



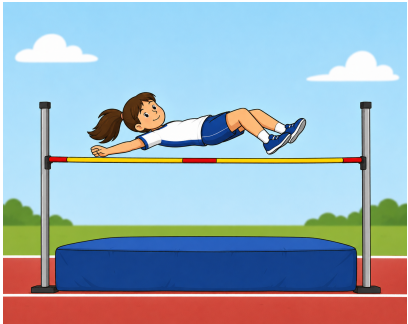
You're for the High Jump

Time Limit: 1.0 s | Memory Limit: 512 MiB

Every aspiring athlete dreams of competing at the New Zealand Physical Championship (NZPC) — the premier school sports event of the region. Before earning a place at the NZPC, however, students must first prove themselves at their local qualifying event.

At the school high jump event, all students have 3 attempts to qualify for the regional sports event high jump. The bar is set at a particular height and after all students have attempted that height, the bar is raised. This is repeated again to a 3rd height.

The 3 jump heights a student achieves are recorded against their name. Each name consists of a single word. If they balk (run, but don't jump), the height is recorded as 'NJ' for no jump. If they attempt the jump but fail to clear the bar, it is recorded as zero.



You are asked to write a program that names the students who have managed to qualify for the NZPC. A student qualifies if their best jump is higher or equal to the qualifying height.

Input

The first line contains a positive integer q ($1 \leq q \leq 10^3$), the qualifying height for the regional event in cm.

The second line contains a positive integer n ($1 \leq n \leq 10^4$), the number of students competing.

The following n lines each contain a student's name, then a space, followed by 3 space-separated jump values. Each value is either a zero (a failed jump) or a positive integer h ($1 \leq h \leq 10^3$) representing the height jumped in cm, or the letters NJ to represent no jump.

Output

Output the names of each student who has met the qualifying height on at least one of their 3 jumps, in the same order as they appear in the input. If no students met the qualifying height, the output should be the single line:

Nobody qualifies!

In the first sample below, Briggs jumped 150 in their last jump, higher than the 145 required, as did Santino.

Sample Input 1	Sample Output 1
145 5 Briggs 140 NJ 150 Emerson 140 143 0 Zhang 140 143 0 Santino 140 143 150 Cameron NJ NJ NJ	Briggs Santino
Sample Input 2	Sample Output 2
145 3 Adams 130 0 NJ Brown 120 140 NJ Clark NJ NJ NJ	Nobody qualifies!

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