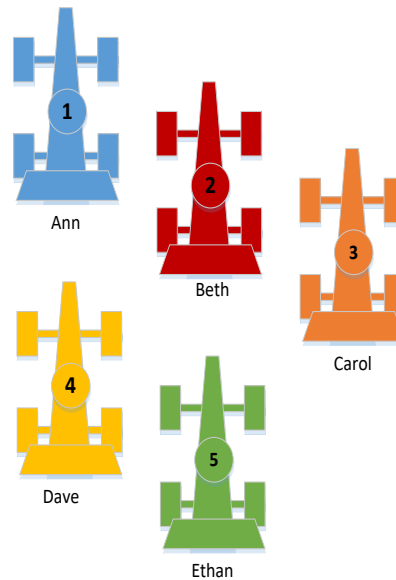# 20 Car race
12 points

Introduction
A famous website portal has asked you to help them publish the race results of car races.

You have managed to subscribe to a news feed service that reports the order of the racers in the grid at the beginning of the race and any overtakes that occur during the race. This will suffice to let you keep track of each racer's position until the end of the race. Can you automate this task writing a piece of software?

Input
The **input format** is as follows:
- The first line consists of the list of racers following the order in the grid. The name of the racers consists of a first name without any white spaces. In the example; Ann is first followed by Beth, which is followed by Carol, etc.
- The following lines contain the overtakes that occur over the course of the race. All the overtake announcements will consist one car taking the position of the car that was immediately ahead of it. Do not consider the case of the racers that are lapped twice by the leading racers.

Output
The **output** consists of the list of racers, one per line, in the order in which they have finished the race.

Example

Input
```
Ann Beth Carol Dave Ethan
Ethan overtakes Dave
Carol overtakes Beth
Carol overtakes Ann
Beth overtakes Ann
Dave overtakes Ethan
```

Output
```
Carol
Beth
Ann
Dave
Ethan
```