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Prolog Example 1

Programme:

block(block1).

block(block2).

block(block3).

block(block4).

table(table1).

on(block1, block2).

on(block2, table1).

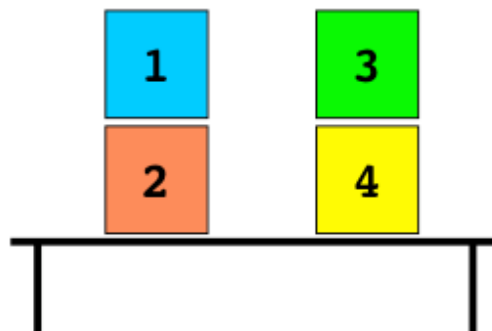
on(block3, block4).

on(block4, table1).

above(X,Y) :- block(X), block(Y), on(X,Y).

above(X,Y) :- block(X), table(Y), on(X,Y).

above(X,Y) :- block(X), block(Z), on(X,Z), above(Z,Y).



Queries:

?- on(block1, table1).

Answer: no

?- above(block1, table1).

Answer: yes

?- above(block1, block2).

Answer: yes

?- above(block2, X).

Answer: X = table1 // was wrong on the original handout

?- above(block3, X).

Answer1: X = block4, Answer2: X = table1 // was wrong

?- above(X, table1).

Answer 1: X = block1, Answer 2: X = block2, // was wrong

Answer 3: X = block3, Answer 4: X = block4

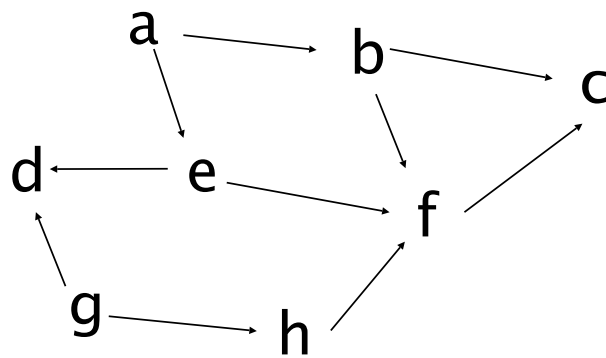
?- above(X,Y).

Answer: ???

Prolog Example 2

Programme:

a(g, h).
a(g, d).
a(e, d).
a(h, f).
a(e, f).
a(a, e).
a(a, b).
a(b, f).
a(b, c).
a(f, c).



path(X, X).
path(X, Y) :- a(X, Z), path(Z, Y).

Queries:

?- a(e,d). Answer: ???
?- path(e,d). Answer: ???
?- path(e,X). Answer: ???
?- path(X,Y). Answer: ???