

NAME – KHUSHI PANWAR, khushipanwar26@gmail.com

ROLL NO – 33

C++ PRACTICAL ASSIGNMENT – 09 DEC 2021

#1 WAP that uses Manipulators : endl,dec,oct,hex,fixed,showpoint,setw(),setprecision(), setfill():

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

int main(){
    int num1=123;

    cout<<setw(60)<<"__ DEALING WITH MANIPULATORS __"<<endl;
    cout<<setw(60)<<"[ endl, dec, oct, hex, fixed, showpoint, setw(), setprecision(), setfill() ]"<<endl;

    cout<<"\nValue of num1 : "<<num1<<endl;
    cout<<"num1 as decimal : "<<dec<<num1<<endl;
    cout<<"num1 as octal : "<<oct<<num1<<endl;
    cout<<"num1 as hexadecimal : "<<hex<<num1<<endl;

    float num2=123.456;

    cout<<"\nValue of num2 : "<<num2<<endl;

    cout<<"\nnum2 with width 10 : "<<setw(10)<<num2<<endl;
    cout<<"num2 with fill character : "<<setw(10)<<setfill('*')<<num2<<endl;

    cout<<"\nnum2 as fixed floating point decimal : "<<fixed<<num2<<endl;
    cout<<"num2 with set precision value 2 : "<<setprecision(2)<<num2<<endl;
    cout<<"num2 with the float point value (for 0 setprecision) : "<<setprecision(0)<<showpoint<<num2<<endl;

    return 0;
}
```

```

    ____ DEALING WITH MANIPULATORS ____
[ endl, dec, oct, hex, fixed, showpoint, setw(), setprecision(), setfill() ]

Value of num1 : 123
num1 as decimal : 123
num1 as octal : 173
num1 as hexadecimal : 7b

Value of num2 : 123.456

num2 with width 10 :    123.456
num2 with fill character : ***123.456

num2 as fixed floating point decimal : 123.456001
num2 with set preicision value 2 : 123.46
num2 with the float point value (for 0 setprecision) : 123.

[Done] exited with code=0 in 0.696 seconds

```

#2- WAP to test the Post and pre increment and decrement operators:

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

int main(){
    cout<<"** POST AND PRE INCREMENT AND DECREMENT OPERATORS **"<<endl;

    cout<<endl<<"__ POST INCREMENT, DECREMENT OPERATORS __"<<endl;
    cout<<endl;

    int a=15;
    cout<<"Value of a : "<<a<<endl;
    cout<<"Value of a++ : "<<a++<<endl;
    cout<<"NEW Value of a : "<<a<<endl;
    cout<<endl;

    int b=10;
    cout<<"Value of b : "<<b<<endl;
    cout<<"Value of b-- : "<<b--<<endl;
    cout<<"NEW Value of b : "<<b<<endl;
    cout<<endl;

    cout<<endl<<"__ PRE INCREMENT, DECREMENT OPERATORS __"<<endl;
    cout<<endl;

    int c=20;
    cout<<"Value of c : "<<c<<endl;
    cout<<"Value of ++c : "<<++c<<endl;
}
```

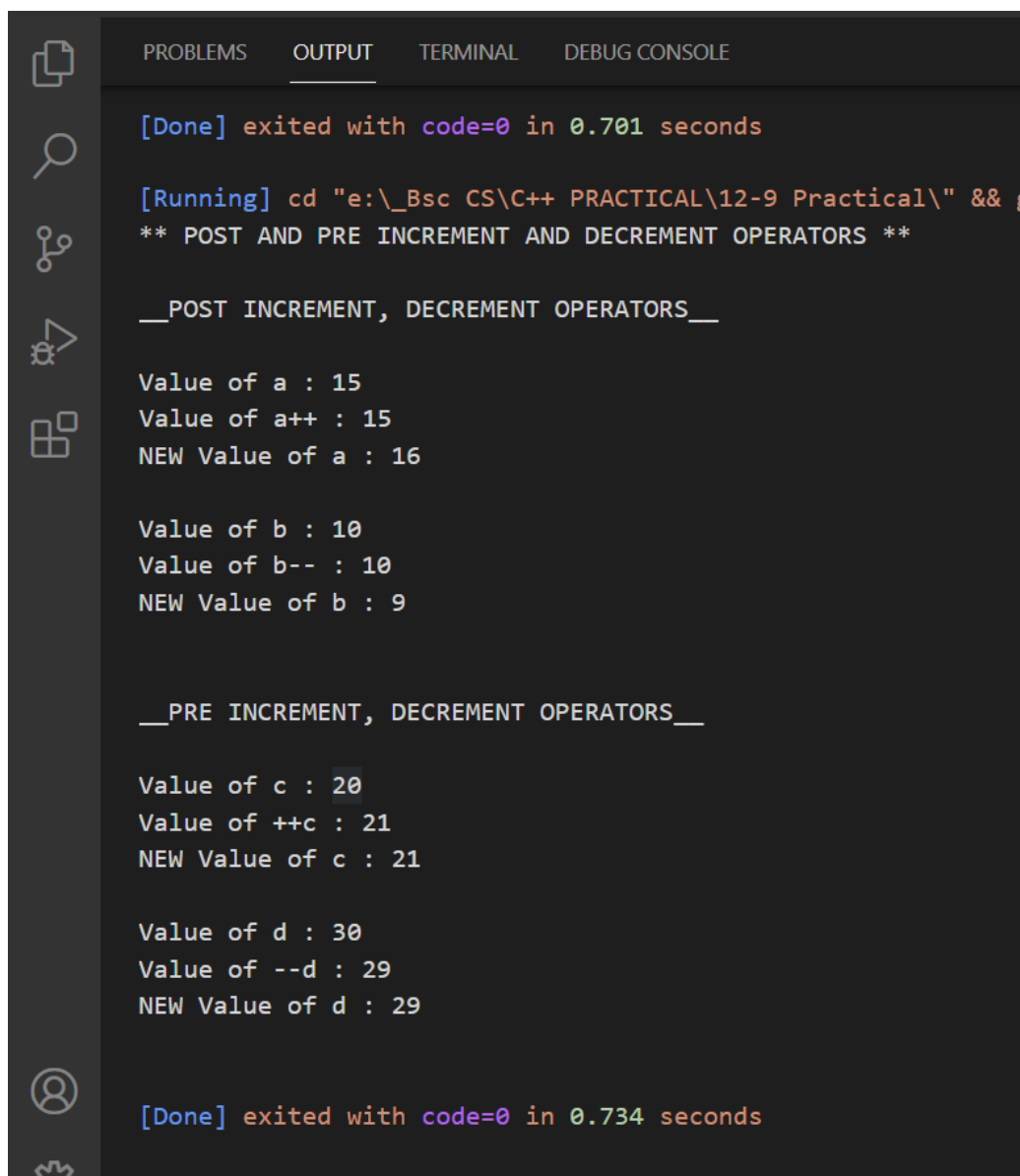
```

cout<<"NEW Value of c : "<<c<<endl;
cout<<endl;

int d=30;
cout<<"Value of d : "<<d<<endl;
cout<<"Value of --d : "<<--d<<endl;
cout<<"NEW Value of d : "<<d<<endl;
cout<<endl;

return 0;
}

```



The screenshot shows the output of a C++ program in an IDE. The output window has tabs for PROBLEMS, OUTPUT, TERMINAL, and DEBUG CONSOLE. The OUTPUT tab is active, displaying the following text:

```

[Done] exited with code=0 in 0.701 seconds

[Running] cd "e:\_Bsc CS\C++ PRACTICAL\12-9 Practical\" && g
** POST AND PRE INCREMENT AND DECREMENT OPERATORS **

__POST INCREMENT, DECREMENT OPERATORS__

Value of a : 15
Value of a++ : 15
NEW Value of a : 16

Value of b : 10
Value of b-- : 10
NEW Value of b : 9

__PRE INCREMENT, DECREMENT OPERATORS__

Value of c : 20
Value of ++c : 21
NEW Value of c : 21

Value of d : 30
Value of --d : 29
NEW Value of d : 29

[Done] exited with code=0 in 0.734 seconds

```

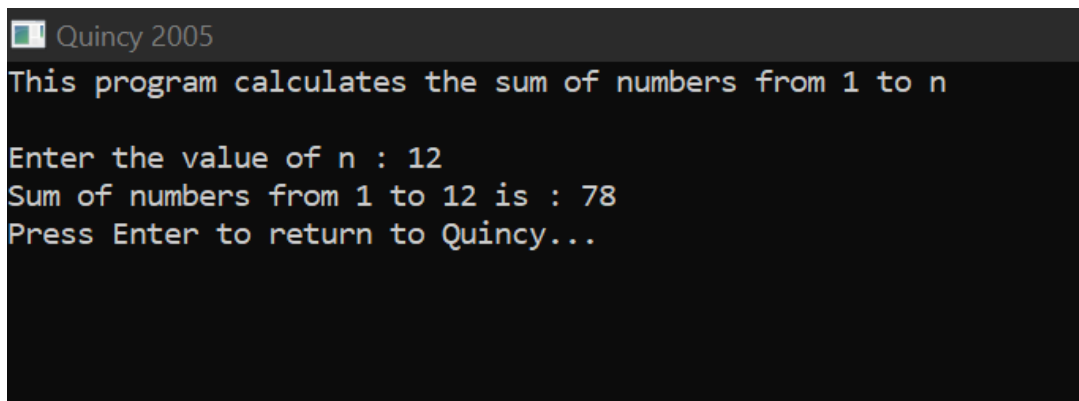
#3 Program to find sum of numbers from 1 to n using for loop:

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

int main(){

    int n, i ;
    int sum=0;
    cout<<"This program calculates the sum of numbers from 1 to n"<<endl;
    cout<<"\nEnter the value of n : ";
    cin>>n;

    for (i=1 ; i<=n; i++) {
        sum=sum+i;
    }
    cout<<"Sum of numbers from 1 to "<<n<<" is : "<<sum;
    return 0;
}
```



#4- Write a C++ program that check if the input is prime number or not:

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

int main(){
    cout<<setw(100)<<"__THIS PROGRAM CHECKS IF THE NUMBER IS PRIME OR COMPOSITE__"<<endl;
    cout<<endl;

    int k=0;
    for (k=0;k<5;k++){
        int num;
        int flag=0;

        cout<<"Enter the number : ";
        cin>>num;
        int i=2;
```

```

        while(i<num){
            if (num%i==0) { flag=1; }
            i++;
        }

    if (flag==1)
        cout<<num<<" is composite number (non prime) "<<endl<<"\n -----*****-----\n"<<endl;

    else
        cout<<"The Number is Prime"<<endl<<"\n-----*****-----\n"<<endl;

}

    return 0;
}

```

```

__THIS PROGRAM CHECKS IF THE NUMBER IS PRIME OR COMPOSITE__

Enter the number : 12
12 is composite number (non prime)
-----*****-----

Enter the number : 13
The Number is Prime
-----*****-----

Enter the number : 14
14 is composite number (non prime)
-----*****-----

Enter the number : 15
15 is composite number (non prime)
-----*****-----

Enter the number : 16
16 is composite number (non prime)
-----*****-----

Press Enter to return to Quincy...

```

#4- WAP to display the fibonacci series: 1 1 2 3 5 8.....n

```

#include <iostream>
#include <iomanip>
using namespace std;

int main(){

    cout<<setw(30)<<"__FIBONACCI SERIES__\n"<<endl;

```

```

int num, t1, t2;

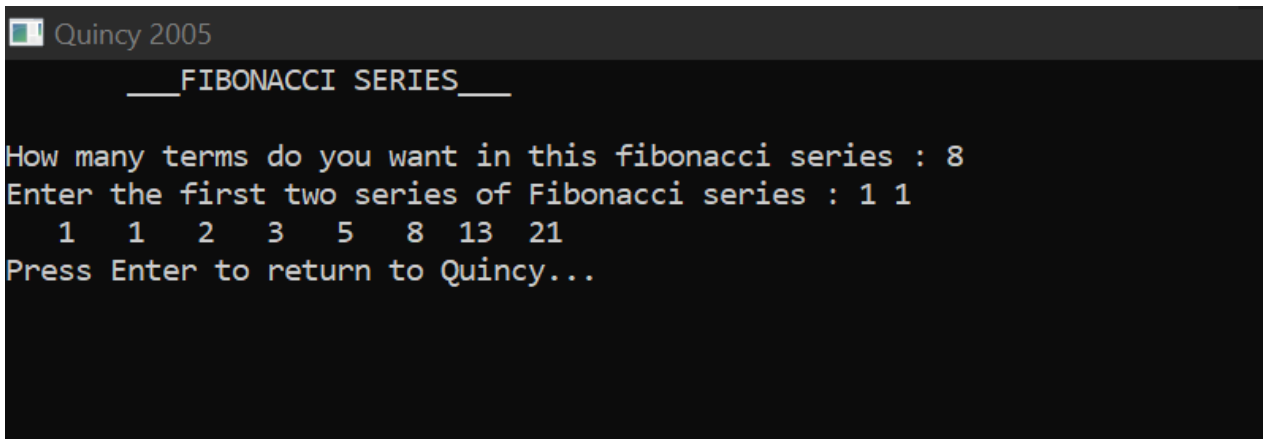
cout<<"How many terms do you want in this fibonacci series : ";
cin>>num;

cout<<"Enter the first two series of Fibonacci series : ";
cin>>t1>>t2;
cout<<setw(4)<<t1<<setw(4)<<t2;

int n=3;
while (n<=num){
    int sum=t1+t2;
    cout<<setw(4)<<sum;
    t1=t2;
    t2=sum;
    n++;
}

return 0;
}

```



```

Quincy 2005
    _FIBONACCI SERIES_

How many terms do you want in this fibonacci series : 8
Enter the first two series of Fibonacci series : 1 1
    1  1  2  3  5  8 13 21
Press Enter to return to Quincy...

```

#5- WAP to display the sum of all even and odd numbers between 1 to n:

```

#include<iostream>
#include<iomanip>
using namespace std;

int main(){
    int num;
    int sumOdd=0;
    int sumEven=0;

```

```

cout<<setw(50)<<"* CALCULATE THE SUM OF ODD AND EVEN NUMBERS *"<<endl;

cout<<"\nThis program calculates the sum of all odd and even numbers from 1 to n."<<endl;

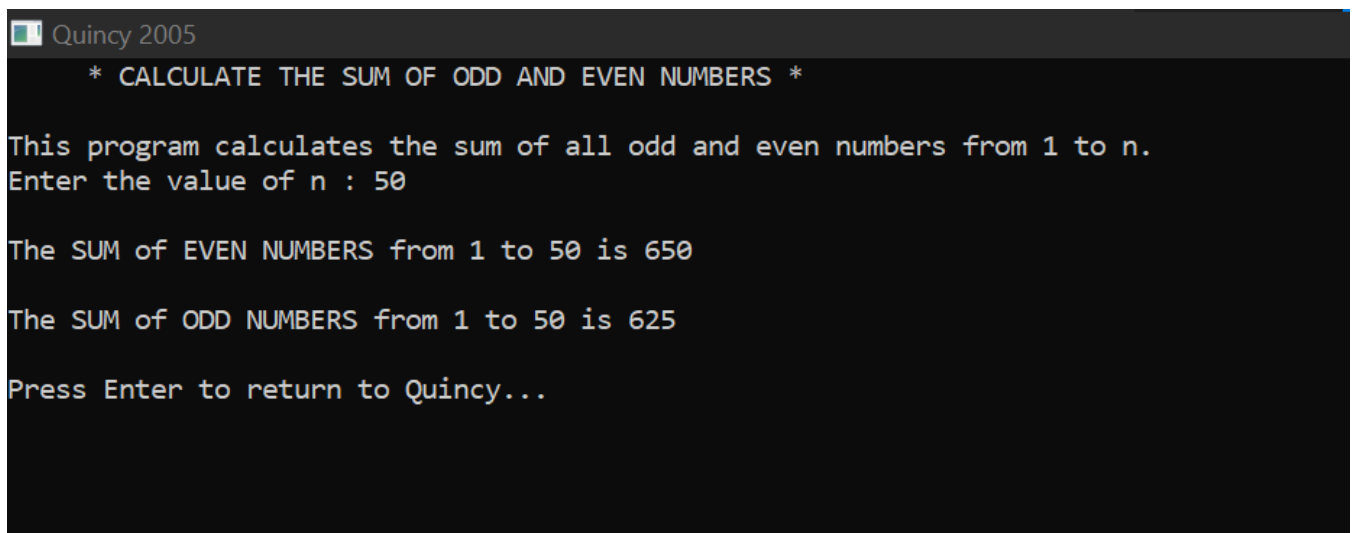
cout<<"Enter the value of n : ";
cin>>num;

int i=0;
while (i<=num){
    if (i%2==0){
        sumEven=sumEven+i;
    }
    else{
        sumOdd=sumOdd+i;
    }
    i++;
}

cout<<"\nThe SUM of EVEN NUMBERS from 1 to "<<num<<" is "<<sumEven<<endl;
cout<<"\nThe SUM of ODD NUMBERS from 1 to "<<num<<" is "<<sumOdd<<endl;

return 0;
}

```



```

Quincy 2005
* CALCULATE THE SUM OF ODD AND EVEN NUMBERS *

This program calculates the sum of all odd and even numbers from 1 to n.
Enter the value of n : 50

The SUM of EVEN NUMBERS from 1 to 50 is 650

The SUM of ODD NUMBERS from 1 to 50 is 625

Press Enter to return to Quincy...

```