

## Assignment 2

Due: Sep 30, 2014

Subject: Querying semantic data using SPARQL

In this assignment you will write SPARQL queries against an ontology data of your choice. Follow these steps:

- **Find an ontology** from the web in a format Protégé supports. You can use search engines to find an ontology in any format you want. For example, if you want music data in turtle format, you can use the following search query in Google:

music filetype:ttl

ttl stands for file extension for turtle files. You can use xml, rdf, owl, n3 for filetype but make sure the data within is in RDF and OWL. The file you choose should have enough data to query; make sure there are at least 500 triples in the file you selected.

- **Upload data to Protégé.** You can use the open menu option in File menu.
- **Write the following queries** in the SPARQL tab of Protégé application.
  - Q1. Number of classes
  - Q2. Number of properties
  - Q3. Number of triples (should be  $\geq 500$ )
  - Q4. Class list with class name and the number of instances for each class
  - Q5. Property list with property name, property type (object vs. data) and the number of usages for each property (in triples)
- **Write 10 queries (Q6-Q15) in SPARQL** about your data and test in Protégé. Queries you wrote should include at least each one of the following: SELECT, COUNT, DISTINCT, ASK, CONSTRUCT, FILTER, REGEX, ORDER, GROUP, UNSAID.

### Submit:

- **queries.txt:** This file should include all queries in the following format:

Q1. Query in English  
SPARQL query  
Result:  
...

- **data.ttl** (file you selected)
- **data.url** (url of the file you downloaded from)
- Zip the above files (**asg2-your-name.zip**) and email to edogdu@ with subject "[BiL546] Asg 2"

Grading:

- Technical completeness: 90%
- Data: Whether the data is a good sample (schema, correctness, url, size) 5%
- Submission: Text file format, file names, etc. (5%)

References:

- SPARQL: <http://www.w3.org/TR/rdf-sparql-query/>

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