🍰 **Interview Cake**

Write a method that takes an array of characters and reverses the letters in place.⤵

> Why an array 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 an array, instead of Java'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.

```java
public static void reverse(char[] arrayOfChars) {


    int leftIndex = 0;
    int rightIndex = arrayOfChars.length - 1;


    while (leftIndex < rightIndex) {

        // swap characters
        char temp = arrayOfChars[leftIndex];
        arrayOfChars[leftIndex] = arrayOfChars[rightIndex];
        arrayOfChars[rightIndex] = temp;

        // move towards middle
        leftIndex++;
        rightIndex--;

    }
}
```

Complexity

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

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