

```

#prim's algo
import numpy as np
#N = 7
INFINITY = 99999
N = int(input("Enter the number of vertices: "))
# G = []
# for i in range(N):
#     row = list(map(int, input(f"Enter the weights for
edges connected to vertex {i + 1} (separated by spaces):
").split()))
#     G.append(row)

#Enter 49 matrix elements separated by spaces
print("Please write the elements of the matrix in a single
line and separated by a space: ")
elems = list(map(int, input().split()))
G = np.array(elems).reshape(N,N)
print(G)

# G = [
#     [0, 28, 0, 0, 0, 10, 0],
#     [28, 0, 16, 0, 0, 0, 14],
#     [0, 16, 0, 12, 0, 0, 0],
#     [0, 0, 12, 0, 22, 0, 18],
#     [0, 0, 0, 22, 0, 25, 24],
#     [10, 0, 0, 0, 25, 0, 0],
#     [0, 14, 0, 18, 24, 0, 0]
# ]

visited = [0, 0, 0, 0, 0, 0, 0]
no_edges = 0
visited[0] = True
mincost = 0

while no_edges < N - 1:
    min = INFINITY
    u = 0
    v = 0

```

```

for i in range(N):
    if visited[i]:
        for j in range(N):
            if (not visited[j] and G[i][j]):
                if min > G[i][j]:
                    min = G[i][j]
                    u = i
                    v = j
        print(str(u + 1) + "->" + str(v + 1) + ":" +
str(G[u][v]))
        visited[v] = True
        mincost = mincost + G[u][v]
        no_edges = no_edges + 1

print("MST COST:", mincost)

```

The screenshot shows a web browser window with the URL `programiz.com/python-programming/online-compiler/`. The page title is "Programiz Python Online Compiler". There is a "Python Certification" button in the top right corner.

The main area of the compiler is divided into two panels. The left panel, titled "main.py", contains the following Python code:

```

1 #prim's algo
2 import numpy as np
3 #N = 7
4 INFINITY = 99999
5 N = int(input("Enter the number of vertices: "))
6 # G = []
7 # for i in range(N):
8 #     row = list(map(int, input(f"Enter the weights for edges connected to
9 #         vertex {i + 1} (separated by spaces): ").split()))
10 #     G.append(row)
11 #Enter 49 matrix elements separated by spaces
12 print("Please write the elements of the matrix in a single line and separated
13     by a space: ")
14 elems = list(map(int, input().split()))
15 G = np.array(elems).reshape(N,N)
16 print(G)
17 # G = [
18 #     [0, 28, 0, 0, 0, 10, 0],
19 #     [28, 0, 16, 0, 0, 0, 14],
20 #     [0, 16, 0, 12, 0, 0, 0],
21 #     [0, 0, 12, 0, 22, 0, 18],
22 #     [0, 0, 0, 22, 0, 25, 24],
23 #     [10, 0, 0, 0, 25, 0, 0],
24 #     [0, 14, 0, 18, 24, 0, 0]]

```

The right panel, titled "Shell", shows the output of the program:

```

Enter the number of vertices: 7
Please write the elements of the matrix in a single line and separated by a space:
0 28 0 0 10 0 28 0 16 0 0 14 0 16 0 12 0 0 0 0 12 0 22 0 18 0 0 0 22 0 25 24 10
0 0 0 25 0 0 0 14 0 18 24 0 0
[[ 0 28 0 0 10 0]
 [28 0 16 0 0 14]
 [ 0 16 0 12 0 0]
 [ 0 0 12 0 22 18]
 [ 0 0 0 22 0 25 24]
 [10 0 0 25 0 0]
 [ 0 14 0 18 24 0 0]]
1->6:10
6->5:25
5->4:22
4->3:12
3->2:16
2->7:14
MST COST: 99

```

The bottom of the image shows a Windows taskbar with various application icons and a system clock indicating the time is 22:05 on 07-11-2023.