Instructions to execute the Dijkstra's Algorithm

Place the below files in the same directory location on your system for first time execution:

1. gridGraph.py
2. nodes.txt
3. edges.txt
4. Dijkstras.py
5. Run.py

Documents 1-5 are already included in the zipped folder. You may use the test input set which is included in the zipped folder or give your own input in 'nodes.txt' and 'edges.txt'

Step 1: Creating Graph partitions

The code *gridGraph.py* also offers below functionalities once the graph is partitioned into grids and stored in the file system:

1. Find coordinates of a Node ID
2. Map specific coordinates to Cell number
3. View the list of files corresponding to a certain cell

Press any other number to exit

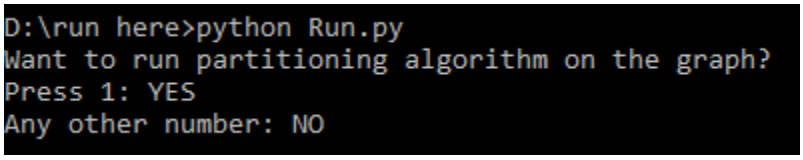
Step 2: Running Dijkstra's Algorithm on Partitioned graph

Enter the source and destination with comma separation without any space into the input.
example : 0,4

Execution steps:

1. Go to terminal
2. In the terminal, go to the directory where your code is saved.
3. Type the command: >python Run.py

   Select one of the options shown below:

   If you press '1', the partitioning algorithm will run.

4. Enter input value of k and m where
   k: dimension of Grids
   m: maximum number of records that can be fed into a file for single cell
   As: ***k,m***

Depiction:

```
Enter source,destination nodes: 0,5

No path from 0 to 5


Number of cells imported: 5

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Press 1 if you want to continue: 1

Enter source,destination nodes: 4,2

Distance from 4 to 2 = 625.0
Number of steps from source to destnation: 2
Path from source to destination:
[4, 3, 2]

Number of cells imported: 0

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Press 1 if you want to continue: 1

Enter source,destination nodes: 2,0

No path from 2 to 0


Number of cells imported: 0

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Press 1 if you want to continue: 2
Thank you. Have a nice day!
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