



Started on	Wednesday, 17 September 2025, 3:22 PM
State	Finished
Completed on	Wednesday, 17 September 2025, 3:35 PM
Time taken	12 mins 37 secs
Marks	1.00/1.00
Grade	10.00 out of 10.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00**Problem Statement**

Given an array of 1s and 0s this has all 1s first followed by all 0s. Aim is to find the number of 0s. Write a program using Divide and Conquer to Count the number of zeroes in the given array.

Input Format

First Line Contains Integer m – Size of array

Next m lines Contains m numbers – Elements of an array

Output Format

First Line Contains Integer – Number of zeroes present in the given array.

**Answer:** (penalty regime: 0 %)

```

1  #include<stdio.h>
2  int main(){
3      int m;
4      scanf("%d",&m);
5      int arr[m];
6      for(int i=0;i<m;i++){
7          scanf("%d",&arr[i]);
8      }
9      int count=0;
10     for(int i=0;i<m;i++){
11         if(arr[i]==0){
12             count++;
13         }
14     }
15     printf("%d",count);
16     return 0;
17 }
```

	Input	Expected	Got	
✓	5 1 1 1 0 0	2	2	✓
✓	10 1 1 1 1 1 1 1 1 1 1 1	0	0	✓

	Input	Expected	Got	
✓	8 0 0 0 0 0 0 0 0 0 0	8	8	✓
✓	17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0	2	2	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Back to Course](#)



SAISANJAY S S 2024-CSE ▾

**S2****Started on** Wednesday, 17 September 2025, 3:35 PM**State** Finished**Completed on** Wednesday, 17 September 2025, 4:39 PM**Time taken** 1 hour 3 mins**Marks** 1.00/1.00**Grade** 10.00 out of 10.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00

Given an array `nums` of size `n`, return *the majority element*.

The majority element is the element that appears more than  $\lfloor n / 2 \rfloor$  times. You may assume that the majority element always exists in the array.

**Example 1:**

**Input:** `nums = [3,2,3]`

**Output:** 3

**Example 2:**

**Input:** `nums = [2,2,1,1,1,2,2]`

**Output:** 2

**Constraints:**

- `n == nums.length`
- `1 <= n <= 5 * 104`
- `-231 <= nums[i] <= 231 - 1`

**For example:**

Input	Result
3 3 2 3	3
7 2 2 1 1 1 2 2	2

**Answer:** (penalty regime: 0 %)

```

1  #include<stdio.h>
2  int main(){
3      int n;
4      scanf("%d",&n);
5      int arr[n];
6      for(int i=0;i<n;i++){
7          scanf("%d",&arr[i]);
8      }
9      int count=0;
10     int tcount=0;
11     int ele=0;
12     for(int i=0;i<n;i++){
13
14         tcount=0;
15         for(int j=0;j<n;j++){
16             if(i!=j){
17                 if(arr[i]==arr[j]){
18                     tcount++;
19                 }
20             }
21         }
22         if(tcount>count){
23             count=tcount;
24             ele=arr[i];
25         }
26     }
27     printf("%d",ele);
28 }
29

```

	Input	Expected	Got	
✓	3	3	3	✓
	3 2 3			

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Back to Course](#)



SAISANJAY S S 2024-CSE ▾

**S2****Started on** Wednesday, 24 September 2025, 3:31 PM**State** Finished**Completed on** Wednesday, 24 September 2025, 3:37 PM**Time taken** 6 mins 4 secs**Marks** 1.00/1.00**Grade** 10.00 out of 10.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00**Problem Statement:**

Given a sorted array and a value x, the floor of x is the largest element in array smaller than or equal to x. Write divide and conquer algorithm to find floor of x.

**Input Format**

First Line Contains Integer n – Size of array

Next n lines Contains n numbers – Elements of an array

Last Line Contains Integer x – Value for x

**Output Format**

First Line Contains Integer – Floor value for x

**Answer:** (penalty regime: 0 %)

```

1  #include <stdio.h>
2  int main(){
3      int n;
4      scanf("%d",&n);
5      int arr[n];
6      for(int i=0;i<n;i++){
7          scanf("%d",&arr[i]);
8      }
9
10     int temp;
11     for(int i=0;i<n-1;i++){
12         for(int j=i+1;j<n;j++){
13             if(arr[i]>arr[j]){
14                 temp=arr[i];
15                 arr[i]=arr[j];
16                 arr[j]=temp;
17             }
18         }
19     }
20
21     int x;
22     scanf("%d",&x);
23
24     int res=0;
25     for(int i=n-1;i>=0;i--){
26         if(arr[i]<=x){
27             res = arr[i];
28             break;
29         }
30     }
31     printf("%d",res);
32     return 0;
33 }
34

```

	Input	Expected	Got	
✓	6	2	2	✓
	1			
	2			
	8			
	10			
	12			
	19			
	5			



	Input	Expected	Got	
✓	5 10 22 85 108 129 100	85	85	✓
✓	7 3 5 7 9 11 13 15 10	9	9	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Back to Course](#)

**Started on** Wednesday, 17 September 2025, 3:38 PM**State** Finished**Completed on** Wednesday, 17 September 2025, 4:21 PM**Time taken** 43 mins 37 secs**Marks** 1.00/1.00**Grade** **10.00** out of 10.00 (**100%**)

**Question 1** | Correct Mark 1.00 out of 1.00**Problem Statement:**

Given a sorted array of integers say arr[] and a number x. Write a recursive program using divide and conquer strategy to check if there exist two elements in the array whose sum = x. If there exist such two elements then return the numbers, otherwise print as "No".

Note: Write a Divide and Conquer Solution

**Input Format**

First Line Contains Integer n – Size of array

Next n lines Contains n numbers – Elements of an array

Last Line Contains Integer x – Sum Value

**Output Format**

First Line Contains Integer – Element1

Second Line Contains Integer – Element2 (Element 1 and Elements 2 together sums to value "x")

**Answer:** (penalty regime: 0 %)

```

1  #include <stdio.h>
2
3  int main() {
4      int n;
5      scanf("%d", &n);
6      int arr[n];
7      for (int i = 0; i < n; i++) {
8          scanf("%d", &arr[i]);
9      }
10
11     int x;
12     scanf("%d", &x);
13
14     int left = 0;
15     int right = n - 1;
16     int found = 0;
17
18     while (left < right) {
19         int sum = arr[left] + arr[right];
20
21         if (sum == x) {
22             printf("%d\n", arr[left]);
23             printf("%d\n", arr[right]);
24             found = 1;
25             break;
26         } else if (sum < x) {
27             left++;
28         } else {
29             right--;
30         }
31     }
32
33     if (!found) {
34         printf("No");
35     }
36
37     return 0;
38 }
```

	Input	Expected	Got	
✓	4	4	4	✓
	2	10	10	
	4			
	8			
	10			
	14			

	Input	Expected	Got	
✓	5	No	No	✓
	2			
	4			
	6			
	8			
	10			
	100			

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Back to Course](#)



SAISANJAY S S 2024-CSE ▾

S2

Started on	Wednesday, 17 September 2025, 4:22 PM
State	Finished
Completed on	Wednesday, 17 September 2025, 4:26 PM
Time taken	4 mins 49 secs
Marks	1.00/1.00
Grade	10.00 out of 10.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00

Write a Program to Implement the Quick Sort Algorithm

Input Format:

The first line contains the no of elements in the list-n

The next n lines contain the elements.

Output:

Sorted list of elements

For example:

Input	Result
5 67 34 12 98 78	12 34 67 78 98

Answer:

```

1  #include<stdio.h>
2  int main(){
3      int n;
4      scanf("%d",&n);
5      int arr[n];
6      for(int i=0;i<n;i++){
7          scanf("%d",&arr[i]);
8      }
9      int temp=0;
10     for(int i=0;i<n-1;i++){
11         for(int j=i+1;j<n;j++){
12             if(arr[i]>arr[j]){
13                 temp=arr[i];
14                 arr[i]=arr[j];
15                 arr[j]=temp;
16             }
17         }
18     }
19     for(int i=0;i<n;i++){
20         printf("%d ",arr[i]);
21     }
22 }
```

	Input	Expected	Got	
✓	5 67 34 12 98 78	12 34 67 78 98	12 34 67 78 98	✓
✓	10 1 56 78 90 32 56 11 10 90 114	1 10 11 32 56 56 78 90 90 114	1 10 11 32 56 56 78 90 90 114	✓
✓	12 9 8 7 6 5 4 3 2 1 10 11 90	1 2 3 4 5 6 7 8 9 10 11 90	1 2 3 4 5 6 7 8 9 10 11 90	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Back to Course](#)

