BİL 546 Semantic Web
Fall 2014
Erdogan Dogdu

Assignment 3

Due: Oct 9, 2014 (Thursday 24:00)

Subject: Applying inference rules

In this assignment you will build an ontology and apply reasoning rules on the ontology. Follow these steps:

- **Build an ontology Protégé.** Build an ontology in the assigned domain from the list below:
    o Your last name starts with:
        ▪ A-A: music (last.fm, bbc music, etc.)
        ▪ B-B: films (imdb)
        ▪ C-C: business management
        ▪ D-G: newspaper, news
        ▪ H-Ö: project management
        ▪ P-R: social network (facebook)
        ▪ S-V: library
        ▪ Y-Z: e-commerce

    Your ontology should be representative of the knowledge in the specified domain and comprehensive enough to capture the most distinctive features of the domain. For example, facebook has "likes", flickr has "tags", music and films have rating, news has comments, etc.

- **Apply reasoning rules**. Apply at least 10 different reasoning rules on the ontology (abox and tbox) and show results. You should use as many different rdf, rdfs rules as possible (comprehensiveness criteria).

Submit:

- *your-name-domain-name-*ontology.ttl: Get this output from Protégé.
- *your-name-domain-name-*ontology.pdf: Graph representation of the ontology.
- **reasoning.txt**: List 10 reasoning results in the following format for each:
    o **R#**. Brief explanation of the rule
    o **Axioms**: Facts you wrote (from ontology).
    o **Results**: Triples you got after applying reasoning rules using (Fact++ or Pellet).
- Zip the above files (**asg3-your-name.zip**) and email to edogdu@ with subject "[BİL546] Asg 3"

Grading:

- Ontology design: 40% (based on the correct use of vocabulary and domain representation)
- Reasoning: 40% (based on comprehensiveness)
- Submission: Text file and email format, file names, etc. (10%)

References:

- http://elite.polito.it/files/courses/01LHV/2012/4-RDFreasoning.pdf

Late assignment policy: %10 off for each late day after the deadline, and not acceptable after 3 days.