, because of the presence of the script, the first `person` element is located by `/1/2`, not `/1/1`. Be sure to use the XML document provided so that you can tell whether your answers are correct. The document must be opened in Mozilla, not IE.

- a.** From the `first` element grandchild of the first `person` element to the `age` child of this `person` element. Use bare names and child sequences.
- b.** The same as part **a** but use only child sequences.
- c.** From the `'t'` in `"Smith"` to the `'2'` in `"25"`, using bare names and child sequences.
- d.** The same as in part **c** but use only child sequences.