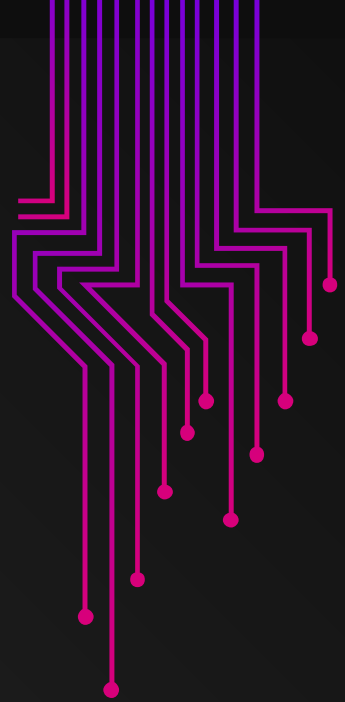
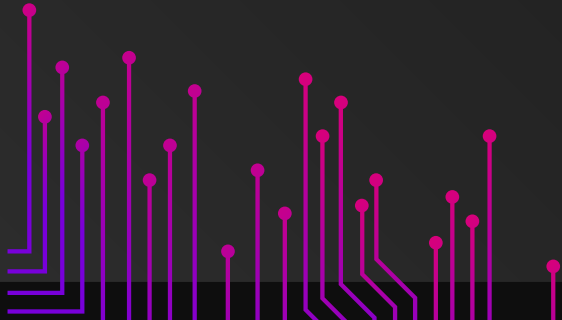


# C Programming Workshop

Loop in c programming by Tawhid Monowar



## Task 01: Print the sequences using for loop.

- 1, 2, 3...10
- 1, 3, 5...19
- 2, 4, 6...20
- 10, 9, 8...1
- 10, 1, 9, 2, 8, 3...1, 10
- 1, 2, 3... $\infty$

**Task 02:** Find the largest and smallest element of the array using for, while and do while loop.

```
arr[]={4, 6, 8, 1, 3, 0, -1, 8, 10, 2, -5};
```

**Task 03:** Try to generate the following series program using Nested Loop:

1

12

123

1234

12345

1

22

333

4444

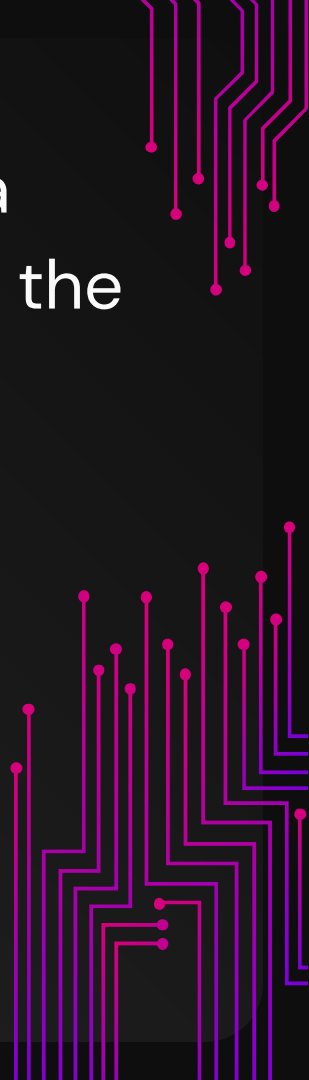
55555

# Task 03: Solution

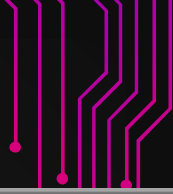
```
Start here x main.cpp x
1 #include <bits/stdc++.h>
2 using namespace std;
3
4 int main()
5 {
6     int n=5;
7
8     for(int i=0; i<=n; i++)
9     {
10         for(int j=0; j<i; j++)
11         {
12             cout << i ;
13         }
14         cout << endl;
15     }
16
17     return 0;
18 }
19
```

```
Start here x main.cpp x
1 #include <bits/stdc++.h>
2 using namespace std;
3
4 int main()
5 {
6     int n=5;
7
8     for(int i=0; i<=n; i++)
9     {
10         for(int j=1; j<=i; j++)
11         {
12             cout << j ;
13         }
14         cout << endl;
15     }
16
17     return 0;
18 }
19
```

**Task 04:** Write a program to keep asking for a number until you enter a negative number. At the end, print the sum of all entered numbers.



# Task 04: Solution



Start here × main.cpp ×

```
1  #include <bits/stdc++.h>
2  using namespace std;
3
4
5  int main()
6  {
7      long n,sum=0;
8
9      while(cin>>n && n>0)
10     {
11         sum+=n;
12     }
13
14     cout << sum << endl;
15
16     return 0;
17 }
18
```

**Task 05:** Dr. Bruce Banner hates his enemies (like others don't). As we all know, he can barely talk when he turns into the incredible Hulk. That's why he asked you to help him to express his feelings.

Hulk likes the Inception so much, and like that his feelings are complicated. They have  $n$  layers. The first layer is hate, second one is love, third one is hate and so on...

For example if  $n = 1$ , then his feeling is "I hate it" or if  $n = 2$  it's "I hate that I love it", and if  $n = 3$  it's "I hate that I love that I hate it" and so on.

Examples:

Input

1

Output

I hate it

Input

2

Output

I hate that I love it

Input

3

Output

I hate that I love that I hate it

Problem link: <https://codeforces.com/problemset/problem/705/A>



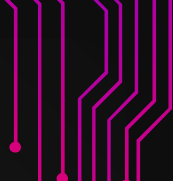
# Task 05: Solution

```
art here x main.cpp x
1  #include<stdio.h>
2
3  int main()
4  {
5      int n,i;
6      scanf("%d",&n);
7
8      for(i=1; i<=n-1; i++) {
9          if(i%2) {
10             printf("I hate that ");
11
12             } else {
13                 printf("I love that ");
14             }
15         }
16
17         if(i%2) {
18             printf("I hate it ");
19
20         } else {
21             printf("I love it ");
22         }
23     }
```

## Bonus Task:

Link: <https://codeforces.com/contest/1828/problem/A>

# Bonus Task: Solution



Start here × \*main.cpp ×

```
1 void solve(long test_case)
2 {
3     long n;
4     cin >> n;
5
6     if(n%2)
7     {
8         for(long i=1; i<=n; i++)
9         {
10             cout << i << " ";
11         }
12     }
13     else
14     {
15         long temp=0;
16         for(long i=0; i<n; i++)
17         {
18             temp+=2;
19             cout << temp << " ";
20         }
21     }
22
23     cout << endl;
24
25 }
```