TASK 2:

```
from sys import maxsize
from itertools import permutations
V = 4
deftravellingSalesmanProblem(graph, s):
  vertex = []  # Changed variable name to lowercase 'vertex'
  for i in range(V):  # Fixed capitalization of 'for'
    if i != s:  # Changed capitalization of 'if'
vertex.append(i)

min_path = maxsize  # Changed variable name to lowercase 'min_path'
next_permutation = permutations(vertex)  # Changed variable name to lowercase
'next_permutation'
  for i in next_permutation:  # Fixed capitalization of 'for'
current_pathweight = 0  # Changed variable name to lowercase 'current_pathweight'
    k = s  # Changed variable name to lowercase 'k'
    for j in i:  # Fixed capitalization of 'for'
current_pathweight += graph[k][j]
      k = j
current_pathweight += graph[k][s]
min_path = min(min_path, current_pathweight)

  return min_path  # Changed capitalization of 'return'
if _name_ == "_main_":
  graph = [[0, 10, 15, 20], [10, 0, 35, 25],
      [15, 35, 0, 30], [20, 25, 30, 0]]
  s = 0
  print(travellingSalesmanProblem(graph, s))  # Changed capitalization of 'print'
```

OUTPUT:


IDLE Shell 3.10.3
File Edit Shell Debug Options Window Help
Python 3.10.3 (tags/v3.10.3:a342a49, Mar 16 2022, 13:07:40) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python310/task2.py ===
80
>>>
Ln: 6 Col: 0