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

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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 ▾

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Complexity

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

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