Knowledge Representation Laboratory 6:
RDF in Python

CITS3005

This laboratory will involve setting up RDFLib in Python on your system, working through the basic tutorial, and completing some exercises.

1. Install ProbLog2. This can be done using pip: `pip install rdflib`, or by following the instructions at `https://rdflib.readthedocs.io/en/stable/gettingstarted.html`.
2. Complete the tutorial at `https://rdflib.readthedocs.io/en/stable/gettingstarted.html` and browse the examples directory, to get an idea of the use of rdflib.
3. Build a knowledgegraph in rdflib with the following properties:
   - there should be nodes for CITS3005, CITS2211, CITS3403, and CITS2200.
   - the units have names and prerequites and outcomes, as given in the UWA handbook `https://handbooks.uwa.edu.au/`
   - the units also have contact hours which can be of type `lecture`, `lab` or `workshop`.
   - contact hours have a duration.
   - the units have assessments, which may be of type `exam`, `project`, or `test`.
   - units have a unit-coordinator.
   - write and execute a SPARQL query for all units without an exam.
   - write and execute a SPARQL query to find all the outcomes in units coordinated by Tim French.
4. Can you represent the same knowledge graph and queries in prolog. Which is most intuitive?