

## Semantic Web

# Exercise sheet 10

## Ontologies

**Exercise 1 (Ontology) (4 points)**

Explain in your own words what is ontology? (min 0.5 pages, max  $\frac{3}{4}$  page).

**Exercise 2 (Ontology design) (4 points)**

Explain in your own words main principles of ontology design. (min 0.5 pages, max  $\frac{3}{4}$  page).

**Exercise 3 (Ontology engineering methodologies) (4 points)**

Explain in your own words different ontology engineering methodologies and briefly explain their characteristics.. (min  $\frac{3}{4}$  pages, max 1 page).

**Exercise 4 (Ontology engineering) (8 points)**

Engineer a comprehensive ontology describing domain of university education in accordance to the statement provided below. 1. Select a suitable methodology described through lecturing material. Express the ontology in OWL. Usage of an ontology editor (e.g., Protégé) is allowed.

A set of faculties and institutes comprise a university. A university is responsible for organizing teaching process formalized through curricula. Faculties and institutes are contributing to a curriculum through lectures and tutorials, conducted by university personnel (professors and assistants). Students must subscribe themselves to a specific curriculum and must pass lecture exams and successfully conclude tutorial exercises. A student may take an exam up to three times for a specific lecture. Upon successful exam a grade is recorded in the student transcript.