

Name: Uthira Baskaran

Net ID: uxb3527

SID:1001573527

Programming language used: Python

Code Structure:

The input is received from the user and checks if it is Uniform search or informed search. The state node and goal node are also received from the user. With the information the start node is expanded, the neighbors of the start node are added to fringe and sorted according to the distance and the parent -child relation is stored.

The Next node with the shortest distance is expanded and the distance keeps accumulating as it goes until it reaches the goal node. The route is backtracked, and the distance is printed.

On omega : python find_route.py uninf/inf input_filename origin_city destination_city heuristic_filename

References

<https://thispointer.com/python-how-to-find-keys-by-value-in-dictionary/>

<http://www.quesucede.com/page/show/id/python-3-tree-implementation>

<https://stackoverflow.com/questions/2358045/how-can-i-implement-a-tree-in-python-are-there-any-built-in-data-structures-in>

<https://www.geeksforgeeks.org/trie-insert-and-search/>

<https://stackoverflow.com/questions/5908420/how-to-fill-a-list-with-0-using-python>

<https://stackoverflow.com/questions/16179875/command-line-input-in-python>

<https://stackoverflow.com/questions/24245057/pop-multiple-items-from-the-beginning-and-end-of-a-list>

<https://www.saltycrane.com/blog/2007/09/how-to-sort-python-dictionary-by-keys/>