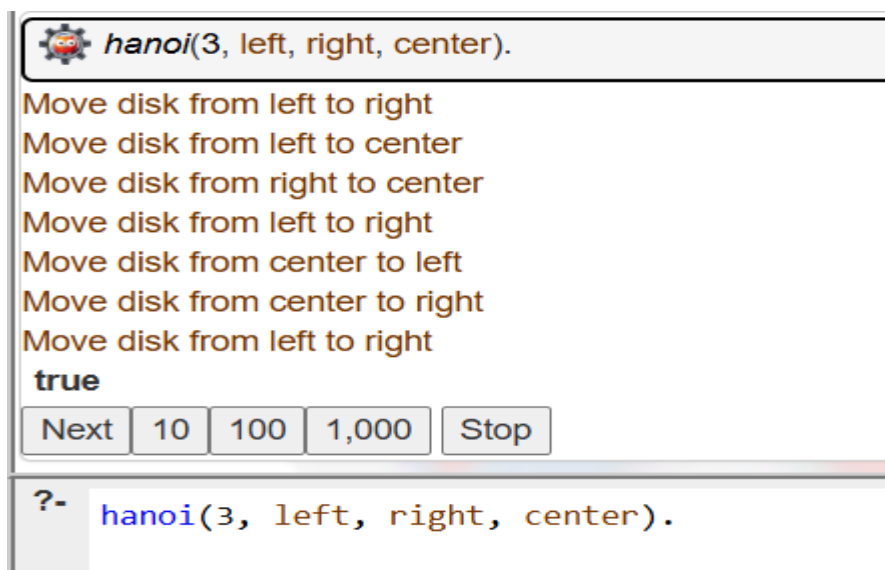


EXPERIMENT:21 Write a Prolog Program to implement Towers of Hanoi

PROGRAM:

```
% hanoi(N, Source, Target, Auxiliary) :-  
%   Moves N disks from Source to Target using Auxiliary.  
  
hanoi(1, Source, Target, _) :-  
    write('Move disk from '), write(Source),  
    write(' to '), write(Target), nl.  
  
hanoi(N, Source, Target, Auxiliary) :-  
    N > 1,  
    M is N - 1,  
    hanoi(M, Source, Auxiliary, Target),  
    hanoi(1, Source, Target, _),  
    hanoi(M, Auxiliary, Target, Source).
```

OUTPUT:



```
hanoi(3, left, right, center).  
Move disk from left to right  
Move disk from left to center  
Move disk from right to center  
Move disk from left to right  
Move disk from center to left  
Move disk from center to right  
Move disk from left to right  
true  
Next 10 100 1,000 Stop  
?- hanoi(3, left, right, center).
```

