Task Schedule

**Description**

Our geometry princess XMM has stoped her study in computational geometry to concentrate on her newly opened factory. Her factory has introduced M new machines in order to process the coming N tasks. For the i-th task, the factory has to start processing it at or after day Si, process it for Pi days, and finish the task before or at day Ei. A machine can only work on one task at a time, and each task can be processed by at most one machine at a time. However, a task can be interrupted and processed on different machines on different days.

Now she wonders whether he has a feasible schedule to finish all the tasks in time. She turns to you for help.

**Input**

On the first line comes an integer T(T<=20), indicating the number of test cases.

You are given two integer N(N<=500) and M(M<=200) on the first line of each test case. Then on each of next N lines are three integers Pi, Si and Ei (1<=Pi, Si, Ei<=500), which have the meaning described in the description. It is guaranteed that in a feasible schedule every task that can be finished will be done before or at its end day.

**Output**

For each test case, print “Case x: ” first, where x is the case number. If there exists a feasible schedule to finish all the tasks, print “Yes”, otherwise print “No”.

Print a blank line after each test case.

**Sample Input**

2

4 3

1 3 5

1 1 4

2 3 7

3 5 9

2 2

2 1 3

1 2 2

Sample Output

Case 1: Yes

Case 2: Yes