Guys 3

Exercises on RDF and RDFS

1. RDF modelling

Represent the following facts with RDF graphs

1. p1 and p2 are political parties
2. c1, c2, c3, c4 were candidates for p1
3. d1, d2, d3 were candidates for p2
4. c3, c1 have been elected (in this order) for p1
5. no one from p2 has been elected
6. elected candidates have become members of the parliament

2. RDF meta modelling

In RDF there is no direct construct to add information to a triple (metadata). However there are situations in which we would like to have this possibility. For example

- to define the validity time of a triple, e.g. “The population of Geneva is 453779 in 2010”
- to define the validity space (location)
- to add provenance information, e.g. “IBM was founded in 1911 according to Wikipedia”
- to add a confidence or certainty level

Find two different ways to represent these additional pieces of information. In other words, find ways to represent quadruples (subject, predicate, object, additional-info) with triples.

3. Transformation to RDF

Create algorithms to transform a spreadsheet (made of cells organized in rows and columns and containing numbers or strings or formulae) into an RDF graph.

The transformation must be lossless, i.e. it must be possible to go back to the original data.

4. RDFS modelling

Define a RDF schema for describing courses (start from *Courses.ttl* file)