ASSIGNMENT

Course Code: CSE-1230

Course Title: Competitive Programming 1

Assignment No: 02

Assignment Topic: Problem Solving-(Code forces newcomer sheet-2)

Submitted By:

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ID NO: C-233125

Semester: 2nd

Section: 2DM

Department: Computer Science and Engineering (CSE)

#	Name			
A	1 to N	standard input/output 1 s, 256 MB		x913
B	Even Numbers	standard input/output 1 s, 256 MB		x813
C	Even, Odd, Positive and Negative	standard input/output 1 s, 256 MB		x700
D	Fixed Password	standard input/output 1 s, 256 MB		x688
E	Max	standard input/output 1 s, 256 MB		x657
F	Multiplication table	standard input/output 1 s, 64 MB		x695
G	Factorial	standard input/output 2 s, 64 MB		x545
H	One Prime	standard input/output 3 s, 64 MB		x524
I	Palindrome	standard input/output 1 s, 256 MB		x151
J	Primes from 1 to n	standard input/output 3 s, 256 MB		x165
K	Divisors	standard input/output 1 s, 256 MB		x529
L	GCD	standard input/output 1 s, 256 MB		x456
M	Lucky Numbers	standard input/output 1 s, 256 MB		x115
N	Numbers Histogram	standard input/output 1 s, 256 MB		x155
O	Pyramid	standard input/output 1 s, 256 MB		x609
P	Shape1	standard input/output 1 s, 256 MB		x600
Q	Digits	standard input/output 1 s, 256 MB		x125
R	Sequence of Numbers and Sum	standard input/output 1 s, 256 MB		x370
S	Sum of Consecutive Odd Numbers	standard input/output 1 s, 256 MB		x417
T	Shape2	standard input/output 1 s, 256 MB		x382
U	Some Sums	standard input/output 2 s, 256 MB		x252
V	PUM	standard input/output 1 s, 256 MB		x359
W	Shape3	standard input/output 1 s, 256 MB		x307
X	Convert To Decimal 2	standard input/output 1 s, 64 MB		x246
Y	Easy Fibonacci	standard input/output 1 s, 256 MB		x346
Z	Three Numbers	standard input/output 3 s, 256 MB		x66

My Submissions

#	When	Who	Problem	Lang	Verdict	Time	Memory
245712902	Feb/10/2024 18:19 UTC+6	Mushii	L - GCD	GNU C++17	Accepted	15 ms	0 KB
245712741	Feb/10/2024 18:17 UTC+6	Mushii	R - Sequence of Numbers and Sum	GNU C++17	Accepted	15 ms	0 KB
245712694	Feb/10/2024 18:17 UTC+6	Mushii	S - Sum of Consecutive Odd Numbers	GNU C++17	Accepted	15 ms	0 KB
245712585	Feb/10/2024 18:16 UTC+6	Mushii	X - Convert To Decimal 2	GNU C++17	Accepted	15 ms	0 KB
245712485	Feb/10/2024 18:15 UTC+6	Mushii	V - PUM	GNU C++17	Accepted	15 ms	0 KB
245712393	Feb/10/2024 18:14 UTC+6	Mushii	U - Some Sums	GNU C++17	Accepted	15 ms	0 KB
245712298	Feb/10/2024 18:13 UTC+6	Mushii	Y - Easy Fibonacci	GNU C++17	Accepted	15 ms	0 KB
245712184	Feb/10/2024 18:12 UTC+6	Mushii	Z - Three Numbers	GNU C++17	Accepted	31 ms	0 KB
245674351	Feb/10/2024 12:16 UTC+6	Mushii	S - Sum of Consecutive Odd Numbers	GNU C++17	Wrong answer on test 1	0 ms	0 KB
245673817	Feb/10/2024 12:11 UTC+6	Mushii	R - Sequence of Numbers and Sum	GNU C++17	Wrong answer on test 1	0 ms	0 KB
245673413	Feb/10/2024 12:06 UTC+6	Mushii	R - Sequence of Numbers and Sum	GNU C++17	Wrong answer on test 1	15 ms	0 KB
245672971	Feb/10/2024 12:01 UTC+6	Mushii	Q - Digits	GNU C++17	Wrong answer on test 9	15 ms	0 KB
245672662	Feb/10/2024 11:58 UTC+6	Mushii	P - Shape1	GNU C++17	Accepted	31 ms	0 KB
245672493	Feb/10/2024 11:56 UTC+6	Mushii	O - Pyramid	GNU C++17	Accepted	15 ms	0 KB
245671445	Feb/10/2024 11:45 UTC+6	Mushii	N - Numbers Histogram	GNU C++17	Accepted	15 ms	0 KB
245670705	Feb/10/2024 11:36 UTC+6	Mushii	M - Lucky Numbers	GNU C++17	Accepted	15 ms	0 KB
245670653	Feb/10/2024 11:35 UTC+6	Mushii	M - Lucky Numbers	GNU C++17	Compilation error	0 ms	0 KB
245597839	Feb/09/2024 20:40 UTC+6	Mushii	K - Divisors	GNU C++17	Accepted	15 ms	0 KB
245594535	Feb/09/2024 20:13 UTC+6	Mushii	I - Palindrome	GNU C++17	Accepted	15 ms	0 KB
245590058	Feb/09/2024 19:33 UTC+6	Mushii	E - Max	GNU C++17	Accepted	15 ms	0 KB
245357041	Feb/07/2024 21:48 UTC+6	Mushii	H - One Prime	GNU C++17	Accepted	15 ms	0 KB
245352125	Feb/07/2024 21:13 UTC+6	Mushii	G - Factorial	GNU C++17	Accepted	0 ms	0 KB
245351435	Feb/07/2024 21:06 UTC+6	Mushii	F - Multiplication table	GNU C++17	Accepted	15 ms	0 KB
245350303	Feb/07/2024 20:54 UTC+6	Mushii	D - Fixed Password	GNU C++17	Accepted	46 ms	0 KB
245349721	Feb/07/2024 20:49 UTC+6	Mushii	C - Even, Odd, Positive and Negative	GNU C++17	Accepted	15 ms	0 KB
245348190	Feb/07/2024 20:35 UTC+6	Mushii	B - Even Numbers	GNU C++17	Accepted	15 ms	0 KB
245347558	Feb/07/2024 20:29 UTC+6	Mushii	A - 1 to N	GNU C++17	Accepted	15 ms	0 KB

By Mushii, contest: Sheet #2 (Loops), problem: (A) 1 to N, **Accepted**, #, Copy

```cpp
#include <bits/stdc++.h>

using namespace std;

int main(){

int N;

cin>>N;
for(int i=1;i<=N;i++){

    cout<<i<<endl;
}


return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (B) Even Numbers, **Accepted**, #, Copy

```cpp
#include <bits/stdc++.h>

using namespace std;

int main(){

int N;

cin>>N;
for(int i=1;i<=N;i++){

    if(i%2==0){
        cout<<i<<endl;
    }
    else if(N==1)
        cout<<"-1"<<endl;

}


return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (C) Even, Odd, Positive and Negative, **Accepted**, #, Copy

```cpp
#include <bits/stdc++.h>

using namespace std;

int main(){

int N,x,even=0,odd=0,pos=0,neg=0;

cin>>N;
for(int i=0;i<N;i++){

    cin>>x;
    if(x%2==0||x==0){
      even++;
    }
    else if(x%2!=0){
        odd++;
    }
    if(x>0){
        pos++;

    }
    if(x<0){
        neg++;
    }

}
    cout << "Even: "<<even<<endl;
    cout << "Odd: "<<odd<<endl;
    cout << "Positive: "<<pos<<endl;
    cout << "Negative: "<<neg<<endl;


return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (D) Fixed Password, **Accepted**, #, Copy

```cpp
#include <bits/stdc++.h>

using namespace std;

int main(){

int N,x=1999;
for(int i=0; ;i++){

    cin>>N;
    if(N!=x){
        cout<<"Wrong"<<endl;
    }
    else if(N==x){
        cout<<"Correct"<<endl;
        break;
    }

}


return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (E) Max, **Accepted**, #, Copy

```cpp
#include <iostream>

using namespace std;
int main(){
int n,Max=0,temp,a;

cin>>n;
for(int i=0;i<n;i++){
    cin>>a;

    if(Max>a){
        Max=Max;

    }else if(a>Max){

        Max=a;
        temp=Max;
    }


}cout<<Max<<endl;







return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (F) Multiplication table, **Accepted**, #, Copy

```cpp
#include <bits/stdc++.h>

using namespace std;

int main(){

int n;
cin>>n;
for(int i=1;i<=12;i++){

    cout<<n<<" * "<<i<<" = "<<n*i<<endl;

}




return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (G) Factorial, **Accepted**, #, Copy

```cpp
#include <bits/stdc++.h>

using namespace std;

int main(){

int t,n;
long long fac=1;
cin>>t;
for(int i=1;i<=t;i++){
    fac=1;
    cin>>n;
    for(int j=1;j<=n;j++){
        fac*=j;
    }
    cout<<fac<<endl;
}




return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (H) One Prime, **Accepted**, #, Copy

```cpp
#include <iostream>
#include <cmath>

using namespace std;

int main() {
    int n;
    cin >> n;

    if (n == 2) {
        cout << "YES" << endl;
    } else if (n == 1 || (n % 2 == 0 && n > 2)) {
        cout << "NO" << endl;
    } else {
        bool is_prime = true;
        for (int i = 3; i <= sqrt(n); i += 2) {
            if (n % i == 0) {
                is_prime = false;
                break;
            }
        }

        if (is_prime) {
            cout << "YES" << endl;
        } else {
            cout << "NO" << endl;
        }
    }

    return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (I) Palindrome, **Accepted**, #, Copy

```cpp
#include<iostream>

using namespace std;
int main(){

int n,a,sum=0,temp ;
cin>>n;
temp=n;

while(n>0){

    a=n%10;
    sum=(sum*10)+a;
    n=n/10;



}
    if(temp==sum){
        cout<<sum<<endl<<"YES"<<endl;
    }else
        cout<<sum<<endl<<"NO"<<endl;



return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (K) Divisors, **Accepted**, #, Copy

```cpp
#include<iostream>

using namespace std;

int main(){

int n;
cin>>n;
for(int i=1;i<=n;i++){

    if(n%i==0){
        cout<<i<<endl;
    }
}




return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (L) GCD, **Accepted**, #, Copy

```cpp
#include <iostream>
using namespace std;

int main()
{
    int a, b;
    cin >> a >> b;
    int max;

    if (a < b)
    {

        for (int i = 1; i <= b; i++)
        {

            if (b % i == 0 && a % i == 0)
            {
                max = i;
            }
        }
        cout << max;
    }
    else if (b < a)
    {

        for (int i = 1; i <= a; i++)
        {

            if (a % i == 0 && b % i == 0)
            {
                max = i;
            }
        }
        cout << max;
    }
    else if (a == b)
    {
        cout << a;
    }
```

By Mushii, contest: Sheet #2 (Loops), problem: (M) Lucky Numbers, Compilation error, #, Copy

```cpp
#include <iostream>
using namespace std;

int main() {
    int A, B;
    cin >> A >> B;

    int luckyCount = 0;

    for (int x = A; x <= B; ++x) {
        int num = x;
        int digit;
        while (num > 0) {
            digit = num % 10;
            if (digit != 4 && digit != 7) {
                break;
            }
            num /= 10;
        }

        if (num == 0) {
            if (luckyCount > 0) {
                cout << " ";
            }
            cout << x;
            ++luckyCount;
        }
    }

    if (luckyCount == 0) {
        cout << -1;
    }

    return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (N) Numbers Histogram, **Accepted**, #, Copy

```cpp
#include<iostream>

using namespace std;

int main(){

char n;
int a,x;
cin>>n>>a;
for(int i=0;i<a;i++){

    cin>>x;
    for(int j=0;j<x;j++){
        cout<<n;

    }
    cout<<endl;

}




return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (O) Pyramid, **Accepted**, #, Copy

```
#include<iostream>

using namespace std;

int main(){

int n;
cin>>n;
for(int i=0;i<n;i++){

    for(int j=0;j<=i;j++){

        cout<<"*";
    }
cout<<endl;
}




return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (P) Shape1, **Accepted**, #, Copy

```
#include<iostream>

using namespace std;

int main(){

int n;
cin>>n;
for(int i=n;i>0;i--){

    for(int j=1;j<=i;j++){

        cout<<"*";
    }
cout<<endl;
}




return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (R) Sequence of Numbers and Sum, **Accepted**, #, Copy

```cpp
#include <iostream>
using namespace std;
int main()
{
	int num1, num2;
	while (cin >> num1 >> num2)
	{
		long long sum = 0;
		int min = 0, max = 0;
		if (num1 <= 0 || num2 <= 0)
		{
			return 0;
		}
		if (num1 >= num2)
		{
			max = num1;
			min = num2;
		}
		else
		{
			max = num2;
			min = num1;
		}
		for (int i = min; i <= max; i++)
		{
			cout << i << " ";
			sum += i;
		}
		cout << "sum =" << sum << endl;
	}
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (S) Sum of Consecutive Odd Numbers, **Accepted**, #, Copy

```cpp
#include <iostream>
using namespace std;
int main()
{
	int counter; // 3
	cin >> counter;

	while (counter--)
	{                                                    // 3 2 1 0
		int num1, num2, sum = 0; // 7 2
		cin >> num1 >> num2;
		int min, max; // 2 7
		if (num1 >= num2)
		{
			max = num1;
			min = num2;
		}
		else
		{
			max = num2;
			min = num1;
		}
		for (int i = min + 1; i <= max - 1; i++)
		{ // 2 3 4 5 6 7
			if (i % 2 != 0)
			{ //  5 / 2 = 2.5
				sum += i;
			}
		}
		cout << sum << endl;
	}
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (U) Some Sums, **Accepted**, #, Copy

```cpp
#include <iostream>
using namespace std;
int main()
{
	int number, range1, range2;
	cin >> number >> range1 >> range2;
	long long sum = 0;
	for (int i = 1; i <= number; i++)
	{
		if (i / 10 == 0)
		{
			if (i >= range1 && i <= range2)
			{
				sum += i;
			}
		}
		else
		{
			int myNumber = i;
			int mySum = 0;
			while (myNumber)
			{
				int digit = myNumber % 10;
				mySum += digit;
				myNumber /= 10;
			}
			if (mySum >= range1 && mySum <= range2)
			{
				sum += i;
			}
		}
	}
	cout << sum << endl;
	return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (V) PUM, **Accepted**, #, Copy

```cpp
#include <iostream>
using namespace std;
int main()
{
	int lines;
	cin >> lines;
	int counter = 1;
	for (int i = 1; i <= lines; i++)
	{
		if (counter % 4 == 0)
		{
			counter++;
			cout << "PUM" << endl;
			i--;
			continue;
		}
		cout << counter << " ";
		counter++;
		cout << counter << " ";
		counter++;
		cout << counter << " ";
		counter++;
	}
	cout << "PUM" << endl;
	return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (X) Convert To Decimal 2, **Accepted**, #, Copy

```cpp
#include <iostream>
#include <cmath>
using namespace std;
int main()
{
    int num, times;
    cin >> times;

    for (int i = 1; i <= times; i++)
    {
        cin >> num;
        int ones = 0;
        int plus = 0;
        int dec = 0;

        while (num != 0)
        {

            if (num % 2 == 1)
            {
                ones++;
                dec += 1 * pow(2, plus);
                plus++;
            }
            num /= 2;


        }

        cout << dec << endl;
    }
    return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (Y) Easy Fibonacci, **Accepted**, #, Copy

```cpp
#include <iostream>

using namespace std;
int main()
{
    int times, first, second, sum;
    cin >> times;

    for (int i = 0; i < times; i++)
    {

        if (i <= 1)
        {
            first = 0;
            second = 1;
            cout << i << " ";
        }
        else
        {
            sum = first + second;
            cout << sum << " ";
            first = second;
            second = sum;
        }

    }
    return 0;
}
```

By Mushii, contest: Sheet #2 (Loops), problem: (Z) Three Numbers, **Accepted**, #, Copy

```cpp
#include <iostream>

using namespace std;
int main()
{
    int max, sum, counter = 0;
    cin >> max >> sum;
    for (int i = 0; i <= max; i++)
    {
        for (int z = 0; z <= max; z++)
        {
            if (sum - i - z >= 0 && sum - i - z <= max)
            {
                counter++;
            }
        }
    }
    cout << counter;
return 0;
}
```