Project 3: Ontology Engineering

Due: March 19, 2019

Maximum grade: 20 points

NOTE: This is an individual project

Using Protégé, a popular ontology editor, create an ontology for a domain of your choice. Just as a start, consider the following possibilities:

- music (include music types, instruments, performers, relationships among them, etc.)
- your favorite sport (e.g., baseball, soccer, cricket)
- cuisine or culinary domain,
- some aspects of computer science, or
- any other interesting domain of your choice.

Your ontology should have a well thought out schema (classes, likely organized into a hierarchy, and properties) and a number of individuals to properly illustrate the classes and relationships among them. Classes should be organized into hierarchies, as needed. There should be a suitable number of object and data type properties, as well as restrictions, such as cardinality specifications.

You should populate your ontology with a reasonable number of individuals, each described by a suitable number of properties. If you prefer, you may devise a method of automatically populating the ontology from some external data source(s).

Your final ontology should be saved in the RDF/XML format.

Provide a README.txt file with a brief description of your ontology, including a list of classes, their domains and ranges, properties, etc., with brief explanation for each one of them.

Submit your ontology and any associated files on eLC to the assignment folder Project 3.

Notes:

You will be using Protégé ontology editor to create your ontology. You should download and install version 5.4 of desktop Protégé. You may use a beta 5.5 version, or even an earlier version (should be above 5.0), as well.

Learning how to use Protégé is a significant part of this project. Lots of information, including useful tutorials, is available on Protégé Wiki:

  https://protegewiki.stanford.edu/wiki/Main_Page

You should read a good, but very introductory paper on ontology development, written by N.F. Noy and D.L. McGuinness:

  https://protege.stanford.edu/publications/ontology_development/ontology101-noy-mcguinness.html

A comprehensive and very useful tutorial on building ontologies with Protégé is available at the University of Manchester (a bit outdated):

  http://mowl-power.cs.man.ac.uk/protegeowltutorial/resources/ProtegeOWLTutorialP4_v1_3.pdf