Programming assignment 14

Minimum spanning trees by Kruskal's algorithm

Input (Standard input)

In the first line, the numbers of vertices N($1 \leq N \leq 1,000$) and edges M($1 \leq M \leq 499,500$) are given.

In each of the next M lines, an undirected edge (x,y) with weight w is given as x y w.

Output (Standard output)

In the first line, prime the number of selected edges.

In the next lines, print all selected edges (x,y) (x < y) with its weight w in increasing order of w.

If the weights of two edges (x,y) and (w,z) are equal, print the edge incident on a lower-numbered vertex first.

(If (x < w) or (x=w and y < z), print (x,y) first.)

[Example]

Input	Output
9 14 2 3 8 3 9 2 4 5 9 4 6 14 1 2 4 5 6 10 2 8 11 6 7 2 7 9 6 8 9 7 3 4 7 1 8 8 7 8 1 3 6 4	8 7 8 1 3 9 2 6 7 2 1 2 4 3 6 4 3 4 7 1 8 8 4 5 9

Wrong answer	Correct answer
1 3 3 1 2 3 3 4 2 2 3 2	2 3 2 3 4 2 1 2 3 1 3 3

Description

1.File name must be mst.cpp

2.Make a comment of your student ID, name and class in the first line of the source code.

ex) 2014601028_Honggildong_A

3.Back up your submitted source code for an unexpected accident.