% Facts: Define relationships in the family tree

male(ram).

male(sethi).

male(vijay).

male(anil).

male(sanjay).

male(karan).

male(akshay).

male(sanam).

male(ujwal).

male(kannu).

male(sanchit).

male(krishna).

male(tanush).

male(avyan).

male(akshav).

female(nirmal).

female(poonam).

female(dolly).

female(geeta).

female(neeru).

female(supriya).

female(sonam).

female(sakshi).

female(diksha).

female(sara).

parent(ram, poonam).

parent(ram, vijay).

parent(ram, geeta).

parent(ram, sanjay).

parent(nirmal, poonam).

parent(nirmal, vijay).

parent(nirmal, geeta).

parent(nirmal, sanjay).

parent(poonam, supriya).

parent(poonam, sonam).

parent(sethi, supriya).

parent(sethi, sonam).

parent(vijay, sakshi).

parent(vijay, diksha).

parent(vijay, ujwal).

parent(dolly, ujwal).

parent(dolly, sakshi).

parent(dolly, diksha).

parent(geeta, sara).

parent(geeta, kannu).

parent(anil, kannu).

parent(anil, sara).

parent(sanjay, sanchit).

parent(sanjay, krishna).

parent(neeru, krishna).

parent(neeru, sanchit).

parent(supriya, tanush).

parent(supriya, avyan).

parent(karan, avyan).

parent(karan, tanush).

parent(sonam, akshav).

parent(akshay, akshav).

parent(sakshi, alaina).

parent(sanam, alaina).

% Define family relationships

% Define family relationships

father(X, Y) :- male(X), parent(X, Y).

mother(X, Y) :- female(X), parent(X, Y).

wife(X, Y) :- female(X), male(Y), parent(X, Z), parent(Y, Z).

husband(X, Y) :- male(X), female(Y), wife(Y, X).

son(X, Y) :- male(X), parent(Y, X).

daughter(X, Y) :- female(X), parent(Y, X).

grandfather(X, Z) :- male(X), parent(X, Y), parent(Y, Z).

grandmother(X, Z) :- female(X), parent(X, Y), parent(Y, Z).

sibling(X, Y) :- parent(Z, X), parent(Z, Y), X \= Y.

cousin(X, Y) :- parent(Z, X), parent(W, Y), sibling(Z, W).

uncle(X, Y) :- parent(Z, Y), sibling(X, Z), male(X).

aunt(X, Y) :- cousin(Z, Y), mother(X, Z), female(X).

second\_uncle(X, Y) :- male(X), grandfather(W, Y), sibling(W, Z), parent(Z, Y).

second\_aunt(X, Y) :- female(X), grandfather(W, Y), sibling(W, Z), parent(Z, Y).

second\_cousin(X, Y) :- grandfather(W, Y), sibling(W, Z), parent(Z, X).

second\_grandfather(X, Y) :- grandfather(W, Y), sibling(W, X).

second\_grandmother(X, Y) :- second\_uncle(W, Y), mother(X, W).

great\_grandfather(X, Z) :- father(X, Y), grandfather(Y, Z).

great\_grandmother(X, Z) :- mother(X, Y), grandfather(Y, Z).

grandson(X, Y) :- male(X), grandparent(Y, X).

granddaughter(X, Y) :- female(X), grandparent(Y, X).

daughter\_in\_law(X, Y) :- female(X), parent(Y, Z), husband(Z, X).

son\_in\_law(X, Y) :- male(X), parent(Y, Z), wife(Z, X).

find\_relationship(X, Y) :- father(X, Y), write(X), write(' is the father of '), write(Y), nl.

find\_relationship(X, Y) :- mother(X, Y), write(X), write(' is the mother of '), write(Y), nl.

find\_relationship(X, Y) :- wife(X, Y), write(X), write(' is the wife of '), write(Y), nl.

find\_relationship(X, Y) :- husband(X, Y), write(X), write(' is the husband of '), write(Y), nl.

find\_relationship(X, Y) :- son(X, Y), write(X), write(' is the son of '), write(Y), nl.

find\_relationship(X, Y) :- daughter(X, Y), write(X), write(' is the daughter of '), write(Y), nl.

find\_relationship(X, Y) :- grandfather(X, Y), write(X), write(' is the grandfather of '), write(Y), nl.

find\_relationship(X, Y) :- grandmother(X, Y), write(X), write(' is the grandmother of '), write(Y), nl.

find\_relationship(X, Y) :- sibling(X, Y), write(X), write(' is the sibling of '), write(Y), nl.

find\_relationship(X, Y) :- uncle(X, Y), write(X), write(' is the uncle of '), write(Y), nl.

find\_relationship(X, Y) :- aunt(X, Y), write(X), write(' is the aunt of '), write(Y), nl.

find\_relationship(X, Y) :- cousin(X, Y), write(X), write(' is the cousin of '), write(Y), nl.

find\_relationship(X, Y) :- second\_uncle(X, Y), write(X), write(' is the second-uncle of '), write(Y), nl.

find\_relationship(X, Y) :- son\_in\_law(X, Y), write(X), write(' is the son-in-law of '), write(Y), nl.

find\_relationship(X, Y) :- daughter\_in\_law(X, Y), write(X), write(' is the daughter-in-law of '), write(Y), nl.

find\_relationship(X, Y) :- second\_aunt(X, Y), write(X), write(' is the second-aunt of '), write(Y), nl.

find\_relationship(X, Y) :- second\_cousin(X, Y), write(X), write(' is the second cousin of '), write(Y), nl.

find\_relationship(X, Y) :- second\_grandfather(X, Y), write(X), write(' is the second grandfather of '), write(Y), nl.

find\_relationship(X, Y) :- second\_grandmother(X, Y), write(X), write(' is the second grandmother of '), write(Y), nl.

find\_relationship(X, Y) :- great\_grandfather(X, Y), write(X), write(' is the great-grandfather of '), write(Y), nl.

find\_relationship(X, Y) :- great\_grandmother(X, Y), write(X), write(' is the great-grandmother of '), write(Y), nl.

find\_relationship(X, Y) :- grandson(X, Y), write(X), write(' is the grandson of '), write(Y), nl.

find\_relationship(X, Y) :- granddaughter(X, Y), write(X), write(' is the granddaughter of '), write(Y), nl.

find\_relationship(X, Y) :- write('Relationship not defined between '), write(X), write(' and '), write(Y), nl.