**IAI : Exp-6(Inlab)**

**Name :** Keyur Patel **Roll No :** 16010421073  **Batch :** A-2

**Code:**

/\* Facts \*/

man(dr\_black).

man(reverend\_green).

man(colonel\_mustard).

man(professor\_plum).

woman(mrs\_peacock).

woman(madame\_rose).

woman(miss\_scarlett).

woman(mrs\_white).

victim(dr\_black).

playing\_cards(colonel\_mustard).

playing\_cards(reverend\_green).

playing\_cards(mrs\_peacock).

gardening(mrs\_white).

gardening(reverend\_green).

played\_golf(professor\_plum).

played\_golf(colonel\_mustard).

smoker(miss\_scarlett).

smoker(colonel\_mustard).

smoker(mrs\_white).

smoker(dr\_black).

smoker(mrs\_peacock).

room(room\_21).

room(room\_22).

room(room\_23).

room(room\_24).

room(room\_25).

stay\_in(dr\_black,room\_22).

stay\_in(reverend\_green,room\_24).

stay\_in(miss\_scarlett,room\_21).

stay\_in(colonel\_mustard,room\_24).

stay\_in(professor\_plum,room\_22).

stay\_in(mrs\_peacock,room\_23).

stay\_in(madame\_rose,room\_21).

stay\_in(mrs\_white,room\_23).

owns\_revolver(reverend\_green).

owns\_revolver(colonel\_mustard).

owns\_revolver(madame\_rose).

/\* Rules \*/

suspect(X):- man(X), \+victim(X).

suspect(X):- woman(X), \+victim(X).

has\_alibi(X):- suspect(X), playing\_cards(X).

went\_outside(X):- gardening(X).

went\_outside(X):- smoker(X).

went\_outside(X):- played\_golf(X).

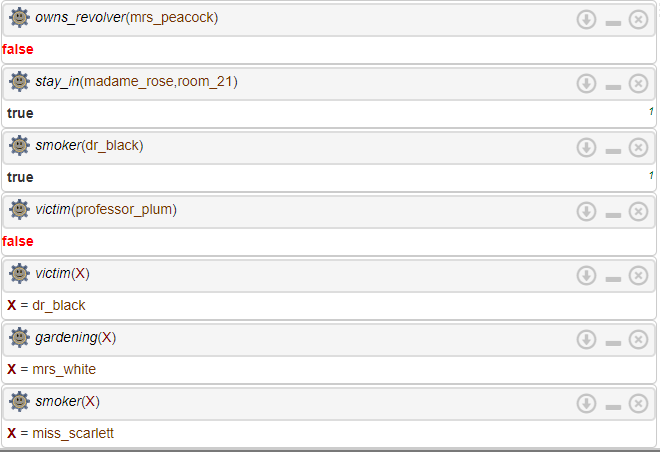
share\_room(X,Y):- room(R), stay\_in(X,R), stay\_in(Y,R), X \= Y.

revolver\_access(X):- owns\_revolver(X).

revolver\_access(X):- share\_room(X,Y), owns\_revolver(Y).

guilty(X):- suspect(X), went\_outside(X), \+has\_alibi(X), revolver\_access(X).

**Output:**



**Outcomes:**

**CO3 :** Ability to formally state the problem and develop the appropriate proof for given a logical deduction problem.