

Inplace sorting

Dutch National flag algorithm

A diagram illustrating the initial state of an array $[1, 0, 1, 1, 2, 0, 0, 1]$ for a sorting algorithm. The array is shown with its elements. Above the array, there are three pointers: *left* (red arrow pointing to the first element, 1), *mid* (pink arrow pointing to the fourth element, 1), and *right* (red arrow pointing to the last element, 1). Above the *mid* pointer, there are four dots, and above the *right* pointer, there are three dots, indicating the range of elements being considered.

$$O(1)$$

if mid == 0:
 swap with left

if mid == 2:
 swap with right

