### Assignment 1 – Semantic Web

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#### Answer 1.1

1.1 (2.5 points)

Please indicate for each of the following statements whether they are true or false.

| true   | □ false                            | "Jaguar" in the context of cars and "Jaguar" in the context of animals have the same syntax but different semantics. |  |
|--------|------------------------------------|--|--|
| □ true | $\square$ false                    | The Semantic Web replaces the traditional HTML-based Web.  |  |
| True   | $\square$ false                    | XML data carries formal semantics.   |  |
| □ true | $\mathbf{\nabla}^{\mathrm{false}}$ | All URIs are also URL.   |  |
| □ true | <b></b> false                      | New vocabularies can be defined by only using RDF.   |  |

#### Answer 1.2

1.2 (2.5 points)

Complete the following sentences, which refer to building blocks of the Semantic Web layer cake.

URIs are used for providing a universal naming system for web resources

XML is used for describing semi-structured data and is used as an common interchange format

RDF is used for describing relationships between URIs using "triples"

RDF-S and OWL are used for providing basic vocabulary for relations

SPARQL is used for querying RDF data

# Answer 2.1

## http://dbpedia.org/person/Ada\_Lovelace 404 http://dbpedia.org/resource/Ada\_Lovelace 200

404 refers to the url that we are trying to access is not found on server,

200 means that the url has been successfully found on server, url has been fetched from server and served to the user

### Answer 2.2



| Source URI                 | Property URI                      | Target URI                      |
|----------------------------|-----------------------------------|---------------------------------|
| https://dbpedia.org/page/C | http://dbpedia.org/ontology/wikiP | http://dbpedia.org/resource/Azt |
| <u>hocolate</u>            | <u>ageWikiLink</u>                | ecs                             |
| http://dbpedia.org/resourc | http://www.w3.org/2000/01/rdf-    | http://dbpedia.org/resource/Azt |
| e/Aztecs                   | schema#seeAlso                    | ec_Empire                       |
| http://dbpedia.org/resourc | http://dbpedia.org/ontology/wikiP | http://dbpedia.org/resource/Azt |
| e/Aztecs                   | ageWikiLink                       | ec_Empire                       |