



আন্তর্জাতিক ইসলামী বিশ্ববিদ্যালয় চট্টগ্রাম  
الجامعة الإسلامية العالمية شيتاغونغ  
International Islamic University Chittagong

# Assignment

Course Title-Computer Programming 1 lab

Course Code: CSE- 1121

Assignment No. – 10

(pdf with Screen Shot)

**(Official & for FINAL TERM)**

Submission date- 18.10.2020

Submitted to-

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Submitted by-

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Matric ID: C201032, Section: A

Department of CSE (Computer Science and Engineering)

// Bismillahir Rahnanir Rahim



vjudge.net/contest/395358#status/S

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Sorowar\_Mahabub

**Begin:** 2020-09-17  
19:15 BST

## CSE-1122 - Basic Array (Long Contest\_1AM)

**End:** 2020-09-24  
01:15 BST


Ended

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Begin: 2020-09-27  
12:05 BST

# CSE-1122 - Basic Array (Long Contest-2\_1AM)

End: 2020-10-02  
02:05 BST

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Overview

Problem

Status

Rank (110:00:00)

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Username	Prob	Result	Time (ms)	Mem (MB)	Lang	Submit Time
Sorowar_Mahabub	All	Accepted			All	
Sorowar_Mahabub	G	Accepted	4	1.7	C	9 days ago
Sorowar_Mahabub	E	Accepted	15		C++	10 days ago
Sorowar_Mahabub	C	Accepted	0	15.3	C++	11 days ago
Sorowar_Mahabub	A	Accepted	35	1.7	C	11 days ago
Sorowar_Mahabub	F	Accepted	4	1.7	C	18 days ago
Sorowar_Mahabub	F	Accepted	3	1.7	C	21 days ago
Sorowar_Mahabub	D	Accepted	0	0.6	C++	21 days ago
Sorowar_Mahabub	B	Accepted	8	1.6	C	21 days ago

Begin: 2020-10-03  
22:00 BST

# CSE-1122-Arrays and Strings (Long Contest- 3\_1AM)

End: 2020-10-10  
22:00 BST



Ended

Overview

Problem

Status

Rank (84:01:18)

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Username	Prob	Result	Time (ms)	Mem (MB)	Lang	Submit Time
Sorowar_Mahabub	All	Accepted			All	
Sorowar_Mahabub	H	Accepted	46	7.8	C++	9 days ago
Sorowar_Mahabub	G	Accepted	13	1.7	C	15 days ago
Sorowar_Mahabub	D	Accepted	4	1.7	C	15 days ago
Sorowar_Mahabub	I	Accepted	62		C++	15 days ago
Sorowar_Mahabub	J	Accepted	30		C++	15 days ago
Sorowar_Mahabub	A	Accepted	31	0.1	C++	15 days ago



# Contest- 1

// A:

```
#include<stdio.h>
int main()
{
    int n, i, j, cnt=0;
    scanf("%d", &n);
    int arr[n+15];
    for(i=0; i<n; i++)
        scanf("%d", &arr[i]);

    for(i=1; i<n-1; i++)
    {
        if(arr[i]>arr[i-1]) {
            if(arr[i]<arr[i+1])
                cnt++;
        }
        else if(arr[i]<arr[i-1]) {
            if(arr[i]>arr[i+1])
                cnt++;
        }
    }
    printf("%d\n", cnt);
}

//      Author: Sorowar Mahabub,
//      studies B.Sc in CSE, IIUC
```

```
//      Bismillahir Rahnanir Rahim
// B:
```

```
#include<stdio.h>
#define size 1001
int main()
```

```

{
    int N, a[size], b[size], count=0;
    scanf("%d", &N);
    for(int i=0; i<N; i++)
        scanf("%d", &a[i]);

    for(int i=0; i<N; i++)
        if(a[i]!=i+1)
            count++;

    if(count<=2)
        printf("YES\n");
    else
        printf("NO\n");
}
//      Author: Sorowar Mahabub,
//      studies B.Sc in CSE, IIUC

```

```

//      Bismillahir Rahnanir Rahim
// C:

```

```

#include<stdio.h>
int main( )
{
    int t, n, num[505];
    scanf("%d", &t);
    while(t--)
    {
        scanf("%d", &n);
        for(int i= 0 ; i< n ; i++)
            scanf("%d",&num[i]);

        int evn= 0, odd= 0;
        for(int i= 0 ; i<n; i++)
        {
            if( i%2 == 0 && num[i]%2 != 0)
                evn++ ;
            else if( i%2 != 0 && num[i]%2 == 0)
                odd++ ;
        }
    }
}

```

```

        if(evn == odd)
            printf("%d\n", ((evn+odd)/2));
        else
            printf("-1\n");
    }
}
//      Author: Sorowar Mahabub,
//      studies B.Sc in CSE, IIUC

```

// D:

```

#include<stdio.h>
int main() {
    int h, n, x = 0;
    scanf("%d%d", &h, &n);

    int A[n];
    for(int i = 0; i < n; i++) {
        scanf("%d", &A[i]);
        x = x+A[i];
    }

    if(x >= h)
        printf("Yes\n");
    else
        printf("No\n");
    return 0;
}

```

// Bismillahhir Rahnanir Rahim  
// E:

```

#include<stdio.h>
int main()
{
    int n, k, m, sum=0, i;
    scanf("%d%d%d", &n, &k, &m);
    int a[n+10];

```

```

for( i=0; i<n-1; i++)
{
    scanf("%d",&a[i]);
    sum+=a[i];
}

/* for(i=0; i<n-1; i++)
    sum+=a[i]; */

int d= -1, val;
for(i=0; i<=k; i++)
{
    val =((sum+i)/n);
    if(val>=m)
    {
        d= 1;
        break;
    }
}
if(d==1)
    printf("%d\n", i);
else
    printf("%d\n", d);
}
//      Author: Sorowar Mahabub,
//      studies B.Sc in CSE, IIUC

```

// F:

```

#include <stdio.h>

int main()
{
    int ar[1005];
    int i, n, sum=0;
    scanf("%d", &n);

    for(i=0; i<n; i++)
        scanf("%d", &ar[i]);
    for(i=0; i<n; i++)

```



```
    sum +=ar[i];
    printf("%d\n", sum);

    return 0;
}
```

// G:

```
#include <stdio.h>
int main()
{
    int n, i, largest, count = 0;
    scanf("%d", &n);
    int ar[n];

    for (i = 0; i < n; i++)
        scanf("%d", &ar[i]);

    largest = ar[0];
    for (i = 1; i < n; i++)
    {
        if (largest < ar[i])
            largest = ar[i];
    }
    //printf("%d\n\n", largest);
    for(int m = 0; m < n; m++)
    {
        if(largest == ar[m])
            count ++;
    }
    printf("%d\n", count);
    return 0;
}
```

// H:

```
#include<stdio.h>
int main()
{
```

```
long long int z= 0, p, l= 0, xx;  
scanf("%l64d", &p);
```

```
while(p>0)  
{  
    xx= p%10;  
    if(xx == 4|| xx == 7) {  
        l +=1;  
    }  
    p= p/10;  
    //l +=1;  
}  
if(l == 4|| l == 7)  
    //if(l == z || l == (z-1))  
    printf("YES\n");  
else  
    printf("NO\n");  
  
return 0;  
}
```

// I:

```
#include<stdio.h>  
int main() {  
    int n, r, a;  
    scanf("%d%d", &n, &a);  
  
    if(n >= 500)  
    {  
        r = n%500;  
        if(r <= a)  
            printf("Yes\n");  
        else  
            printf("No\n");  
    }  
    else if(n < 500)  
    {  
        if(n < a)
```

```

        printf("Yes\n");
    else
        printf("No\n");
}
return 0;
}

```

```

//      Bismillahhir Rahnanir Rahim
// J:

```

```

#include<stdio.h>
int main()
{
    int n, i, j, count, flag=0, d;
    scanf("%d", &n);
    for(i=1; i<=n; i++)
    {
        d= i;
        count= 0;
        while(d)
        {
            d/=10;
            count++;
        }

        if(count%2)
            flag++;
    }
    printf("%d\n", flag);
}

```

```

//      Author: Sorowar Mahabub,
//      studies B.Sc in CSE, IIUC

```

```

// K:
#include <stdio.h>
int main() {

```

```

int i, n, ar[1005];
scanf("%d", &n);

for (i = 0; i < n; i++)
    scanf("%d", &ar[i]);

for (i = 0; i < n; i++) {
    if (ar[i]>=0)
        ar[i]=ar[i]+2;
}
for (i = 0; i < n; i++)
    printf("%d ", ar[i]);
printf("\n");
return 0;
}

```

# Contest -2

```

//      Bismillahir Rahnanir Rahim
// A:

```

```

#include <stdio.h>
int main()
{
    long long int a,b=1,c,d=1e18;
    scanf("%lld", &a);
    for(int i=0; i<a; i++)

```

```

{
    scanf("%lld", &c);
    if(c==0)
    {
        printf("0");
        return 0;
    }

    b *=c;
    if(c>d)
    {
        b=-1;
    }
    d = d / c;
}
printf("%lld\n", b);
return 0;
}

```

// B:

```

#include<stdio.h>
int main()
{
    int N, max=0, i, sum=0, sum1=0;
    scanf("%d",&N);
    int L[N];

    for(i=0; i<N; i++)
        scanf("%d",&L[i]);

    max = L[0];
    for(i=0; i<N; i++)
        if(L[i] > max)
            max = L[i];

    for(i=0; i<N; i++)
        sum = sum + L[i];
}

```

```
sum1 = sum - max;
if(sum1>max)
    printf("Yes\n");
else
    printf("No\n");

}

// Author: Sorowar Mahabub
```

// C:

```
#include<stdio.h>
int main()
{
    int t, n, a[206], p, q;
    scanf("%d", &t);
    while(t--)
    {
        int max=2, min=150, i;
        scanf("%d", &n);
        for(i=0; i<n; i++)
        {
            scanf("%d", &a[i]);
            if(a[i]<min)
            {
                min=a[i];
                p= i;
            }
            if(a[i]>max)
            {
                max=a[i];
                q= i;
            }
        }
        if(p>q)
            printf("%d %d\n", max, min);
        else
            printf("%d %d\n", min, max);
    }
}
```

```
    return 0;
}
```

// D:

```
#include<stdio.h>
int main()
{
    int N, max=0, i, sum=0, sum1=0, count= 0;
    scanf("%d",&N);
    int L[N];

    for(i=0; i<N; i++)
        scanf("%d",&L[i]);

    for(i=0; i<N; i++)
        if(L[i] > 0 && L[i]%6 == 0)
        {
            count++;
            sum +=L[i];
        }

    printf("%d %d\n", count, sum);
}
```

// Author: Sorowar Mahabub

// E:

```
#include<stdio.h>
int main()
{
    int t;
    scanf("%d", &t);
    int n,i;
    for(i=0; i<t; i++)
    {   scanf("%d",&n);
```



```

    int sum=0,odd=0,even=0;
    int a[n], j;
    for(j=0; j<n; j++)
    {
        scanf("%d", &a[j]);
        if(a[j]%2!=0 || a[j]==1)
            odd++;
        else
            even++;

        sum +=a[j];
    }
    if(sum%2!=0 || sum == 1)
        printf("YES\n");
    else
    {
        if(odd!=0 && even !=0)
            printf("YES\n");
        else
            printf("NO\n");
    }
}
return 0;
}

```

// F:

```

#include<stdio.h>
int main()
{
    int a, g, i, sum= 0, baki_ace, k, z;
    scanf("%d%d", &a, &g);
    int arr[a];
    for(i= 0; i<a; i++)
    {
        scanf("%d", &arr[i]);
        sum+= arr[i];
    }
    baki_ace= g-sum;
    int min= arr[0];
}

```

```

for(i=0; i<a; i++)
    if(arr[i]<min)
        min= arr[i];

z= baki_ace/min;
k= z+a;

printf("%d\n", k);
return 0;

}

//      Author: Sorowar Mahabub,
//      studies B.Sc in CSE, IIUC

// G:

#include<stdio.h>
int main()
{
    int n, m, x;
    scanf("%d%d%d", &n, &m, &x);

    int a[m+17], xx= 0, y= 0;
    for(int i=0; i<m; i++)
    {
        scanf("%d", &a[i]);
        if(a[i]>x)
            xx++;
        else
            y++;
    }
    if(xx<y)
        printf("%d\n", xx);
    else
        printf("%d\n", y);

    return 0;
}

```

# Contest- 3

```
//      Bismillahhir Rahnanir Rahim
```

```
//A :
```

```
#include<stdio.h>
```

```
int main() {
```

```
    int n, i, l1=0, l2=0;
```

```
    scanf("%d", &n);
```

```
    char s[n];
```

```
    scanf("%s", s);
```

```
    for(i=0; i<n; i++)
```

```
    {
```

```
        if(s[i]=='A')
```

```
            l1++;
```

```
        if(s[i]=='D')
```

```
            l2++;
```

```
    }
```

```
    if(l1>l2)
```

```
        printf("Anton\n");
```

```
    else if(l1<l2)
```

```
        printf("Danik\n");
```

```
    else if(l1==l2)
```

```
        printf("Friendship\n");
```

```
    return 0;
```

```
}
```

```
//D :
```

```
#include <stdio.h>
```

```

int main()
{
    int n, M, i, count= 0;
    int d[110]= {0};

    scanf("%d", &n);
    for(i=0; i<n; i++) {
        scanf("%d", &M);

        if(d[M]==0)
            count++;

        d[M]=1;
    }
    printf("%d\n", count);

    return 0;
}

```

//G :

```
#include <stdio.h>
```

```

int main()
{
    int n, k, M, i, count= 0;
    int d[110];

    scanf("%d%d", &n, &k);
    for(i=0; i<n; i++) {
        scanf("%d", &M);

        if(M>=k)
            count++;
    }
    printf("%d\n", count);

    return 0;
}

```

```

// H: {Contest 3}
#include<stdio.h>
#define Size 2000019
int main()
{
    int n, arr[Size];
    scanf("%d", &n);

    int not_zero, zero, okay= 0;
    for(int i=0; i<n; i++)
    {
        scanf("%d", &arr[i]);
        if(arr[i]==0)
            zero= i;
        else
            not_zero= i;
    }

    if(not_zero<zero)
        okay= not_zero+1;
    else
        okay= zero+1;

    printf("%d\n", okay);
    return 0;
}

```

```

//I :
#include<stdio.h>
#include<string.h>

int main()
{
    char s[101];
    int m, lower= 0, upper= 0, mm, mmm, mmmm;
    gets(s);

```

```

for(m= 0; s[m]!='\0'; m++)
{
    if(s[m] >= 'a' && s[m] <= 'z')
        lower++;
    if(s[m] >= 'A' && s[m] <= 'Z')
        upper++;
}
// printf("%d %d\n", upper, lower);
if(upper>lower)
{
    for(mm= 0; s[mm]!='\0'; mm++)
    {
        if(s[mm] >= 'a' && s[mm] <= 'z')
            printf("%c", s[mm]-32);
        else
            printf("%c", s[mm]);
    }
    printf("\n");
}
else if(lower>upper)
{
    for(mmm= 0; s[mmm]!='\0'; mmm++)
    {
        if(s[mmm] >= 'A' && s[mmm] <= 'Z')
            printf("%c", s[mmm]+32);
        else
            printf("%c", s[mmm]);
    }
    printf("\n");
}
else if(upper==lower)
{
    for(mmmm= 0; s[mmmm]!='\0'; mmmm++)
    {
        if(s[mmmm] >= 'A' && s[mmmm] <= 'Z')
            printf("%c", s[mmmm]+32);
        else
            printf("%c", s[mmmm]);
    }
    printf("\n");
}

```

```

    return 0;
}

//J :
#include <stdio.h>
#include <stdlib.h>

int cmpfunc (const void * a, const void * b) {
    // return ( *(int*)a - *(int*)b );
    return ( *(int*)b - *(int*)a );
}

int main () {
    int n, m, mm, sum= 0;
    scanf("%d", &n);
    int values[n];
    for(m= 0; m<n; m++)
        scanf("%d", &values[m]);

    qsort(values, n, sizeof(int), cmpfunc);

    for(mm= 0 ; mm<n; mm+= 2 )
        sum += (values[mm]-values[mm+1]);

    printf("%d\n", sum);

    return 0;
}

```

```

//      Author: Sorowar Mahabub,
//      studies B.Sc in CSE, IIUC

```

Submitted by-

**MD. SOROWAR MAHABUB RABBY**

Matric ID: C201032, Section: A

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