Central university of Haryana

Department of computer science & engineering under SOET

Python lab
(BT CS 526)
Lab-4.

Submitted by :-

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ROLL NO: 202102
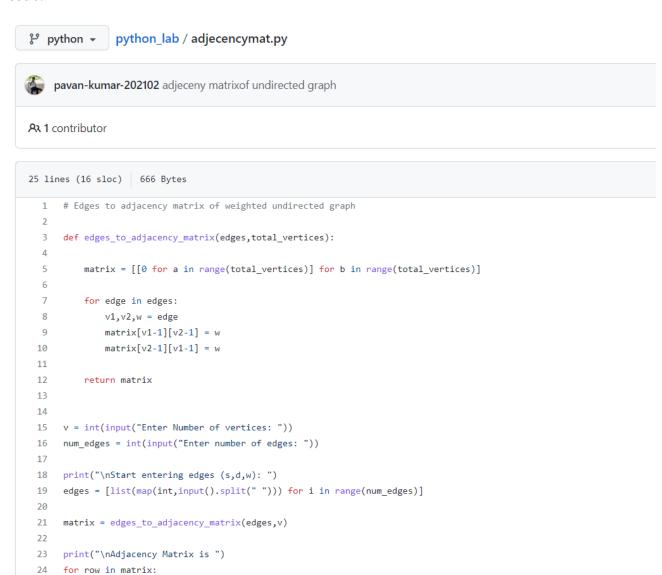
submitted to :-

anant rajee bara

Problem statement:

WAP to represent Graph using Adjaceny Matrix

code:

25 lines (16 sloc)   666 Bytes

```python
1    # Edges to adjacency matrix of weighted undirected graph
2
3    def edges_to_adjacency_matrix(edges,total_vertices):
4
5        matrix = [[0 for a in range(total_vertices)] for b in range(total_vertices)]
6
7        for edge in edges:
8            v1,v2,w = edge
9            matrix[v1-1][v2-1] = w
10           matrix[v2-1][v1-1] = w
11
12       return matrix
13
14
15   v = int(input("Enter Number of vertices: "))
16   num_edges = int(input("Enter number of edges: "))
17
18   print("\nStart entering edges (s,d,w): ")
19   edges = [list(map(int,input().split(" "))) for i in range(num_edges)]
20
21   matrix = edges_to_adjacency_matrix(edges,v)
22
23   print("\nAdjacency Matrix is ")
24   for row in matrix:
25       print(row)
```

Output:

```
Enter Number of vertices: 4
Enter number of edges: 4

Start entering edges (s,d,w):
0 1 2
0 2 4
2 3 6
1 3 8

Adjacency Matrix is
[0, 0, 8, 2]
[0, 0, 6, 4]
[8, 6, 0, 0]
[2, 4, 0, 0]
```

Github link:

https://github.com/pavan-kumar-202102/python_lab/blob/python/adjecencymat.py