

Day-26

Python DSA

Ceil The Floor

https://www.naukri.com/code360/problems/ceiling-in-a-sorted-array_1825401?leftPanelTabValue=PROBLEM

```
def getFloorAndCeil(arr, n, x):
    floor_val, ceil_val = -1, -1
    l, h = 0, n - 1

    while l <= h:
        mid = (l + h) // 2

        if arr[mid] == x:
            # If exact match, both floor and ceil are x
            return x, x
        elif arr[mid] < x:
            floor_val = arr[mid] # possible floor
            l = mid + 1
        else:
            ceil_val = arr[mid] # possible ceil
            h = mid - 1

    return floor_val, ceil_val
```

Time Complexity- $O(\log N)$

Space Complexity- $O(1)$