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Write a function that takes a list of characters and reverses the letters in place.↴

Why a list of characters instead of a string?

The goal of this question is to practice manipulating strings *in place*. Since we're modifying the input, we need a mutable type like a list, instead of Python 3.6's *immutable* strings.

## Breakdown

In general, an in-place algorithm will require swapping elements.

## Solution

We swap the first and last characters, then the second and second-to-last characters, and so on until we reach the middle.

```
def reverse(list_of_chars):

    left_index = 0
    right_index = len(list_of_chars) - 1

    while left_index < right_index:
        # Swap characters
        list_of_chars[left_index], list_of_chars[right_index] = \
            list_of_chars[right_index], list_of_chars[left_index]
        # Move towards middle
        left_index += 1
        right_index -= 1
```

Python 3.6 ▼

# Complexity

$O(n)$  time and  $O(1)$  space.

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Next up: Reverse Words → (</question/reverse-words?course=fc1&section=array-and-string-manipulation>)

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