**AI(2180703)**

Tutorial-6

Name : Yogesh Bavishi

Enrollment No.: 170200107003

Division/Batch: E/E1

Q: Write a program to solve N-Queens problem using Prolog.

**Code(pract6.pl):**

use\_module(library(lists)).

n\_queen(N, Solution) :-

    length(Solution, N),

    queen(Solution, N).

up2N(N,N,[N]) :-!.

up2N(K,N,[K|Tail]) :- K < N, K1 is K+1, up2N(K1, N, Tail).

queen([],\_).

queen([Q|Qlist],N) :-

    queen(Qlist, N),

    up2N(1,N,Candidate\_positions\_for\_queenQ),

    member(Q, Candidate\_positions\_for\_queenQ),

    check\_solution(Q,Qlist, 1).

check\_solution(\_,[], \_).

check\_solution(Q,[Q1|Qlist],Xdist) :-

    Q =\= Q1,

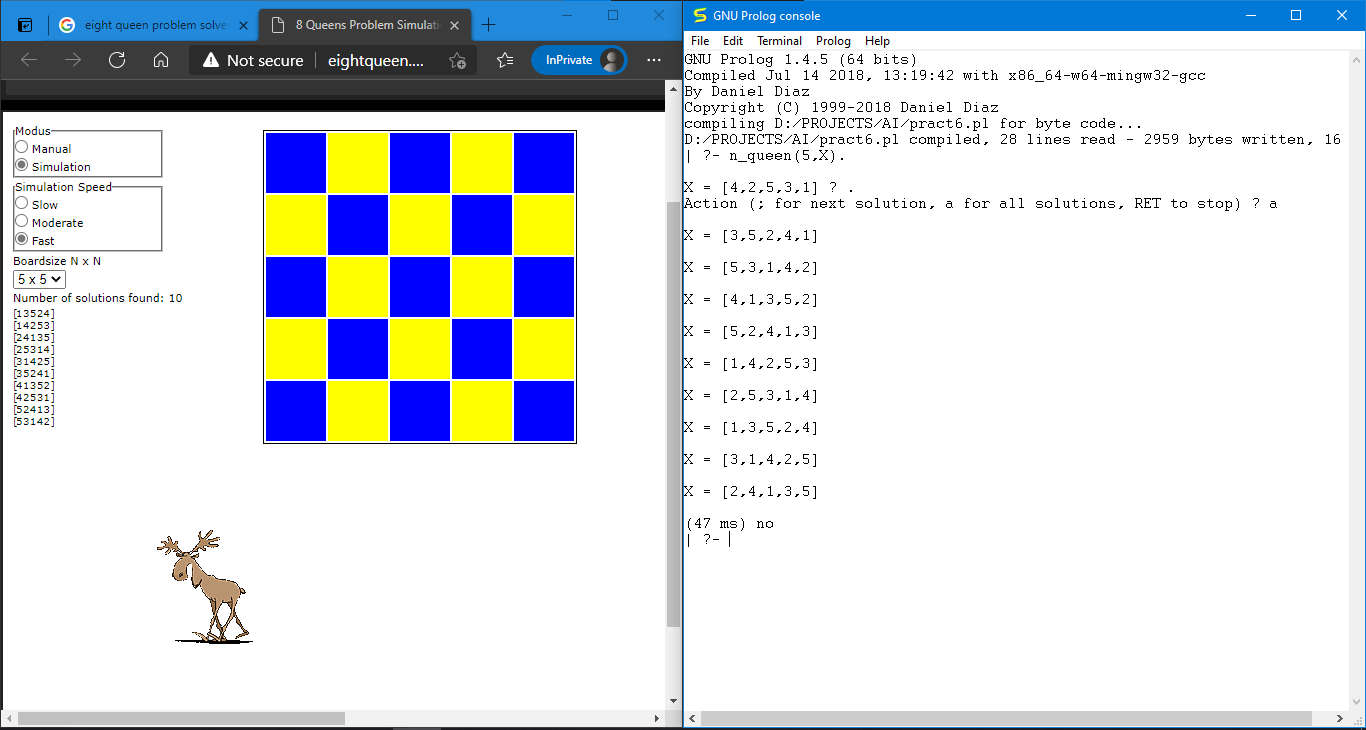
    Test is abs(Q1-Q),

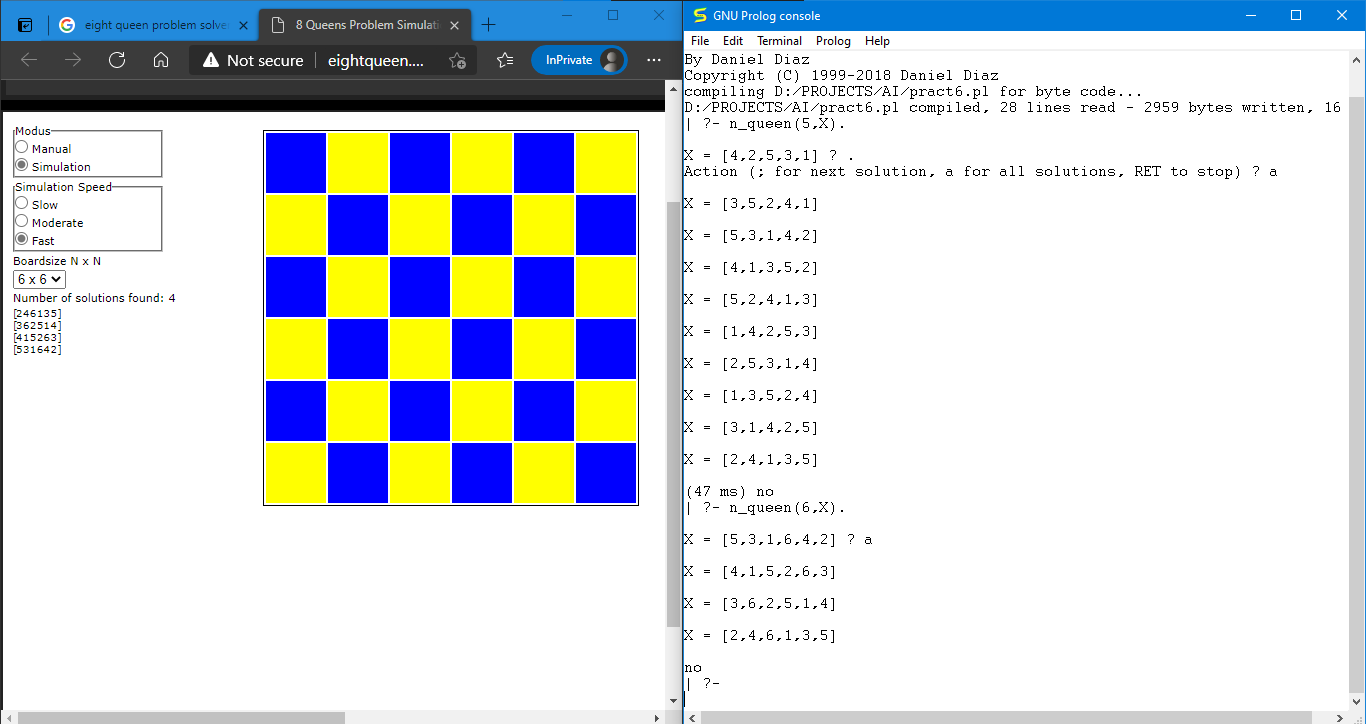
    Test =\= Xdist,

    Xdist1 is Xdist + 1,

check\_solution(Q,Qlist,Xdist1).

**Output :**

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