



University of Innsbruck – Institute of Computer Science
Semantic Technology Institute
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PS Introduction to Modeling

Assignment 1

The following exercises do not require any knowledge about modeling languages or modeling techniques but knowledge about the meaning of the terms *domain*, *concept*, *attribute* and *relation*. All the „modeling“ should be done in natural language only.

Exercise 1 (Modeling in natural language – 6 points)

- Pick a domain you want to experiment with.
- List at least five basic concepts in your domain.
- Add at least two attributes to your concepts.
- Define relationships between the concepts you listed (each concept should be in at least one relationship).
- Answer the following question: Are there restrictions on your concepts? If yes, which? If no, why not?

Example:

- **Domain:** Hotel
- **Concepts & Attributes:**
 - Hotel: name, number of rooms, address, ...
 - Room: capacity, balcony, ...
 - ...
- **Relationships:**
 - A *hotel* consists of several *rooms*.

- A *hotel* has at least one *restaurant*.
- Each *tourist* lives in exactly one *room* but a *room* can accommodate several *tourists*.
- ...

- **Restrictions:**

- It is not allowed to accommodate more than *capacity* *tourists* into a *room*.
- The *name* of a *hotel* has to be at least three characters long.
- ...

Exercise 2 (Concept visualization – 4 points)

Visualize as many of the concepts, attributes, relationships and restrictions defined in Exercise 1 in a way you prefer. Of course, it does not have to be in any formal way but simply in a way you would draw it to explain your idea to a friend. Attach the drawing in a digital form (photo, scan, ...).

Enter your anticipated points and send your final solution and explanations (txt and pdf files only!) to anna.fensel@uibk.ac.at until Tuesday the 28th of October 2015, 16:00.