Exercise 4 – Discussion on October 7th

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).

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)) 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/

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

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

Assignment 3: Inference with Jena

Now add the following statements to a model:
@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/

Report the facts inferred by the DBpedia’s ontology