BİL 546 Semantic Web
Fall 2014
Erdogan Dogdu

Assignment 1

Due: Sep 23, 2014

Subject: Modelling data in semantic web using Protégé / Building an ontology

DBLP website (http://www.informatik.uni-trier.de/~ley/db) is a portal providing information about computer science research publications. You can access the citation information (titles, authors, journal/conference name, volume, issue, page numbers, etc.) of conference and journal papers and also search them by keywords.

Design an RDF/RDFS Ontology for the information presented in DBLP. <u>Concepts</u> to consider are but not limited to:

- Publications
- Conferences
- Workshops
- Journals
- Series
- Books
- Authors
- …

The ontology should be able to support the following queries:

- Find papers written by a particular author.
- Find papers published in a journal in a particular volume and number.
- Find papers which have "semantic web" in their title.
- Find authors with publications in a given journal in a particular year.
- Find co-authors of a certain author.

Notes:

- You need to submit your model in 4 formats:
    o Graph model: your-name-ont-name-model.pdf
    o RDF/XML: your-name-ont-name.owl
    o N3: your-name-ont-name.n3
    o Turtle: your-name-ont-name.ttl
- You must use the latest Protégé software to create the ontology.
- The schema part of your ontology should be reasonably comprehensive; the instance level need not be complete (few examples that represent the above queries are enough).
- The ontology should be consistent and verifiable against a reasoner.
- You must use rdfs:label and rdfs:comment to document your classes (as many).
- You must at least use the following rdf/rdfs class/prop/attr:
    o rdf:type, rdfs:subClassOf, rdfs:subPropertyOf, (one of) rdf:Bag/Seq/Alt, rdf:Statement, rdfs:domain, rdfs:range.

Grading:

- Technical completeness: Use of ontology constructs (rdf, rdfs, owl) %40
- Comprehensiveness: How good the domain is represented (use of classes, properties, ...) %40
- Data: You should have enough representative examples (individuals) %20

Submit your work as a zip/rar file (**asg1-your-name.zip**) by email to edogdu@ with subject line "[BİL546] Asg 1"

References:

- Download Protégé editor
- Protégé tutorial from CO-ODE project

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