

# First and last occurrences of x

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**Basic** Accuracy: 53.04% Submissions: 43233 Points: 1

Given a sorted array **arr** containing **n** elements with possibly duplicate elements, the task is to find indexes of first and last occurrences of an element **x** in the given array.

## Example 1:

### Input:

n=9, x=5

arr[] = { 1, 3, 5, 5, 5, 5, 67, 123, 125 }

**Output:** 2 5

**Explanation:** First occurrence of 5 is at index 2 and last occurrence of 5 is at index 5.

## Example 2:

### Input:

n=9, x=7

arr[] = { 1, 3, 5, 5, 5, 5, 7, 123, 125 }

**Output:** 6 6

### Your Task:

Since, this is a function problem. You don't need to take any input, as it is already accomplished by the driver code. You just need to complete the function **find()** that takes **array arr**, **integer n** and **integer x** as parameters and returns the required answer.

**Note:** If the number **x** is not found in the array just return both index as -1.

**Expected Time Complexity:**  $O(\log N)$

**Expected Auxiliary Space:**  $O(1)$ .

### Constraints:

$1 \leq N \leq 10^7$

From <<https://practice.geeksforgeeks.org/problems/first-and-last-occurrences-of-x3116/1#>>

## Solution

```
int a1=-1;
int a2=-1;
for(int i=0;i<n;i++){
    if(arr[i]==x){
        a1=i;
        break;
    }
}
for(int i=n-1;i>=0;i--){
    if(arr[i]==x){
        a2=i;
        break;
    }
}
return {a1,a2};
```

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