//Count number of occurrences (or frequency) in a sorted array

/*Given a sorted array arr[] of size N and a number X, you need to find the number of occurrences of X in given array.

Note: Expected time complexity is O(log(n))
Examples:
Input: N = 7, X = 2, Arr[] = {1, 1, 2, 2, 2, 2, 3}
Output: 4
Explanation: 2 occurs 4 times in the given array.
Input: N = 7, X = 4, arr[] = {1, 1, 2, 2, 2, 2, 3}
Output: 0
Explanation: 4 is not present in the given array.*/

Code:

```
#include <stdio.h>

int main() {
    int n, x;
    int count = 0;

    printf("Enter the size of the array: ");
    scanf("%d", &n);

    int arr[n];

    printf("Enter the elements of the sorted array: ");
    for (int i = 0; i < n; i++) {
        scanf("%d", &arr[i]);
    }

    printf("Enter the value of X: ");
    scanf("%d", &x);

    for (int i = 0; i < n; i++) {
        if (arr[i] == x) {
            count++;
        }
```

```
    }

    printf("Output: %d\n", count);

    return 0;
}
```