Sisteme Bazate pe Cunostinte - Laboratorul 4

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Reminder: Ontologia Persoanelor

O ontologie care continea:

- clasele Person, Man, Woman
- relatii isparentOf, ismotherOf, isfatherOf, hasParent, hasMother, hasFather, hasAncestor, isChildOf
- indivizi john, mary, taylor, si jenna
- asertii: john o are pe taylor ca mama, taylor e parintele lui mary, mary o are pe jenna ca mama

Intrebare de data trecuta: cum formalizam Sibling sau hasSibling?

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Acum interogati: hasSibling **value** John. Ce se intampla? De ce?

Scrieti o axioma si pentru hasGrandfather

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$$Sibling(X, Y) : -hasParent(X, Z), hasParent(Y, Z), X <> Y$$

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SQL: daca presupunem existenta unui tabel *HasParent* cu coloane *Person* si *Parent*

```
SELECT DISTINCT A.Person AS Person1,
                B.Person AS Person2
FROM HasParent A, HasParent B
WHERE A.Parent=B.Parent
AND A.Person <> B.Person
```

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SPARQL: limbaj de interogare pentru RDF/OWL

```
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax
PREFIX owl: <http://www.w3.org/2002/07/owl#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX fam: <http://www.semanticweb.org/m/ontologies

SELECT DISTINCT ?a ?b
WHERE {?a fam:hasParent ?p.
           ?b fam:hasParent ?p.
           ?a owl:differentFrom ?b
           }
```

Referinte SPARQL

Introducere Video:
https://www.youtube.com/watch?v=FvGndkpa4K0

Prezentari:
https://www.slideshare.net/fabien_gandon/sparql-in-a-nutshell

https://www.iro.umontreal.ca/~lapalme/ift6281/sparql-1_1-cheat-sheet.pdf

Linked Open Vocabularies:
https://lov.linkeddata.es/dataset/lov/sparql

Exercitiu SPARQL

Alegeti un vocabular de pe pagina Linked Open Vocabularies si compuneti mai multe SPARQL queries pe baza vocabularului respectiv