class Solution{

public:

void sortColors(vector<int> &nums) {

if (nums.size() == 0) return;

int zeroPartition = 0, twoPartition = nums.size() - 1;

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

if (nums[i] == 0) {

swap(nums[zeroPartition], nums[i]); zeroPartition++; i++;

} else if (nums[i] == 2) {

swap(nums[twoPartition], nums[i]); twoPartition--;

} else {

i++;

}

}

}

void swap(int& a, int& b) {

int tmp = a; a = b; b = tmp;

}

};