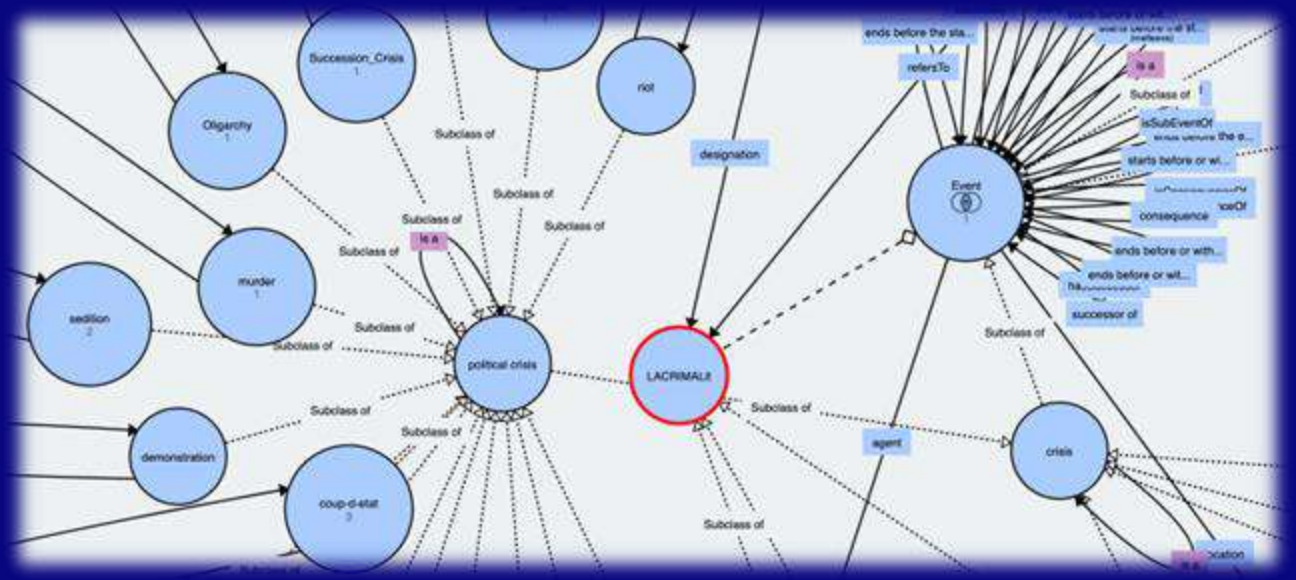

Ontologies for Digital Humanities:

An example of utilisation in the research and study of Classics.

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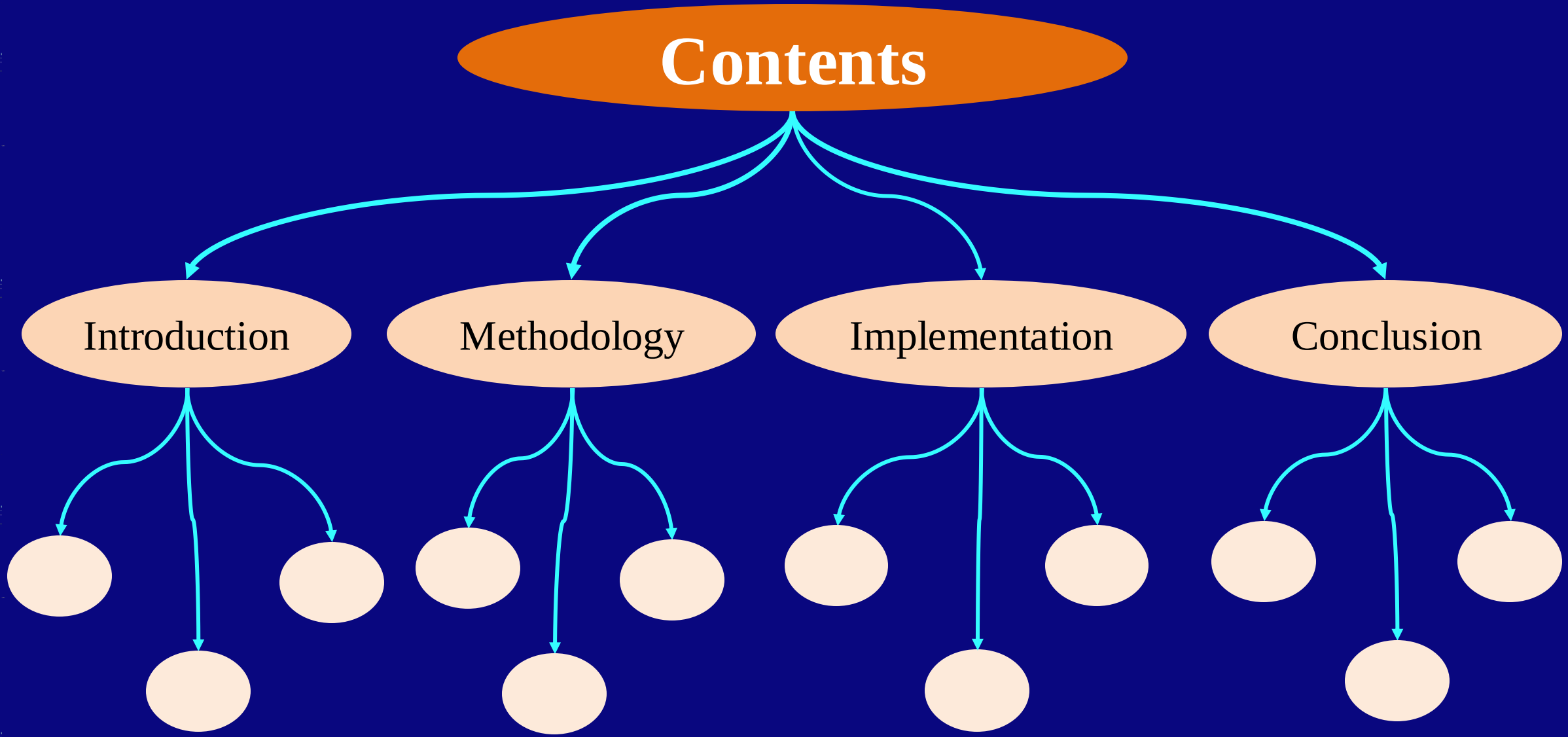
TOTh 2024, June 7th

Contents



Introduction

Increasing use of ontologies
in Digital Humanities (Jansen, 2019).

Utilisation of an ontology with antiquerian content in Classics.

- Can query graphs render the research questions of Classicists?
- How effectively can Classicists transform their questions into query graphs?
- Is this utilisation beneficial and effective for Classics research?

Introduction

Increasing use of ontologies in Digital Hum

An expert in ancient Greek and Roman language, literature, art, architecture, or culture (Britannica Dictionary).

Utilisation of an ontology with antiquerian content in Classics.

?

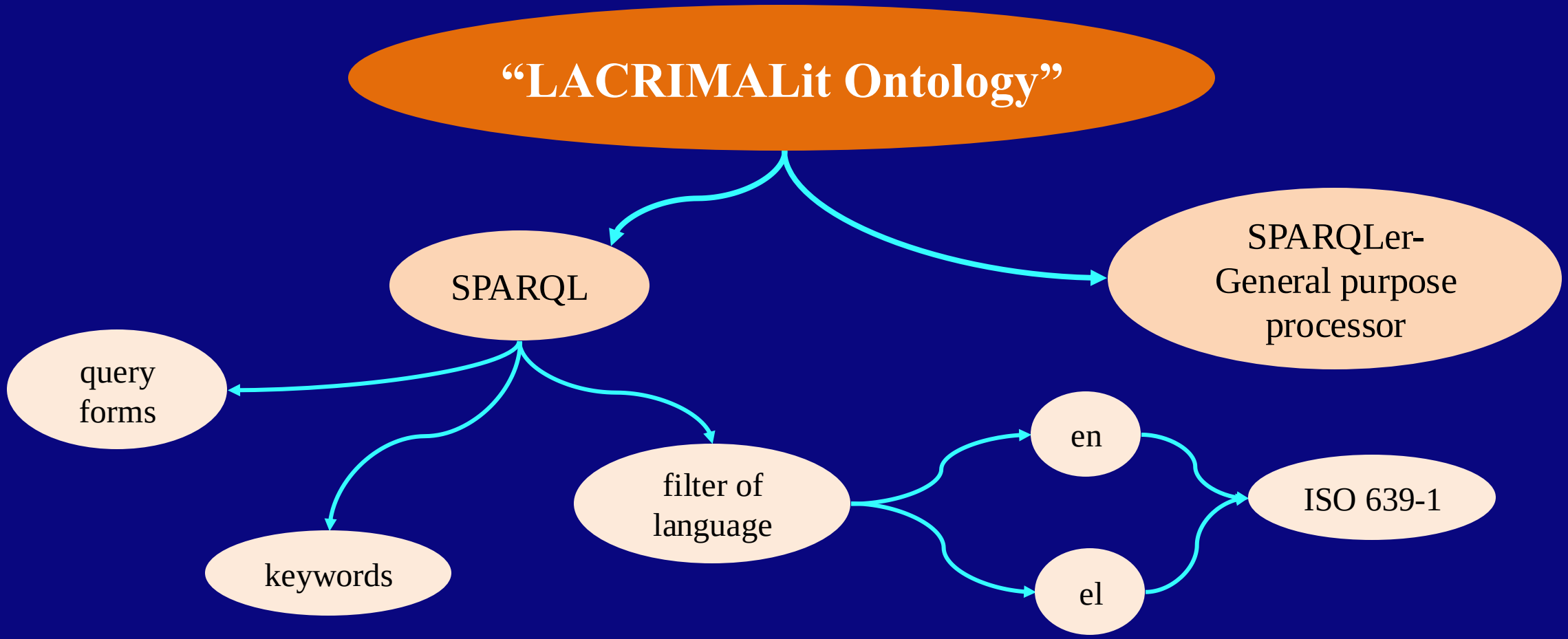
graphs render the
uestions of Classicists?

How effectively can Classicists transform their questions into query graphs?

- Is this utilisation beneficial and effective for Classics research?

Introduction

Methodology

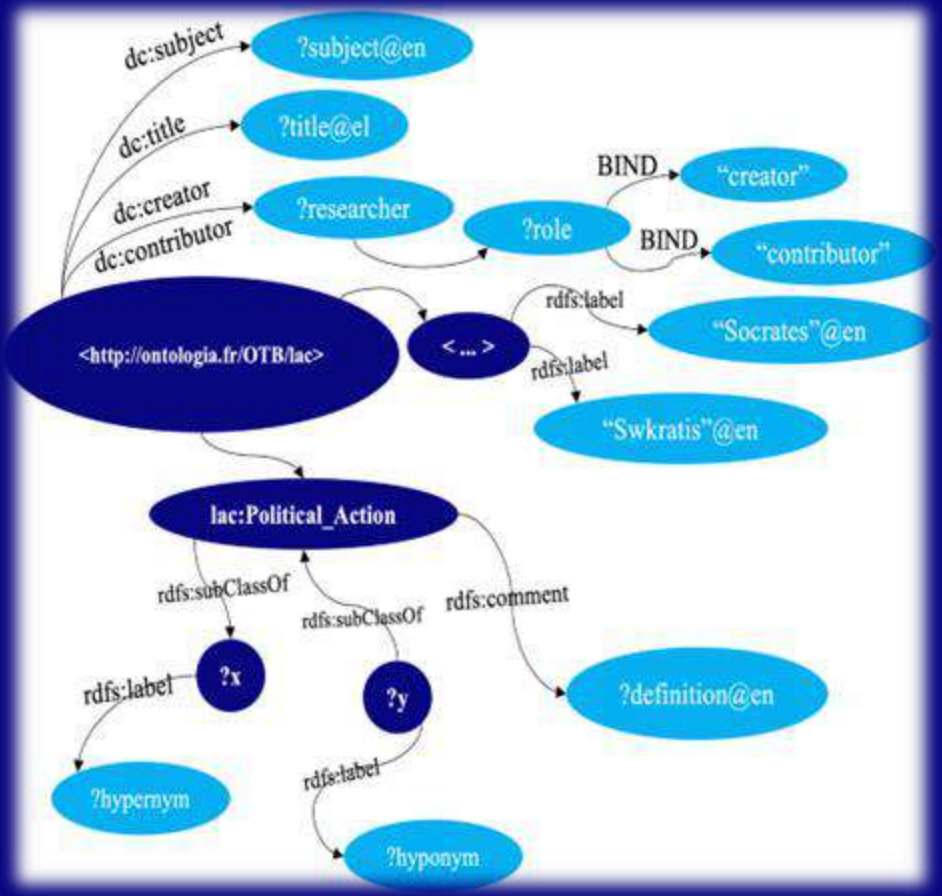


Implementation

Research or cognitive needs that a researcher or student of Classics may have.

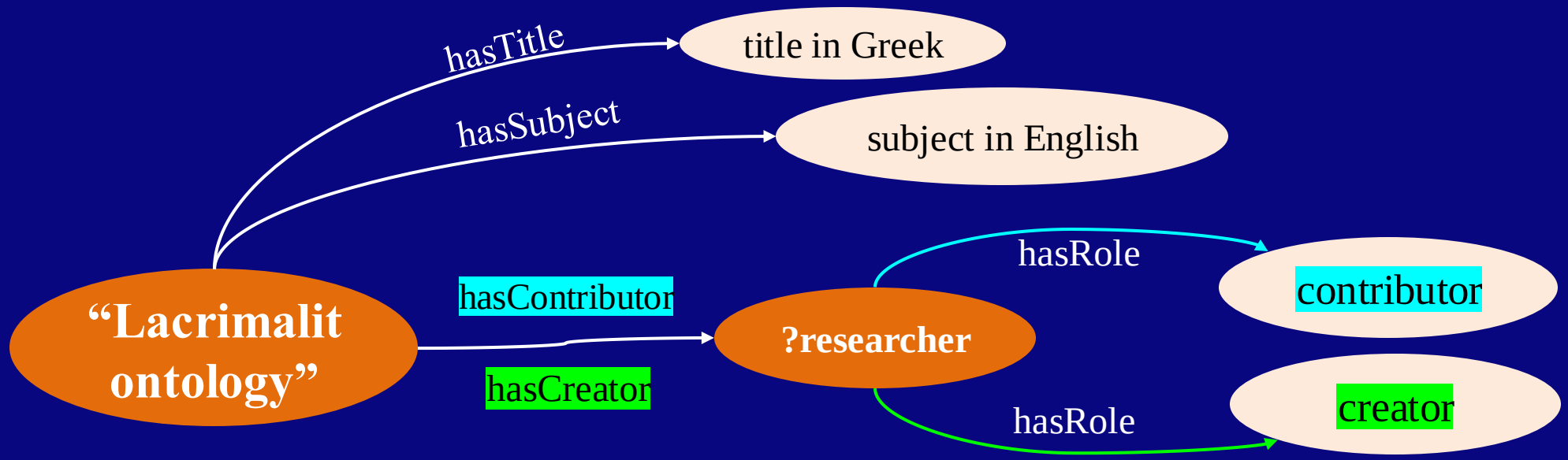
query graphs

“LACRIMALit Ontology”

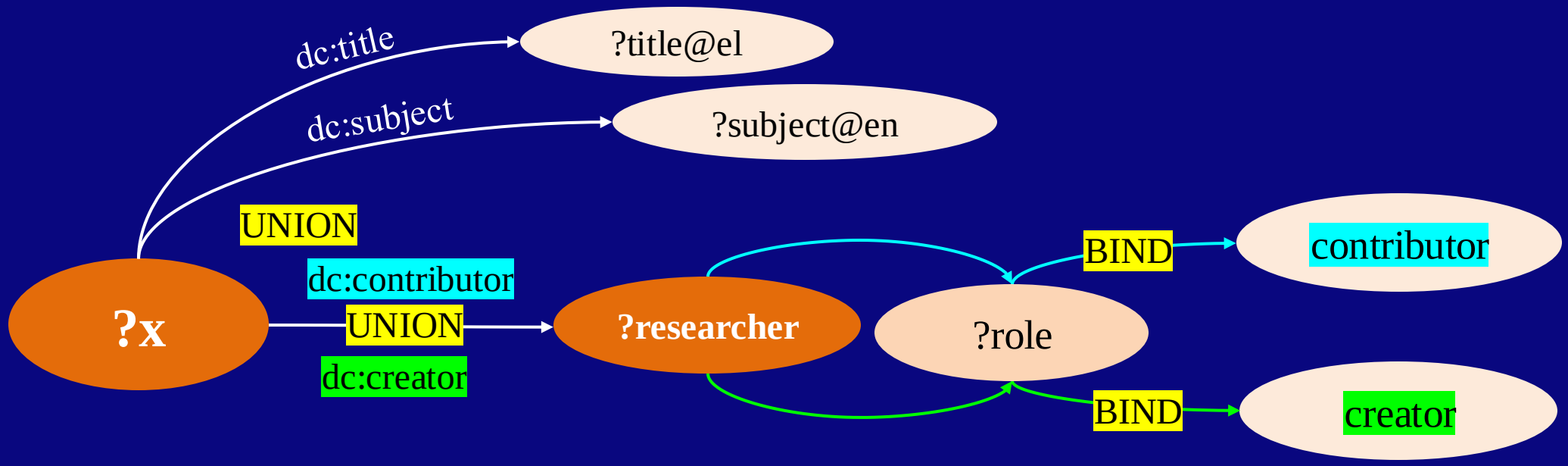


The query graphs visualized.

Implementation
(1st qg: ontology's metadata)



Implementation
(1st qg: ontology's metadata)



Implementation
(1st qg: ontology's metadata)

```
PREFIX dc: <http://purl.org/dc/elements/1.1/>
SELECT ?title ?subject ?researcher ?role
FROM <http://ontologia.fr/OTB/lac.owl>
WHERE {{<http://ontologia.fr/OTB/lac> dc:subject ?subject;
                                      dc:title ?title.
FILTER (lang(?subject) = "en")
FILTER (lang(?title) = "el")}
UNION
{<http://ontologia.fr/OTB/lac> dc:creator ?researcher.
BIND("creator" AS ?role) }
UNION
{<http://ontologia.fr/OTB/lac> dc:contributor ?researcher.
BIND("contributor" AS ?role) }}
```

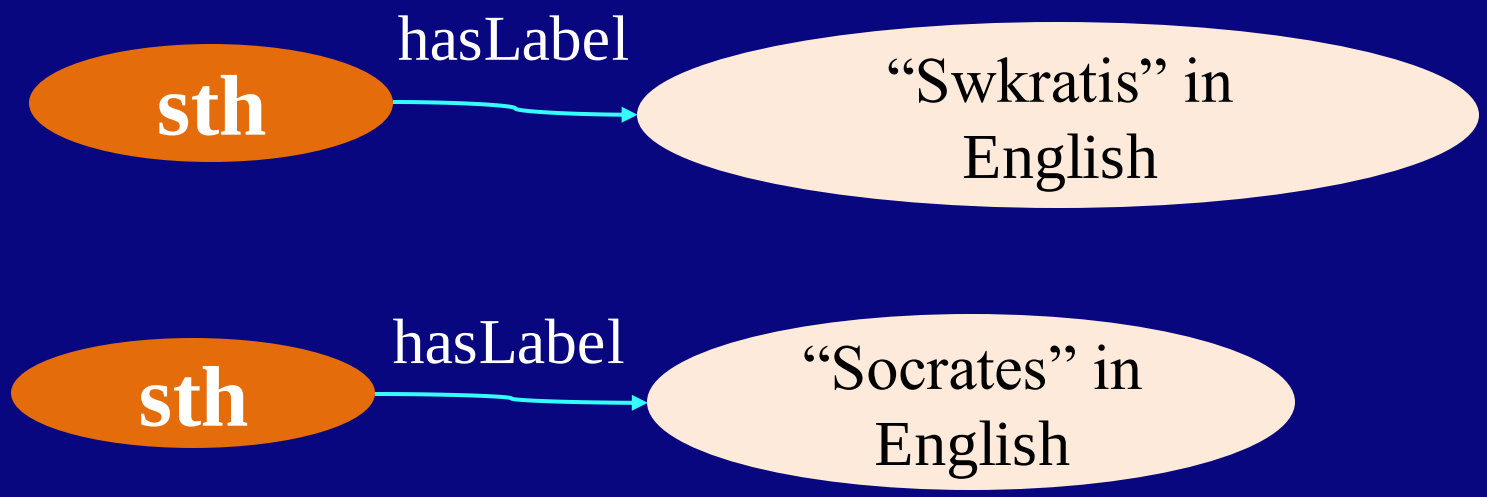
The 1st qg in "SPARQLer- General Purpose Processor"

Implementation
(1st qg: ontology's metadata)

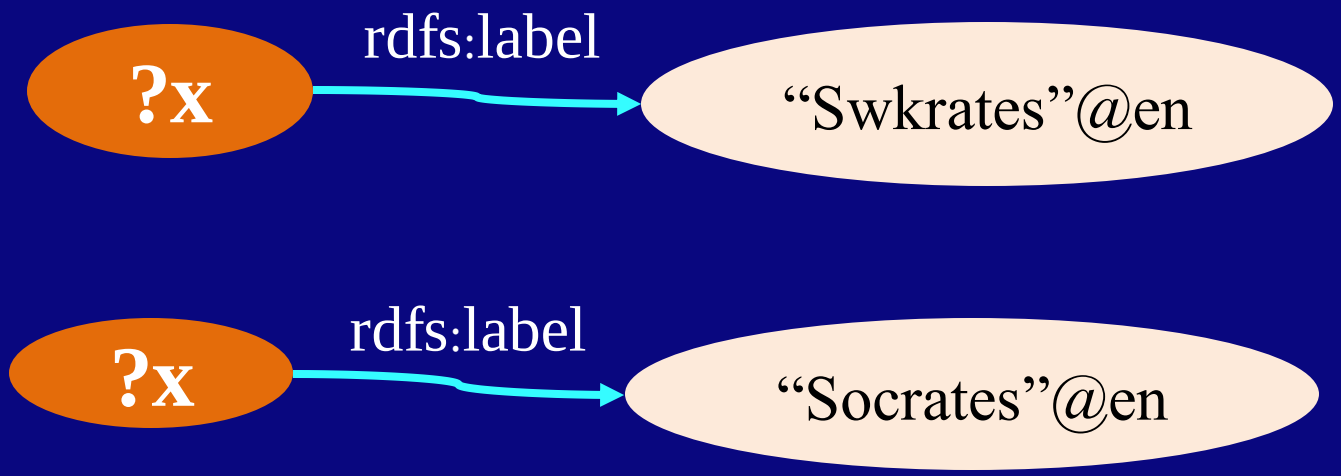
title	subject	researcher	role
"Οντολογία LACRIMALit" @el	"LACRIMALit ontology describes events of crises in Greco-Roman Antiquity." @en		
		"Christophe Roche (USMB, LISTIC)"	"creator"
		"Maria Papadopoulou (USMB, LISTIC)"	"creator"
		"Markus Zimmermann (University of Bayreuth, IMS-FORTH)"	"contributor"
		"Roberta Dainotto (UoC, IMS-Forth)"	"contributor"
		"Anna-Maria Miliara (UoC, IMS-FORTH)"	"contributor"
		"Panayotis Androulakis (UoC, IMS-FORTH)"	"contributor"
		"Eleni-Melina Tamiolaki (UoC, IMS-FORTH)"	"contributor"

The results of the 1st query graph in xml via "SPARQLer- General Purpose Processor" (retrieved 29/05/2024).

Implementation
(2nd qg: validating literals)



Implementation
(2nd qg: validating literals)



Implementation
(2nd qg: validating literals)

```
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
ASK
FROM <http://ontologia.fr/OTB/lac.owl#>
WHERE {?x rdfs:label "Swkratis"@en}
```

The invalid literal of the 2nd qg in “SPARQLer- General Purpose Processor”.

```
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
ASK
FROM <http://ontologia.fr/OTB/lac.owl#>
WHERE {?x rdfs:label "Socrates"@en}
```

The valid literal of the 2nd qg in “SPARQLer- General Purpose Processor”.

Implementation
(2nd qg: validating literals)

```
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
ASK
FROM <http://ontol                    .owl#>
WHERE {?x rdfs:label "Swkratis"@en}
```

ASK => false

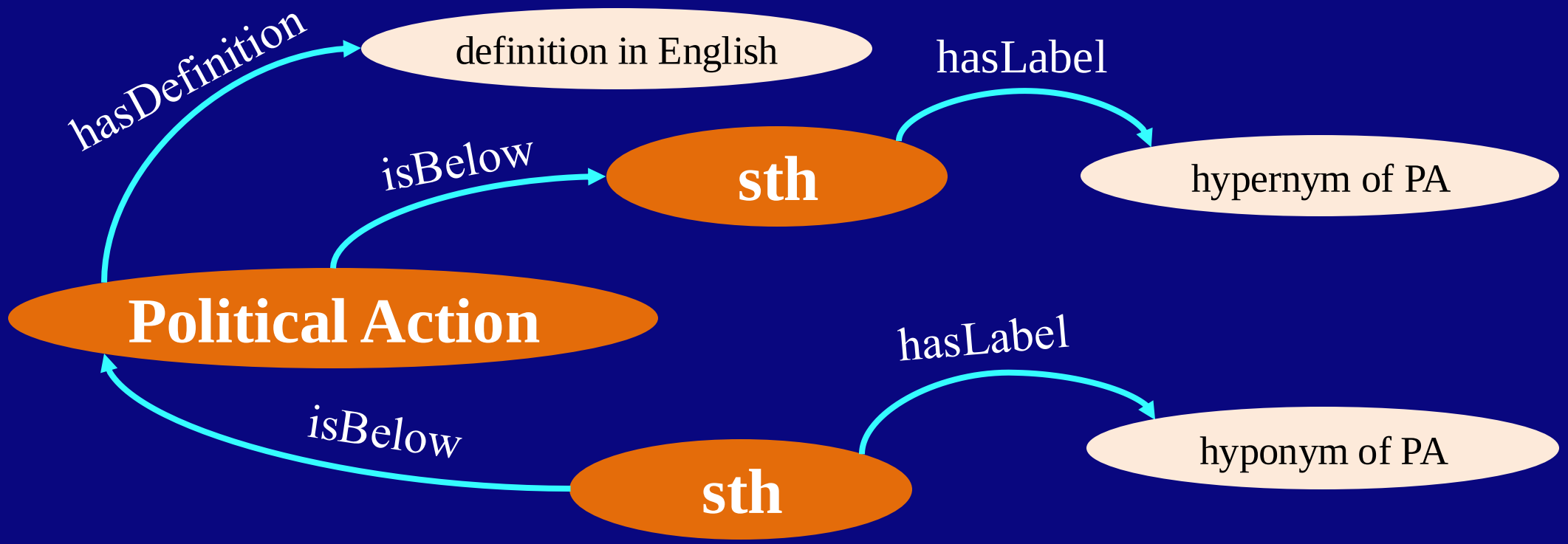
The invalid literal of the 2nd qg in “SPARQLer- General Purpose Processor”.

```
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
ASK
FROM <http://ontol                    .owl#>
WHERE {?x rdfs:label "Socrates"@en}
```

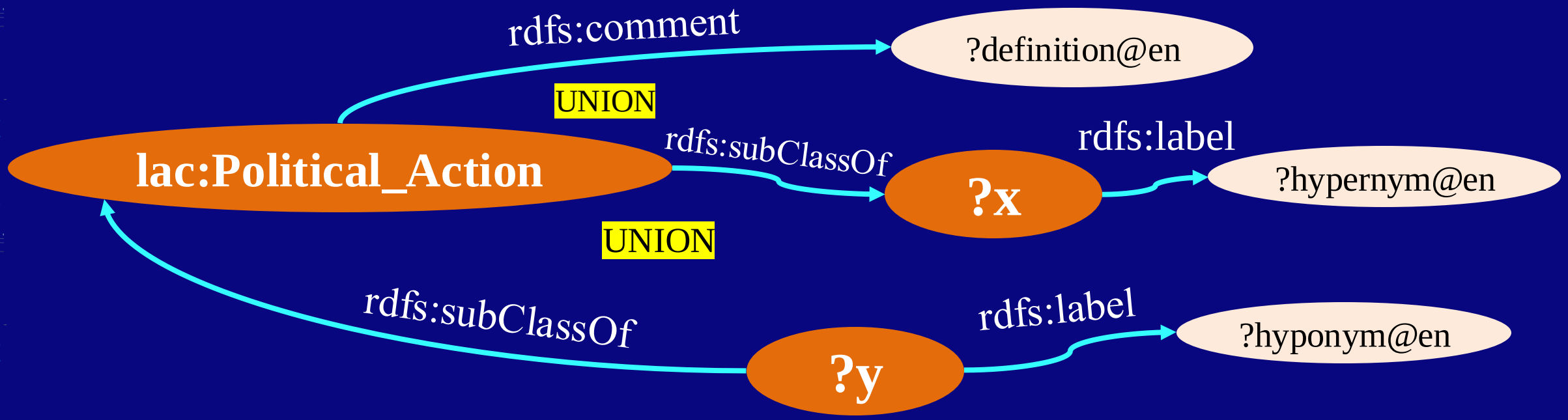
ASK => true

The valid literal of the 2nd qg in “SPARQLer- General Purpose Processor”.

Implementation
(3rd qg: definition, hyponym, hypernym of a term)



Implementation
(3rd qg: definition, hyponym, hypernym of a term)



Implementation
(3rd qg: definition, hyponym, hypernym of a term)

```
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX lac: <http://ontologia.fr/OTB/lac#>
SELECT ?definition ?hypernym ?hyponym
FROM <http://ontologia.fr/OTB/lac.owl#>

WHERE {
{lac:Political_Action rdfs:comment ?definition.
 FILTER(lang(?definition)="en")}
UNION
{lac:Political_Action rdfs:subClassOf ?x.
?x rdfs:label ?hypernym.
FILTER(lang(?hypernym)="en")}
UNION
{?y rdfs:subClassOf lac:Political_Action;
    rdfs:label ?hyponym.
FILTER(lang(?hyponym)="en")}
}
```

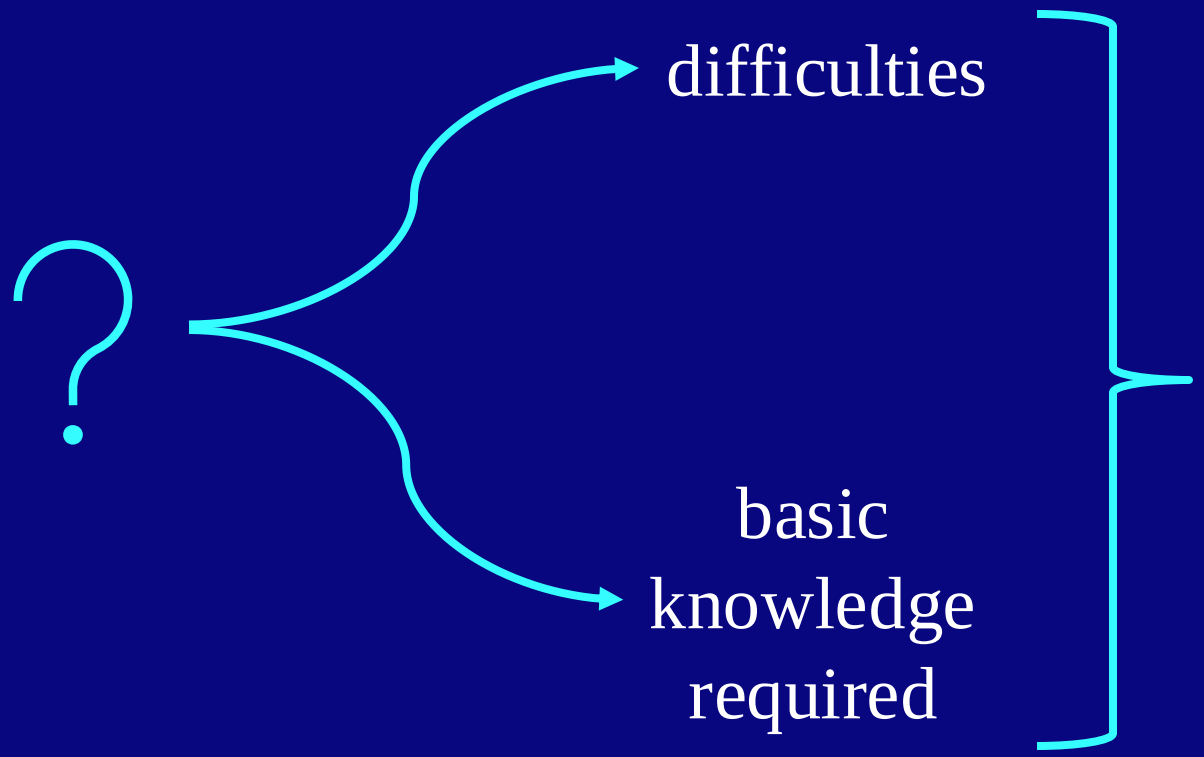
The 3rd qg in “SPARQLer- General Purpose Processor”

Implementation
(3rd qg: definition, hyponym, hypernym of a term)

hypernym	hyponym	definition
"Event" @en		
	"harangue" @en	
	"truce" @en	
	"peace treaty" @en	
	"armistice" @en	
	"elections" @en	
	"alliance" @en	
	"hegemony" @en	
	"amnesty" @en	
		"action designed to attain a purpose by the use of political power or by activity in political channels" @en

The results of the 3rd query graph in xml via “SPARQLer- General Purpose Processor” (retrieved 29/05/2024).

Results



- Retrieve accurate and reliable **information**.
- Enhance and broaden the **research possibilities**.
- Develop a more logical and computation **thinking**.

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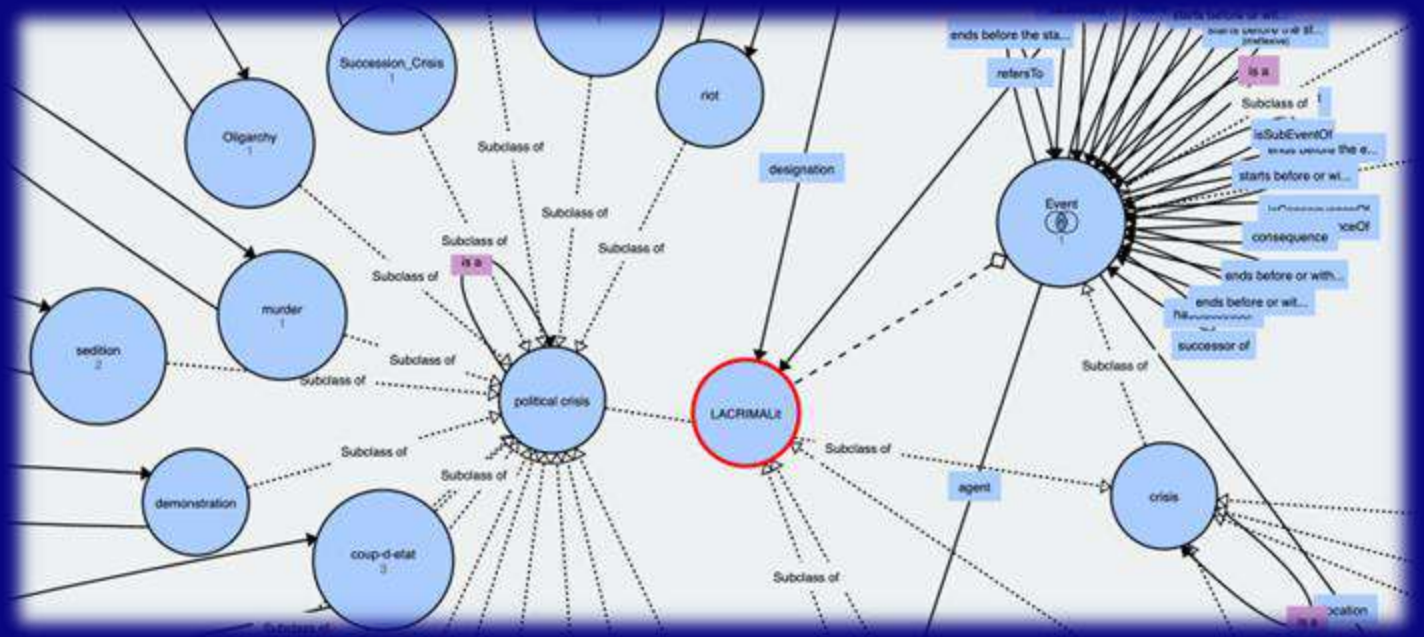
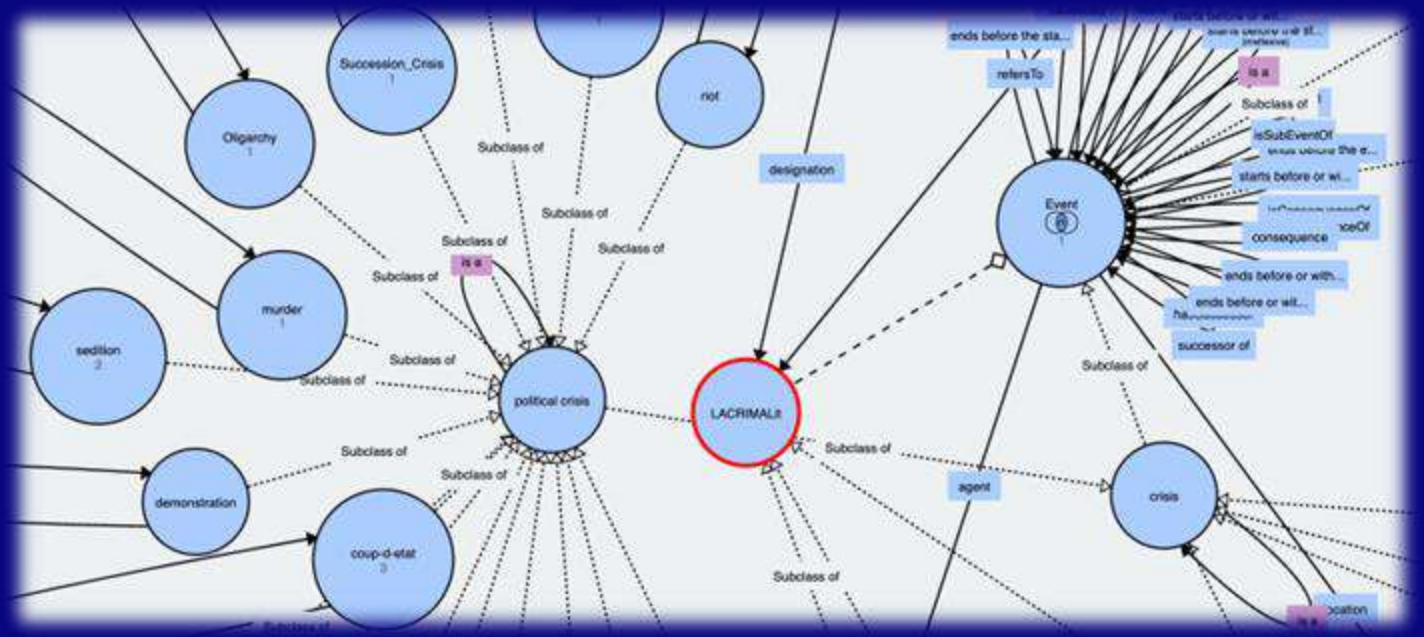


I gratefully acknowledge the generous funding of the European Union in the context of the TALOS-Artificial Intelligence for the Humanities and the Social Sciences project (TALOS-AI4SSH) under the Horizon Europe Framework Programme (HORIZON-WIDERA-2022-TALENTS-01-01-ERA Chairs); Grant agreement ID: 101087269.



Merci beaucoup pour votre attention !

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TOTh 2024, June 7th