Award-Heist

Assignment 5
Data Structures & Algorithms

Problem Statement: Devansh is a very jealous cultural secretary, he always wants awards for himself. he has many friends with different awards. but due to his nature he wants that none of his friends should have more or equal number of awards as himself. for this he is even ready to buy those awards from his friends. so he prepares a list of the money demanded by each friend for the different kinds of awards they possess. Above all this, he is cheap and wants to accomplish this wish of his with minimum possible cost. But Alas, like his assignments Devansh wants someone else to do his work and is asking for first years to do this task for him.

Input
In the first line you will be given the number of awards devansh already has. X.
In the next line is the number of friends Devansh has. N .
The next N lines contain the information of his friends. i^{th} line is as follows:
The first number is J_i denoting the number of awards i^{th} friend has with him.
next come J_i integers C_{ij} representing the costs of the the j^{th} award of the i^{th} friend .
Output
Single Integer , The minimum cost in which Devansh can get his wish satisfied.
Constraints
$0 \leq N \leq 10^5$
$0 \leq X \leq 10^5$
$0 \leq C_{ij} \leq 10^9$
$\sum_{i=1}^{i=N} J_i \leq 10^5$
Time Limit: 2 seconds
Memory Limit: 256 MB

Sample Test Case 1

Input	Output
2 4 3 5 6 2 4 8 1 9 7 2 5 3 1 11	3

Explanation It is optimal for devansh to buy the award costing 1 from his second friend and award costing 2 from his first friend. in this way he will have 4 awards and his friends will have 2,3,2 and 1 awards respectively. hence his wish will be complete. also this is the cheapest possible way.
Sample Test Case 2

Input	Output
3 3 2 21 3 1 5 6 2 1 8	0

Explanation This case if straight-forward. Devansh does not need to buy any more awards as he already has more awards than anyone else.