B1- Online 3:

Minimum spanning Tree(MST):

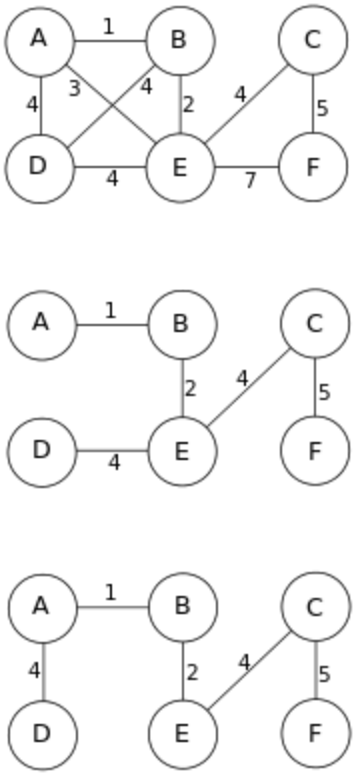
Description:

You are given a weighted graph G(V, E) Where V represents vertices & E represents edges.
Now given an edge your task is to answer the following.

1. Whether a given edge is in a MST? Yes/ No
2. If Yes, is this edge going to be in all possible MSTs? Yes/ No

if unique , the it must be yes , if not , check removing it and see the resultant mst , if two don't match , then answer is no .

The following figure shows the 2 possible MST of a sample graph.



Now The Edge AB of cost 1 will be included in any possible MSTs. And the edge AD of cost 4 is not included in all MSTs.

Your task is to find out the answer for such queries.

Sample input format:

1. Test case T

2. For each case, first line specifying the number of vertices and edges n, m
3. m following edge description
4. Query edge

Sample output format:

1. In MST: YES/NO
2. In ALL MST: NA/YES/NO

Instructions : Use Kruscal or Prim's algorithm for finding minimum spanning tree.

Mark distribution:

1. MST of Graph - 5
2. Checking Edge in mst- 1
3. Checking Edge in all mst- 4

For example sample input and output for the above picture will be
(vertices A-F are numbered as 0-5 here)

Sample Input	Sample Output
3	
6 9 0 1 1 0 3 4 0 4 3 1 3 4 1 4 2 2 4 4 2 5 5 3 4 4 4 5 7 0 3	Case 1# In MST: YES In all MST: NO
6 9 0 1 1 0 3 4 0 4 3 1 3 4 1 4 2 2 4 4 2 5 5	Case 2# In MST: YES In all MST: YES

3 4 4 4 5 7 0 1	
6 9 0 1 1 0 3 4 0 4 3 1 3 4 1 4 2 2 4 4 2 5 5 3 4 4 4 5 7 4 5	Case 3# In MST: NO In all MST: NA