Ontology Engine

Follow up

Date	description	author
13/05/2007	Add rules implementation remarks to be discuss	Y. Le Razer
08/05/2007	create the present document and the directory ontology_engine	Y. Le Razer

Rules implementation remarks

Date Vs DateFrom

```
      "id": "mmr:rule-3",
      "sourcePath": "Date", --> should be dateFrom (or defaulted)
      "targetClass": "soo:Experience",
      "targetProperty": "dateFrom",
      "targetFunction": "fno:date-to-xsd"
```

as-IS function imply lowercase

```
if rule.targetFunction == "fno:as-is":
  currentInstance[rule.targetProperty] = str(document[rule.sourcePath]).lower()
  continue
```

gamingtest-rules-structure inconsistent with gamingtest-rules

Rules in the gamingtest-rules-structure are not coherent with the one of gamingtest-rules. (can't remember why)
I used the gamingtest-rules.

No way to know the correct language for this rules

```
        "id": "mmr:rule-4",
        "sourcePath": "Associated Soft Skill Block",
        "targetClass": "soo:Skill",
        "generateId": "true",
        "targetFunction": "fno:search-for-mapping-with-source",
        "relationTo": "soo:Experience",
        "relationName": "soo:resultFromExperience",
        "relationNameInverse": "soo:hasSkill"
```

```
if rule.targetFunction == "fno:search-for-mapping-with-source":
    currentInstance['prefLabel'] = {}
    currentInstance['prefLabel']['@value'] = document[rule.sourcePath]
    currentInstance['prefLabel']['@language'] = 'en'
```

Description

The primary function of this software engine is to generate a RDF file following the model.yaml (an simplified description of an ontology), the rules of transformation and a json file with the data to be included.
This conversion involves interpreting the YAML data according to predefined transformation rules that dictate how to map YAML structures to RDF triples.

Environment

We use poetry as dependency management and packaging in Python. This is a cheat sheet for basic usage.

Libraries

Test framework

We use the pytest library : `pip install pytest`. This is article that explain python testing with PyTest.

Yaml

We use the pyyaml library : `pip install pyyaml`. This is an example of CRUD operations on yaml.

RDFS

Online Course : Cambridge Semantics

Cambridge Semantics presents a RDF 101 Course.

- RDF is a graph data model.
- RDF data are directed, labeled graphs.
- A single edge in an RDF graph is a 3-tuple that is called either a statement or triple.
- Triples are organized into named graphs, forming 4-tuples, or quads.
- RDF resources (nodes), predicates (edges), and named graphs are labeled by URIs.
- Although preferable to reuse URIs when possible, Semantic Web technologies, including OWL and SPARQL, make it easy to resolve URI conflicts, as we'll see in future lessons.

Other Sources

- https://www.easyrdf.org/docs/rdf-formats-json

Mindmatcher sources

07/05/2024 18h44 - Florent provide in Slack a Definition files in RDFS.

References

- Python Naming Convention

Rules