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SEC:-CSE-36

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1.WAP to add two numbers.

```
kiit@GOURAV-CHAKRABORTY: ~
  GNU nano 4.8
#include <iostream>
using namespace std;
void add (int c,int d)
{
cout<<"The sum of the numbers is"<<c+d<<endl;


}
int main()
{
int a,b;
cout<<"enter two numbers = ";
cin>>a>>b;
add(a,b);

}
```

```
kiit@GOURAV-CHAKRABORTY:~$ g++ prog1.cpp -o a
kiit@GOURAV-CHAKRABORTY:~$ ./a
enter two numbers = 45 64
The sum of the numbers is109
```

2.WAP to check even or odd

```
GNU nano 4.8
#include <iostream>
using namespace std;

void checknum(int n)
{
        if (n%2!=0)
                {
                        cout<<"The number is a odd number";
                }

        else
                {
                        cout<<"the number is an even number";
                }
}

int main()
{
        int a;
        cin>>a;
        checknum(a);
        return 0;
}
```

```
kiit@GOURAV-CHAKRABORTY:~$ g++ 2707prog2.cpp -o a
kiit@GOURAV-CHAKRABORTY:~$ ./a
7
The number is a odd numberkiit@GOURAV-CHAKRABORTY:~$
```

3.WAP to find factorial of number

```cpp
GNU nano 4.8
#include <iostream>
using namespace std;
int c=1;
void fact (int n)
{

        if (n!=0)
        {
        c=c*n;
        n--;
        fact(n);
        }
else{
        cout<<"The factorial is"<<c;
}
}

int main()
{
        int a;
        cout<<"Enter a number";
        cin>>a;
        fact(a);
}
```

```
kiit@GOURAV-CHAKRABORTY: ~
kiit@GOURAV-CHAKRABORTY:~$ g++ 2707prog3.cpp -o a
kiit@GOURAV-CHAKRABORTY:~$ ./a
Enter a number4
The factorial is24kiit@GOURAV-CHAKRABORTY:~$
```

4.WAP to swap two numbers(call by value ,call by reference and call b y address)

```cpp
GNU nano 4.8
#include <iostream>
using namespace std;

void swap(int *m,int *n)
{
int z,x;
z=*n;
x=*m;
cout <<"The swapped numbers are"<<z<<"\t"<<x<<endl;
}
int main()
{
int a,b;
cout<<"Enter two numbers";
cin>>a>>b;
swap(&a,&b);

}
```

```cpp
GNU nano 4.8
#include <iostream>
using namespace std;
void swap(int a, int b)
{
        int temp;
        temp=a;
        a=b;
        b=temp;
        cout<<"Swapped numbers are"<<"\t" <<a<<"\t"<<b<<endl;
}

int main()
{
        int x,y;
        cout<<"Enter the two numbers to be swapped";
        cin>>x>>y;
        swap(x,y);
        return 0;
}
```

```
kiit@GOURAV-CHAKRABORTY:~$ g++ 2707prog4.cpp -o a
kiit@GOURAV-CHAKRABORTY:~$ ./a
Enter two numbers6 7
The swapped numbers are7        6
kiit@GOURAV-CHAKRABORTY:~$
```
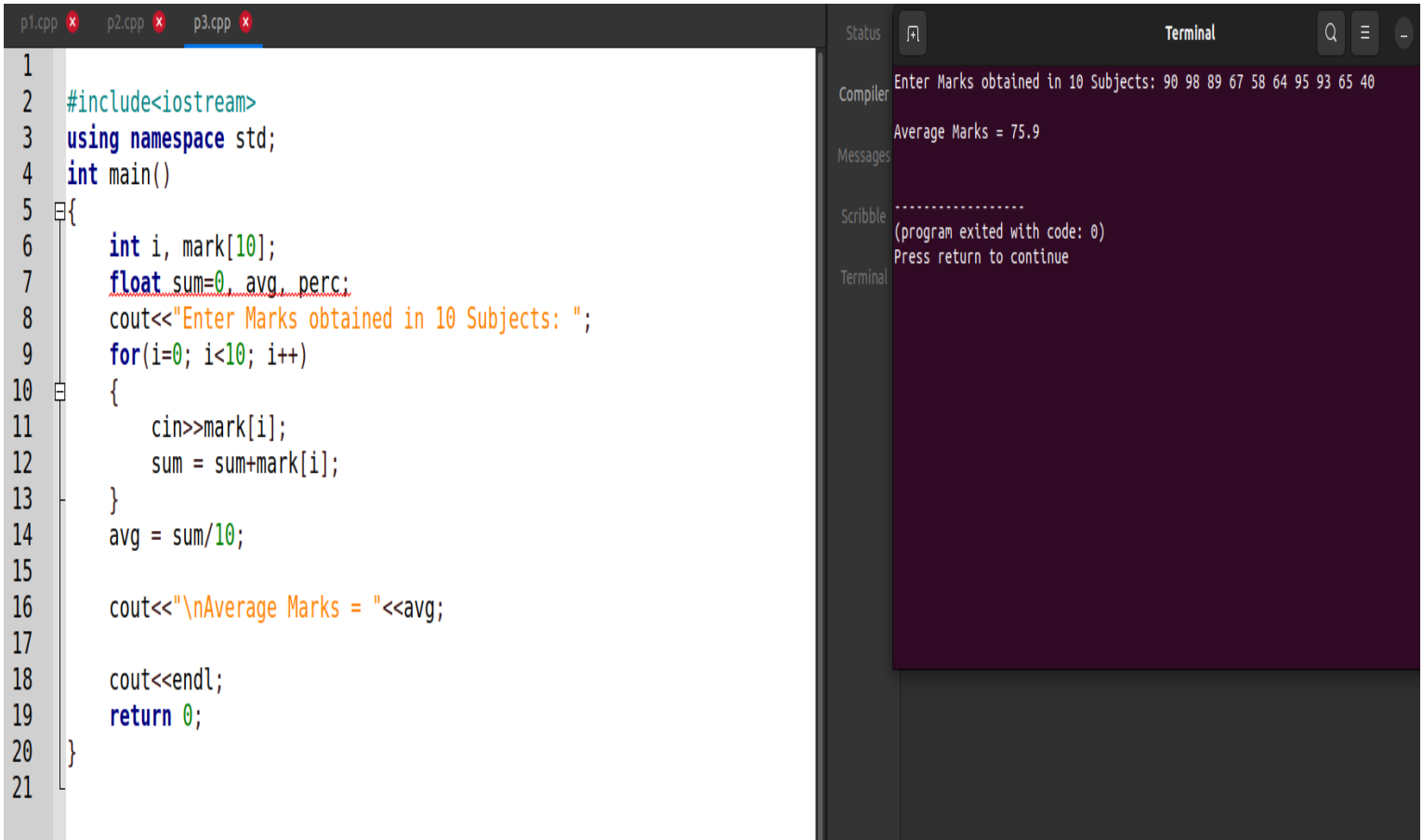
```
kiit@GOURAV-CHAKRABORTY:~$ g++ dryrun.cpp -o a
kiit@GOURAV-CHAKRABORTY:~$ ./a
Enter the two numbers to be swapped22 30
Swapped numbers are     30      22
kiit@GOURAV-CHAKRABORTY:~$
```

5.WAP to calculate the area of the triangle using Heron's formula.

```
GNU nano 4.8
#include <iostream>
#include <cmath>
using namespace std;

void area(int a,int b,int c)
{
int s;
s=(a+b+c)/2;
int area;
area = sqrt(s*(s-a)*(s-b)*(s-c));
cout<<area;
}
int main()
{
int m,n,l;
cin>>m>>n>>l;
area(m,n,l);
return 0;

}
```

```
kiit@GOURAV-CHAKRABORTY: ~
kiit@GOURAV-CHAKRABORTY:~$ g++ 2707prog5.cpp -o a
kiit@GOURAV-CHAKRABORTY:~$ ./a
8 9 10
27kiit@GOURAV-CHAKRABORTY:~$
```

6.Program to find average marks obtained by a class of 10 students in a test.

```cpp
#include<iostream>
using namespace std;
int main()
{
    int i, mark[10];
    float sum=0, avg, perc;
    cout<<"Enter Marks obtained in 10 Subjects: ";
    for(i=0; i<10; i++)
    {
        cin>>mark[i];
        sum = sum+mark[i];
    }
    avg = sum/10;

    cout<<"\nAverage Marks = "<<avg;

    cout<<endl;
    return 0;
}
```

```
Enter Marks obtained in 10 Subjects: 90 98 89 67 58 64 95 93 65 40

Average Marks = 75.9

-----------------
(program exited with code: 0)
Press return to continue
```
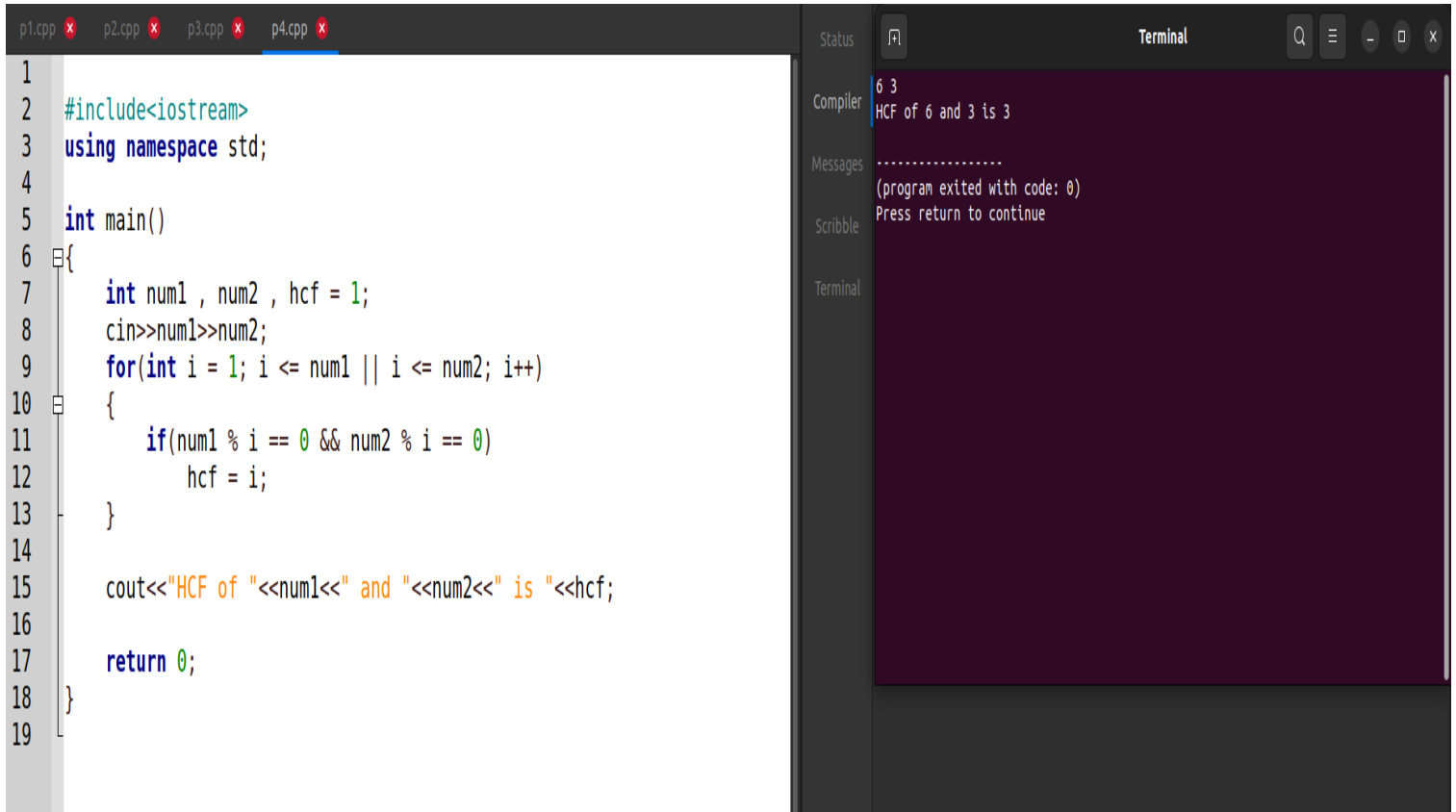
7.WAP to calculate the sum of digits of a given number.

```
kiit@GOURAV-CHAKRABORTY: ~
  GNU nano 4.8
#include <iostream>
using namespace std;
int s=0,b;
void sumofdigits(int n)
{

if (n!=0)
{
b=n%10;
s=s+b;

sumofdigits(n/10);
}
else
{
cout<<"sum of digits"<<s<<endl;

}
}
int main()
{
int a;
cout<<"enter a number";
cin>>a;
sumofdigits(a);
return 0;

}
```

```
kiit@GOURAV-CHAKRABORTY: ~
kiit@GOURAV-CHAKRABORTY:~$ g++ 2707prog6.cpp -o a
kiit@GOURAV-CHAKRABORTY:~$ ./a
enter a number7690
sum of digits22
kiit@GOURAV-CHAKRABORTY:~$
```

8.WAP to find the GCD/HCF of two numbers .

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

int main()
{
    int num1 , num2 , hcf = 1;
    cin>>num1>>num2;
    for(int i = 1; i <= num1 || i <= num2; i++)
    {
        if(num1 % i == 0 && num2 % i == 0)
            hcf = i;
    }

    cout<<"HCF of "<<num1<<" and "<<num2<<" is "<<hcf;

    return 0;
}
```

```
6 3
HCF of 6 and 3 is 3

-----------------
(program exited with code: 0)
Press return to continue
```

9.WAP to check whether a number n is prime number or not.

```cpp
GNU nano 4.8
#include <iostream>
using namespace std;
int main()
{
int i,n;
bool is_prime= true;
cout <<"Enter a positive Integer";
cin >>n;

if (n==0||n==1)
{is_prime= false;

}
for (i=2;i<=n/2;++i)
{
if (n%i==0){
is_prime = false;
break;
}
}
if (is_prime)
cout <<n<<"is a prime number";
else
cout <<n<<"is not a prime number";
return 0;

}
```

```
kiit@GOURAV-CHAKRABORTY: ~
kiit@GOURAV-CHAKRABORTY:~$ g++ 2707prog7.cpp -o a
kiit@GOURAV-CHAKRABORTY:~$ ./a
Enter a positive Integer67
67is a prime numberkiit@GOURAV-CHAKRABORTY:~$
```

10.WAP to check whether an input integer is perfect number or not.

```cpp
#include<iostream>
using namespace std;
int main ()
{
    int i, num, div, sum=0;
    cout << "Enter the number to be checked : ";
    cin >> num;
    for (i=1; i < num; i++)
    {
        div = num % i;
        if (div == 0)
            sum = sum + i;
    }
    if (sum == num)
        cout << "\n" << num <<" is a perfect number.";
    else
        cout << "\n" << num <<" is not a perfect number.";
    return 0;
}
```

```
Enter the number to be checked : 102

102 is not a perfect number.

-----------------
(program exited with code: 0)
Press return to continue
```

Compiler

Messages

Scribble

Terminal

11.WAP to find the first n numbers of a Fibonacci sequence

```cpp
#include <iostream>
using namespace std;
int fib(int x) {
    if((x==1)||(x==0)) {
        return(x);
    }else {
        return(fib(x-1)+fib(x-2));
    }
}
int main() {
    int x , i=0;
    cout << "Enter the number of terms of series : ";
    cin >> x;
    cout << "\nFibonnaci Series : ";
    while(i < x) {
        cout << " " << fib(i);
        i++;
    }
    return 0;
}
```

```
Enter the number of terms of series : 5

Fibonnaci Series :  0 1 1 2 3

-----------------
(program exited with code: 0)
Press return to continue
```