**Approach**

1. Keep the array sorted inorder to find the floor and ceil
2. Finding ceil:(smallest element greater than or equal to x)
   1. If x > arr[-1], ceil is undefined
   2. Else:
      1. Traverse the array until arr[i] < x
      2. Ceil = arr[i]
3. Finding Floor(largest element which is smaller than or equal to **X)**
   1. If x < arr[0], floor is undefined
   2. Else:
      1. Traverse until arr[i] <= x
      2. Floor = arr[i-1]

**Code:**

arr = sorted(arr)

# find floor

if x < arr[0]:

floor = -1

else:

i = 0

# traverse until arr[i] <= x, once not true, breaks, so return i-1 which denotes greatest element smaller than or equal to x

while i < n and arr[i] <= x:

i+=1

floor = arr[i-1]

# find ceil

if x > arr[-1]:

ceil = -1

else:

i = 0

while i<n and arr[i] < x:

i+=1

ceil = arr[i]

return [floor,ceil]