```prolog
%initial state:
%        monkey is at door,
%        key is in the middle of room,
%        banana is at window locked in a box,
%        Monkey does not have the banana.

%canget(state(atdoor,locked,hasnot,hasnot)).
%canget(state(S1, S2, S3, S4)).

%S1-monkey location-atdoor / onfloor / atwindow / middle
%S2-box is locked or not: locked/unlocked
%S3-monkey has the key or not has,hasnot
%S4-monkey has the banana or not-has,hasnot

%legal actions
move(state(atwindow,unlocked,has,hasnot),            % before move
     grasp,                                          % grasp banana
     state(atwindow,unlocked,has,has)).              % after move

move(state(atwindow,locked,has,H),
     unlock,                                         % unlock box
     state(atwindow,unlocked,has,H)).

move(state(middle,locked,hasnot,H),
     get_key,                                        % get the key
     state(middle,locked,has,H)).

move(state(P1,locked,_,_),
     walk(P1,P2),                                    % walk form P1 to P2
     state(P2,locked,_,_)).

%canget(State): monkey can get banana in state
canget(state(_,_,_,has)).                            % Monkey already has it, goal state
canget(State1):-                                     %do some work to get it
     move(State1,Move,State2),                       %do something
     canget(State2).                                 %Get it now
```

```prolog
child_of(mary, steve).
child_of(mary,anne).
child_of(alice,anne).
child_of(alice,steve).
child_of(jane,steve).
child_of(leslie,steve).
child_of(steve,ema).
child_of(sally,ema).
child_of(anne,nani).
child_of(anne,john).
child_of(james,john).

female(mary).
female(alice).
female(jane).
female(nani).
female(ema).

child_of(ram, steve).
child_of(ram,anne).
child_of(shyam,anne).
child_of(shyam,steve).
child_of(hari,ram).
female(anne).

sisters(Person1,Person2) :-
        child_of(Person1,Parent1),child_of(Person1,Parent2),
        child_of(Person2,Parent1),child_of(Person2,Parent2),
        not(Parent1 = Parent2),
        female(Person1),female(Person2),
        not(Person1 = Person2).

brothers(Person1,Person2) :-
        child_of(Person1,Parent1),child_of(Person1,Parent2),
        child_of(Person2,Parent1),child_of(Person2,Parent2),
        not(Parent1 = Parent2),
        not(female(Person1)),not(female(Person2)),
        not(Person1 = Person2).

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

uncle(X,Y):-
        brothers(X,Z),child_of(Y,Z).

husband(X,Y) :-
        child_of(Z,X),
        child_of(Z,Y),
        female(Y),
        not(female(X)).

brother_in_law(X,Z):-
        child_of(Y,W),child_of(Y,Z),
        female(W),
        not(female(Z)),
        child_of(X,U),child_of(W,U),
        not(female(X)),
        not(female(Z)).

brother_in_law(X,Z):-
        child_of(Y,Z),child_of(Y,W),
        female(Z),
        child_of(W,U),child_of(X,U),
        not(female(X)).
```