Lab-2

P1:- 8 Puzzle problem using DFS.

Algorithm:-

Let fringe be a list containing the initial state

loop
if fringe is empty return failure.
node ← remove first (fring)
if node is a goal
Then return the path from initial state to node
else generate all successor node & add generated node to the front of fringe
end loop

P2:- 8 Puzzle problem using BFS.

Algorithm:-

Let fring be a list containing the initial state
loop
if fringe is empty return failure
node ← remove-first (fringe)
if node is a goal
then return the path from initial state to node
else generate all successor node & add generated node to the back of fring
end loop.

Vacume cleaner algo

States:- The state is determined by both the agent location and the dirt location. The agent is in one of two location. Each of which might or might not contain dirt.

initial state: any state can be designated as the initial state.

Actions:- in this simple environment, each state has just three actions: Left, right, & suck. Larger environment might also include up & down.

Transition model:- The action have their expected effects. except that moving left in the leftmost square, moving Right in the rightmost square & sucking in a clean square have no effect

goal test:- This check whether all the squares are clean.

Path cost: each step cost is 1, so the path cost is the no. of steps in the path.

18.10