ITMO UNIVERSITY

Semantic Web for Digital Humanities

Introduction of Concepts and Application Building

Oct 28th, 2019

Outline

- ☑ **Day 1:** Introduction to the Semantic Web, Introduction of main concepts like RDF, RDF-S, OWL, SPARQL

- ☑ **Day 2:** Application building for the Semantic Web

Goal

- ✅ You should be able to **use data from the Semantic Web** in Digital Humanities (or any other) projects – and to build little applications with the data

About Me

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- **Research Fields:** Natural Language Processing, Semantic Web

Question for Motivation

✅ The current Web contains so much information about everything.

✅ But, we are not able to ask Google something like this: You are planning to go on a Windsurfing vaction.

"Show me all locations for windsurfing which next week which have a wind forecast of at least 3bft each day, and which have available flights and hotel at a reasonable price – ordered by distance to my current location."

✅ **All information is on the Web, but what would be necessary so that a computer can answer this question?**
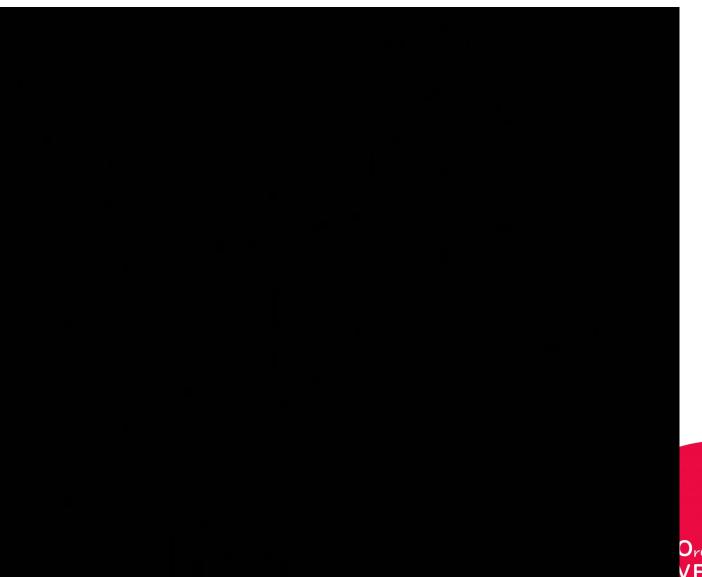
✔ So to answer a question like this, a computer needs to:

- Understand the question (NLP QA)
- **Have the data to answer the question, ie. it must be able to understand the data on the Web (Semantic Web)**
- In which format could a computer maybe understand the data?
- **Give example of a flight (in triples)**

Basic Intro of Semantic Web

- Original Idea of the Semantic Web by Tim Burners-Lee
- WWW originated 1992 at CERN (Geneva) – and was implemented as a combination of documents and hyperlinks
- But the original idea was rather a Semantic Web

ITsMOre than a UNIVERSITY

Overview for Motivation

✅ **The Linked Data cloud:**

- https://lod-cloud.net/

✅ **DBPedia:**

- http://dbpedia.org/page/Canada

✅ **Wikidata:**

- https://www.wikidata.org/wiki/Q42