

## Semantic Web

## Exercise sheet 3

## Resource Description Framework (RDF)

## Exercise 1 (RDF Syntax) (6 points)

Given the following graph model (semantic network) write all RDF statements in Turtle notation.



## **Exercise 2 (RDFS Modeling) (7 points)**

Design an RDF Schema which models the domain described through the set of natural language statements. Express the schema in Turtle notation.

1. Student is a Person.
2. Teacher is a Person.
3. Person has first name, last name and email.
4. Student attends Course.
5. Professor teaches Course.
6. University offers a set of Courses.
7. Course has name and identifier.

## **Exercise 3 (RDFS Entailment) (7 points)**

Execute RDFS entailment rules over the set of RDF statements from Exercise 1 and Exercise 2 and write down all the realization statements in Turtle notation.