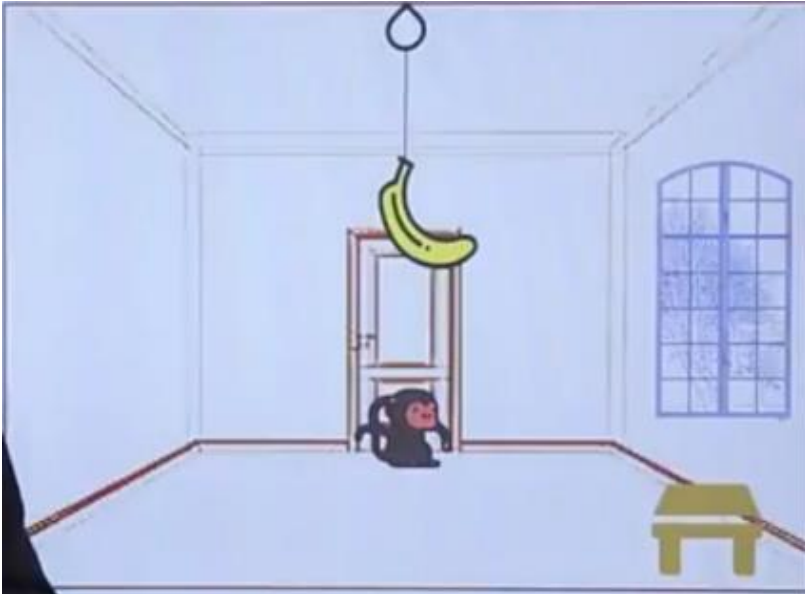


AI ASSIGNMENT – 6

Monkey is on the floor, at door. A block is on floor, at window. Banana is hanging from the roof at the middle of room.

Problem is "How monkey can get the banana?"



Source Code:

```
move(state(middle,onbox,middle,hasnot),
    grasp,
    state(middle,onbox,middle,has)).
move(state(P,onfloor,P,H),
    climb,
    state(P,onbox,P,H)).
move(state(P1,onfloor,P1,H),
    drag(P1,P2),
    state(P2,onfloor,P2,H)).
move(state(P1,onfloor,B,H),
    walk(P1,P2),
    state(P2,onfloor,B,H)).

canget(state(_,_,_,has)).
canget(State1) :-
    move(State1,_,State2),
    canget(State2).
```

Output:

```
sakshi@sakshi: ~/Desktop/AI/ass06
sakshi@sakshi:~/Desktop/AI/ass06$ gedit monkey.pl
^C
sakshi@sakshi:~/Desktop/AI/ass06$ swipl
Welcome to SWI-Prolog (threaded, 64 bits, version 8.4.1)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

For online help and background, visit https://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?- consult('monkey.pl').
true.

?- canget(state(atdoor, onfloor, atwindow, hasnot)).
true.

?- trace
|
true.

[trace] ?- canget(state(atdoor, onfloor, atwindow, hasnot)).
Call: (10) canget(state(atdoor, onfloor, atwindow, hasnot)) ? creep
Call: (11) move(state(atdoor, onfloor, atwindow, hasnot), _16528, _16468) ? creep
Exit: (11) move(state(atdoor, onfloor, atwindow, hasnot), walk(atdoor, _17232), state(_17232, onfloor, atwindow, hasnot)) ? creep
Call: (11) canget(state(_17232, onfloor, atwindow, hasnot)) ? creep
Call: (12) move(state(_17232, onfloor, atwindow, hasnot), _18812, _18752) ? creep
Exit: (12) move(state(atwindow, onfloor, atwindow, hasnot), climb, state(atwindow, onbox, atwindow, hasnot)) ? creep
Call: (12) canget(state(atwindow, onbox, atwindow, hasnot)) ? creep
Call: (13) move(state(atwindow, onbox, atwindow, hasnot), _21090, _21030) ? creep
Fail: (13) move(state(atwindow, onbox, atwindow, hasnot), _21848, _21030) ? creep
Fail: (12) canget(state(atwindow, onbox, atwindow, hasnot)) ? creep
Redo: (12) move(state(_17232, onfloor, atwindow, hasnot), _23356, _18752) ? creep
Exit: (12) move(state(atwindow, onfloor, atwindow, hasnot), drag(atwindow, _24060), state(_24060, onfloor, _24060, hasnot)) ? creep
Call: (12) canget(state(_24060, onfloor, _24060, hasnot)) ? creep
Call: (13) move(state(_24060, onfloor, _24060, hasnot), _25640, _25580) ? creep
Exit: (13) move(state(_24060, onfloor, _24060, hasnot), climb, state(_24060, onbox, _24060, hasnot)) ? creep
Call: (13) canget(state(_24060, onbox, _24060, hasnot)) ? creep
Call: (14) move(state(_24060, onbox, _24060, hasnot), _27918, _27858) ? creep
Exit: (14) move(state(middle, onbox, middle, hasnot), grasp, state(middle, onbox, middle, has)) ? creep
Call: (14) canget(state(middle, onbox, middle, has)) ? creep
Exit: (14) canget(state(middle, onbox, middle, has)) ? creep
Exit: (13) canget(state(middle, onbox, middle, hasnot)) ? creep
Exit: (12) canget(state(middle, onfloor, middle, hasnot)) ? creep
Exit: (11) canget(state(atwindow, onfloor, atwindow, hasnot)) ? creep
Exit: (10) canget(state(atdoor, onfloor, atwindow, hasnot)) ? creep
true.

[trace] ?- □
```