Exercise 4 – Discussion on October 6th

Assignment 1: Familiarizing with Linked Data sets

In order to start to familiarize yourself with some linked data sets, you should start by browsing DBpedia, which can be visualized with a browser. You can start for example with the entity Mannheim [http://www.dbpedia.org/page/Mannheim](http://www.dbpedia.org/page/Mannheim)

By clicking on the links you can access other entities allowing you to navigate through its DBpedia’s RDF graph.

Find a way through which Mannheim and the Berlin’s Olympic Stadium [http://www.dbpedia.org/page/Olympiastadion_(Berlin)](http://www.dbpedia.org/page/Olympiastadion_(Berlin)) are related and draw the RDF graph with the entities and links separating them.

Assignment 2: Setting up Jena

Jena is a Java framework for building Semantic Web and Linked Data applications: [https://jena.apache.org/](https://jena.apache.org/)

Create a Java program which uses Jena to load the DBpedia ontology, which can be downloaded at: [http://downloads.dbpedia.org/2014/dbpedia_2014.owl.bz2](http://downloads.dbpedia.org/2014/dbpedia_2014.owl.bz2)

Information about how to load an ontology in Jena it can be found at: [https://jena.apache.org/documentation/ontology/](https://jena.apache.org/documentation/ontology/)

Assignment 3: Inference with Jena

Now add the following statements to a model:
```owl
@prefix dbr: <http://dbpedia.org/resource/> .
@prefix dbo: <http://dbpedia.org/ontology/> .
dbr:Albert_Speer dbo:birthPlace dbr:Mannheim .
```

Create an OWL reasoner to perform inference on the created facts with the DBpedia ontology model [https://jena.apache.org/documentation/inference/](https://jena.apache.org/documentation/inference/)

Report the facts inferred by the DBpedia’s ontology