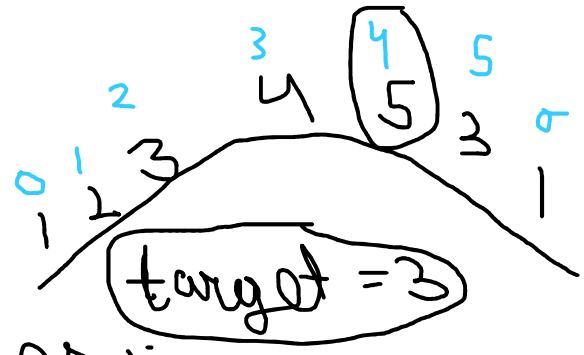
Q.7 Search In Mountain Array

Friday, January 24, 2025 8:09 PM

[1,2,3,4,5,3,1]



AND :

① Find peak element ⇒ 4th index

② Binary Search in asc arr ⇒ (0,4)

③ If not found, BS desc arr ⇒ (4,6)

arr = [1, 2, 3, 4, 5, 3, 1]

0 1 2 3 4 5 6

s e

① Find Peak index

while (s < e)

s = 0, 4

e = 6, 5, 4

s + (e − s) / 2

0 + (6 − 0) / 2 (4 + (6 − 4) / 2) (4 + (5 − 4) / 2)

mid = 3, 5, 4

arr[3] = 4, arr[5] = 3

if arr[3] > arr[3+1]

4 > 5 // False

else

s = m + 1

s = 4

if arr[5] > arr[5+1]

3 > 1 // True

e = mid

if arr[4] > arr[4+1]

s = 4

if arr[4] > arr[4+1]

5 > 3

e = mid

return start[4]