

Advanced Studies in IT (CT433): Semantic Web - Exercises Sheet 2:

1) Check out the following rdf file containing information about Axel Polleres:

<http://www.polleres.net/foaf.rdf>

1) Write down the following queries in SPARQL and their result tables:

- a) Which are the names (indicated by the predicate `http://xmlns.com/foaf/0.1/knows`) and FOAF files (indicated by the property `http://www.w3.org/2000/01/rdf-schema#seeAlso`) and persons of persons known by Axel Polleres?
- b) Based on the answers from a) : Which are the names of persons known by Giovambattista Ianni OR Jos De Bruijn?
- c) Write a query querying ALL those FOAF files found in a) (using several FROM and/or FROM NAMED clauses) that states: Which are the names of all persons who don't know anybody called "Jos De Bruijn"?
- d) Return the names of all persons who do not have a URI as identifier (needs FILTERs, particularly the functions `isBlank()` or `isIRI()` can be used)?

2) Write down a query constructing a new graph with triples from all the FOAF files in 1) a) containing:

- triples `X <http://www.example.org/connectedTo> Y` . if `X` knows `Y` or vice versa
- more over the graph should contain the names (using again the predicate `http://xmlns.com/foaf/0.1/knows`) for all connected persons

- a) Write down the respective SPARQL CONSTRUCT query
- b) Write down the result graph in Turtle Syntax

3) Write down all the triples in Giovambattista Ianni's FOAF file (obtained from 1) a)) in Turtle syntax.

Resources:

- W3C RDF Primer: <http://www.w3.org/TR/rdf-primer>
- Turtle - Terse RDF Triple Language <http://www.dajobe.org/2004/01/turtle/>
- SPARQL specification <http://www.w3.org/TR/rdf-sparql-query/>
- FOAF vocabulary specification: <http://xmlns.com/foaf/0.1/>

Tools:

- W3C RDF Validator: <http://www.w3.org/RDF/Validator/>
- Jena ARQ (HP Labs) <http://jena.sourceforge.net/ARQ/>
- dlhex-SPARQL (online interface): <http://www.polleres.net/dlhex-sparql> if you report a bug, you get an extra point!! ☺