



# SKILLS

## C++ Assignments | Loops-2 | Week 3

### 1. . Predict the output

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

using namespace std;

int main( ){
    int main( ) {
        cout << "In while loop" << endl;
    }
}
```

Ans infinite loop

```
In while loop
In while loop
In while loop
In while loop
In while loop
In while loop
.
.
.
```

### 2. Predict the output

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

using namespace std;

int main( ) {
    int t = 10;
    while (t /= 2) {
        cout << "Hello" << endl;
    }
}
```

Ans hello

Hello

Hello

### 3. Predict the output

```
#include <bits/stdc++.h>
using namespace std;
int main( ){
for (int x = 1; x * x <= 10; x++)
cout << "In for loop" << endl;
}
```

Ans

In while loop

In while loop

In while loop

### 4. Predict the output

```
#include <bits/stdc++.h>
using namespace std;
int main( ) {
int x = 10, y = 0 ;
while ( x >= y ) {
x-- ;
y++ ;
cout << x << " " << y << endl;
}
```

Ans

9      1

8      2

7      3

6      4

5      5

4      6

### 5. WAP to print the sum of all the even digits of a given number

Sample Input : 4556

Output: 10

```
ANS #include <iostream>
```

```
Using namespace std;
```

```
int main(){
```

```
int n;
```

```
cin>>n;
```

```
int sum=0;
```

```
while(n>0){
```

```
int x=n%10;
```

```
sum+=(x%2==0? X:0);
```

```
n/=10;
```

```
}
```

```
Cout<<sum;
```

6. WAP to print the sum of a given number and its reverse.

Sample input : 12

Sample Output : 33 [12+21]

Ans

```
# include <iostream>
```

```
Using namespace std;
```

```
Int n;
```

```
Cin<<n;
```

```
Int temp = n, x=0;
```

```
While(temp >0){
```

```
X*=10;
```

```
X+= (temp % 10);
```

```
temp /= 10;

}

Cout<<n + x<<endl;

}
```

### 7. Print the factorials of first 'n' numbers

Sample Input : 10

Output :

1  
2  
6  
24  
120  
720  
5040  
40320  
362880

Ans

```
# include <iostream>
Using namespace std;
int main(){
int n;
cin>>n;
int f=1;
for(int i=1; i<=n; i++){
f*=i;
cout<<f<<endl;
}
}
```

### 8. Print first 'n' fibonacci numbers.

Sample Input : 10

Output : 1 1 2 3 5 8 13 21 34 55

ANS

```
#include <iostream>

Using namespace std;

int n;

cin>>n;

int f0=1.f1=1;

cout<< f0<<" "<< f1 << " ";

for(int l=3; l<=n;l++){

    int next = f0 + f1;

    cout<< next<<" ";

    f0 =f1;

    f1 = next;

}

]
```

9. Write a program to print out all Armstrong numbers between 1 and 500. If the sum of cubes of each digit of the number is equal to the number itself, then the number is called an Armstrong number. For example,  $153 = (1 * 1 * 1) + (5 * 5 * 5) + (3 * 3 * 3)$

output

1  
153  
370  
371  
407

Ans

```
#include <iostream>
Using namespace std;
int main(){
    For (int i=1; i<=500; i++){
        int x=0; temp>0){
            While (temp>0){
                int m=temp % 10){
                    X+=m*m*m;
                    Temp /=10;
                }
            }
            If(i==x){
                Cout<<i<<endl;
            }
        }
    }
}
```

