Networking Isolated Buildings

Problem

Imagine you're a network engineer at NITC, responsible for designing a network to connect a set of isolated buildings across the campus. Each building pair has potential cable routes, with costs influenced by distance and obstacles like walkways or green areas. You've been provided with a list of all possible connections, each assigned a specific cost, but not every building pair has a direct route available.
Your task is to carefully select connections so that:

- Every building is linked to the network.
- The network contains exactly one cycle.
- The solution respects budget limitations.
- Avoids unnecessary cabling.

The end goal is to design a well-connected campus network that meets above requirements while **minimizing costs**.

Input Format

- The first line contains an integer $n \in [1, 1000]$, denoting the number of buildings.
- The subsequent n lines contain the label of the respective node followed by a space separated nodes adjacent to it, sorted in ascending order from left to right, separated by a single space.
- The next n lines contain the label of the respective node followed by the weights of the edges corresponding to the adjacency list, separated by a single space. The edge weights are integers in the range $[1, 10000]$. Further, no two edges have the same weight.

Output Format

The output is a single integer representing the total cost to connect all buildings.

Test Cases

Input 1

```
5
```

```
0 1 3
1 0 2 3 4
2 1 4
3 0 1 4
4 1 2 3
0 2 5
1 2 3 4 6
2 3 8
3 5 4 9
4 6 8 9
```

Output:

20

Input 2

```
6
0 1 2
1 0 2
2 0 1 3 4 5
3 2 5
4 2 5
5 2 3 4
0 1 2
1 2 3
2 1 3 4 5 10
3 4 6
4 5 11
5 10 6 11
```

Output:

21