

Python Online Compiler

main.py

Run

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1 from itertools import permutations

2

3

4 dist = [

5 [0, 29, 20, 21],

6 [29, 0, 15, 17],

7 [20, 15, 0, 28],

8 [21, 17, 28, 0]

9]

10

11 n = len(dist)

12 cities = list(range(n))

13 min_path = None

14 min_cost = float('inf')

15

16

17 for perm in permutations(cities[1:]):

18 path = [0] + list(perm)

19 cost = sum(dist[path[i]][path[i+1]] for i in range(n-1)) + dist[path[-1]][0]

20 if cost < min_cost:

21 min_cost = cost

22 min_path = path

23

24 print("Shortest Path:", min_path + [0])

25 print("Minimum Cost:", min_cost)

26

Output

Shortest Path: [0, 2, 1, 3, 0]

Minimum Cost: 73

=== Code Execution Successful ===