

maynard_hw1_r1.py - hw_1 - [~/Desktop/AI/hw/hw_1]

hw_1

input1.txt

Project

hw_1 (~/Desktop/AI/hw/hw_1)

CIS4930-Assignment 1.docx

input1.txt

maynard.txt

maynard_hw1_r1.py

External Libraries

maynard_hw1_r1.py

```
1  # #####
2  #
3  # Jason Maynard, U30503758
4  # HW 1, Problem 3, Directed Graph shortest path
5  #
6  # INPUTS: Weighted directed graph (G), prompt user for 2 verticies (u,v)
7  #
8  # OUTPUTS: Shortest path, total weight of shortest path
9  #
10 # Uses NetworkX directed graphs to model graph
11 # www.networkx.com
12 #
13 #####
14
15 import networkx as nx # Network modeling and analysis
16 import matplotlib.pyplot as plt # Graph plotting
17 import numpy as np # Numerical Python for matrix
18 import sys
19
20
21 # Create a new networkX graph object
22 # DiGraph() indicates that it is a directed graph
23 G = nx.DiGraph()
24
25 # Open files -----
26 print 'Opening files'
27
28 # Error checking on opening file
29 # Exit gracefully
30 try:
31     the_file = open('input1.txt', 'r')
32
33 except IOError:
```

Run: maynard_hw1_r1 maynard_hw1_r1 maynard_hw1_r1 maynard_hw1_r1

Opening files

The clean data as an array:

```
[[ 2 13  3]
 [ 2  8 16]
 [13  2  5]
 [13  1 12]
 [13  5  4]
 [ 1  8 20]
 [ 3  1 10]
 [ 5  3  6]
 [ 5  8  5]
 [ 8 13 13]]
```

Figure 1

Home

Back

Forward

Zoom In

Zoom Out

Full Screen

Save

Terminal

4: Run

5: Debug

6: TODO

Event Log

14:1 LF UTF-8