

Deductive Databases & Knowledge Based Systems

Sheet 12

Exercise 1

Try to answer **briefly**, precisely and understandable.

1. What are ABox, TBox, and RBox?
2. What is reification and what is the problem with it?

Exercise 2

Download Protégé 4 from <http://protege.stanford.edu/> and open the University Ontology on our webpage.

1. Play around with the ontology, try to perform some classifications or queries.
2. If you add \neg Professor to the equivalence classes statement of Teacher, also Christoph disappears from the Teachers class. Why?
3. Add the following concepts at a useful place in the ontology (if possible – if not, guess why it does not work):
 - a. Intitute (with a property leadBy to Person and some useful properties to Lecture and University)
 - b. The property supervises which is a subproperty of teaches. Somebody supervises a lecture if he/she is the professor of the institute to which the lecture belongs.
 - c. ComputerScienceLecture, EconomicsLecture
 - d. CSStudent (Somebody is a CSStudent if he/she attends at least 3 CS lectures)
 - e. EconomicsStudent (Somebody is a EconomicsStudent if he/she attends at least 3 economics lectures)
 - f. Test your ontology! (maybe add some individuals to run the tests...)