



SOFTWARE INCUBATOR

Presents

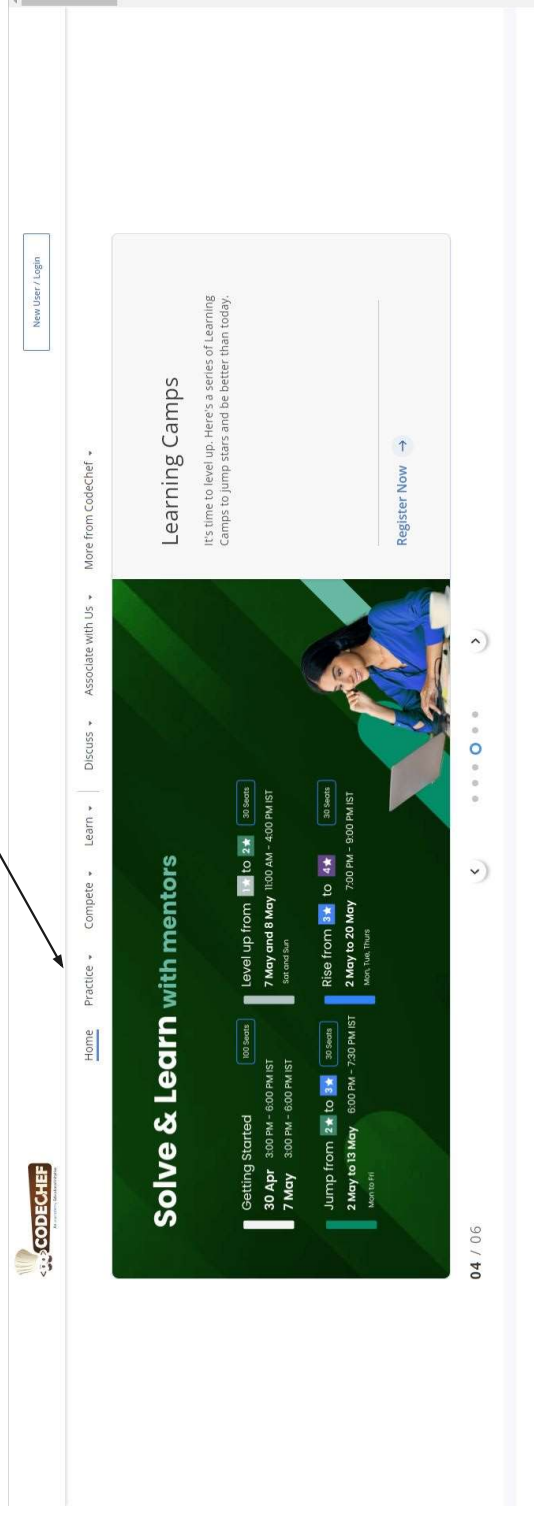
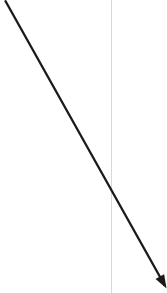
SINTAX

A Competitive Programming Workshop


Codechef setup

Open - [.codechef.com/](https://www.codechef.com/)

Contest Link: <https://www.codechef.com/SINT22TS>



Click on Code, Compile and Run (IDE)



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PRACTICE

Practice Problems →

IDE

Code, Compile and Run (IDE) →

MAY COOKOFF

01 2022

08:00 PM - 10:30 PM

Contest Duration: 2.5 H

Rated for All

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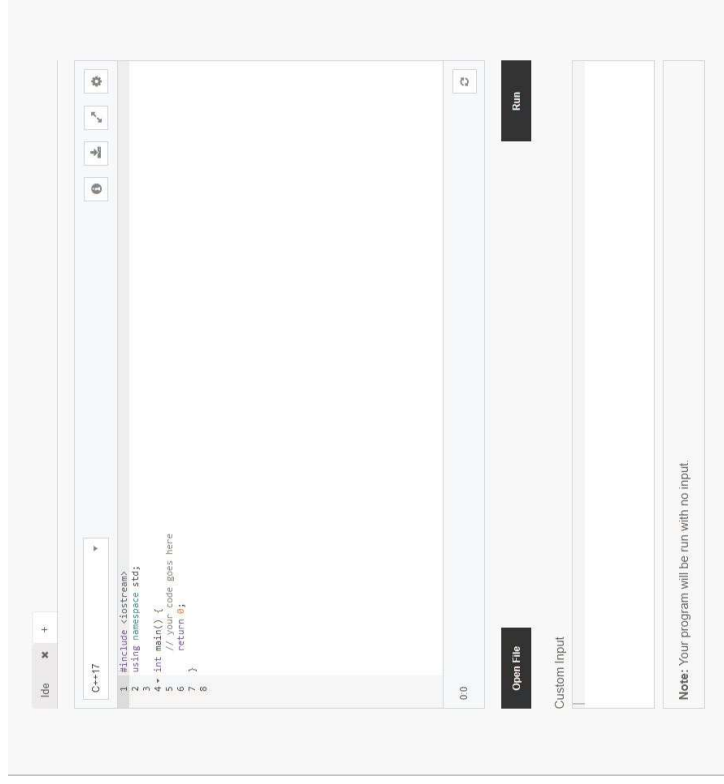
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Write your code in editor



Why?

Let's Begin!

PRINT “HELLO WORLD” IN C

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

```
int main()  
{  
    printf("Hello World");  
    return 0;  
}
```

Output
Hello World

PRINT "HELLO WORLD" IN C++

```
#include<bits/stdc++.h>
using namespace std;

int main()
{
    printf("Hello World");
    return 0;
}
```

Output
Hello World

```
#include<bits/stdc++.h>
using namespace std;
```

```
int main()
{
    cout << "Hello World";
    return 0;
}
```

Output
Hello World

INPUT OUTPUT IN C++

```
#include<bits/stdc++.h>
using namespace std;
int main( )
{
    int x;
    scanf("%d", &x);
    printf("%d",x);
    return 0;
}
```

INPUT

5

OUTPUT

5

```
#include<bits/stdc++.h>
using namespace std;

int main()
{
    int x;
    cin >> x;
    cout << x;
    return 0;
}
```

INPUT

5

OUTPUT

5

```
#include<bits/stdc++.h>
using namespace std;

int main()
{
    int x; cin>>x;cout<<x;
    return 0;
}
```

INPUT

5

OUTPUT

5

DATA TYPES

Data Type is the type of data or information we are going to store in the variable.

E.g:- **int, float, char, string, long long int** etc.

<https://www.geeksforgeeks.org/c-data-types/> refer

```
#include<bits/stdc++.h>
using namespace std;
```

```
int main()
{
    int a, b;
    float avg= 0;
    cin>>a;
    cin>>b;
    avg = (a + b) / 2;
    cout << avg;
    return 0;
}
```

INPUT

4 5

OUTPUT

4

```
#include<bits/stdc++.h>
using namespace std;
int main() {
    int a, b;
    float avg= 0;
    cin>>a;
    cin>>b;
    avg = (float)(a + b) / 2;
    //avg=((float)a+b)/2;
    //avg=(a+b)/2.0;
    cout << avg;
    return 0;
}
```

INPUT

4 5

OUTPUT

4.5

if - else STATEMENT

```
if(condition)
{
    // is true
    statements
}
else
{
    // is false
    statements
}
```

```
#include<bits/stdc++.h>
using namespace std;
```

```
int main()
{
    int a, b;
    cin >> a >> b;
    if(a > b) {
        cout << a;
    }
    else {
        cout << b;
    }
    return 0;
}
```

INPUT

37

OUTPUT

7

NESTED if - else

```
if(condition) {  
    // is true  
    statements  
}  
else {  
    if(condition) {  
        statement  
    }  
    else{  
        statement  
    }  
}
```



```
#include<bits/stdc++.h>
using namespace std;
int main()
{
    int a, b;
    cin >> a >> b;
    if(a > b) {
        cout << a;
    }
    else {
        if(b > a)
            cout << b;
        else
            cout << "Numbers are equal";
    }
    return 0;
}
```

INPUT

7 7

OUTPUT

Numbers are equal

Else - If

```
if(condition) {  
    // is true  
    statements  
}  
else if(condition) {  
    // is true  
    statements  
}  
else {  
    // is false  
    statements  
}
```

```
#include<bits/stdc++.h>
using namespace std;
```

```
int main() {
    int a,b;
    cin >> a >> b;
    if(a > b)
        cout << a;
    else if(a < b)
        cout << b;
    else
        cout<<"Nos. are equal";
    return 0;
}
```

INPUT

8 4

OUTPUT

8

INPUT

4 4

OUTPUT

Nos. are equal

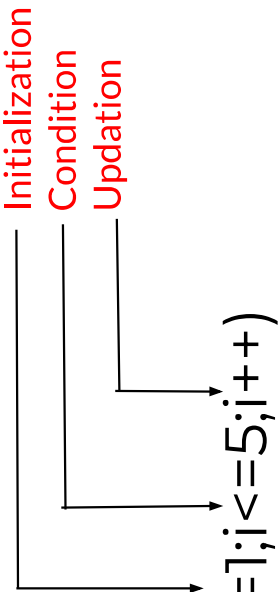
ITERATION (LOOP)

```
#include<bits/stdc++.h>
using namespace std;
int main()
{
    cout<<"Tareekh\n";
    cout<<"Tareekh\n";
    cout<<"Tareekh\n";
    cout<<"Tareekh\n";
    cout<<"Tareekh\n";
    return 0;
}
```

FOR LOOP

```
#include<bits/stdc++.h>
using namespace std;

int main()
{
    for(int i=1;i<=5;i++)
    {
        cout<<"Tareekh\n";
    }
    return 0;
}
```



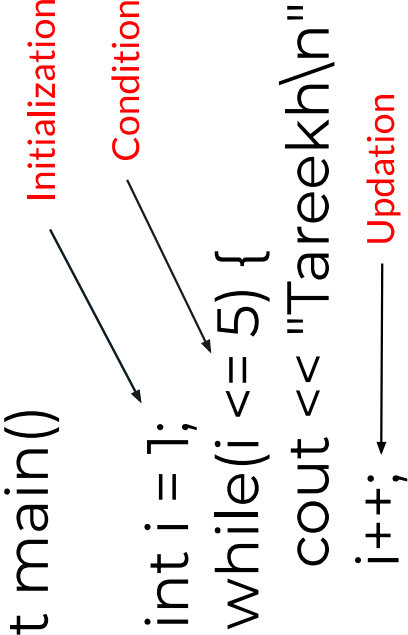
The diagram illustrates the three components of the for loop syntax: **Initialization** (i=1), **Condition** (i<=5), and **Updation** (i++). Arrows point from these labels to their respective parts in the code snippet.

Output

Tareekh
Tareekh
Tareekh
Tareekh
Tareekh

WHILE LOOP

```
#include<bits/stdc++.h>
using namespace std;
int main()
{
    int i = 1;
    while(i <= 5) {
        cout << "Tareekh\n";
        i++;
    }
    return 0;
}
```



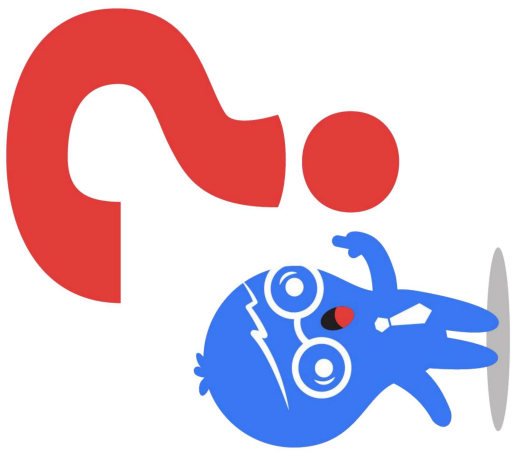
Output

Tareekh
Tareekh
Tareekh
Tareekh
Tareekh

EVEN SUM

Q.) Find the sum of even natural numbers upto n ?

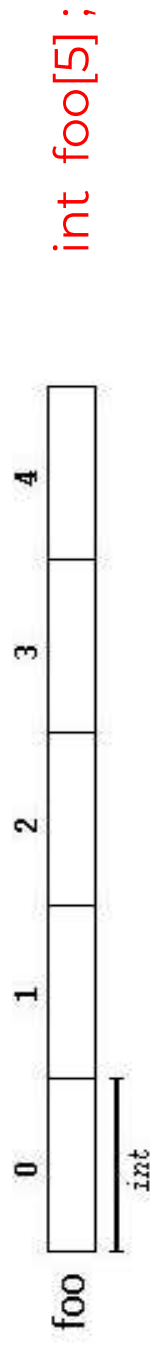
<https://ideone.com/F8f48L>



ARRAY

An array is a collection of elements of the same data type placed in contiguous memory locations .

For example, a five element integer array foo may be logically represented as:



Where 0,1,2,.. are index of the array that are used for individual reference.

```
int a[5] = {2,4,5,6,1};
```

OR

```
int a[5]; // where 5 is size..
```

```
for(int i=0;i<5;i++)
```

```
{
```

```
    cin>>a[i];
```

```
}
```

2	4	5	6	1
0	1	2	3	4

```
char a[4] = {'a','c','d','i'};
```

OR

```
char a[4];
```

```
for(int i=0;i<4;i++)
```

```
{
```

```
    cin>>a[i];
```

```
}
```

“String is a character array in C++”.

a	c	d	i
0	1	2	3

Chocolate Question!

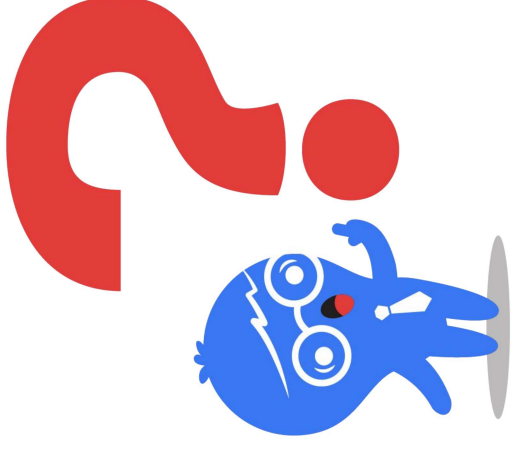
```
int arr[5]={1,2};
```

What will be the value of arr[3] ?

ODD COUNT (ARRAY)

Q.) Given an array find the count of odd numbers present in it.

<https://ideone.com/8hKDzo>



Not Char Array

Q.) Write a program to perform Input and Output operation on string

