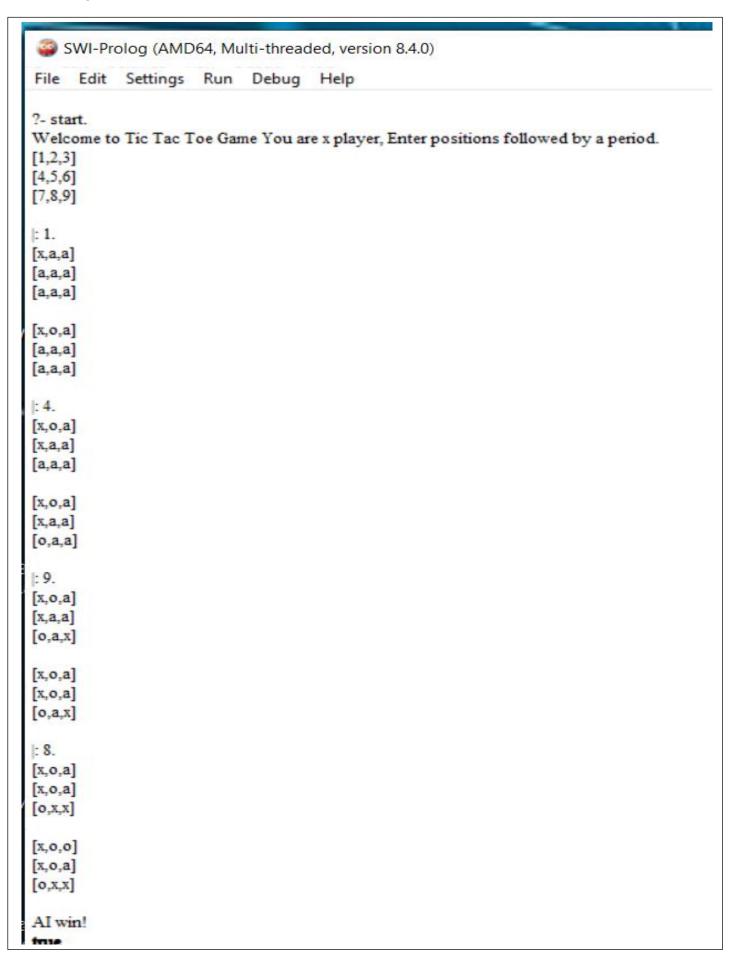
```
win(Board, Player) :- row_win(Board, Player);
col_win(Board, Player);
diagwin(Board, Player).
row win(Board, Player) :- Board = [Player,Player,Player,___,__];
Board = [_,_,_,Player,Player,Player,_,_,];
Board = [_,_,_,_,Player,Player,Player].
col_win(Board, Player) :- Board = [Player,_,_,Player,_,_,Player,_,_];
Board = [_,Player,__,,Player,__,,Player,__];
Board = [_,_,Player,_,_,Player].
diagwin(Board, Player) :- Board = [Player,___,Player,__,_,Player];
Board = [_,_,Player,_,Player,_,Player,_,].
omove([a,B,C,D,E,F,G,H,I], Player, [Player,B,C,D,E,F,G,H,I]).
omove([A,a,C,D,E,F,G,H,I], Player, [A,Player,C,D,E,F,G,H,I]).
omove([A,B,a,D,E,F,G,H,I], Player, [A,B,Player,D,E,F,G,H,I]).
omove([A,B,C,a,E,F,G,H,I], Player, [A,B,C,Player,E,F,G,H,I]).
omove([A,B,C,D,a,F,G,H,I], Player, [A,B,C,D,Player,F,G,H,I]).
omove([A,B,C,D,E,a,G,H,I], Player, [A,B,C,D,E,Player,G,H,I]).
omove([A,B,C,D,E,F,a,H,I], Player, [A,B,C,D,E,F,Player,H,I]).
omove([A,B,C,D,E,F,G,a,I], Player, [A,B,C,D,E,F,G,Player,I]).
omove([A,B,C,D,E,F,G,H,a], Player, [A,B,C,D,E,F,G,H,Player]).
xmove([a,B,C,D,E,F,G,H,I], 1, [x,B,C,D,E,F,G,H,I]).
xmove([A,a,C,D,E,F,G,H,I], 2, [A,x,C,D,E,F,G,H,I]).
xmove([A,B,a,D,E,F,G,H,I], 3, [A,B,x,D,E,F,G,H,I]).
xmove([A,B,C,a,E,F,G,H,I], 4, [A,B,C,x,E,F,G,H,I]).
xmove([A,B,C,D,a,F,G,H,I], 5, [A,B,C,D,x,F,G,H,I]).
xmove([A,B,C,D,E,a,G,H,I], 6, [A,B,C,D,E,x,G,H,I]).
xmove([A,B,C,D,E,F,a,H,I], 7, [A,B,C,D,E,F,x,H,I]).
xmove([A,B,C,D,E,F,G,a,I], 8, [A,B,C,D,E,F,G,x,I]).
xmove([A,B,C,D,E,F,G,H,a], 9, [A,B,C,D,E,F,G,H,x]).
xmove(Board, _, Board) :- write('Illegal Move.'), nl.
disp([A,B,C,D,E,F,G,H,I]):-
```

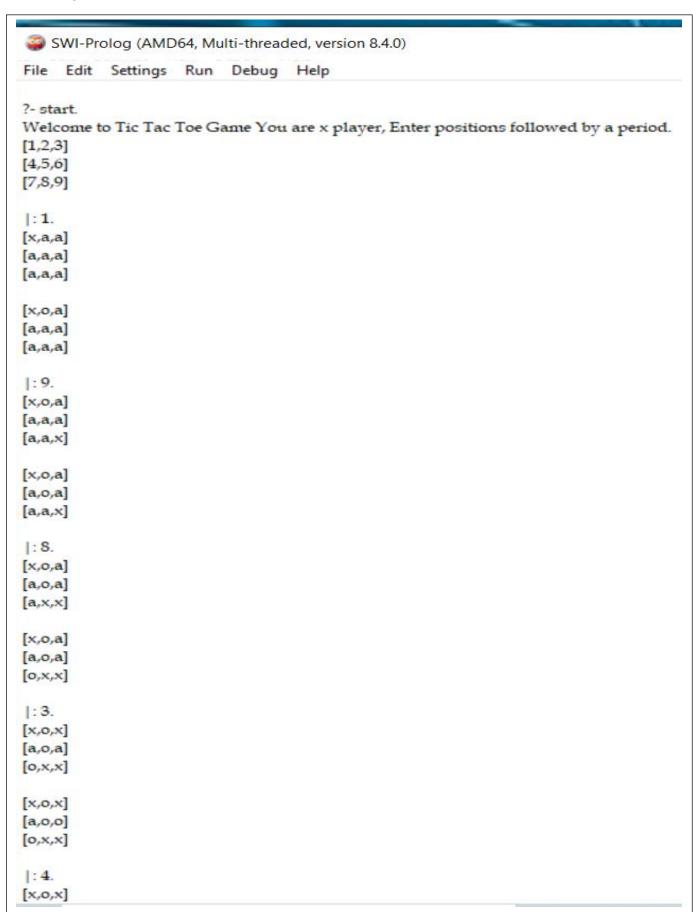
```
write([A,B,C]),nl,
write([D,E,F]),nl,
write([G,H,I]),nl,nl.
start :- how_to_play, strt([a,a,a,a,a,a,a,a,a,a]).
how_to_play :-
write('Welcome to Tic Tac Toe Game You are x player, Enter positions followed by a
period.'),
nl,
disp([1,2,3,4,5,6,7,8,9]).
strt(Board) :- win(Board, x), write('Congratulation !! You win!').
strt(Board) :- win(Board, o), write('AI win!').
strt(Board) :- read(N),
xmove(Board, N, NewBoard),
disp(NewBoard),
oplay(NewBoard, NewnewBoard),
disp(NewnewBoard),
strt(NewnewBoard).
can_x_win(Board) :- omove(Board, x, NewBoard), win(NewBoard, x).
oplay(Board,NewBoard):-
omove(Board, o, NewBoard),
win(NewBoard, o),!.
oplay(Board, NewBoard):-
omove(Board, o, NewBoard),
not(can_x_win(NewBoard)).
oplay(Board, NewBoard):-
omove(Board, o, NewBoard).
oplay(Board, NewBoard):-
not(member(a,Board)),!,
write('Game Ended Without Winner!'), nl,
NewBoard = Board.
```

X win:

```
SWI-Prolog (AMD64, Multi-threaded, version 8.4.0)
File Edit Settings Run Debug Help
?-
% c:/users/dell/desktop/tic tac toe/tic tac toe compiled 0.00 sec, -1 clauses
Welcome to Tic Tac Toe Game You are x player, Enter positions followed by a period.
[4,5,6]
[7,8,9]
: 5.
[a,a,a]
[a,x,a]
[a,a,a]
[o,a,a]
[a,x,a]
[a,a,a]
: 9.
[o,a,a]
[a,x,a]
[a,a,x]
[o,o,a]
[a,x,a]
[a,a,x]
: 3.
[o,o,x]
[a,x,a]
[a,a,x]
[o,o,x]
[o,x,a]
[a,a,x]
: 7.
[o,o,x]
[o,x,a]
[x,a,x]
[o,o,x]
[o,x,o]
[x,a,x]
Congratulation !! You win!
true .
```

O Win:





SWI-Prolog (AMD64, Multi-threaded, version 8.4.0)				
File Edit	Settings	Run	Debug	Help
[x,o,a]				
[a,a,a]				
[a,a,a]				
: 9.				
[x,o,a]				
[a,a,a]				
[a,a,x]				
[x,o,a]				
[a,o,a]				
[a,a,x]				
: 8.				
[x,o,a] [a,o,a]				
[a,x,x]				
[x,o,a]				
[a,o,a]				
[o,x,x]				
:3.				
[x,o,x]				
[a,o,a]				
[o,x,x]				
[x,o,x]				
[a,o,o]				
[o,x,x]				
: 4 .				
[x,o,x]				
[x,o,o]				
[o,x,x]				
Game Ended Without Winner!				
[x,o,x]				
[x,o,o]				
[o,x,x]				
l				
:				