Semantic Web Engineering

Exercise 4 - OWL

Due: 12:00 am, November 25, 2010 reif@ifi.uzh.ch

Required Reading: Protege OWL Tutorial
http://owl.cs.manchester.ac.uk/tutorials/protegeowltutorial/

Use the Protege OWL tutorial and the lecture slides to answer the following questions. Be prepared to present your solutions in the lecture on November 26, 2010.

Following tools might be helpful for the exercise:

- Protege http://protege.stanford.edu

1. Define the Pizza-ontologie using individuals instead of classes

On the web you find the pizza ontology we discussed in the lecture for download (`pizza_classes.owl`). The ontology uses classes for the pizza toppings (e.g., `TomatoTopping`).
Your task is, to define an ontology that uses individuals as pizza toppings (e.g., `tomotoTopping` is an instance of the class `VegetabelTopping`) and allows a reasoner to infer the same conclusions (e.g., that a `PizzaMargarita` is an instance of the class `VegetarianPizza` and `CheesyPizza`). The skeleton of this ontology you can download under `pizza_individuals.owl`.

Hints:

- You might have to declare individuals as different form other individuals.
- You find valuable information in appendix A.2 of the Protege OWL tutorial (page 101). The Protege keyword for the hasValue restriction is `value`.
- Individuals are referenced using curly braces (e.g., `{tomatoTopping}`) in the Protege "Class Expression Editor".