OWL Lab

Ressources

RDF Validation Services :

- http://www.w3.org/RDF/Validator/
- http://rdf-translator.appspot.com/

The semantic engine Corese: http://wimmics.inria.fr/corese
The OWL ontology editor Protégé: http://protege.stanford.edu/ and associated tutorial
http://protegewiki.stanford.edu/wiki/Protege4Pizzas10Minutes

Exercice 1

Copy the ontology defined in human_rdfs.ttl in a new file humans_owl.ttl and complete it:

- Declare that hasSpouse and hasFriend both are symmetric properties.
- Declare that hasAncestor is transitive.
- Declare that hasChild is the inverse property of hasParent.
- Declare that classes Male and Female are disjoint.
- Declare that class Professor is the intersection of class Lecturer and class Researcher.
- Declare that class Academic is the union of class Lecturer and class Researcher.
- Use two restrictions to declare that any person married with a man is a woman and that any person married with a woman is a man.
- Use a restriction to declare that any person has a parent who is a woman.

For each of the above declarations, write a SPARQL query showing that Corese implements part of the OWL language (you will realize that the answers to the queries are different when you load the ontology in humans_rdfs.ttl or the ontology in humans_owl.ttl).

Exercice 2

Load your file humans_owl.ttl in the OWL editor Protégé and visualize your ontology.

Discover the functionalities of Protégé to edit an OWL ontology.

Discover the capabilities of the embedded reasoner to detect inconsistencies, e.g. for the disjointness of Male and Female, violate this constraint in the RDF data (and suppress the violation after that).