

CmpE 494 Service-Oriented Architectures
Fall 2005
Assignment 4—Due: 27/12/2005

You will do this assignment in groups of four people.

Develop an OWL ontology for representing knowledge about a university. Your ontology will describe concepts such as department, student, and course, the properties of each concept such as `hasName`, `isCredits` and relations between them such as `takes` and `offers`. You can define other concepts or properties as well. Your ontology should specifically cover the following statements:

1. A cross-listed course is a course that is offered by more than one department.
2. A student is a member of exactly one department.
3. A CmpE course is a course that is offered by CmpE department and is always three credits.
4. A CmpE student is a student that is a member of CmpE department.
5. CmpE courses are taken by CmpE students.
6. CmpE-494 is a CmpE course and is taken by Ali, who is a student in the CmpE department.
7. Okan, an IE students, takes CmpE-494.

During the demo show examples to demonstrate the correctness of your ontology. For example, you should not be able to instantiate a new CmpE course with 4 credits. You cannot have a student that is a member of two departments, etc.

Use Protégé (Available at <http://protege.stanford.edu/>) to develop your ontology. While installing, choose to setup the software with OWL support.

1. Prepare a design document of your project and explain your design decisions, your classes and your properties and the task division in the group. Write your documentation and your source code (Protege file `.pprj` and OWL file) in a CD and submit the CD **before class** to the instructor. Make sure that all group members' names are clearly written.
2. Watch for the notification of demo dates. **All** members of the group need to be present in the demo. Be prepared to show all aspects of your program. The demos will take place in the university so make sure that your demo runs on the PC Labs in the university or that you can bring in the necessary hardware and software for the demo.