LAB-5

Implement Stimulated Annealing algorithm for n-Queen problem

=>

current ← initial state
T ← a large positive value
While T > 0 do
    next ← a random neighbor of current
    ΔE ← current.cost - next.cost.
    if ΔE > 0 then
        current ← next
    else
        current ← next with probability.
    end if
    decrease T
end while.
return current.

Output :-

Final Solution : [1, 3, 0, 2]
Number of conflicts : 0

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Psudocode :

```
Stimulated_Annealing (initial_temp, colling_rate,
                      max_iteration):
    Initialize current state
    Set temp to initial_temp

    For i from 1 to max_iterations:
        If T <=0
            Exit the loop.

        Generate a neighboring state
        Calculate ΔE # change in cost

        If delta_E > 0
            current ⇐ next_state
        Else
            If randomnum < exp (delE/T):
                current ⇐ next_state.

        Decrease Temp.

    Return current.
```