A Generic approach for the Form-based population of Ontologies

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Motivation

Aim:

To propose a generic approach to build HTML forms dynamically for Ontologies .

Ontologies:

RDF, RDFS, and OWL etc.

SPARQL Query:

One of the efficient query languages for the Semantic Web(W3C)

Extraction of data

- **Schemas and Classes**
  Endpoints like DBpedia using query limit.

- **Retrieval of properties and datatypes**
  Depending up on type of class, subclass associated.

- **Loops in Classes and Properties**
  Querying endpoint for looped dataset.

- **Parsing and Conversion to valid form field:**
  Parse the data type and value which is compatible with form elements.

Extraction of data

Identify named entities with entity linkage.

Example:
Predicate married_to <s,p,o> pairs get sentences, then extract features.

(BarackObama, Michelle Obama) and (Bill Clinton, Hillary Clinton)

Extraction of data

```
prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#>
prefix owl: <http://www.w3.org/2002/07/owl#>

SELECT ?subject ?predicate ?object
WHERE {
  ?subject ?predicate ?object
}
LIMIT 50
```

Showing 1 to 50 of 50 entries

Search: Show 1000 er

subject	predicate	object
<http://localhost:3030/ACCESSIBLE/data>	<http://www.w3.org/1999/02/22-rdf-syntax-ns#type>	owl:Ontology
<http://localhost:3030/ACCESSIBLE/data>	owl:imports	<http://www.w3.org/2003/11/swrl>
<http://localhost:3030/ACCESSIBLE/data>	owl:imports	<http://swrl.stanford.edu/ontologies/built-ins/3.3/abox.owl>
<http://localhost:3030/ACCESSIBLE/data>	owl:imports	<http://swrl.stanford.edu/ontologies/3.3/swrla.owl>
<http://localhost:3030/ACCESSIBLE/data>	owl:imports	<http://swrl.stanford.edu/ontologies/built-ins/3.3/query.owl>
<http://localhost:3030/ACCESSIBLE/data>	owl:imports	<http://swrl.stanford.edu/ontologies/built-ins/3.3/temporal.owl>
<http://localhost:3030/ACCESSIBLE/data>	owl:imports	<http://swrl.stanford.edu/ontologies/built-ins/3.3/tbox.owl>

Related works

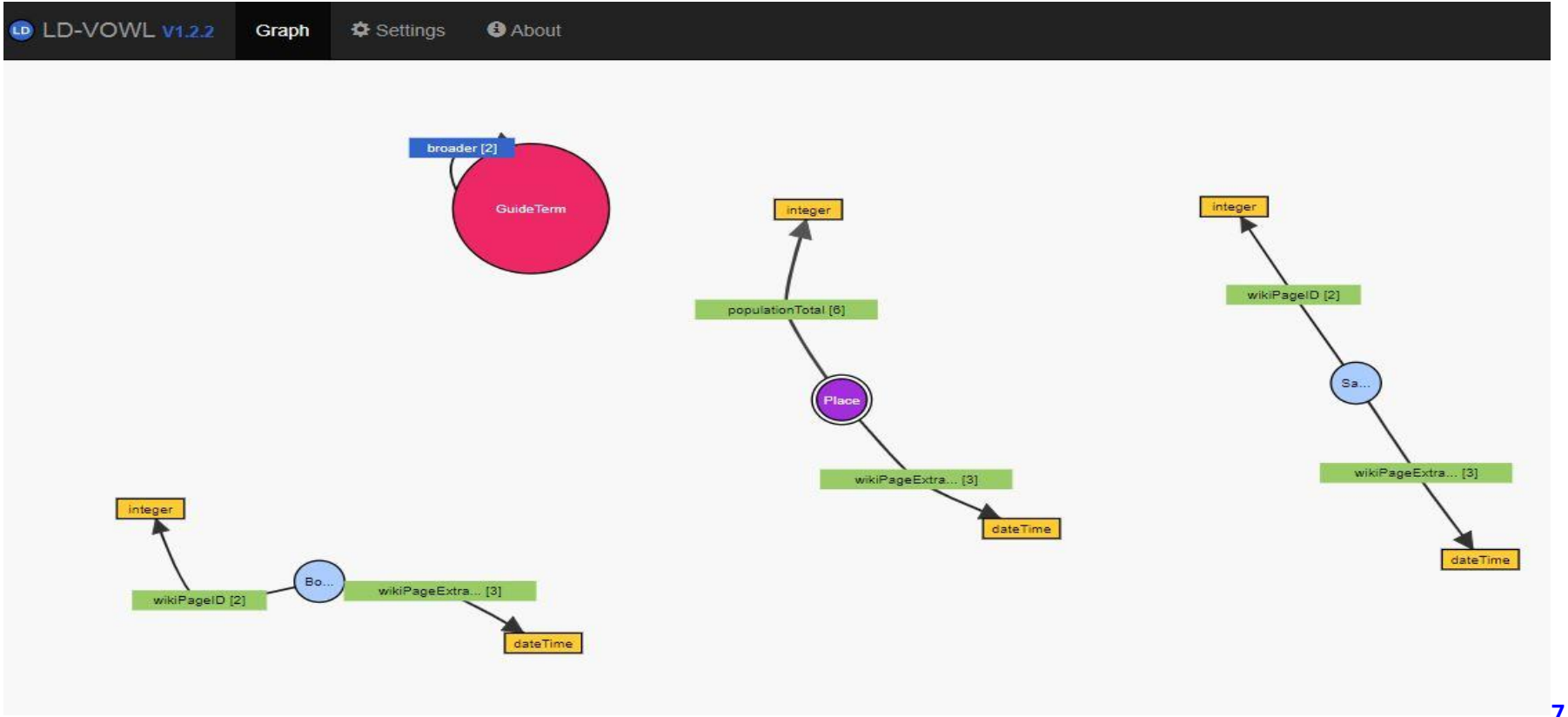
- **LD-VOWL:**
  Extraction of linked data using SPARQL and Visualization.

- **Ontology-based Representation of Accessibility Profiles for Learners:**
  Using ontologies to represent accessibility needs and preferences.

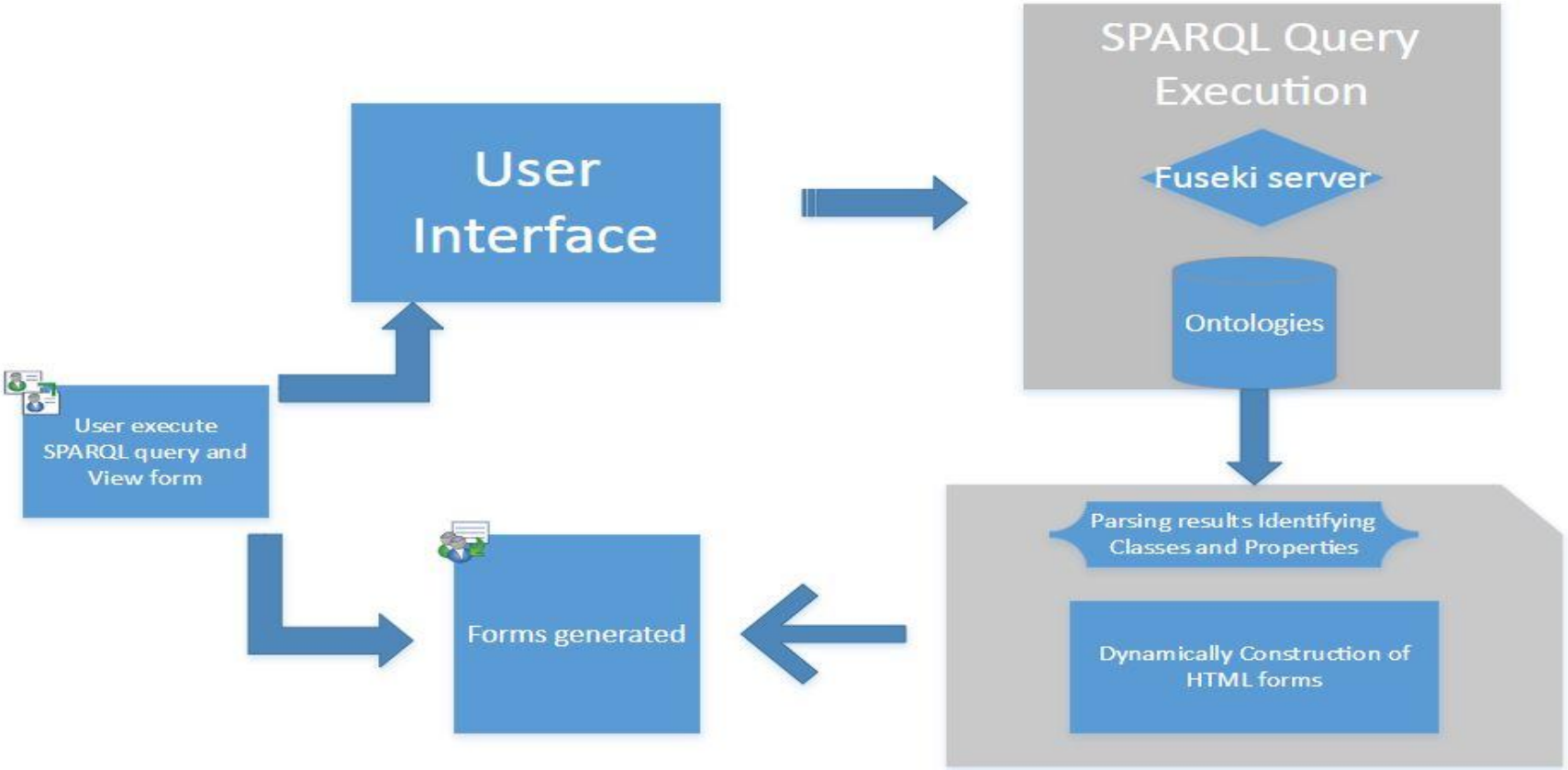
- **RDF to HTML+RDFa Form :**
  Online tool for visualizing RDF in HTML interface.

- **Sparql Web pages:**
  An RDF-based framework to describe user interfaces for rendering Semantic Web data.

Related works

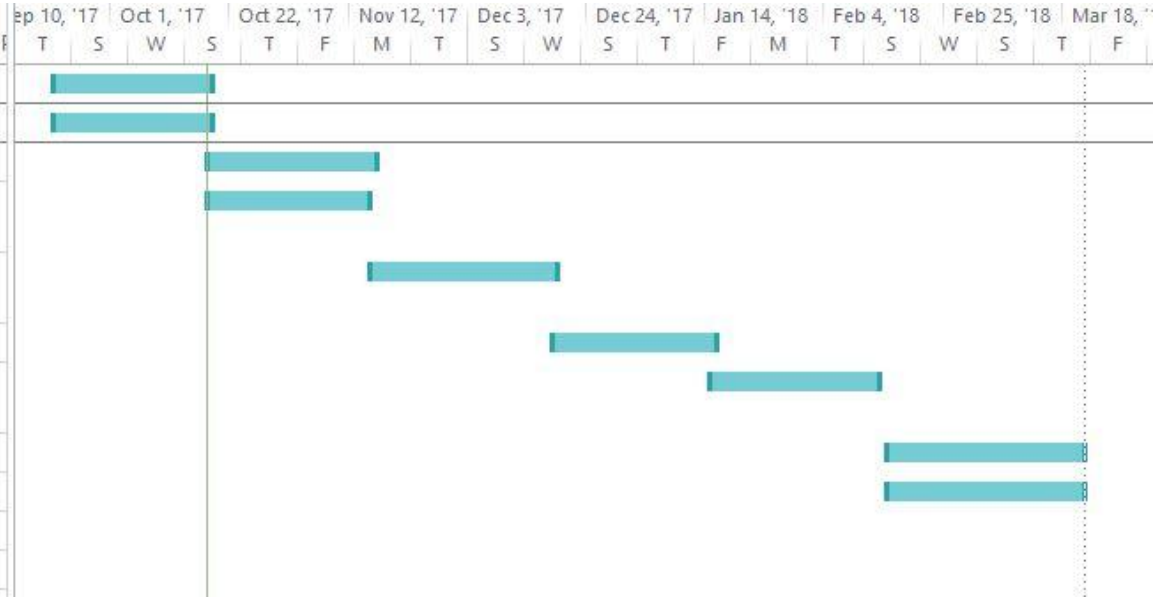


Proposed System



Timeline

Task Name	Duration	Start	Finish
Litrature Study	20 days	Thu 9/21/17	Wed 10/18/17
Current System Study	20 days	Thu 9/21/17	Wed 10/18/17
System Design	22 days	Wed 10/18/17	Thu 11/16/17
Implementation ofSystem Design	21 days	Wed 10/18/17	Wed 11/15/17
System Testing and Defect Fixing	23 days	Thu 11/16/17	Mon 12/18/17
System enhancements	21 days	Mon 12/18/17	Mon 1/15/18
Overall System testing and Evaluation	22 days	Mon 1/15/18	Tue 2/13/18
Evaluation and Analysis	25 days	Thu 2/15/18	Wed 3/21/18
Thesis Writing	25 days	Thu 2/15/18	Wed 3/21/18



Reference links

https://thesai.org/Downloads/Volume4No6/Paper_20-Format_SPARQL_Query_Results_into.pdf

https://www.topquadrant.com/technology/sparql-web-pages-swp/

http://ceur-ws.org/Vol-1704/paper11.pdf

http://rhizomik.net/html/redefer/rdf2html-form/

http://www.w3schools.com/js/js_htmldom.asp

http://www.123rf.com/stock-photo/3d_thank_you.html