

## Find Max & Min from A List using Divide and Conquer

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Student name :	I51496
Student email / username :	2103a51496@sru.edu.in
Class name :	III_DAA_I_23-24
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Earned Marks :	Pending

**Prof. Jyothi** wants to find the **Max** and **Min** Marks secured in an examination, which was attempted by **N** Students, with less time complexity.

**Input:**

first line contains 1 value, the number of students

second line contains N student marks

**Output:**

Two Values, first one is Max and second one is Min

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program.c

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```
#include
int i,j;
void findmaxmin(int a[],int s, int e, int *max,int *min){
    if(s==e){
        *max = *min = a[s];
    }
    else if(s == e-1){
        if(a[s] > a[e]){
            *max = a[s];    // if easy solution
            *min = a[e];
        }
        else{
            *max = a[e];
            *min = a[s];
        }
    }
    else{
        int mid = (s+e)/2;    // sorting for max solution
        findmaxmin(a,s,mid,max,min);
        int max1,min1;
        findmaxmin(a,mid+1,e,&max1,&min1);
        if(max1 > *max){
            *max = max1;
        }
        if(min1 < *min){
            *min = min1;
        }
    }
}
```

```
    }  
}  
void main(){  
    int n,max,min;  
    scanf("%d",&n); // taking the input as n i.e number of students  
    int a[n];  
    for(i=0;i
```

Test Cases

Test Cases	Status
Test Case 1	Pass