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Practical No: 4

1) Implement a program in SWI Prolog to solve Tower of Hanoi puzzle.

CODE:

% Base case: Move 1 disk from X to Y

move(1, X, Y, \_) :-

write('Move top disk from '),

write(X), write(' to '), write(Y), nl.

% Recursive case: Move N disks

move(N, X, Y, Z) :-

N > 1,

M is N - 1,

move(M, X, Z, Y), % Move M disks from X to Z using Y as auxiliary

move(1, X, Y, \_), % Move the remaining disk from X to Y

move(M, Z, Y, X). % Move M disks from Z to Y using X as auxiliary

% Specify what should be executed at startup

:- initialization(main).

% Main predicate to run Tower of Hanoi

main :-

write('Solving Tower of Hanoi for 3 disks'), nl,

move(3, 'Left', 'Right', 'Center'), % Solve for 3 disks

halt.

**OUTPUT:**

