

Ontologies - Practical Session 2

Reusing, refining, and formalizing

During the three practical sessions of the ontology course (of which this is the second), we will go through the process of building a complete ontology. Since ontologies should be shared and consensual, and a big part of the process is about discussing and pondering possible representations of concepts, you will do this in groups of 3 or 4.

T1: Reintegrate the group you were in last time. If you were not in a group the last time, find one.

Note that you will need to submit the final ontology as well as its documentation and a short report on the different steps you went through to build it after the third practical session. Make sure to **keep notes** of everything you do today and during the other sessions.

Today, you will restart from the skeleton ontology you made last time. Make sure that you are reasonably satisfied with it before starting. We will do things in a slightly different order than in the lecture.

You will need to have Protégé installed locally, so make sure that at least one computer in your group has a working version of Protégé on it.

T2: Using the sources we saw in the lecture (repositories, google, etc.) and others, find ontologies that contain concepts and relations that you can reuse for your children story ontology. Take notes of what you find and open the most promising ones in Protégé to inspect them. Identify for each which concepts and which relations you could reuse, how compatible they are with the ontology you are building, and in which way you might reuse them (import, specialization, relation).

T3: Integrate the elements from the ontologies found that are the most consistent with your initial skeleton ontology. You can import those ontologies or link to them by creating concepts/properties/individuals with the right URIs.

In more detail, in Protégé, you can make reference to a concept or a relation from an external ontology by creating a new concept or a new relation that you identify using the URI of the concept or relation in the original ontology. You can do that, when creating a new class or property, by clicking the “New Entity Options” button and specifying the namespace for the new entity. To make things easier, you can also specify the prefix corresponding to that namespace in the “Active Ontology” tab of Protégé.

T4: Now that you have integrated some external elements, use the three questions seen in the lecture to refine your ontology, complete it, ensure that it is correct within the scope you think you should have. Also, identify, first as English phrases, more precise definitions of the concepts you have included.

T5: Write down description logic statements for the English definitions you have written above and integrate them into your ontology using Protégé.