SPARQL

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1 Exercises – DBPedia

Use the `http://dbpedia.org/sparql` endpoint for posing queries. Answer the
following questions using relevant sources described in the DBPedia ontology `http://mappings.dbpedia.org/server/ontology/classes/`, or the browser available
at
`http://live.dbpedia.org/page/Czech_Republic`. For the DBPedia resources
and properties and for DC terms use prefixes, e.g.

```
PREFIX dct: <http://purl.org/dc/terms/>
PREFIX dbo: <http://dbpedia.org/ontology/>
PREFIX dbp: <http://dbpedia.org/property/>
PREFIX dbrc: <http://dbpedia.org/resource/Category:>
```

Ex. 1 — Find all types (classes), the resource describing Prague belongs to.

Ex. 2 — Find labels of Prague in english and german.

Ex. 3 — List all EU members (countries) and show what is the relative strength of a
voter in different EU countries (i.e. the ratio of total population to the number of seats in
the EU parliament). Take the Czech Republic (`http://dbpedia.org/resource/Czech_Republic`) as an example to explore the properties. Note that not all information is available for all countries. (Hint: Explore the type
`http://dbpedia.org/resource/Category:Member_states_of_the_European_Union`)

Ex. 4 — How many actors died in another country than they got born according to
DBPedia. Group by countries where the actors were born. (Hint: Start with the actor
type `http://dbpedia.org/resource/Actor`.)

Ex. 5 — Which world countries have more than one official language ? (Hint: Use
HAVING)

Ex. 6 — Find ten countries with the highest population and show their gross domestic
product per capita.

Ex. 7 — Find all parliamentary republics optionally together with their english label (if exist).

Ex. 8 — Find all female ancestors of the Prince Charles. (Hint: Start with the resource `http://dbpedia.org/resource/Charles,_Prince_of_Wales` and use property path expressions.)

Ex. 9 — Using the CSSZ SPARQL endpoint `https://data.cssz.cz/sparql-query-editor`, create a SPARQL query finding the ratio of newly approved disability pensions comparing to the total number of conducted medical reports related to disabilities in individual years.
Compare your solution to the corresponding exercise in Seminar 1.

2 Relevant References

- DBPedia SPARQL endpoint `http://dbpedia.org/sparql`

- CSSZ SPARQL endpoint `https://data.cssz.cz/sparql-query-editor`

- OSW ontology SPARQL endpoint `http://onto.fel.cvut.cz:7300/repositories/osw2018-ontology`

- SPARQL endpoint list `http://www.w3.org/wiki/SparqlEndpoints`