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Warm Up Session

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(This problem set contains 2 problems; pages are numbered from 1 to 3)

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Problem A

Help!

Well, we have to admit: we need your help. This year things have not been running as smoothly as we wished, and we could not finish the contest system software in time. One vital part is missing, and as you know, we need the system working by this afternoon, for the real contest. The missing part is the module that computes the team's scores, given the team's list of submissions.

Please, please, someone help us!

Input

The input contains several test cases. The first line of a test case contains a single integer N indicating the number of submissions in the test ($1 \leq N \leq 300$). Each of the following N lines describe a submission; each of these lines contains a *problem identifier* (a single letter from 'A' to 'Z'), followed by an integer T representing the time in minutes ($0 \leq T \leq 300$), followed by a *judgement* (the word "correct" or the word "incorrect"). The input is in ascending order by time, and there will be at most one "correct" judgement for each problem. The end of input is indicated by $N = 0$.

The input must be read from standard input.

Output

For each test case in the input your program should output a line containing two integers S and P , separated by a space, where S is the number of distinct problems with a "correct" judgement and P is the time at which each distinct problem is first judged "correct", plus 20 for each "incorrect" submission for a problem that is later judged "correct".

The output must be written to standard output.

Sample Input	Output for the sample input
3 A 120 incorrect A 130 incorrect A 200 incorrect 5 A 100 correct B 110 incorrect B 111 correct C 200 correct D 300 incorrect 0	0 0 3 431

Problem B

Head or Tail

John and Mary have been friends since nursery school. Since then, they have shared a playful routine: every time they meet, they play Head or Tail with a coin, and whoever wins has the privilege of deciding what they are going to play during the day. Mary always choose Head, and John always choose Tail.

Nowadays they are in college, but continue being truly good friends. Whenever they meet, they still play Head and Tail, and the winner decides which film to watch, or which restaurant to have dinner together, and so on.

Yesterday Mary confided to John that she has been keeping a record of the results of every play since they started, in nursery school. It came as a surprise to John! But since John is studying Computer Science, he decided it was a good opportunity to show Mary his skills in programming, by writing a program to determine the number of times each of them won the game over the years.

Input

The input contains several test cases. The first line of a test case contains a single integer N indicating the number of games played ($1 \leq N \leq 10000$). The following line contains N integers R_i , separated by space, describing the list of results. If $R_i = 0$ it means Mary won the i th game, if $R_i = 1$ it means John won the i th game ($1 \leq i \leq N$). The end of input is indicated by $N = 0$.

The input must be read from standard input.

Output

For each test case in the input your program should output a line containing the sentence “Mary won X times and John won Y times”, where $X \geq 0$ and $Y \geq 0$.

The output must be written to standard output.

Sample Input	Output for the sample input
5 0 0 1 0 1	Mary won 3 times and John won 2 times
6 0 0 0 0 0 1	Mary won 5 times and John won 1 times
0	