

Array questions:-

1.majority element:-

```
class Solution {
    public int majorityElement(int[] nums) {

        int count =0;
        int majority=0;
        for(int i=0;i<nums.length;i++){
            if(count==0 && majority!=nums[i]){
                majority=nums[i];
                count=1;
            }
            else if(majority==nums[i]){
                count++;
            }
            else{
                count--;
            }
        }
        return majority;
    }
}
```

2.single number:

```
class Solution {
    public int singleNumber(int[] nums) {
        Arrays.sort(nums);
        for(int i=0; i<nums.length; i++){
            if(nums.length == 1){
                return nums[i];
            }
            if(i == nums.length-1){
                return nums[i];
            }
            if(nums[i] == nums[i+1]){
                i++;
            }
            else{
                return nums[i];
            }
        }

        return -1;
    }
}
```

```
}
```

3.gas station:

```
class Solution {
    public int canCompleteCircuit(int[] gas, int[] cost) {
        int total=0,avail=0,index=0;
        for(int i=0;i<gas.length;i++){
            total+=gas[i]-cost[i];
            avail+=gas[i]-cost[i];
            if(avail<0){
                avail=0;
                index=i+1;
            }
        }
        if(total<0){
            return -1;
        }
        return index;
    }
}
```