Maximum flow problem

Cost: 16 | Solved: 36

Memory limit: 256 MBs

Time limit: 1 s

Input: standard input

Output: standard output

Task:

The administration is trying to get rid of the traffic congestion problem of its native county town N. There are ***n*** traffic lights and ***m*** roads between these traffic lights in the city. For each road, its throughput (the maximal number of machines that can simultaneously be on a road without creating traffic jams problems) is known. It is also known that the path from the first traffic light to the ***n***th is the most traffic-dangerous.

Help the city administration calculate the worst possible case for this road, i.e. find what the greatest number of machines can simultaneously make a move along this path from the first traffic light to the ***n***th.

Input:

The first line contains a natural ***n*** ($1 \le n \le 100$) – the quantity of traffic lights.

The next ***n*** lines contain the adjacency matrix of the graph, representing the plan of the county town N.

Keep in mind that the throughput of each road can't be greater than 1000.

Output:

The maximal number of cars that can simultaneously be on a road moving from the first traffic light to the ***n***th.

Example:

Input	Output

4 0 2 0 5 2 0 3 4 0 3 0 0 5 4 0 0	7