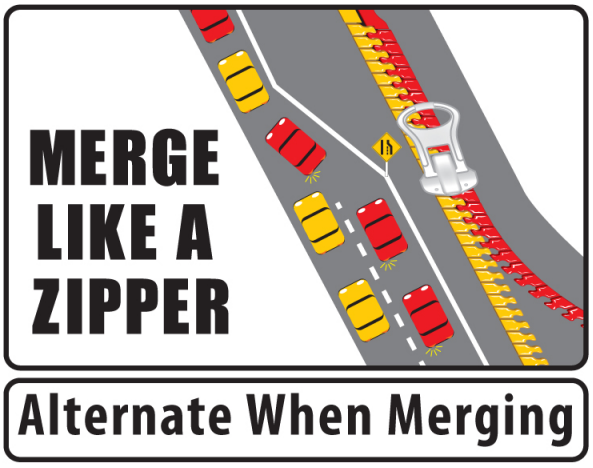
CMPUT 274/5 - Tangible Computing **Fall 2018**
Morning Problem: Merge Two Lists

Description

The safest and fairest way to merge cars onto a highway is called "zipper merging", where cars from two different lanes alternate merging onto a single lane at the point where the first lane ends. This minimizes the average waiting time of each car, and ensures that each car eventually gets onto the highway.



Write a program that will implement this solution. Given two lanes of cars that both need to merge onto a single-lane highway, "zip" the cars together fairly by choosing one from each lane at a time. Always start with the first car from the lane on the left.

When you are finished, print a space-separated list showing the order in which the cars are now driving (assume no passing).

For example, here are two lanes of cars. The first is a list the cars in the left lane, while the second is of the cars on the right:

```
corolla sienna rav
hatchback prius convertible
```

The first car on the left always goes first in the order, so when the final car goes on the highway, the driving order looks like this:

```
corolla hatchback sienna prius rav convertible
```

Input

The input will consist of two consecutive lines of space-separated car makes or models, representing the $n \geq 0$ cars in the left lane followed by the $m \geq 0$ cars in the right lane. The number of cars in each lane need not be the same.

Output

Print the newly-merged list of cars as a line of space-separated elements.

Sample Input 1

```
4runner
corolla
```

Sample Output 1

```
4runner corolla
```

Explanation: Because the 4runner is on the left, it goes first. Then the corolla can merge, as it is the only car left.

Sample Input 2

```
hatchback pickup van matrix
mercedesbenz micra escape mustang
```

Sample Output 2

```
hatchback mercedesbenz pickup micra van escape matrix mustang
```

Explanation: By "zipping" the cars together, starting from the cars that are already on the highway, we end up with an order that begins with the hatchback and ends with the mustang.

Sample Input 3

```
car van
snowmobile truck car hatchback
```

Sample Output 2

```
car snowmobile van truck car hatchback
```

Explanation: The right lane is longer than the left, so when the left lane is exhausted, all cars from the right lane are free to go.