

Practical session (2): SPARQL

Sources: <http://liris.cnrs.fr/~pchampin/2015/udos/tuto/#id1>

<https://www.w3.org/TR/2013/REC-sparql11-query-20130321/>

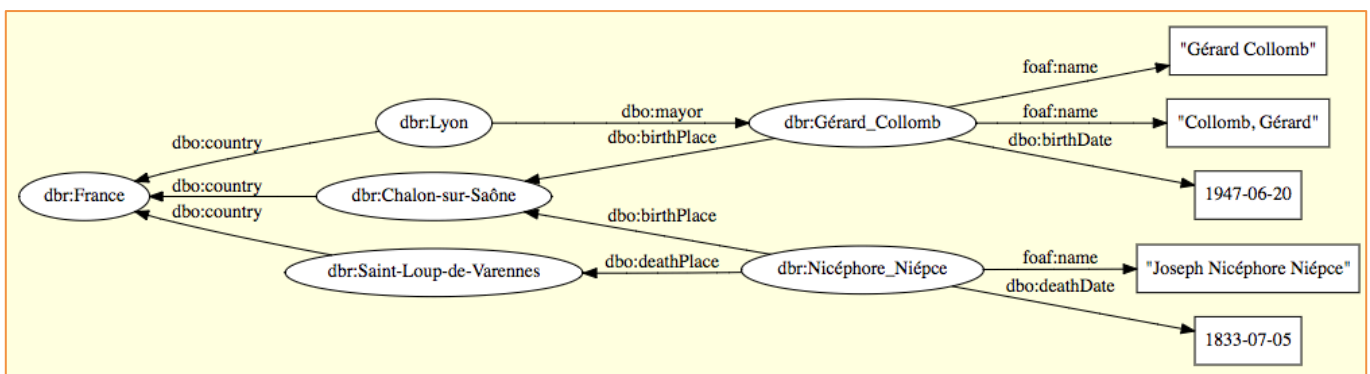
Introduction

For this practical session, we will use the DBpedia SPARQL access point, and to access it, we will use the Yasgui online client. By default, Yasgui (<http://yasgui.org/>) is configured to query DBpedia (<http://wiki.dbpedia.org/>), which is appropriate for our tutorial, but keep in mind that:

- Yasgui is not linked to DBpedia, it can be used with any SPARQL access point;
- DBpedia is not related to Yasgui, it can be queried with any SPARQL compliant client (in fact any HTTP client that is not very configurable).

Vocabulary

An excerpt of a dbpedia dataset



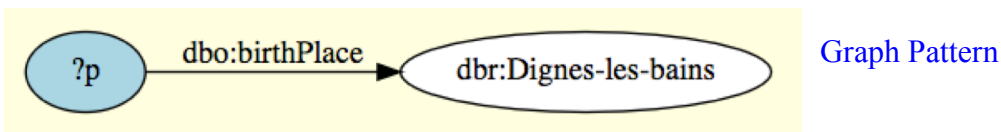
The vocabulary of DBpedia is very large, but in this tutorial we will only need the IRIs below.

foaf:name	Propriété	Nom d'une personne (entre autre)
dbo:birthDate	Propriété	Date de naissance d'une personne
dbo:birthPlace	Propriété	Lieu de naissance d'une personne
dbo:deathDate	Propriété	Date de décès d'une personne
dbo:deathPlace	Propriété	Lieu de décès d'une personne
dbo:country	Propriété	Pays auquel un lieu appartient
dbo:mayor	Propriété	Maire d'une ville
dbr:Digne-les-Bains	Instance	La ville de Digne les bains
dbr:France	Instance	La France

/>\ Warning: IRIs are case-sensitive.

Exercises

1. Display the IRIs of all Dignois of origin (people born in Digne-les-Bains)

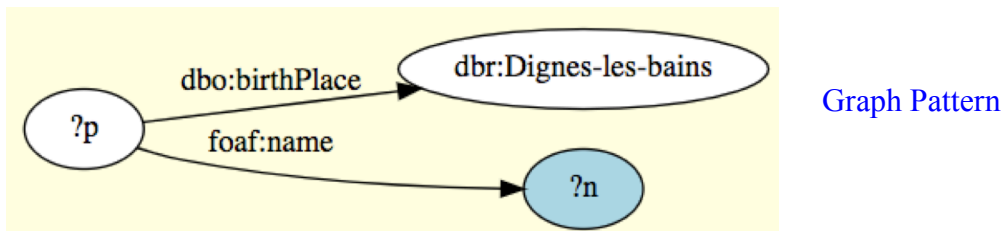


Answer:

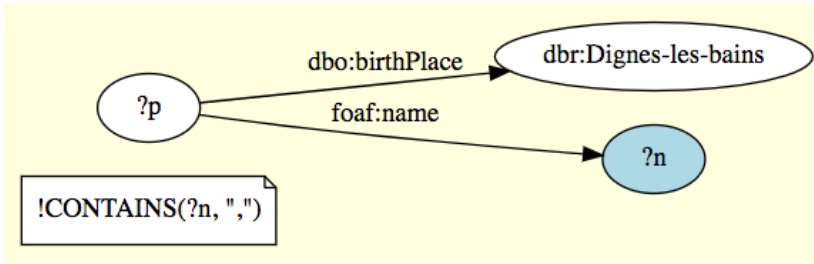
```
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX owl: <http://www.w3.org/2002/07/owl#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX dbo: <http://dbpedia.org/ontology/>
PREFIX dbr: <http://dbpedia.org/resource/>
PREFIX db: <http://dbpedia.org/>
```

```
SELECT * WHERE {
  ?p dbo:birthPlace dbr:Digne-les-Bains .
}
LIMIT 100
```

2. Show the names of the original Dignois

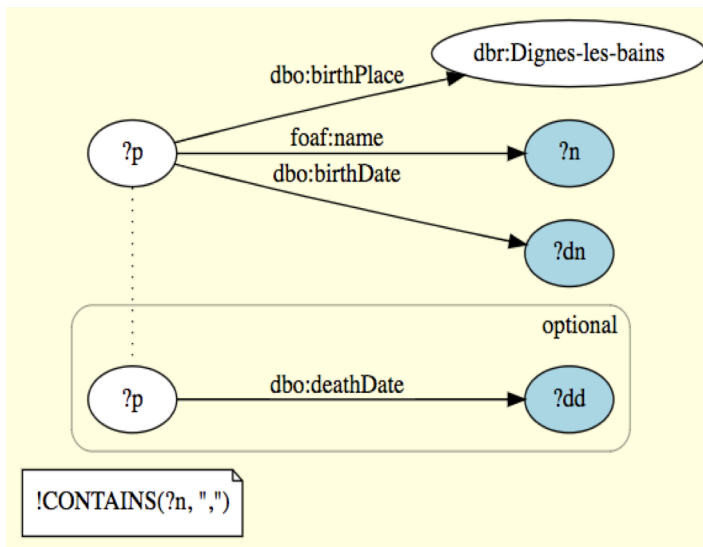


3. Display the names (without commas) of the Dignois (you will need a filter and the [contains](#) function)



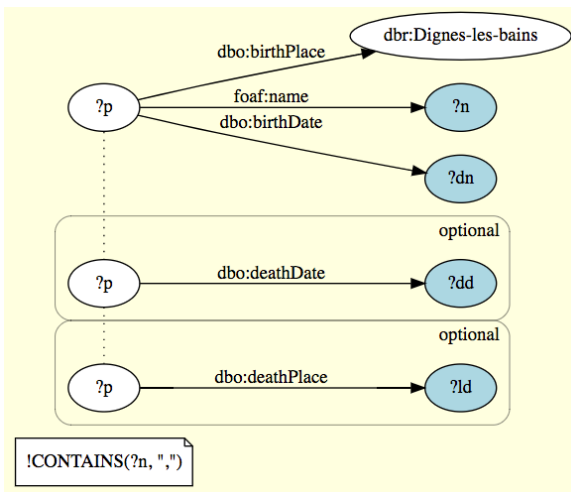
Graph Pattern

4. Display the names (without commas) of Dignoiois with their date of birth, and **if applicable** (OPTIONAL), their date of death



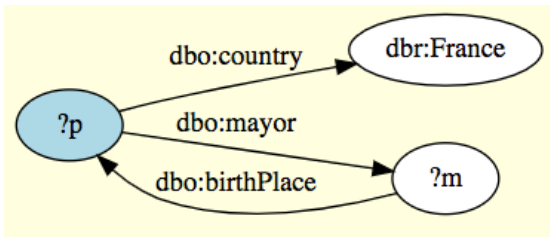
Graph Pattern

5. Display the names (without commas) of the Dignoiois with their date of birth, and **if applicable** (OPTIONAL), their date and place of death (pay attention to Paul Duqueylar)



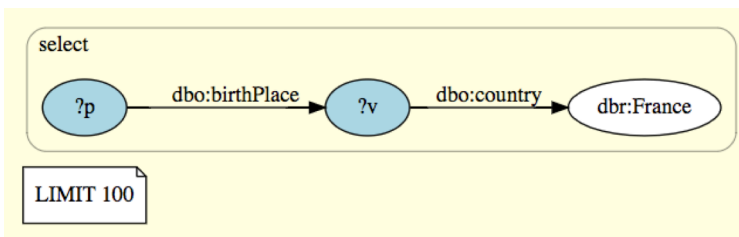
Graph Pattern

6. Show IRIs of all French cities whose mayor is native



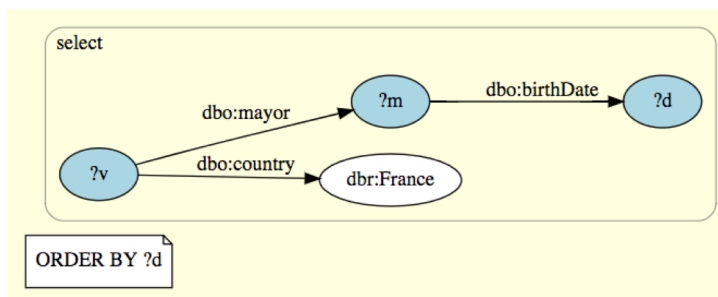
Graph Pattern

7. Display the IRIs of people born in a French city, as well as the IRI of the city, limiting ([LIMIT](#)) the number of results to 100.



Graph Pattern

8. Display the IRIs of the French cities sorted by ([ORDER BY](#)) the date of birth of their mayor (we exclude in fact cities whose mayor, or his date of birth, are not informed in DBPedia). Also post the Mayor's IRI and date of birth.



Graph Pattern

9. Show for each French city its IRI, and the number of natives of that city listed in DBPedia. This will be done using the [COUNT aggregation function](#).

```
SELECT ?ville (COUNT(?person) as ?nb_persons)
{ ... }
GROUP BY ?ville
```