

Semantic Web – Tutorial #5

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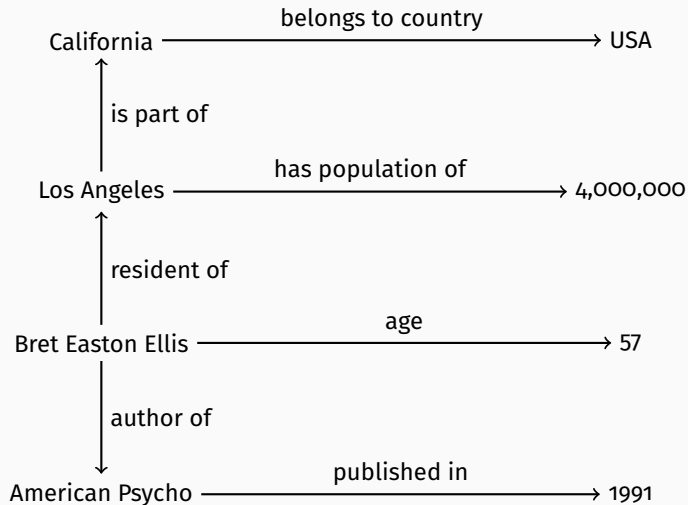
1: RDF

Consider the following information:

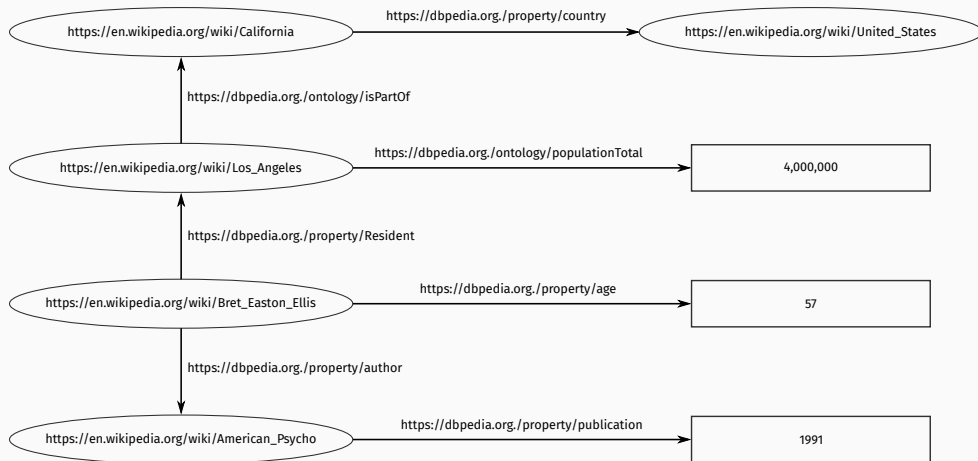
Los Angeles is a city in the state of California in the USA. Its population is estimated at 4 million. The author Bret Easton Ellis, who is 57 years old, is a citizen of Los Angeles. His most famous work, American Psycho, was published in 1991.

Task: Create an RDF graph which incorporates the information given above.

1: RDF Graph | Overall Idea



Final RDF graph:



Task: Represent the information above in RDF using Turtle syntax. You must provide at least 7 statements. For this task use the following URIs for their respective elements:

Los Angeles	https://en.wikipedia.org/wiki/Los_Angeles
California	https://en.wikipedia.org/wiki/California
Bret Easton Ellis	https://en.wikipedia.org/wiki/Bret_Easton_Ellis
American Psycho	https://en.wikipedia.org/wiki/American_Psycho

```
1: @prefix wiki: <https://en.wikipedia.org./wiki/> .
2: @prefix dbo: <https://dbpedia.org./ontology/> .
3: @prefix dbp: <https://dbpedia.org./property/> .
4:
5: wiki:Los_Angeles      dbo:isPartOf      wiki:California ;
6:                        dbo:populationTotal 4 000 000 .
7: wiki:California      dbp:country        wiki:United_States .
8: wiki:Bret_Easton_Ellis dbp:Resident      wiki:Los_Angeles ;
9:                        dbp:author          wiki:American_Psycho ;
10:                       dbp:age              57 .
11: wiki:American_Psycho  dbp:publication  1991 .
```

Task: Translate your Turtle RDF into RDF/XML.

2: Programming

(Question 3 Write a code in Python for loading and analysing RDF data from DBpedia. Your code must get the description of Berlin (<http://dbpedia.org/data/Berlin.rdf>). You must write a function with the signature `RELATEDTO(propertyURI)` that prints all the resources that relates to Berlin via the URI `propertyURI`.

```
from rdflib import Graph
import pprint

from rdflib import URIRef
from rdflib.namespace import RDF

def relatedTo(propertyURI):

    berlinURI = "http://dbpedia.org/data/Berlin.rdf"
    g = Graph()

    g.parse(berlinURI)

    prop = URIRef(propertyURI)

    for s,p,o in g.triples( (None, prop, None) ):
        print(s)

relatedTo("http://dbpedia.org/property/namedAfter")
```