

Lab exercise – WEEK 3

Question 1

Draw the RDF graph model in Question 1.3 again, this time using Container.

Question 2

You can use Protégé software installed in the computer laboratory. If you want to install the software for your own computer, visit the website <http://protege.stanford.edu/>

Before attempting the following exercises, please go through the Protégé tutorial exercises available from the “A Practical Guide To Building OWL Ontologies

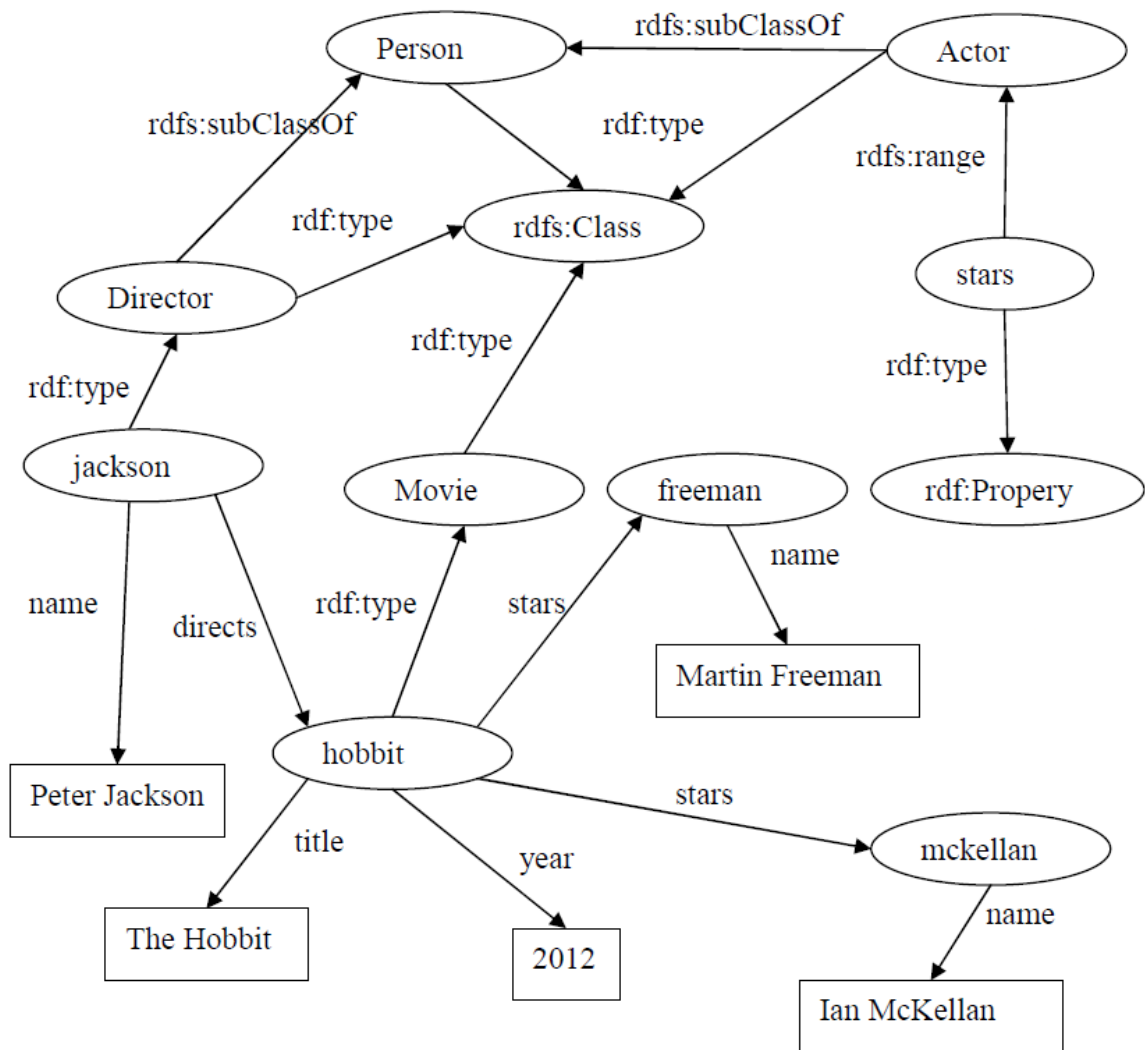
Using Protégé 4 and CO-ODE Tools” which can be downloaded (Protégé tutorial (v1.3)) from <http://owl.cs.manchester.ac.uk/publications/talks-and-tutorials/protg-owl-tutorial/>

Note this tutorial is for Protégé 4.0 and the current version is Protégé is 5.2. There may be some differences in the interface; however, the exercises in the tutorial should work in Protégé 5.2

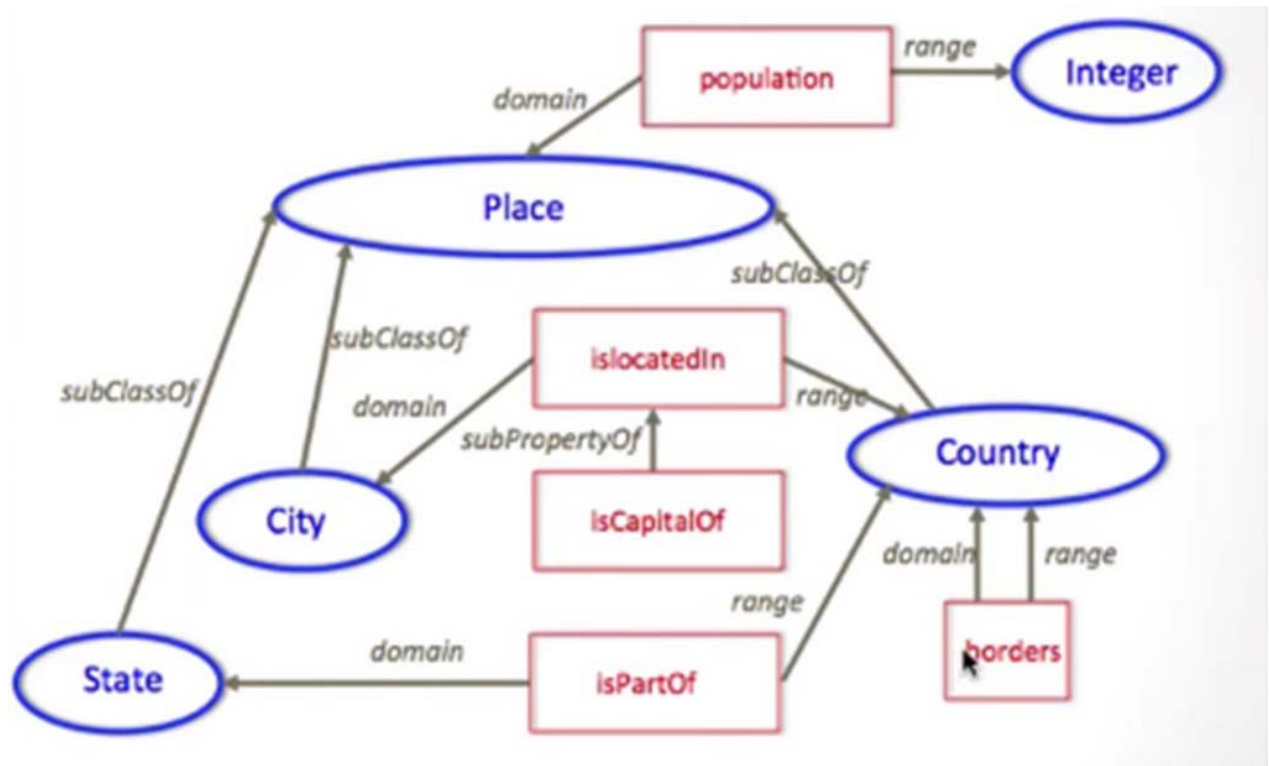
Task 1

Implement the following RDF graph using Protégé. Save the file. Open the OWL file using a Notepad, copy the RDF/XML document to the RDF Validator, parse the RDF to display output in Triples and Graph. Compare the output graph to the given RDF graph, did you get the same graph?

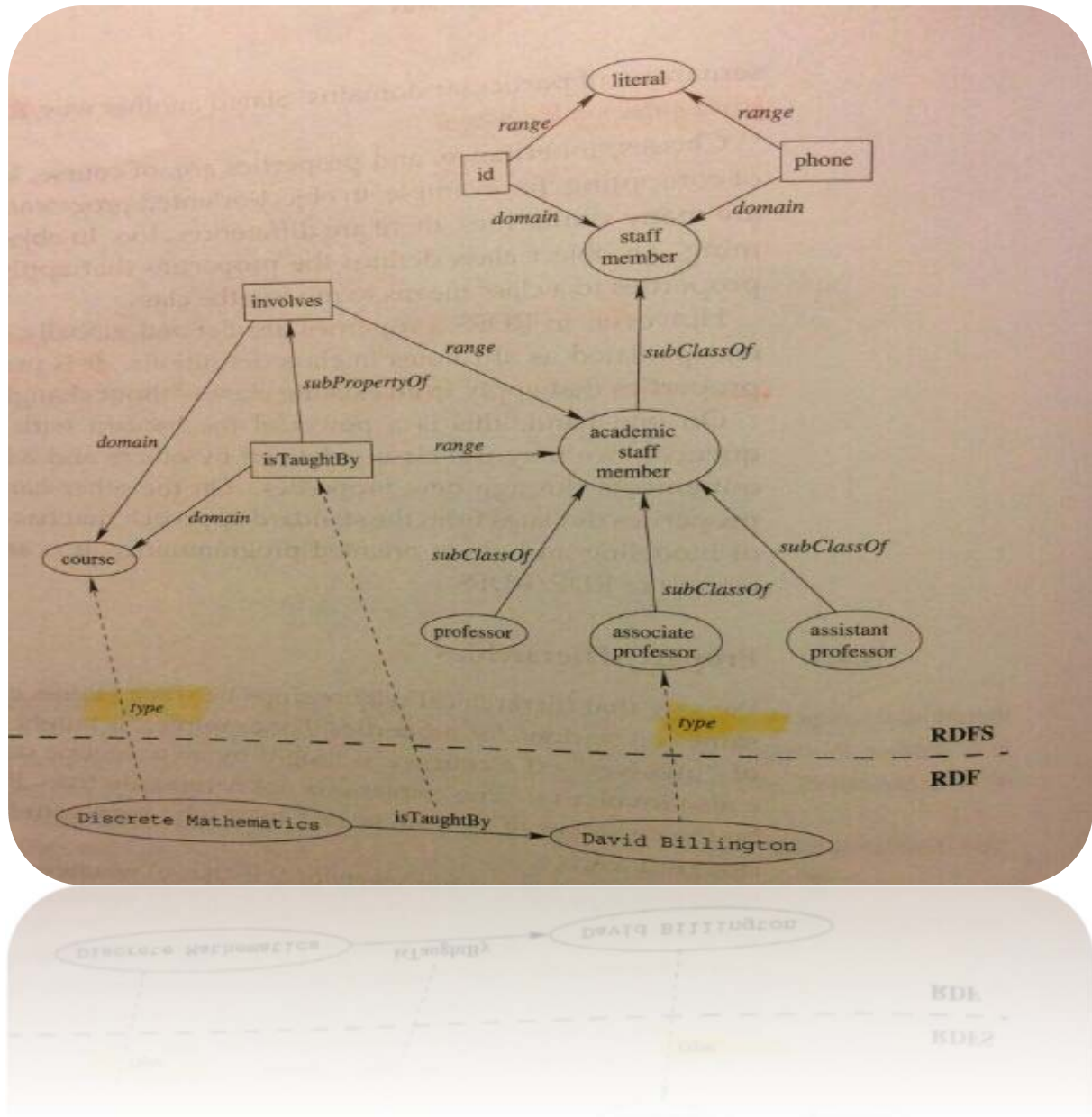
Part a



Part b



Part c



Task 2

Implement the following RDF/XML statements using Protégé. Save the file. Open the OWL file using a Notepad, copy the RDF/XML document to the RDF Validator, parse the RDF/XML statements to display output in Triples and Graph.

```
<rdfs:Class rdf:ID="Person" />
<rdfs:Class rdf:ID="Student">
  <rdfs:subClassOf="#Person" />
</rdfs:Class>
<rdfs:Class rdf:ID="Professor">
  <rdfs:subClassOf="#Person" />
</rdfs:Class>
<rdfs:Class rdf:ID="Course" />
<rdf:Property rdf:ID="advises">
  <rdfs:domain rdf:resource="#Professor" />
  <rdfs:range rdf:resource="#Student" />
  <rdfs:subPropertyOf="#knows">
</rdf:Property>
<rdf:Property rdf:ID="takes">
  <rdfs:domain rdf:resource="#Student" />
  <rdfs:range rdf:resource="#Course" />
</rdf:Property>
<rdf:Property rdf:ID="teaches">
  <rdfs:domain rdf:resource="#Professor" />
  <rdfs:range rdf:resource="#Course" />
</rdf:Property>
<rdf:Property rdf:ID="knows" />
  <Professor rdf:ID="alan">
    <teaches rdf:resource="#cs100" />
    <advises rdf:resource="#rob" />
    <advises rdf:resource="#sarah" />
  </u:Professor>
  <u:Student rdf:ID="rob">
    <takes rdf:resource="#cs100" />
    <takes rdf:resource="#cs200" />
  </Student>
</rdf:RDF>
```