

Artificial Intelligence

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VERSION NO.

1.3

ASSIGNMENT NO. 3

CS-414 AI V

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Problem 2

Use google map to identify the location of Markaz of different sectors in Islamabad. (e.g I-8 Markaz, I-10 Markaz etc.) and draw a graph between these identified Markaz and label the edges with the distances representing the cost from one to another Markaz. Choose source and destination from these Markaz randomly from any sector I as source to any other sector F or E as destination. Assume a suitable heuristic function to estimate value of each Markaz to destination and the apply uniform and A* search algorithms to find minimum cost path from source to destination.

Analyze both algorithm and identify which one is more efficient and why? Efficiency can be measured in terms of number of nodes/Markaz explored during the searching process.

Problem 2

Efficiency measure:

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Nodes explored in Uniform Cost Search: 3  
Nodes explored in A* Search: 4
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As per number of nodes being explored through the searching process of both the Uniform searching process and A* searching process. We will decide which one is more efficient algorithm.

In uniform searching process, number of nodes being explored are 3.

In A* searching process, number of nodes being searched are 4.

Through our above observations, we conclude that , Uniform search is more efficient as compared to A* search as it explores less nodes.