

Installing Protégé on Dice:

1. Go to <http://protege.stanford.edu> and follow the download links for version 4.1 beta
2. Download installer for linux (without the Java VM)
 - run the installer: [dice]: sh install_protege_4.1.bin
3. cd to the Protégé directory, and run Protégé by: [dice]: ./run.sh

Using Protégé

1. The welcome screen lets you open an OWL file stored locally, or copy one from a URI. Select **Open from URI** and enter:
http://www.inf.ed.ac.uk/teaching/courses/kmm/PDF/cows.owl
2. The GUI is organised into 8 tabs, the **Active Ontology** tab opens first (but may not show any information).
3. The ontology hierarchy is shown in the **Classes** tab, the **Object Properties** and **Data Properties** tabs show the roles (object and datatype properties respectively) their domains and ranges. The **Entities** tab shows both classes and properties.
4. In the **Classes** tab, selecting a class in the hierarchy, e.g. *Herbivore*, lets you see the formal definition (if any) and, very importantly, the disjointness assertions are shown at the bottom of the lower right panel.
 - a. The circle **o** lets you edit the definition, there is an option to type Manchester syntax: **Class expression editor**
 - b. The **x** deletes the definition
 - c. **Equivalent classes** are necessary and sufficient conditions for class membership
 - d. **Superclasses** are parent (subsuming) classes / necessary definitions.
5. Useful options for creating class definitions (under **Edit**) include **Add covering axiom** and **Make primitive siblings disjoint**
 - a. Note that you may need to update these axioms should you edit the child/sibling classes later.
6. In the **Object Properties** tab, properties are shown as sub-properties (child nodes) of *topObjectProperty*.
 - a. Note that the characteristics (transitivity etc) and domains and ranges must be defined manually.
7. Files are saved in the usual way, see the **File** menu. Save often, and check the message that appears on saving for reports of an error.
8. Other files from the KMM website can be opened using **File/Open from URL**

**The Classifier**

1. Hermit should be selected (under **Reasoner**), **Reasoner/Start reasoner** will call the classifier. The inferred hierarchy will be shown with a pale yellow background in the **Classes** tab (select **Class hierarchy (inferred)**).
2. Inconsistent classes are shown in red, e.g. *MadCow*.
3. After editing the ontology it is necessary to rerun the classifier, use **Reasoner/Synchronise reasoner**.