Clothes

2022/2023 SEASON – FOURTH ROUND

Monday morning. You are faced with the difficult task of choosing an outfit.

There are n types of clothes in your wardrobe, and of type i you have x_i different clothings. Conveniently, each of your clothes is monochromatic and has its characteristic "prettiness".

Under the influence of the latest fashion trends, you want to wear one clothing item of each type so that each of the selected n clothes is of different colour.

You want to find a set of clothes that maximizes the amount of "prettiness" of the selected clothes while still keeping up with fashion trends.

Input

The first line of the file **clothes.in** contains the number n – the number of different types of clothes. The next n lines contain a number x_i, followed by x_i pairs (c, p), denoting clothing of type i with colour c and "prettiness" p.

Output

On the single line of the **clothes.out** file print the maximum "prettiness". If choosing a desired outfit is not possible, print -1.

Constraints

$1 \leq n \leq 50$

$1 \leq x_1 + x_2 + \ldots + x_n \leq 125000$

$1 \leq c, p \leq 10^7$

Time limit: 1 sec.
Memory limit: 256 MB.

Sample test

Input (clothes.in)	Output (clothes.out)
3 1 1 1 2 1 10 2 1 3 1 100 2 10 3 1	3