

## RDF Lab

### Ressources

A Text editor, e.g. Natepad++, Sublime Text

RDF Validation and Converter Services :

- <http://rdf-translator.appspot.com/>
- <https://www.easyrdf.org/converter>

The W3C validator Service: <http://www.w3.org/RDF/Validator/>

The Corese semantic engine: <https://project.inria.fr/corese/>

### 1. DBpedia

Get the RDF data about Paris on DBpedia.org, find the triple expressing that it is a capital in Europe.

### 2. first.ttl

*Margot is a 32 years old woman, her shoe size is 38 and her pants size is 40. She is married to Arthur, with whom she has two children: Simon and Marie. Margot is a teacher; Alice and Pierre are her colleagues. Her mother is called Simone.*

- Formalize the above natural language statements in RDF, in the Turtle syntax.
- Open the XML editor of your choice and translate your RDF triples in the XML syntax.
- Save your first semantic annotations in the `first.rdf` file and validate them with the W3C validation service.
- Download and launch the Corese standalone interface.

It proposes several tabs: (1) the System tab for traces of execution, (2) a SHACL editor tab (3) a Turtle Editor tab and (4) A “+” tab to edit or load as many SPARQL queries as you want and visualize the result of their execution on the loaded RDF data. A default SPARQL query is available:

```
select ?x ?t where {?x rdf:type ?t}
```

The SPARQL language will be presented in a next course. Today, you just need to understand that this query enables to retrieve all the resources referred to in the loaded RDF dataset and their types. Execute the query and examine the result.

### 2. humans\_data

With your Web browser, visit <http://ns.inria.fr/humans/data#> and spot the age of Gaston in the graph

Download the RDF file at [http://ns.inria.fr/humans/humans\\_data.ttl](http://ns.inria.fr/humans/humans_data.ttl) and examine it.

Download the RDF file at [http://ns.inria.fr/humans/humans\\_data.xml](http://ns.inria.fr/humans/humans_data.xml) and examine it.

- What is the namespace used for the instances/resources (Gaston, Laura, etc.) described in these files?
- Which mechanism enables to associate the instances and the namespace ?
- What is the namespace of the vocabulary used to describe the resources (hasParent, name, etc.) and how is it specified?
- Find all the information available on John.