

You are given an positive integer N (Here N means number of terms) . Now print the following sequence as shown below.

For N=10, the sequence should be

0 1 1 2 3 5 8 13 21 34

Sample Input 1: Sample Output 1:

10 0 1 1 2 3 5 8 13 21 34

Sample Input 2: Sample Output 2:

1

Sample Input 3:

0

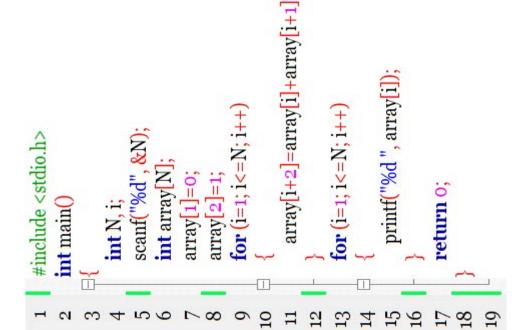
Sample Output 3:

2 01

Hints – Basically It's a Fibonacci sequence. The Fibonacci sequence is a sequence where the next term is the sum of

the previous two terms. The first two terms of the Fibonacci sequence are 0 followed by 1.

>> Implement it using array.





Write a C program to take one positive integer  $\mathbf{N}$ , the size of an array as input. Then take a positive integer array of size  $\mathbf{N}$  as input and sort the array in ascending order. It is guaranteed that the input array will contain distinct integers.

Note – It is possible to sort an array without any sorting algorithm. Hence for this problem you can't use any sorting algorithm.

Sample Input 1: Sample Output 1:

5 135617

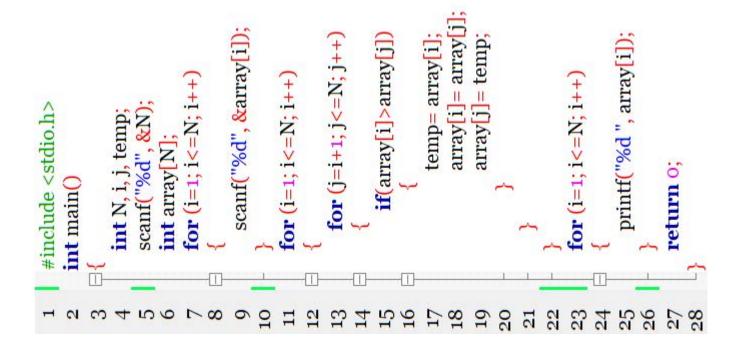
615317

Sample Input 2: Sample Output 2:

7 1 2 5 7 9 10 15

5 2 15 7 9 1 10

Hints – Check the 31<sup>st</sup> October conceptual session.





Write a C program to take one positive integer **N**, the size of an array as input. Then take a positive integer array of size **N** as input and tell if the sum of odd values is even or not.

If the sum of odd values is even print YES otherwise NO.

Sample Input 1: Sample Output 1:

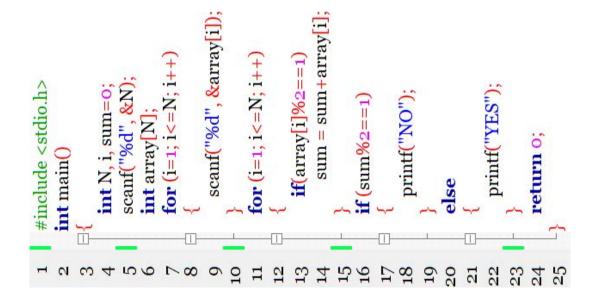
5 YES

52746

Sample Input 2: Sample Output 2:

5 NO

3 17 8 10 3





Write a C program to take one positive integer **N**, the size of an array as input. Then take a positive integer array of size **N** . And next line will contain k . Now find the k-th smallest element from the array.

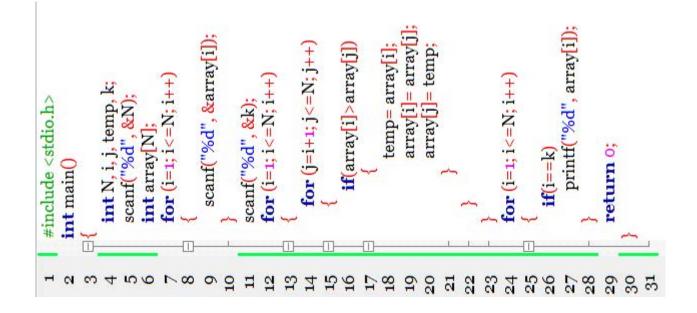
Sample Input: Sample Output:

6

6 25 1 4 9 17

3

Explanation – For the above test case k=3 means you need to find the 3<sup>rd</sup> smallest element from the array





Write a C program to take one positive integer **N**, the size of an array as input. Then take a positive integer array of size **N** . Now count the number of prime numbers from this array and print them.

In the sample output the first line will contain count of prime numbers and second line will contain the prime numbers.

Sample Input 1: Sample Output 1:

2

3

5

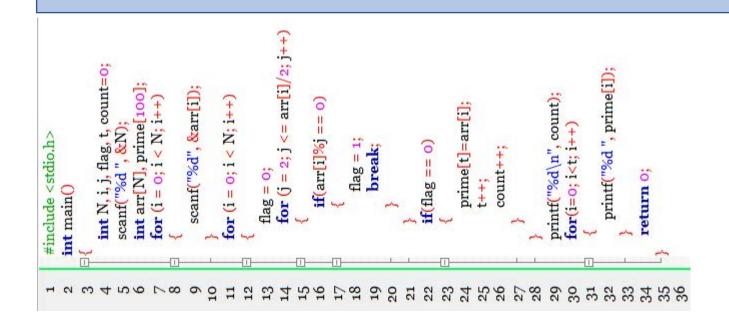
2 10 4 21 97

Sample Input 2: Sample Output 2:

6

5 12 16 19 23 9 5 19 23

Hints - Nested loop





Write a C program to take a positive integer N and print the pattern as shown below

For N=4, the pattern should be

Sample Input:

6

## **Sample Output:**

#include <stdio.h> 0 8 4 9

## **Codeforces Problem Link -**

- 1) https://codeforces.com/contest/707/problem/A
- 2) https://codeforces.com/contest/1472/problem/A
- 3) https://codeforces.com/problemset/problem/1676/B

```
// Brain's Photos: Codeforces
 1
 2
       #include<stdio.h>
 3
      int main()
 4
     ₽{
 5
        int a, b, flag=o, i;
 6
         char color;
 7
 8
         scanf("%d%d", &a, &b);
 9
10
        for(i=0; i<a*b*2; i++)
11
12
           scanf("%c", &color);
13
           if(color=='C' || color=='M' || color=='Y')
14
             flag = 1;
15
        }
16
17
        if(flag)
18
        printf("#Color");
19
20
         else
21
        printf("#Black&White");
22
23
         return o;
24
25
26
```

```
scanf("%d %d %lld", &w, &h, &n);
                                                                                                                while(w%2==0|| h%2==0)
// Cards for Friends: Codeforces
                                        int t, i, w, h;
long long int n, sheet;
scanf("%d", &t);
                                                                                                                                                         sheet=sheet*2;
                                                                                                                                                                                                                                                                                        printf("YES\n");
                                                                                                                                                                                                                                                                                                        printf("NO\n");
                                                                        int result[t];
for(i=1; i<=t; i++)</pre>
                                                                                                                                                                                                                                                                for(i=1; i<=t; i++)
                                                                                                                                                                                                                                                                                if(result[i]==1)
                                                                                                                                if(w%2==0)
                                                                                                                                                                                       h/=2;
sheet*=2;
                                                                                                                                                                        if(h%2==0)
                                                                                                                                                                                                                                               result[i]=0;
                 #include<stdio.h>
                                                                                                                                                                                                                                result[i]=1;
                                                                                                                                                                                                                        if(sheet>=n)
                                                                                                                                                 W=W/2;
                                                                                                         sheet= 1;
                         int main()
                                                                                                                                printf("%d\n", sum-(n*min));
// Equal Candies: Codeforces
                                                                                                                                           for(int j=0; j<n; j++)
                                                                                                                                                                                                           for(int j=0; j<n; j++)
                                                                                                                                                                scanf("%d", &a[j]);
                                                                                      for(int i=0; i<t; i++)
                                                                                                                                                                                                                                sum=sum+a[j];
                                                                                                                     scanf("%d", &n);
                    #include<stdio.h>
                                                                scanf("%d", &t);
                                                                                                                                                                                                                                           if(a[j]<min)
                                                                                                                                                                                                                                                                min=a[j];
                                                                                                                                                                                                 int min=a[0]
                                                                                                                                                                                       int sum=0;
                                                                                                                                int a[n];
                                                                                                                                                                                                                                                                                                                       return 0;
                                 int main()
                                                                                                            int ni
                                                      intt
                                                                                                                                                                                                                                                                                                            50
                                                                                                                                                                                                                                                                                                                      32 33
                                                                                                                                                                                                 19
                                                                                                                                                                                                            20
                                                                                                                                                                                                                                 22
23
24
25
26
26
27
                                                                                                                                                                                                                                                                                    27
28
                                                                                                   9
                                                                                                                                                                                      18
                                                                                                                                                                                                                      21
```