UNIB20005 Language and Computation

Semantics Worksheet 1

We have seen how to build syntactic representations, with the help of grammars and parsers. The next step is to map these tree structures to representations of meaning.

This week's workshop lays important groundwork for next week's lectures. We will cover feature-based grammars and first order logic, drawing on material from the early parts of chapters 9 and 10 in the textbook.

a. Please read the subsections of §9.1 called *Syntactic Agreement* and *Using Attributes and Constraints*, then do exercise §9.6 ex. 2.

   Homework: read the subsection of §9.3 called *Case and Gender in German*, then do exercise §9.6 ex. 6. Note that you should omit the hyphens from the input words, e.g. *unas cortinas hermosas*.

b. Read §10.1, skimming the details and being sure to grasp the core concepts, including: database tables, translation of queries into SQL, "truth in a situation", consistency, and models. Discuss these concepts with a partner, and ask the tutor about any aspects you do not understand. The book says: "we have 'hard-wired' an embarrassing amount of detail about the database"; what is the issue here? How adequate is SQL as a representation of the meaning of a question? Explain your understanding to the tutor.

c. Read §10.2, then complete §10.8 ex. 1 (a-c). Show your work to the tutor.

   Homework: finish ex. 1.

d. Read §10.3, then attempt §10.8 ex. 2 (a-c), 3 (a-c).

   Homework: finish ex. 2, 3.

Please complete the homework tasks before the semantics lectures, where knowledge of this material will be assumed. If you have difficulties outside the workshop, please post questions on Discussion Forum.