Hands-on Exercise & Exam

Time: 45 minutes. You are allowed to use any material, and any Internet resource.

EXERCISE 2 (SPARQL)

Using the DBpedia dataset and exploring the DBPedia ontology (dbo: http://dbpedia.org/ontology/)
write a (complete and correct) query that has the following characteristics:

- Choose a country (e.g. Germany)
- Select all the people that were born (or live, or work) in this country that have at least two
  characteristics, of which one has a given constraint (e.g. persons that are artists, and were born
  before 1970, or persons that are athletes and are taller than 1.80m, …)
- The query should report the list of persons (resource URI and name) and the relevant
  characteristic(s) (e.g. the date of birth or the height in the examples)
- If useful, you can limit the number of results

Run the SPARQL query against one of the DBpedia endpoints.

Grab a screenshot of the resulting triple-set.

You should submit both the (complete) text of the query, and the screenshot.

SUBMISSION INSTRUCTIONS

- Collect all the required files in a single archive (.zip)
- Name the archive as follows: *Lastname_Firstname*_ex2.zip (example:
  Corno_Fulvio_ex2.zip)
- Upload the resulting file to OwnCloud, at the following URL:
  https://baltea.polito.it/owncloud/index.php/s/ppGpqyV3shsVsAP

RESOURCES AND LINKS

- Official (W3C) RDF Validator for RDF Documents serialized in the RDF/XML format
  https://www.w3.org/RDF/Validator/
- RDF Validator for RDF Documents serialized in the Turtle format
  http://ttl.summerofcode.be/
- Converter of RDF documents among different formats
  http://www.easyrdf.org/converter
- W3C Recommendations relevant to RDF:
  Concepts and Abstract Syntax - https://www.w3.org/TR/2014/REC-rdf11-concepts-20140225/
  Turtle language - https://www.w3.org/TR/2014/REC-turtle-20140225/
  RDF Schema - https://www.w3.org/TR/2014/REC-rdf-schema-20140225/
- W3C Recommendation: SPARQL Query Language
  https://www.w3.org/TR/2013/REC-sparql11-query-20130321/
- DBpedia SPARQL interactive endpoints
  http://dbpedia.org/sparql - Virtuoso SPARQL Query Editor
  http://dbpedia.org/snorql/ - SPARQL Explorer
  http://dbpedia.org/isparql/ - Interactive SPARQL Query Builder by OpenLink
- Navigating DBpedia
  http://dbpedia.org/page/Coffee - list of properties for a resource
  http://dbpedia.org/resource/Coffee - URI for the resource – or dbr:Coffee
  https://en.wikipedia.org/wiki/Coffee - human-readable page
  http://dbpedia.org/fct/ - resource search engine (hint: use "Entity Label Lookup")
- Useful namespaces
  http://dbpedia.org/sparql?nsdecl – list of all predefined namespaces in DBpedia SPARQL
  endpoint
  dbo: DBpedia Ontology (concepts); dbr: DBpedia resources (individual resources)