03. Max Sum Longest Path in DAG

Condition:

Given an acyclic directed graph with edge values, your goal is to find the longest path from a given starting vertex to one of the edges of the graph, such that the sum of the edge values along this path is maximized.

Input:

The input consists of the number of vertices in the graph **N**, followed by a description of the vertices and their edges. For each vertex, a list of vertices to which an edge exists and their values are provide.

Limitations:

- The number of vertices does not exceed 1000.
- The edge values are integers in the interval [-1000, 1000].

Output:

Derive the longest path from the starting vertex to any of the graph's edges and the sum of the edge values along this path.

Examples:

Input	Input
5 1 2 3 4 2 3 4 3 4 4	1 -> 3 -> 4 -> 5 Total: 9