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### Assignment 3

INF = 9999999

# number of vertices in graph

N = 5

#creating graph by adjacency matrix method

G = [[0, 19, 5, 0, 0],

[19, 0, 5, 9, 2],

[5, 5, 0, 1, 6],

[0, 9, 1, 0, 1],

[0, 2, 6, 1, 0]]

selected\_node = [0, 0, 0, 0, 0]

no\_edge = 0

selected\_node[0] = True

# printing for edge and weight

print("Edge : Weight\n")

while (no\_edge < N - 1):

    minimum = INF

    a = 0

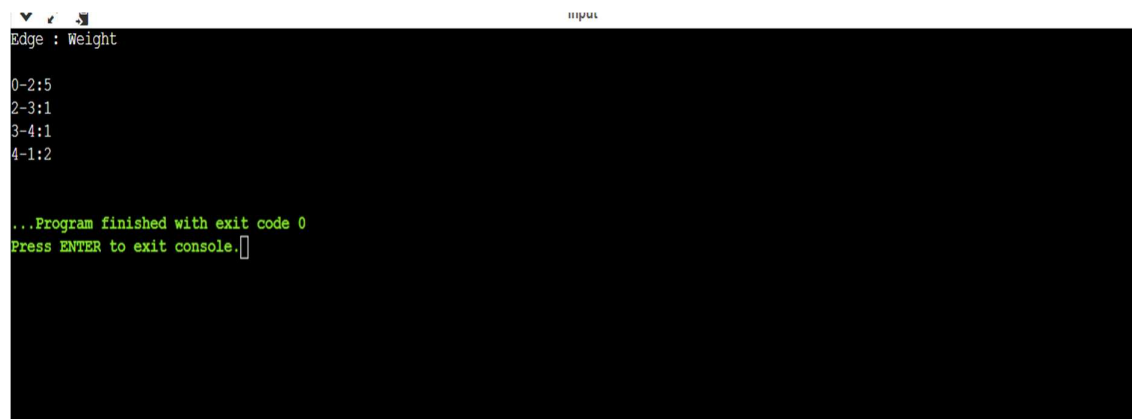
    b = 0

    for m in range(N):

        if selected\_node[m]:

```
for n in range(N):  
    if ((not selected_node[n]) and G[m][n]):  
        # not in selected and there is an edge  
        if minimum > G[m][n]:  
            minimum = G[m][n]  
            a = m  
            b = n  
  
    print(str(a) + "-" + str(b) + ":" + str(G[a][b]))  
  
    selected_node[b] = True  
  
    no_edge += 1
```

output:



```
input  
Edge : Weight  
0-2:5  
2-3:1  
3-4:1  
4-1:2  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```