

18/11 - 8/11/24

# LAB-4

→ Implementing Hill climbing search algorithm to solve N queens problem.

\* Algorithm  
function HILLCLIMBING(problem) returns a state  
maximum

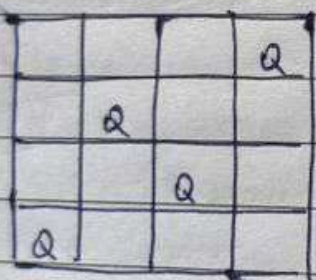
current ← MAKE-NODE (problem, INITIAL-STATE)

do loop

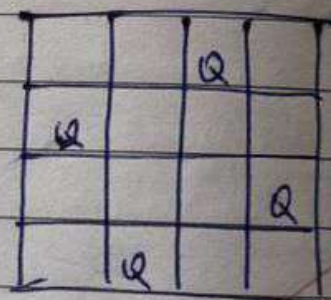
neighbor ← a highest valued successor of current  
if neighbor.VALUE ≤ current.VALUE then return current

current ← neighbor

→ State space tree  
Initial state



Initial state.



Goal State

State: Score:

3 1 2 0

0

1 3 2 0

1

→ select

2 1 3 0

1

0 1 2 3

6

3 2 1 0

6

3 0 2 1

1

3 1 0 2

4



State	Score:
1 3 2 0	1
3 1 2 0	2
2 3 1 0	2
0 3 2 1	3
1 2 3 0	3
1 3 0 2	0 ← <u>Goal</u>

*1st/12th*