Exploring DBPEDIA

- Can you remember the week 6 lab exercise on exploring DBpedia page on London? Today we are going to explore DBpedia knowledge graph through SPARQL.
- Visit the SPARQL query editor for DBpedia on http://dbpedia.org/sparql. You can write queries and execute them to access data in different result format.
- Run the following query to view all the triples associated with Sydney in DBpedia.

  ```sparql
  select distinct dbr:Sydney ?a ?b where {dbr:Sydney ?a ?b}
  ```

- Update the query above to get a description of Sydney (use “rdfs:comment” predicate).

  ```sparql
  select distinct ?b where {dbr:Sydney rdfs:comment ?b}
  ```

- Use the DBpedia query interface to complete following exercises.
  1. Write and submit a query to find a property of Sydney that has integer value 1213.

     ```sparql
     select distinct ?b where {
     dbr:Sydney ?b "1213"^^xsd:integer
     }
     ```

     Answer: 2574

  2. What is the URI of the property identified in question 1?

     http://dbpedia.org/property/rainfall

  3. Write a query to count the number of people (with a DBpedia entry) born in Sydney. (You may use rdf:type, dbo:Person, and dbo:birthPlace to design this query)

     ```sparql
     select distinct count(?a)
     where {
     ?a rdf:type dbo:Person;
     dbo:birthPlace dbr:Sydney
     }
     ```

  4. Write a query that use “rdf:type” property to see all the categories to which dbo:Sydney belong, in DBpedia.

     ```sparql
     select distinct ?a
     where{
     dbr:Sydney rdf:type ?a
     }
5. Above query says it is a type of “yago:WikicatAustralianCapitalCities”. Write a query to find what other cities belong to this type?
   ```sparql
   select distinct ?a
   where {
     ?a rdf:type yago:WikicatAustralianCapitalCities
   }
   ```

6. Write a query to identify the rdfs:label of any `yago:WikicatAustralianCapitalCities` that has a higher rainfall than Sydney.
   ```sparql
   select distinct ?label
   where {
     dbr:Sydney dbp:rainfall ?k.
     FILTER (?t>?k)
   }
   ```