

Assignment 5

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Branch: BE_CSE	Semester: 6th
Section: IOT_637-B	Subject: AP Lab II

75. Sort Colors

```
class Solution { public:    void sortColors(vector<int>& nums) {  
        int low = 0, mid = 0, high = nums.size() - 1;    while (mid <=  
        high) {        if (nums[mid] == 0) swap(nums[low++],  
        nums[mid++]);        else if (nums[mid] == 1) mid++;  
        else swap(nums[mid], nums[high--]);  
        }  
    }  
};
```

The screenshot displays a coding platform interface with a dark theme. On the left, the 'Accepted' status is shown with 88/88 testcases passed. The submission was made by 'Muskan_' on Feb 12, 2025 at 17:03. Performance metrics indicate a runtime of 0 ms (Beats 100.00%) and memory usage of 11.74 MB (Beats 31.50%). A bar chart shows the runtime performance relative to other submissions. The right panel shows the C++ code for the 'Sort Colors' problem, which implements a three-pointer sorting algorithm. The code is as follows:

```
1 class Solution {  
2 public:  
3     void sortColors(vector<int>& nums) {  
4         int low = 0, mid = 0, high = nums.size() - 1;  
5         while (mid <= high) {  
6             if (nums[mid] == 0) swap(nums[low++], nums[mid++]);  
7             else if (nums[mid] == 1) mid++;  
8             else swap(nums[mid], nums[high--]);  
9         }  
10    }  
11 };
```

Below the code, the 'Testcase' section shows 'Case 1' with the input array `nums = [2,0,2,1,1,0]`.

215. Kth Largest Element in an Array

```
class Solution { public:    int findKthLargest(vector<int>&
                                nums, int k) {    priority_queue<int, vector<int>,
                                greater<int>> pq;    for (int num : nums) {
                                pq.push(num);        if (pq.size() > k) pq.pop();
                                }    return
                                pq.top();
                                }
                                };
```

