

What's My Name?

Problem

In a hierarchical file system, file names are organized in a tree format. A file name + path specifies a unique location in a file system. A path points to a file system location by following the directory tree hierarchy expressed in a string of characters in which path components, separated by a delimiting character, represent each directory. The delimiting character is most commonly the slash ("/"). (For example, "/home/monkey/banana" specifies a unique location.)

Systems can use either absolute or relative paths. A full path or absolute path is a path that points to the same location on one file system regardless of the working directory or combined paths. It is usually written in reference to a root directory ("/").

Given a hierarchical file system tree and a possible absolute path name, validate that the absolute path name exists in the tree. The tree will never have more than 10000 nodes. Each name will never be more than 20 characters.

Examples

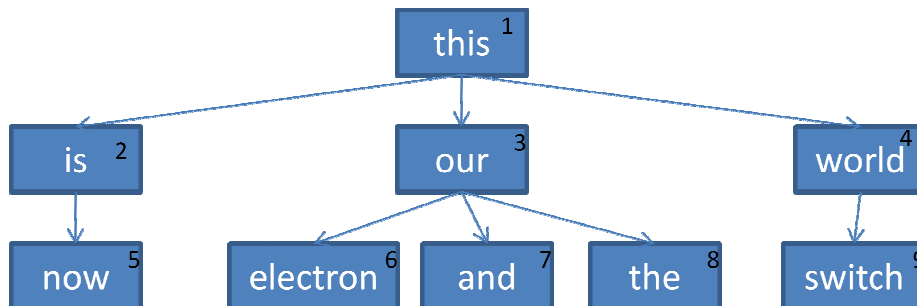
Each tree can be built by one or more lines of

```
[number of node]:[name]
```

Followed by a newline and one or more lines of

```
[parent number]:[child number],[child number],...
```

The example input will specify a tree as shown above, followed by a newline and the absolute path name of a file. Your output must display "yes" if the absolute file name exists or else "no", as well as a list of node numbers corresponding to the absolute path name if it exists. Our examples specify the following tree:



Example Input A

```
1:this
```

```
2:is
```

3:our
4:world
5:now
6:electron
7:and
8:the
9:switch

1:2,3,4
2:5
3:6,7,8
4:9

/this/is/now

Example Output A

yes 1,2,5

Example Input B

[same tree as example A]

/this/world/electron

Example Output B

no