

Cogui Tutorial : Facts

A basic graph (BG) fact is composed of concept nodes (entities labelled by concept types and a marker – either generic or individual) and relation nodes (representing relationships between the entities). A knowledge base is composed of a vocabulary and a set of BG facts. A query is a BG. Each homomorphism ("projection") from the query to the knowledge base defines a query answer.

1. Open the cogxml file Tutorial-step3.cogxml

Tutorial-step3.cogxml consists of:

- The vocabulary from Tutorial-step2.cogxml
- The fact example-fact-errors

2. Exercise: The fact example-fact-errors contains several errors. You can see those errors by clicking the validate vocabulary button. Fix all the errors in the fact.

Hints:

- There are several solution graphs depending on choices made to address the bugs

3. Open the solution to Exercise 2: Tutorial-step4.cogxml.

In Tutorial-step4.cogxml:

- Analyse the three graphs and compare to your solution.
- Delete the facts example-fact-solution2 and example-fact-solution3.

4. Insert a new fact graph called example-simple-fact stating that Mary, a woman is the mother of the girl Alice and she is married to Bob, a man.

5. Insert a new fact graph called example-generic-fact containing three concept nodes of type Girl with generic marker, and all relation nodes of type like between any pair of distinct concept nodes.

Remark: You can use classify graph to classify your facts and see the relation between different facts. Discuss how can you modify example-simple fact such that it is less general than example-generic-fact.

6. Create a new query query-example, asking who likes who. Visualise both the projections and projection images.

Note: The difference between the two visualisation types is explained in the tutorial slides.