

Protege Ontology Text-Editor Module Documentation

3B1
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0.1 Guidelines

The Protege Ontology Text-Editor Module implements an API which will allow the specialized user(e.g. teacher) to modify an ontology by adding or deleting concepts or relationships between concepts. Throughout the API we create a link between GUI and OWL modules. GUI plug-in may access and display all new concepts .OWL may read information from Edit and Edit may modify OWL.

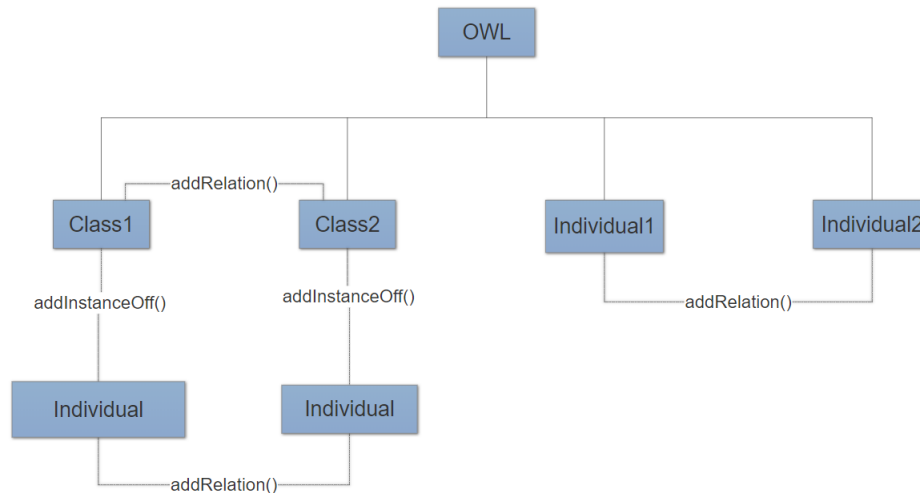
0.2 Technologies used

This module uses the OWL API, a Java API. It is used for implementation in creating, manipulating and serializing OWL ontology.It is used for detecting the relationships between concepts.

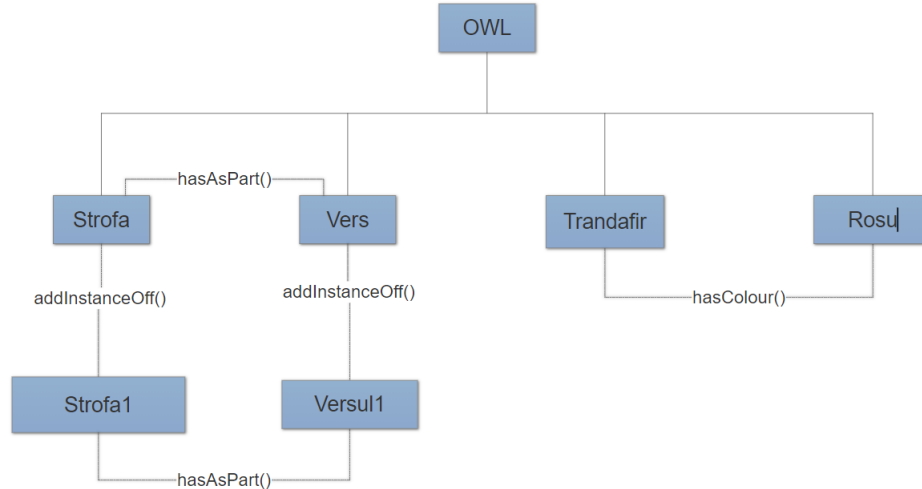
Apache Maven, a project build and management system, is used for describing the software build process and his dependencies. Also used for finding the relationships between concepts and resolving the dependencies.

0.3 Application architecture

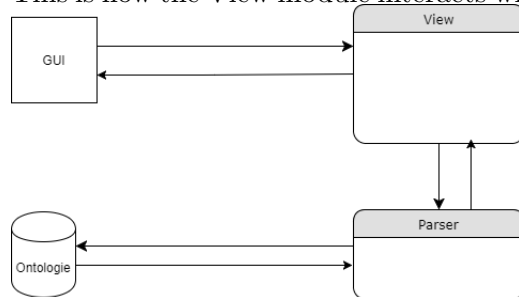
This is how Edit module will treat concepts or entities and relationships between them:



And this is an example of a basic ontology and how Edit module work on it:



This is how the View module interacts with both the GUI and the Parser:



0.4 Implementation

This module is based on 3 parts: Validation, Edit and View.

The Validation module checks if the documents format matches (Document.java) with the one allowed and based on that format it chooses a strategy (DocumentStrategyMapping.java) that suits the format (e.g. Docx-DocumentStrategy.java).

The Edit module allows to modify the ontology(Api.java) by adding relations between entities, removing concepts, adding instances of a concept and linking individuals. Also this module resolves dependencies between concepts and verifies if a concept or a relationship exists(Resolver.java).

The View module allows to load an ontology that has been validated

by the first module and get the relationships between concepts that can be found in that ontology(ViewApi.java).Also it retrieves if a word represents a concept and the relations that word has(Parser.java).