

## Exercise Sheet 07

(Semantic Web)

**Please note:** The exercises will be neither collected, corrected, nor graded.

### Exercise 1

- a) What are ABox, TBox, and RBox?
- b) What is reification and what is the problem with it?

### Exercise 2

Download Protégé 5 from <http://protege.stanford.edu/products.php> and open the University Ontology on our webpage ([http://www.ifis.cs.tu-bs.de/webfm\\_send/1958](http://www.ifis.cs.tu-bs.de/webfm_send/1958)).

- a) Play around with the ontology, try to perform some classifications or queries and remove some inconsistencies.
- b) If you add **not** Professor to the equivalence classes statement of Teacher, also Kinda disappears from the teacher class. Why?
- c) Add the following concepts at a useful place in the ontology (if possible – if not, guess why it does not work).
  - Institute (with a property leadBy to Person and some useful properties to Lecture and University)
  - 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.
  - ComputerScienceLecture, EconomicsLecture
  - CSStudent (Somebody is a CSStudent if he/she attends at least 3 CS lectures)
  - EconomicsStudent (Somebody is a EconomicsStudent if he/she attends at least 3 economics lectures)
  - Test your ontology! (maybe add some individuals to run the tests...)