Problem D. Servers

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	256 megabytes

Nasreddine and **Amani** were in charge of maintaining the production servers of NIXZ and Jigler. Each time they had to make sure everything is working fine. Since servers' operating system was Linux and they, sometimes, get lost when diving into directories, you are asked to write them an algorithm that, with a given set of Linux commands, prints the result accordingly. The commands that **Nasreddine** and **Amani** gave you were only of two types: **cd** (change the current directory) and **pwd** (display the current directory).

Directories in each server form a traditional hierarchical tree structure. There is a single root directory, denoted by the slash character "/". Every other directory has a name (a non-empty string consisting of lowercase Latin letters). Each directory (except for the root) has a parent directory.

The command cd changes the current directory to the directory specified by the path. The path consists of the names of directories separated by slashes. The name of the directory can be "..", which means a step up to the parent directory. ".." can be used in any place of the path, maybe several times. If the path begins with a slash, it is considered to be an absolute path, that is, the directory changes to the specified one, starting from the root. If the parameter begins with a directory name (or ".."), it is considered to be a relative path, that is, the directory changes to the specified directory, starting from the current one.

The command pwd should display the absolute path to the current directory. This path must not contain "..".

Initially, the current directory is the root. All directories mentioned explicitly or passed indirectly within any command cd are considered to exist. It is guaranteed that there is no attempt of transition to the parent directory of the root directory.

Input

The first line of the input data contains the single integer n ($1 \leq n \leq 100$) the number of commands.

Then n lines follow, each contains one command. Each of these lines contains either command pwd, or command cd, followed by a space-separated non-empty parameter.

The command parameter cd only contains lower case Latin letters, slashes and dots, two slashes cannot go consecutively, dots occur only as the name of a parent pseudo-directory. The command parameter cd does not end with a slash, except when it is the only symbol that points to the root directory. The command parameter has a length from 1 to 200 characters, inclusive.

P.S.: Directories in the file system can have the same names.

Output

For each command pwd you should print the full absolute path of the given directory, ending with a slash. It should start with a slash and contain the list of slash-separated directories in the order of being nested from the root to the current folder. It should contain no dots.

Examples

standard input	standard output
7 pwd cd /home/nasreddine pwd cd .. pwd cd nasreddine/../amani pwd	/ /home/nasreddine/ /home/ /home/amani/
4 cd /a/b pwd cd ../a/b pwd	/a/b/ /a/a/b/