Extract Occupancy matrix from input txt file

Add start node to open set after calculating cost

Is open set empty?

No

Take the first node of open set as a **current node**

Is the current node the goal node?

No

Find a neighbour node

Yes

Next node

Check whether the generated Node belongs to obstacle space or not?

No

Yes

Next node

Check whether the neighbour node is in closed set or not? (using nodeStatus)

No

Yes

Yes

Success, construct the shortest path

Failed! Path can't be found.

Calculate the costToCome as a cost from current node to neighbour node

Calculate heuristicCost as a distance between neighbour node and goal node using euclidean distance

Calculate totalCost

Check whether the neighbour node is present in open set?

Yes

Check whether the totalCost of neighbour node is cheaper than previous totalCost?

No

Add it in the open set

No

Yes

Update neighour node's parentID to current node, costToCome, heuristicCost & totalCost

Any more Neighbour node?

Yes

No

Add **current node** to close set by updating nodeStatus

Arrange the nodes in open set based on the total cost in ascending order

**Note: Red Color** block denotes new changes