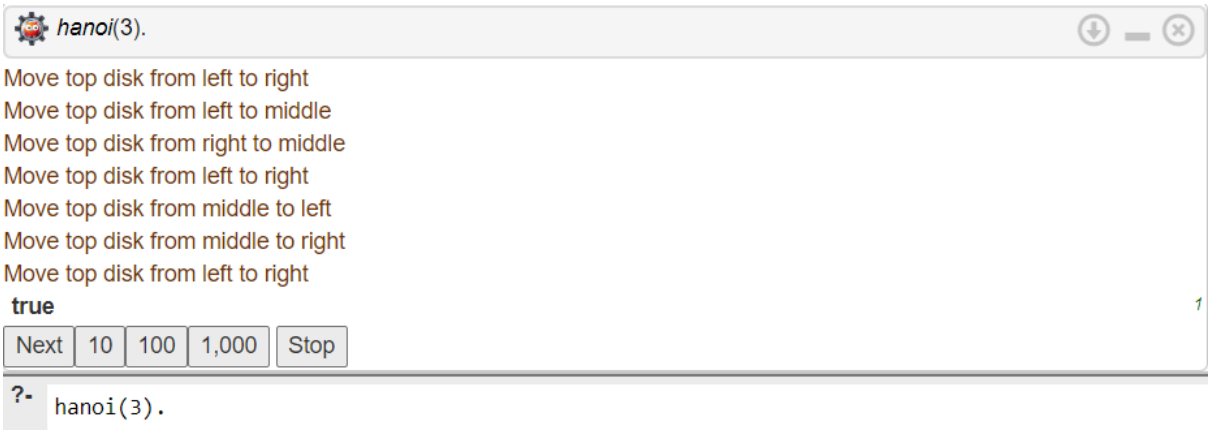
Tower of Hanoi

```
move(1, X, Y, _) :-
    write('Move top disk from '),
    write(X),
    write(' to '),
    write(Y),
    nl.

move(N, X, Y, Z) :-
    N > 1,
    M is N - 1,
    move(M, X, Z, Y),
    move(1, X, Y, _),
    move(M, Z, Y, X).

hanoi(N) :-
    move(N, left, right, middle).
```

Output:



N-Queen

```
queens(N, Queens) :-
   length(Queens, N),
         board(Queens, Board, 0, N, _, _),
         queens(Board, 0, Queens).

board([], [], N, N, _, _).
board([_|Queens], [Col-Vars|Board], Col0, N, [_|VR], VC) :-
         Col is Col0+1,
         functor(Vars, f, N),
         constraints(N, Vars, VR, VC),
         board(Queens, Board, Col, N, VR, [_|VC]).

constraints(0, _, _, _) :- !.
constraints(N, Row, [R|Rs], [C|Cs]) :-
         arg(N, Row, R-C),
         M is N-1,
         constraints(M, Row, Rs, Cs).

queens([], _, []).
queens([C|Cs], Row0, [Col|Solution]) :-
         Row is Row0+1,
         select(Col-Vars, [C|Cs], Board),
         arg(Row, Vars, Row-Row),
         queens(Board, Row, Solution).
```

Output: