Sort an array of 0's, 1's and 2's

Brute force

0	2	1	1	0	0	1	2	0	2	1	2	2	0	0
0	1	2	3	4	5	6	7	8	9	10	11	12		

1) Step:

count0 = 6
count1 = 4
count2 = 5

} O(n) (one traversal (First time))

2) Step: Modify the given array and 6 0's followed by 4 1's followed by 5 2's.

0	0	0	0	0	0	1	1	1	1	2	2	2	2	2

It will also take O(n)

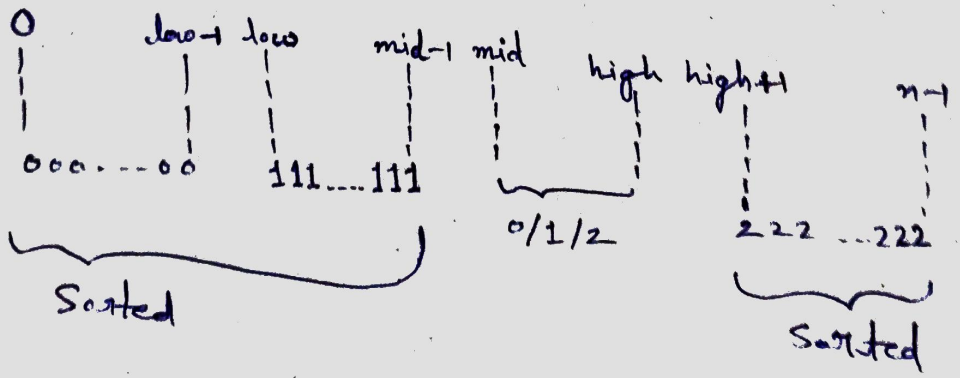
So, Total T = O(n) + O(n)
= O(2n)
S = O(1)

Optimal

We will be using DNF algorithm

↓

Dutch National Flag Algorithm



Conditions

```
if(a[mid] == 0) {
    swap(a[low], a[mid]);
    low = low + 1;
    mid = mid + 1;
} else if (a[mid] == 1) {
    mid = mid + 1;
} else if (a[mid] == 2) {
    swap(a[mid], a[high]);
    high = high - 1;
}
```

→ Repeat this till (mid > high)