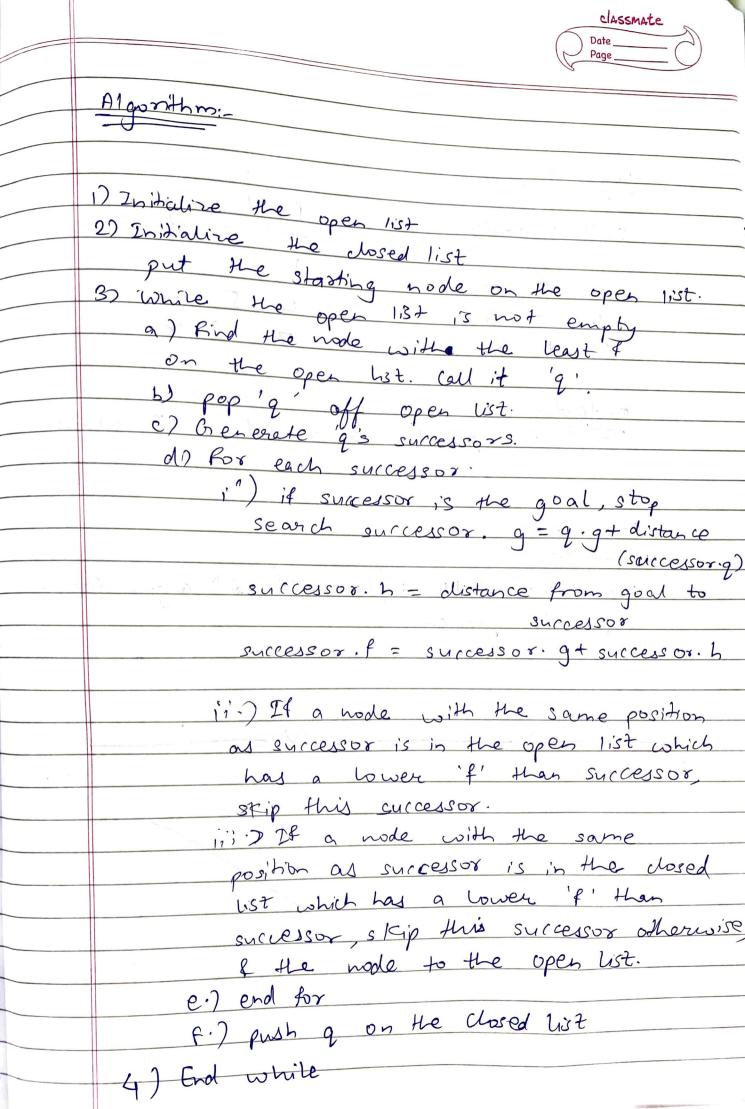
|    | classmate   |
|----|---|
|    | AIR-Assignment-1  |
|    | Title: A* algorithm   |
|    | Problem statement: Salia  |
|    | using A* algorithm. Assume any initial config & define goal config clearly.   |
|    | Objectives: To learn & understand use & need of A* algo.  |
|    | - To apply A* algo to real time problem  - To implement A* algo using suitable  programming 1 4 mass  |
|    | - To implement A* also using suitable   |
| S. | programming language.   |
|    | Outcomes:-  |
|    | - Tearn about A+ algo.  |
|    | - Apply A* also to garning problem  |
|    | - Apply A* also to gaming problem - Implement A* also using Python  |
| \  | H/W & \$/w reg.:-   |
|    | - OS! Ubuntu  |
|    | - Eclipse IDE   |
|    | 0 11 11 11 11 11 11 11 11 11 11 11 11 11  |
|    | or the design hands and the long are  |
|    | Theory:  Theory:  The is one of the most popular heuristic  |
|    | 104104  |
|    | - A** is one of the most popular heuristic<br>search algo. for kinding paths in a graph.<br>- It is really a smart algo, which separates it |
|    | search algo. for kinding pains in a graph it  |
|    | - It is really a smart argue lone   |
|    | from other comentional algor.   |
|    |   |

- Consider a square good having many obstacles

l'une are given a starting cell & a

target cell. - We want to reach tourget cell from the starting cell as quickly as possible - What At also, does is at each step it picks the node according to a value i-f' which is a parameter equal to our of other two parameters - g & h. - At each step, it picks the node coll having least '-f' & process that node/cell. - We define 'g' & 'h' simply as possible g= the movement cost to move from the starting point to a given-square on the grid following the path generated to set there. to get there. h = the estimated movement cost to more from that given square on the grid to the final destruction This is often referred to as the henristic which is nothing but a Kind of smart guess. - We really don't know the actual divisions
until we find the path because all sorts
of things can be in the way.



Test cases:-Initial config. The purile is solved in 18 mores Condusion We successfully implemented At algo. for 8-pur de problem.