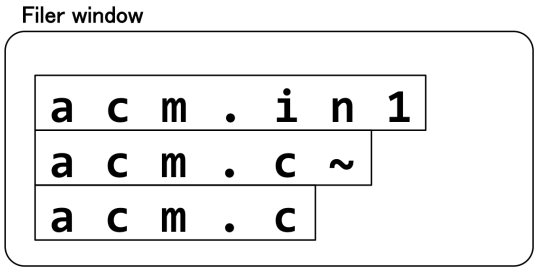
Problem C. Delete Files

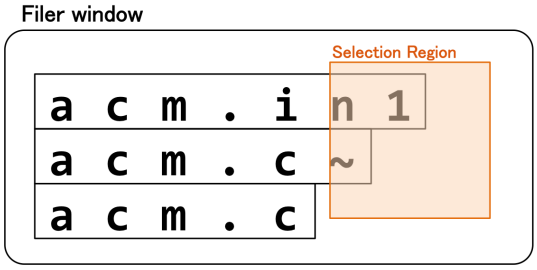
Input file:	*standard input*
Output file:	*standard output*
Time limit:	1 second
Memory limit:	512 mebibytes

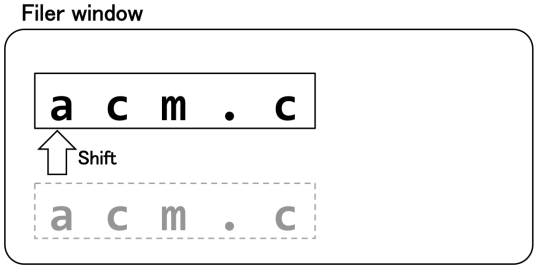
You are using an operating system named "Jaguntu". Jaguntu provides "Filer", a file manager with a graphical user interface.

When you open a folder with Filer, the name list of files in the folder is displayed on a Filer window. Each filename is displayed within a rectangular region, and this region is called a filename region. Each filename region is aligned to the left side of the Filer window. The height of each filename region is 1, and the width of each filename region is the filename length. For example, when three files "`acm.in1`", "`acm.c `", and "`acm.c`" are stored in this order in a folder, it looks like this on the Filer window.



You can delete files by taking the following steps. First, you select a rectangular region with dragging a mouse. This region is called selection region. Next, you press the delete key on your keyboard. A file is deleted if and only if its filename region intersects with the selection region. After the deletion, Filer shifts each filename region to the upside on the Filer window not to leave any top margin on any remaining filename region. For example, if you select a region from the first picture below, then the two files "`acm.in1`" and "`acm.c `" are deleted, and the remaining file "`acm.c`" is displayed on the top of the Filer window as at the second picture.





You are opening a folder storing N files with Filer. Since you have almost run out of disk space, you want to delete unnecessary files in the folder. Your task is to write a program that calculates the minimum number of times to perform deletion operation described above.

Input

The input consists of a single test case.

The first line contains one integer N ($1 \leq N \leq 1,000$), which is the number of files in a folder. Each of the next N lines contains a character D_i and an integer L_i: D_i indicates whether the i-th file should be deleted or not, and L_i ($1 \leq L_i \leq 1,000$) is the filename length of the i-th file. If D_i is '`y`', the i-th file should be deleted. Otherwise, D_i is always '`n`', and you should not delete the i-th file.

Output

Output the minimum number of deletion operations to delete only all the unnecessary files.

Examples

standard input	standard output
3 y 7 y 6 n 5	1
3 y 7 n 6 y 5	2
6 y 4 n 5 y 4 y 6 n 3 y 6	2