

75 Days of Code

Day 49

Problem no : 215.

Problem Title :Kth Largest Element in an Array

Given an integer array nums and an integer k, return the kth largest element in the array.

Note that it is the kth largest element in the sorted order, not the kth distinct element.

Can you solve it without sorting?

Example 1:

Input: nums = [3,2,1,5,6,4], k = 2

Output: 5

Example 2:

Input: nums = [3,2,3,1,2,4,5,5,6], k = 4

Output: 4

```

function findKthLargest(nums: number[], k: number): number {
    // let newNums = nums.sort((a,b)=>a-b);
    // return newNums[newNums.length-k];

    const quickSort = (arr:number[]):number[]=>{
        if(arr.length<=1){
            return arr;
        }

        const pivot = arr[Math.floor(Math.random()*arr.length)];
        const left =[];
        const right =[];
        const equal =[];

        for(const num of arr){
            if(num<pivot){
                left.push(num)
            }else if(num>pivot){
                right.push(num)
            }else{
                equal.push(num);
            }
        }

        if(k<=right.length){
            return quickSort(right);
        }
        else if(k<= right.length + equal.length){
            return equal;
        }
        else{
            k-= (right.length+equal.length);
            return quickSort(left);
        }
    }

    const sorted = quickSort(nums);
    return sorted[sorted.length-1];
};

```

✓ Accepted



Runtime

Details

157 ms

Beats 37.36% of users with TypeScript

Memory

51.72 MB

Beats 63.53% of users with TypeScript

✓ Testcase | > Result ✕

✓ Accepted

Runtime

Details

85 ms

Beats 88.26% of users with TypeScript

Memory

68.50 MB

Beats 7.27% of users with TypeScript