

Minimum Spanning Tree

Given a weighted, undirected and connected graph of **V** vertices and **E** edges. The task is to find the sum of weights of the edges of the Minimum Spanning Tree.

Example 1:

Input:

```
3 3
0 1 5
1 2 3
0 2 1
```

Output:

4

Explanation:

The Spanning Tree resulting in a weight of 4 is shown above.

Example 2:

Input:

```
2 1
0 1 5
```

Output:

5

Explanation:

Only one Spanning Tree is possible

which has a weight of 5.

Your task:

Since this is a functional problem you don't have to worry about input, you just have to complete the function **spanningTree()** which takes number of vertices V and an adjacency matrix `adj` as input parameters and returns an integer denoting the sum of weights of the edges of the Minimum Spanning Tree. Here `adj[i]` contains a list of lists containing two integers where the first integer `a[i][0]` denotes that there is an edge between i and `a[i][0][0]` and second integer `a[i][0][1]` denotes that the distance between edge i and `a[i][0][0]` is `a[i][0][1]`.

In other words , `adj[i][j]` is of form $\{ u , wt \}$. So,this denotes that i th node is connected to u th node with edge weight equal to wt .

Expected Time Complexity: $O(E \log V)$.

Expected Auxiliary Space: $O(V^2)$.

Constraints:

$$2 \leq V \leq 1000$$

$$V-1 \leq E \leq (V*(V-1))/2$$

$$1 \leq w \leq 1000$$

Graph is connected and doesn't contain self loops & multiple edges.