A Assemble

Recently your team noticed that the computer you use to practice for programming contests is not good enough anymore. Therefore, you decide to buy a new computer.

To make the ideal computer for your needs, you decide to buy separate components and assemble the computer yourself. You need to buy exactly one of each type of component.

The problem is which components to buy. As you all know, the quality of a computer is equal to the quality of its weakest component. Therefore, you want to maximize the quality of the component with the lowest quality, while not exceeding your budget.

Input

On the first line one positive number: the number of testcases, at most 100. After that per testcase:

- One line with two integers: $1 \leq n \leq 1\,000$, the number of available components and $1 \leq b \leq 1\,000\,000\,000$, your budget.
- n lines in the following format: "`type name price quality`", where `type` is a string with the type of the component, `name` is a string with the unique name of the component, `price` is an integer ($0 \leq$ `price` $\leq 1\,000\,000$) which represents the price of the component and `quality` is an integer ($0 \leq$ `quality` $\leq 1\,000\,000\,000$) which represents the quality of the component (higher is better). The strings contain only letters, digits and underscores and have a maximal length of 20 characters.

It will always possible to construct a computer with your budget.

Output

Per testcase:

- One line with one integer: the maximal possible quality.

Sample in- and output

Input	Output
1 18 800 processor 3500_MHz 66 5 processor 4200_MHz 103 7 processor 5000_MHz 156 9 processor 6000_MHz 219 12 memory 1_GB 35 3 memory 2_GB 88 6 memory 4_GB 170 12 mainbord all_onboard 52 10 harddisk 250_GB 54 10 harddisk 500_FB 99 12 casing midi 36 10 monitor 17_inch 157 5 monitor 19_inch 175 7 monitor 20_inch 210 9 monitor 22_inch 293 12 mouse cordless_optical 18 12 mouse microsoft 30 9 keyboard office 4 10	9