

Algorithms Lab

Exercise – *First steps with BGL*

Read a weighted undirected graph, compute the total weight of its minimum spanning tree and the distance from node 0 to the node furthest from it.

Input The first line of the input file contains $t \leq 100$, the number of the test cases.

Each test case starts with a line containing $n \leq 100, m \leq \frac{n \cdot (n-1)}{2}$, the number of vertices and edges of the graph. m lines follow, each defining the starting point, ending point, and weight of an graph edge. All weights are non-negative integers not bigger than 1000.

The input graph will always be connected.

Output For each test case output a single line containing w , the sum of the weights of all edges of the minimum spanning tree, and d , the distance from node 0 to the node furthest from it.

Sample input

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

Sample output

```
7 5
```