

COMP 872 Social Semantic Web Fall 2014

Assignment 1

Due by Friday, Sept. 5 at 11:00 PM

1. Express the following in an N3 RDF document. Use shorthand notation (e.g., for triples with a common subject and for the `dc:type` property) as much as possible, use bnodes wherever they are natural, and make free use of the elements in the FOAF vocabulary and, if needed, the Dublin Core vocabulary.

The document

`http://www.Acme.com/news/BillSmithDisse.html`

is about a guy named Bill Smith, who knows Acme employees Al Jones (employee id 473) and Ann White (employee id 215), and who created the document

`http://www.BillSmith.net/news/AcmeDisse.html,`

which is about the Acme company

Suppose that the URI

`http://www.Acme.com/employeeid/`

is associated with the ids of Acme employees.

The following are the suggested bindings to establish between prefixes and URIs in the preamble of your document. The first three are standard bindings.

`rdf: with http://www.w3.org/1999/02/22-rdf-syntax-ns#`

`dc: with http://purl.org/dc/elements/1.1/`

`foaf: with http://xmlns.com/foaf/0.1/`

The next binding is a suggestion for the URI introduced here.

`empid: with http://www.Acme.com/employeeid/`

Identify all people as such (using `foaf:Person`). You may use `foaf:Group` to indicate that Acme is a company. Be sure to include the names of entities when they are given.

Validate your answer using Apache Any23 at <http://any23.org/> as described in the slides. Submit to Blackboard your answer in a Word document along with a paragraph of modest size explaining your N3 RDF document, including justifications for decisions you were forced to make. Also include a copy of the RDF graph that you get by copying the RDF/XML Any23 into the W3C RDF Validator (<http://www.w3.org/RDF/Validator/>) and clicking on Parse RDF with Triples and Graph selected in the display option. (You will have to cut this graph into two or more pieces to fit it into the Word document.) The validator is just a syntax checker; it doesn't check that you use URIs and literals with the correct semantics. I'll determine this.

2. Express the following in an N3 RDF document. Follow the directions given for Problem 1.

Jane wrote a document about Fred. Jane and Fred know each other.

Use prefixes as in Problem 1. Because of cross references, you will not be able to use the [...] notation for bnodes but rather must introduce placeholders (of the form `_:xxx`) for them.

As with Problem 1, validate your answer, and submit it in a Word document that includes a paragraph explaining your document and a copy of the RDF graph (split into several pieces) produced by the W3C RDF Validator.