

Onto-X Project

Terminology

Let's call the attached ontology "Onto-X". Onto-X carries entities representing a hierarchy of pathologies. Each entity is described by

- **Class Id:** representing a unique ID of the entity within the ontology
- **Preferred Label:** specifying the label of the entity
- **Parents:** representing one or more direct ancestors of the entity. The list of parents is separated by a pipe "|"

Task

The task is the following:

- Building a logical representation of Onto-X that preserves ancestor relationships (direct and indirect) and consequently enables reconstructing the hierarchy of entities. In other terms, for a given entity, we want to get all its relationships with the rest of the ontology entities. In addition we want to extract the depth of each relationship. For example: given the ID of "CERVIX DISORDER", the API should return a dictionary of relationships:

```
{
  "GYNECOLOGIC DISORDERS" : 2,
  "CERVIX DISORDERS": 1,
  "CERVICITIS": 0,
  "CERVIX NEOPLASM", 0,
  "PAPANICOLAU SMEAR SUSPICIOUS", 0
  "entity-X":  $n_x$ ,
  "entity-Y":  $n_y$ ,
  .....
}
```

- The API should be implemented in python and should queryable through a Command Line Interface.

Deadline and Evaluation

We expect a solution in one week starting from the time you receive this email. Besides the result, the evaluation takes into consideration the methodology and the quality of the code.

