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Task 7 documentation

### ****Description:****

### This project implements the **A\*** (A-star) search algorithm to find the **shortest and most cost-effective path** between nodes in a weighted graph using both actual and heuristic costs.

### ****Features:****

 Uses **graph representation** with nodes and edge costs.

 Employs **heuristic values (h(n))** for estimating distance to goal.

 Calculates **total cost f(n) = g(n) + h(n).**

Uses **open and closed lists** for node exploration tracking.

 Finds **optimal path** efficiently.

### ****Logic Used:****

1. Initialize start node with g=0 and calculate f=g+h.
2. Select node with smallest f(n) from open list.
3. Expand its neighbors, updating path and total cost.
4. Move explored nodes to closed list.
5. Repea**t** until goal node is reached.
6. Output the shortest path and its total cost.