

852. Peak Index in a Mountain Array

BINARY SEARCH;

Edge case => do not do $e = \text{mid} - 1$;

Bcoause in right side it might be the peak elemt also;

USE 3 CASE => ONE FOR PEAK=>1 FOR MOVING LEFT =>1 MORVING RIGHT;

```
1  class Solution {
2  public:
3      int peakIndexInMountainArray(vector<int>& arr) {
4          int s=0;
5          int e=arr.size()-1;
6          int mid=s+(e-s)/2;
7
8          while(s<=e){
9              if(arr[mid]>arr[mid-1] && arr[mid]>arr[mid+1]){
10                 return mid;
11             }else if(arr[mid] >arr[mid-1]){
12                 s=mid+1;
13             }else{
14                 e=mid;
15             }
16             mid=s+(e-s)/2;
17         }
18         return mid;
19     }
20 };
```