

Knowledge Representation Workshop 7

CITS3005

September 21, 2023

Semantic and Validating Schema

The unit project is released at <https://teaching.csse.uwa.edu.au/units/CITS3005/> and requires you to build a knowledge graph and ontology representing a fragment of the information contained in the UWA Handbook.

This workshop will focus on the development of semantic and validating schema for the knowledge graph. Consider the unit and major information available at: <https://handbooks.uwa.edu.au/>.

1. What are a set of classes and properties that can be used to describe the unit and major information? Do they related to any general vocabularies?
2. What semantic characteristics do these classes and properties have? Describe them in plain English, and then express them in RDFS.
3. What are the typical questions the knowledge graph might be used to answer? What requirements do we have on the schema to be able to answer these questions?
4. Describe the requirements of the knowledge graph using shapes. Are there any requirements that are hard to express?
5. Express the shapes as a SHACL graph.
6. What unstructured information is in the handbook that may be required to answer questions? What can we access this information.