JS

function dutch\_flag\_sort(arr) {

// all elements < low are 0, and all elements > high are 2

// all elements from >= low < i are 1

let low = 0,

high = arr.length - 1,

i = 0;

while (i <= high) {

if (arr[i] === 0) {

[arr[i], arr[low]] = [arr[low], arr[i]]; // swap

// increment 'i' and 'low'

i += 1;

low += 1;

} else if (arr[i] === 1) {

i += 1;

} else { // the case for arr[i] === 2

[arr[i], arr[high]] = [arr[high], arr[i]]; // swap

// decrement 'high' only, after the swap the number at index 'i' could be 0, 1, or 2

high -= 1;

}

}

}

let arr = [1, 0, 2, 1, 0];

dutch\_flag\_sort(arr);

console.log(arr);

arr = [2, 2, 0, 1, 2, 0];

dutch\_flag\_sort(arr);

console.log(arr);

Java

class DutchFlag {

public static void sort(int[] arr) {

// all elements < low are 0 and all elements > high are 2

// all elements from >= low < i are 1

int low = 0, high = arr.length - 1;

for (int i = 0; i <= high;) {

if (arr[i] == 0) {

swap(arr, i, low);

// increment 'i' and 'low'

i++;

low++;

} else if (arr[i] == 1) {

i++;

} else { // the case for arr[i] == 2

swap(arr, i, high);

// decrement 'high' only, after the swap the number at index 'i' could be 0, 1 or 2

high--;

}

}

}

private static void swap(int[] arr, int i, int j) {

int temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

public static void main(String[] args) {

int[] arr = new int[] { 1, 0, 2, 1, 0 };

DutchFlag.sort(arr);

for (int num : arr)

System.out.print(num + " ");

System.out.println();

arr = new int[] { 2, 2, 0, 1, 2, 0 };

DutchFlag.sort(arr);

for (int num : arr)

System.out.print(num + " ");

}

}