

Hands-on Exercise & Exam

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

EXERCISE 2 (SPARQL)

Use the DBpedia data-set for finding the most relevant cities in the country where you would like to spend the vacation of your dreams. In particular:

- Write a (complete and correct) SPARQL query that will find all the cities, in the given country, and return the largest ones;
 - Important cities may be identified by their population, or by their area;
 - You may choose whether to report a fixed number of results (e.g., the top-10), or the ones whose size exceed a given threshold;
 - The query should report the list of cities (resource URI and name) and their size.
- 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 MediaFire, at the following URL:
http://www.mediafire.com/filedrop/filedrop_hosted.php?drop=dc1f25448f88653475a6b481080a84e5fae08219b2d6395e6b1b50289b8e139e
- Note: Some “Ad Blockers” are incompatible with Mediafire. If you encounter upload issues, try disabling your Ad Blocker.

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)