

Problem A

ACM CONTEST AND BLACKOUT

In order to prepare the “The First National ACM School Contest”(in 20??) the major of the city decided to provide all the schools with a reliable source of power. (The major is really afraid of blackouts☺). So, in order to do that, power station “Future” and one school (doesn’t matter which one) must be connected; in addition, some schools must be connected as well.

You may assume that a school has a reliable source of power if it’s connected directly to “Future”, or to any other school that has a reliable source of power. You are given the cost of connection between some schools. The major has decided to pick out two the cheapest connection plans – the cost of the connection is equal to the sum of the connections between the schools. Your task is to help the major – find the cost of the two cheapest connection plans.

Input

The Input starts with the number of test cases, T ($1 \leq T \leq 15$) on a line. Then T test cases follow. The first line of every test case contains two numbers, which are separated by a space, N ($3 \leq N \leq 100$) the number of schools in the city, and M the number of possible connections among them. Next M lines contain three numbers A_i , B_i , C_i , where C_i is the cost of the connection ($1 \leq C_i \leq 300$) between schools A_i and B_i . The schools are numbered with integers in the range 1 to N .

Output

For every test case print only one line of output. This line should contain two numbers separated by a single space - the cost of two the cheapest connection plans. Let S_1 be the cheapest cost and S_2 the next cheapest cost. It’s important, that $S_1 = S_2$ if and only if there are two cheapest plans, otherwise $S_1 < S_2$. You can assume that it is always possible to find the costs S_1 and S_2 .

Sample Input	Sample Output
2	110 121
5 8	37 37
1 3 75	
3 4 51	
2 4 19	
3 2 95	
2 5 42	
5 4 31	
1 2 9	
3 5 66	
9 14	
1 2 4	
1 8 8	
2 8 11	
3 2 8	
8 9 7	
8 7 1	
7 9 6	
9 3 2	
3 4 7	
3 6 4	
7 6 2	
4 6 14	
4 5 9	
5 6 10	

Problem source: Ukrainian National Olympiad in Informatics 2001

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