

\varnothing
 \vdots
 $A \wedge B$
 $C \vee D$
 $\forall x: F(x)$
 $\exists x: A: \neg F(x)$

\rightarrow this is some c

$F(x_1)$
 $F(x_2)$
 $\neg F(c)$
 \square

x_1/c

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$\forall p, c: \text{domain}(p, c) \rightarrow \forall x \exists y: p(x, y) \rightarrow c(x)$
df's: domain : County.
refs. range : City.

: capital : germany : berlin.
 City(x) ← capital(x, y).

\Rightarrow : germany a: County.
 : berlin a: City.

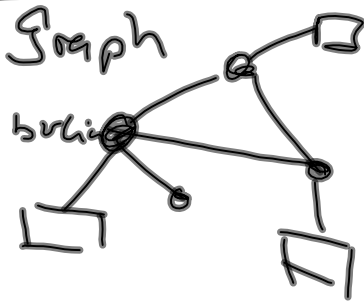
bird(x) \sim fly(x) bird(trees)

fly(trees)

fly(trees) is consistent with knowledge

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Data Model



2000-2004

RDF

- RDF-DBMS
- Query: SPARQL

DL / DFS
 • DL / OWL
 • Tableau

Logic
 DL

DB: (SPO) → edges of graph [→ world graph DB]

vertically partitioned storage

<u>name</u>	<u>pop</u>	<u>country</u>
germany 'Germany'	germany 8250000	germany berlin

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?X a :City ;
 population ?P

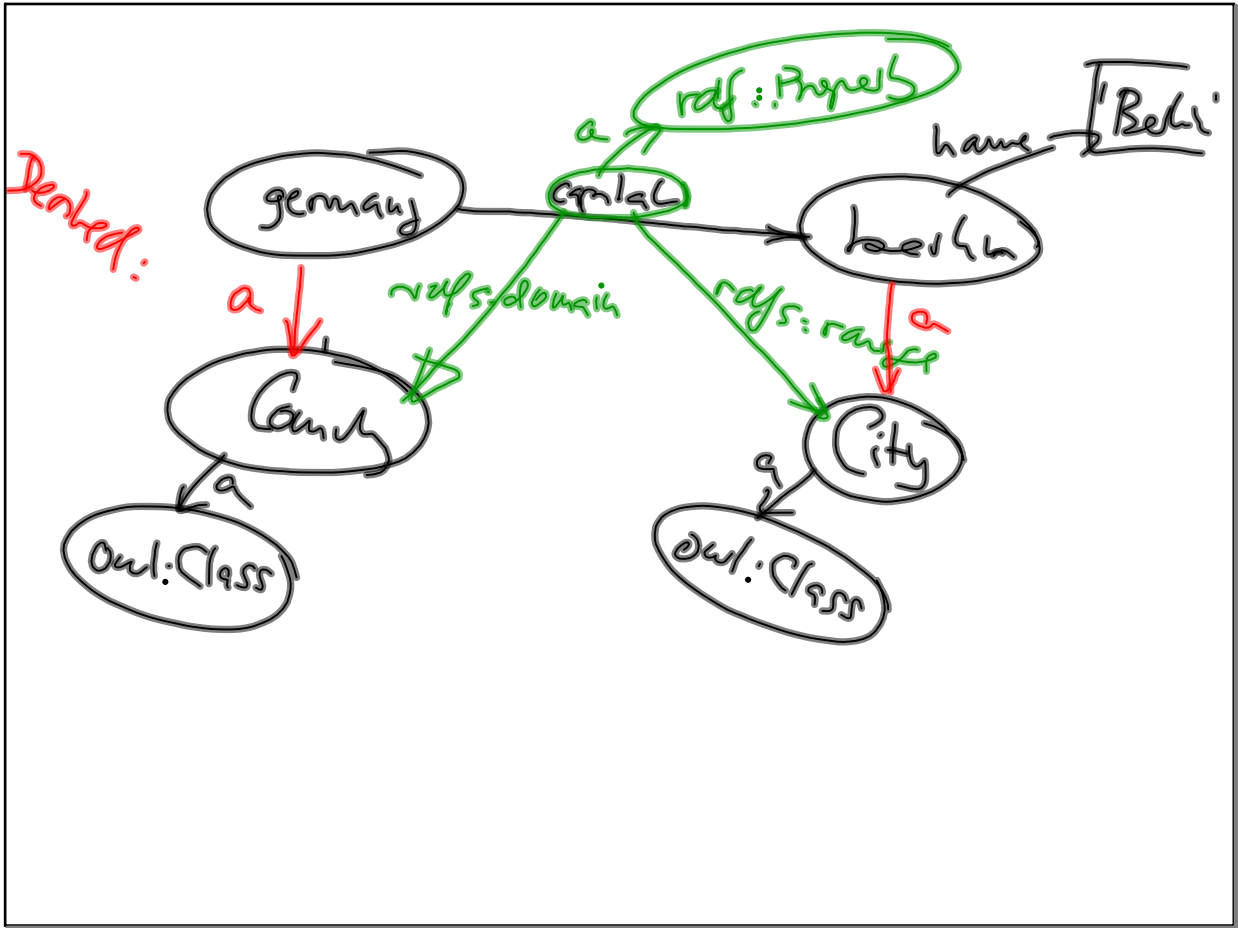
URI

(FILTER ?P > 100.000)

:berlin a :City
 :pop 3400.000.

:berlin a :City;
 :pop 3500000;

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Nov 14-11:18