Assignment #2 – Explanation
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Overview

For my ontology assignment, I created an ontology to display relationships between characters, places, and school subjects described in the novel Harry Potter and the Philosopher's Stone. I focused on three main groups: characters, places, and subjects.

Characters

Within characters, I distinguished between animals and humans. I further separated humans into squibs, magical characters, and muggle characters. Within the magical characters, I broke down characters into students, professors, and ghosts. I did this to distinguish between different types of magical characters and focused primarily on groups found at Hogwarts

Places

Within places, I distinguished between London and Hogwarts, the two primary places activity occurs in the first book of the series. I also broke Hogwarts further down into its houses: Gryffindor, Slytherin, Hufflepuff, and Ravenclaw.

Subjects

Within subjects, I simply listed the subjects offered at Hogwarts to first year students.

Object Properties

I used object properties to outline relationships between different groups and different terms. For instance, I used the object property 'has_pet' to link 'Humans' to 'Animals'. I then used the object property restrictions to outline which animal was the specific pet of which human. I also used the inverse property 'is_pet_of' to outline which human owned which animal.

Other object properties/inverse object properties used were:
- is_house_of (ie. Gryffindor is house of Hogwarts)
- haunts/is_haunted_by (ie. Ghosts haunt Hogwarts)
- teaches/is_taught_by (ie. Professors teach Students/Subjects)
- is_headmaster_of/is_head_by (ie. Professor Dumbledore is headmaster of Hogwarts)

Rationale

I focused on the first book of the Harry Potter series to keep relationships organized for myself. As the series progresses, students graduate Hogwarts and are not longer students, characters die and are no longer professors, and some living beings die and become ghosts. By focusing on the first book, I could better categorize characters and accurately keep subclasses disjoint within my ontology.

I also limited the amount of characters and places for simplicity purposes as I learned the properties ontologies. Although I always knew Harry Potter is a complex topic, I learned through this assignment that ontologies are also very complex. There are numerous ways to build an ontology surrounding Harry Potter. I tried to build mine so that more terms and object properties could be added at a later time. In other words, I tried to create an ontology that I could grow as I learned.

In hindsight, I probably would have focused only on students, professors, courses, and Hogwarts houses. This would have been simpler to follow and would better display relationships. I would also focus on relationships specifically at Hogwarts rather than try to tackle the entire book.