Day8

Friday, 17 May, 2024 08:38 PM

```
let arr = [3,2,5,4,1]
let ans = []
for(let i =0;i<arr.length;i++){
    const curr = arr[i]
    let min = Infinity
    let minValue  = -10000000
    for(let j = 0;j<arr.length;j++){
        const next = arr[j]
        if(next>curr){
            const diff = next-curr
            if(diff<min){
                min = diff
                minValue = next
            }
        }
    }
    ans.push(minValue)
}
console.log(ans)
```

i = 0

Curr = 3

min = ∞ , j = 0

next = 3

j = 1, next = 2

j = 2, next = 5

next > Curr

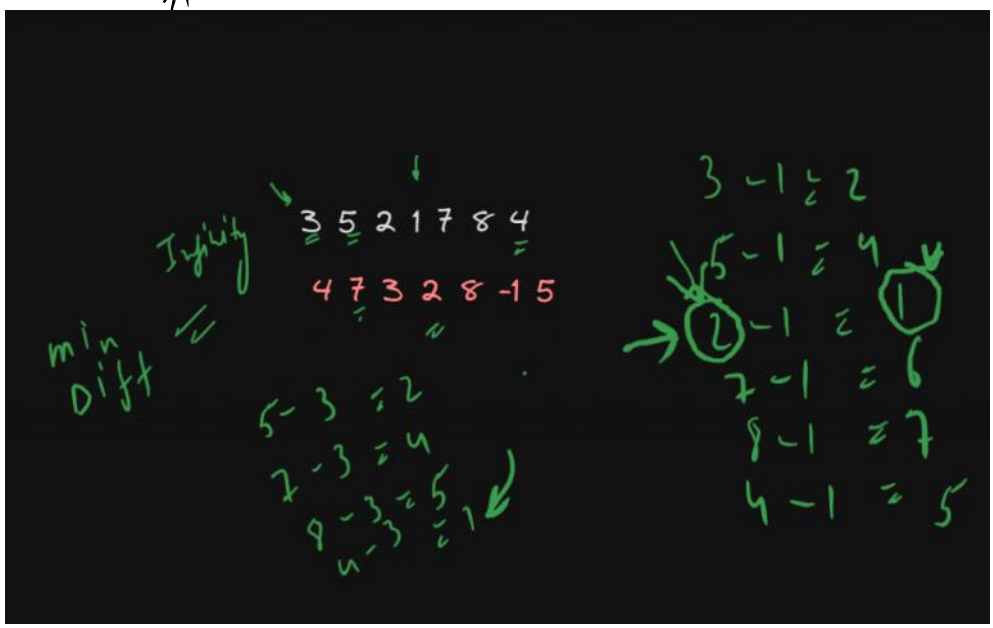
diff = 5 - 3

diff = 2

min = 2

minValue = 5

→ min = 1, minValue = 4



For in loop iterate over Keys
For of loop iterate over Values

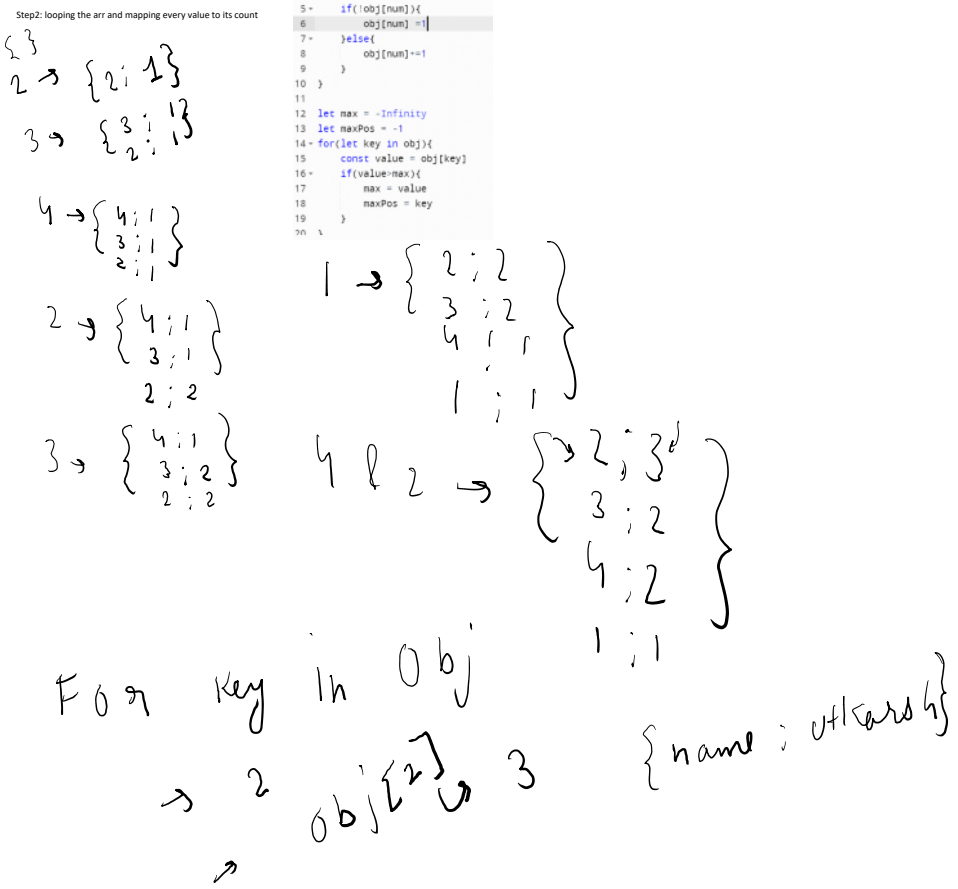
Object holds key value pairs and does not maintain the order
Map holds key value pairs and does maintain the order

Step1. Creating object

Step2: looping the arr and mapping every value to its count

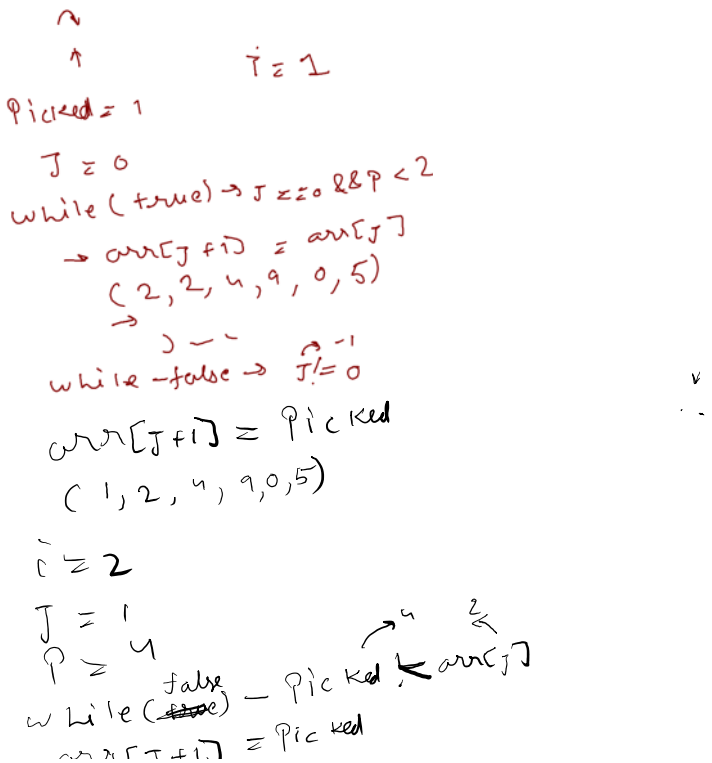
main.js

```
let arr = [2,3,4,2,3,1,4,2]
let obj ={}

for(let num of arr){
    if(!obj[num]){
        obj[num] =1
    }else{
        obj[num]+=1
    }
}

let max = -Infinity
let maxPos = -1
for(let key in obj){
    const value = obj[key]
    if(value>max){
        max = value
        maxPos = key
    }
}
```



Bubble sort makes the sorted array from the end by comparing consecutive elements
Selection sort continuously find smallest element and keep it in the beginning of the array

2,1,4,9,0,5




```
let arr = [2,1,4,9,0,5]
let n = arr.length;



for(let i = 1;i<n;i++){
    const picked = arr[i]
    let j = i-1;


    while(j>=0 &&picked<arr[j] ){
        arr[j+1] = arr[j]
        j--
    }
    arr[j+1] = picked

}

console.log(arr)
```

```
}

console.log(arr)
```