

% Given facts

likes(mary, food).

likes(mary, wine).

likes(john, wine).

likes(john, mary).

% Rules based on the conditions:

likes(john, X) :- likes(mary, X). % John likes anything that Mary likes

likes(john, Y) :- likes(Y, wine). % John likes anyone who likes wine

likes(john, Y) :- likes(Y, Y). % John likes anyone who likes themselves

% Sample queries:

% Query 1: Does John like food?

% ?- likes(john, food).

% Query 2: Does John like wine?

% ?- likes(john, wine).

% Query 3: Does John like food if Mary likes food?

% ?- likes(john, food).

% Query 4: Who does John like?

% ?- likes(john, Y).