Shoots and SPACE-LADDERS

*While exploring the future, Seymore Time Traveler discovered a
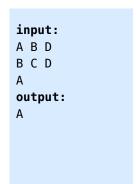new technology — FUTER-SPACE-PORTAL technology. . . thing!*

Description

Our hero, again, is in a predicament of laziness. He has discovered many world, connected together by *SPACE WORMHOLE THINGS*! He would love to travel through them. . . but he doesn't want to travel through *too* many wormholes (because that sounds hard).

     Your task, should you choose to accept it, is to find the shortest path from the starting world, to the destination of Seymore's choice.

Example Input/Output

You will be given $n + 1$ lines of input, where n is the number of worlds. Each of the first n lines will be a world name (a single upper-case character), followed by a list of each world *that* world has a portal to. The $n + 1$'th line will be a single upper-case letter, designating the desired destination. You must output a sequence of letters that represents the shortest path to the destination. Assume you start at the first given world. You can assume a path will always exist. There will be less than 10 worlds given.

```
input:
A B D
B C D
C
output:
A B C
```

```
input:
A B D
B C D
A
output:
A
```

```
input:
A B C D
B F
D B C
F E
E
output:
A B C E
```