Oblig 4 IN3060 (author: evengal) - Task 2 - Entailment

sim:Marge rdf:type foaf:Person:

Yes

1. sim:Marge fam:hasSpouse sim:Homer - P
2. fam:hasSpouse rdfs:domain foaf:Person – P
3. sim:Marge rdf:type foaf:Person – rdfs2 1, 2

fam:hasSister rdfs:subPropertyOf fam:isRelativeOf:

Yes

1. fam:hasSister rdfs:subPropertyOf fam:hasSibling - P
2. fam:hasSibling rdfs:subPropertyOf fam:isRelativeOf - P
3. fam:hasSister rdfs:subPropertyOf fam:isRelativeOf - rdfs5 1, 2

sim:Marge rdf:type fam:Woman:

No, fam:hasSpouse does not entail which gender sim:Marge is. Look at the example from first statement:

1. sim:Marge fam:hasSpouse sim:Homer – P
2. fam:hasSpouse rdfs:domain foaf:Person - P
3. sim:Marge rdf:type foaf:Person – rdfs2 1, 2 → Does not give the gender

sim:Herb rdf:type fam:Man:

Yes

1. fam:hasBrother rdfs:range fam:Man - P
2. _a fam:hasBrother sim:Herb - P
3. sim:Herb rdf:type fam:Man – rdfs3 1, 2

sim:Lisa fam:isRelativeOf sim:Homer:

Yes

1. fam:hasParent rdfs:subPropertyOf fam:isRelativeOf - P
2. sim:Lisa fam:hasParent sim:Homer – P
3. fam:hasFather rdfs:subPropertyOf fam:hasParent – P

4. sim:Lisa fam:hasFather sim:Homer – P
5. sim:Lisa fam:isRelativeOf sim:Homer - rdfs7 3, 4

sim:Lisa fam:hasMother sim:Marge:

No, there is not possible to derive information from fam:hasSpouse to claim that Marge is the mother of Lisa. Spouse does not always mean that is the mother.

sim:Patty rdf:type foaf:Person:

Yes

1. sim:Lisa fam:hasParent _a - P
2. _a fam:hasSister sim:Patty - P
3. fam:hasSister rdfs:domain foaf:Person - P
4. sim:Patty rdf:type foaf:Person – rdfs3 1, 2, 3