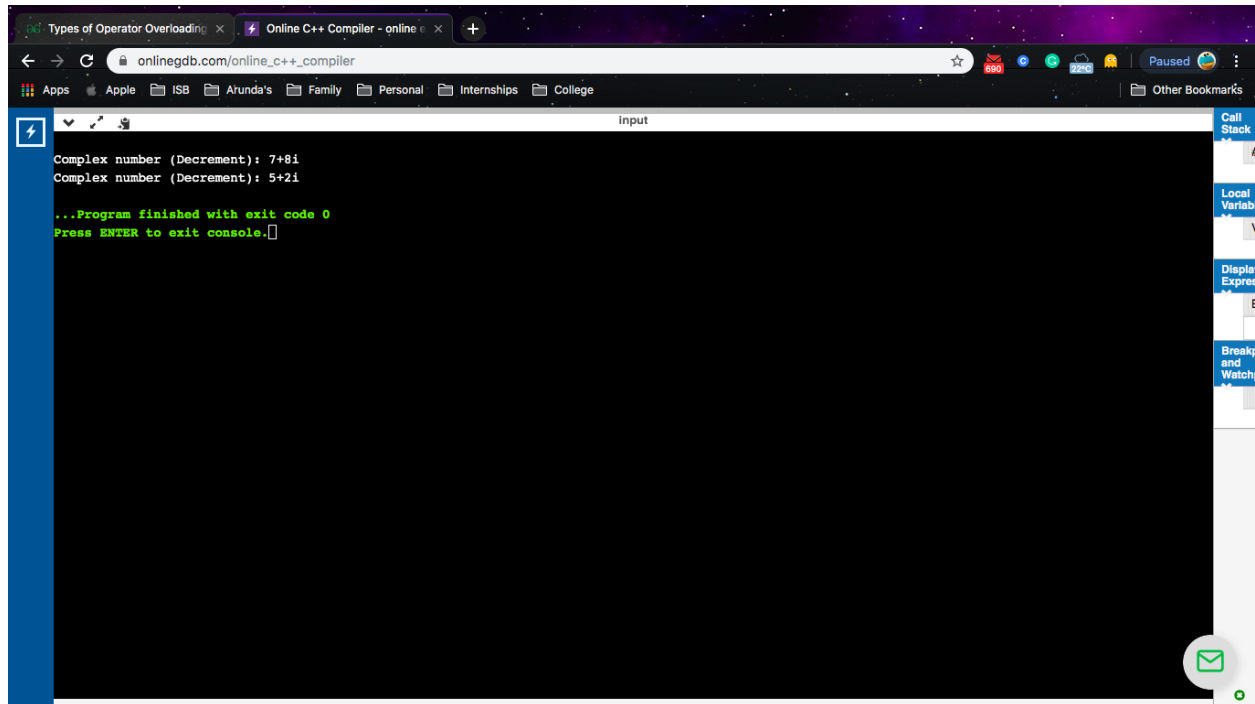


Unary Operator Overloading

```
#include <iostream>
using namespace std;
class Complex
{
    public:
    int real, imag;
    Complex(int r, int i)
    {
        this->real = r;
        this->imag = i;
    }
    void operator-()
    {
        real--;
        imag--;
        cout << "\nComplex number (Decrement): " << real << "+" << imag << "i";
    }
};
int main()
{
    Complex c1(8, 9);
    Complex c2(6,3);
    -c1;
    -c2;

    return 0;
}
```

Output

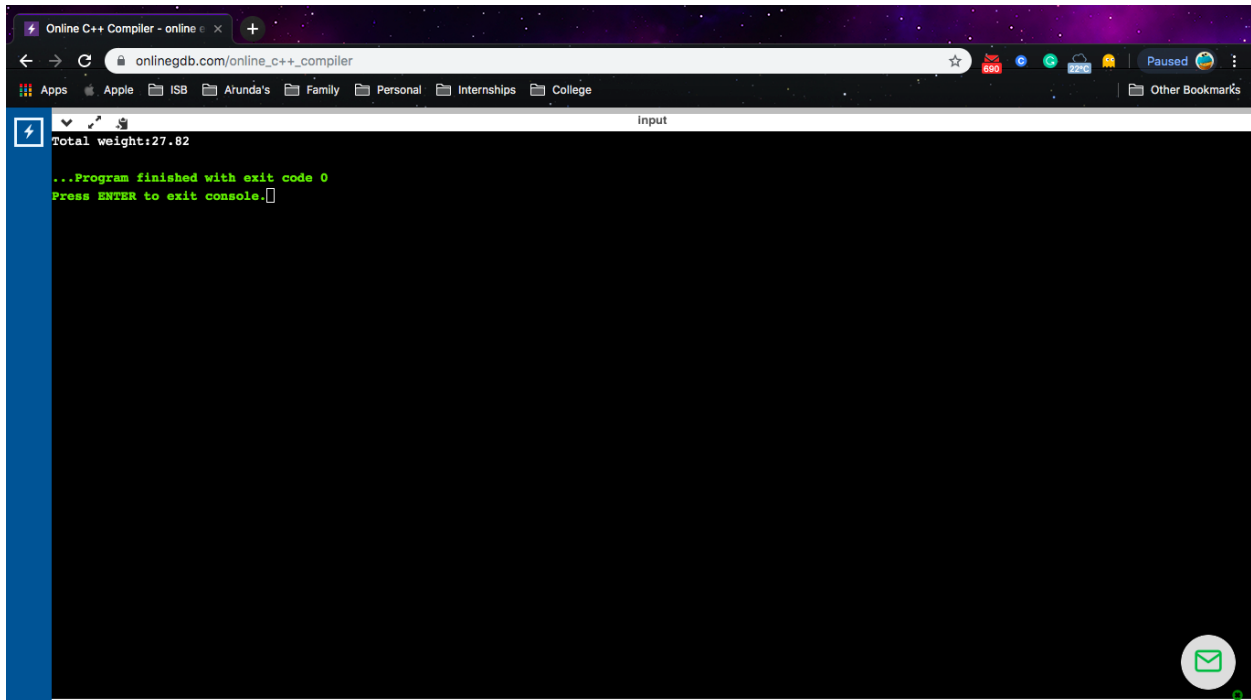


Binary Operator Overloading

```
#include<iostream>
using namespace std;
class Weight
{
    public:
    int kilograms,grams;
    Weight()
    {
        this->kilograms=0;
        this->grams=0;
    }
    Weight(int kg,int g)
    {
        this->kilograms=kg;
        this->grams=g;
    }
    void printData()
    {
        cout<<"Kg:"<<kilograms<<"g:"<<grams<<endl;
```

```
    }  
    Weight operator+(Weight &w2)  
    {  
        Weight w3;  
        w3.kilograms=this->kilograms+w2.kilograms;  
        w3.grams=this->grams+w2.grams;  
        return w3;  
    }  
};  
int main()  
{  
    Weight w1(8,15);  
    Weight w2(19,67);  
    Weight w3;  
    w3=w1+w2;  
    cout<<"Total weight:"<<w3.kilograms<<". "<<w3.grams;  
}
```

Output

A screenshot of a web browser displaying an online C++ compiler. The browser's address bar shows 'onlinegdb.com/online_c++_compiler'. The page has a dark theme. On the left, there's a blue sidebar with a lightning bolt icon. The main area is a console window with a black background and green text. The output text reads: 'Total weight:27.82', followed by '...Program finished with exit code 0' and 'Press ENTER to exit console.' with a cursor. The browser's top bar shows various icons and a 'Paused' status.

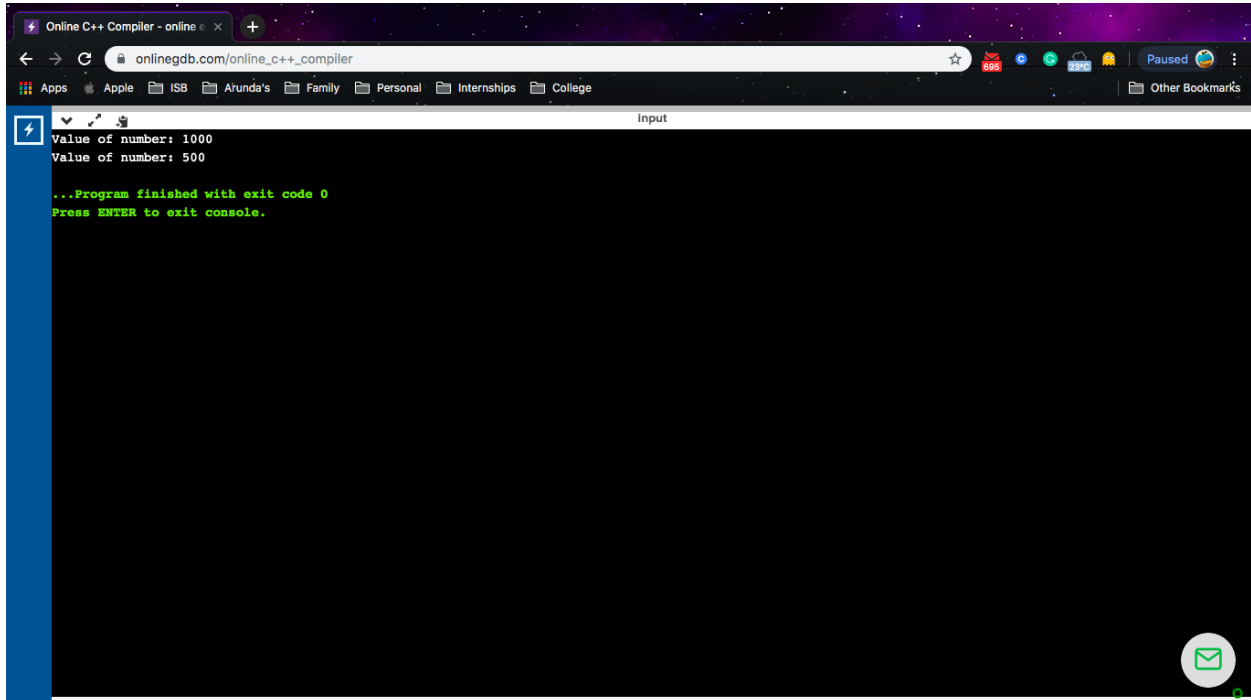
```
Online C++ Compiler - online g  
onlinegdb.com/online_c++_compiler  
Apps Apple ISB Arunda's Family Personal Internships College Other Bookmarks  
Total weight:27.82  
...Program finished with exit code 0  
Press ENTER to exit console.  
Input
```

Friend Function Overriding

```
#include <iostream>
```

```
using namespace std;
class Number
{
    private:
        int a;
    public:
        void getNum(int x);
        friend void printNum(Number no);
};
void Number::getNum(int x)
{
    a=x;
}
void printNum(Number no)
{
    cout << "Value of number: " << no.a;
}
int main()
{
    Number nObj,nObj1;
    nObj.getNum(1000);
    printNum(nObj);
    cout<<"\n";
    nObj1.getNum(500);
    printNum(nObj1);
    return 0;
}
```

Output

A screenshot of a web browser displaying an online C++ compiler. The browser's address bar shows 'onlinegdb.com/online_c++_compiler'. The page has a dark theme. On the left, there's a blue sidebar with a lightning bolt icon. The main area is a black console with green text. The text in the console reads: 'Value of number: 1000', 'Value of number: 500', '...Program finished with exit code 0', and 'Press ENTER to exit console.' The browser's top bar shows various icons and a 'Paused' status. The bottom right corner of the console has a green circular icon with a white envelope symbol.

```
Value of number: 1000
Value of number: 500

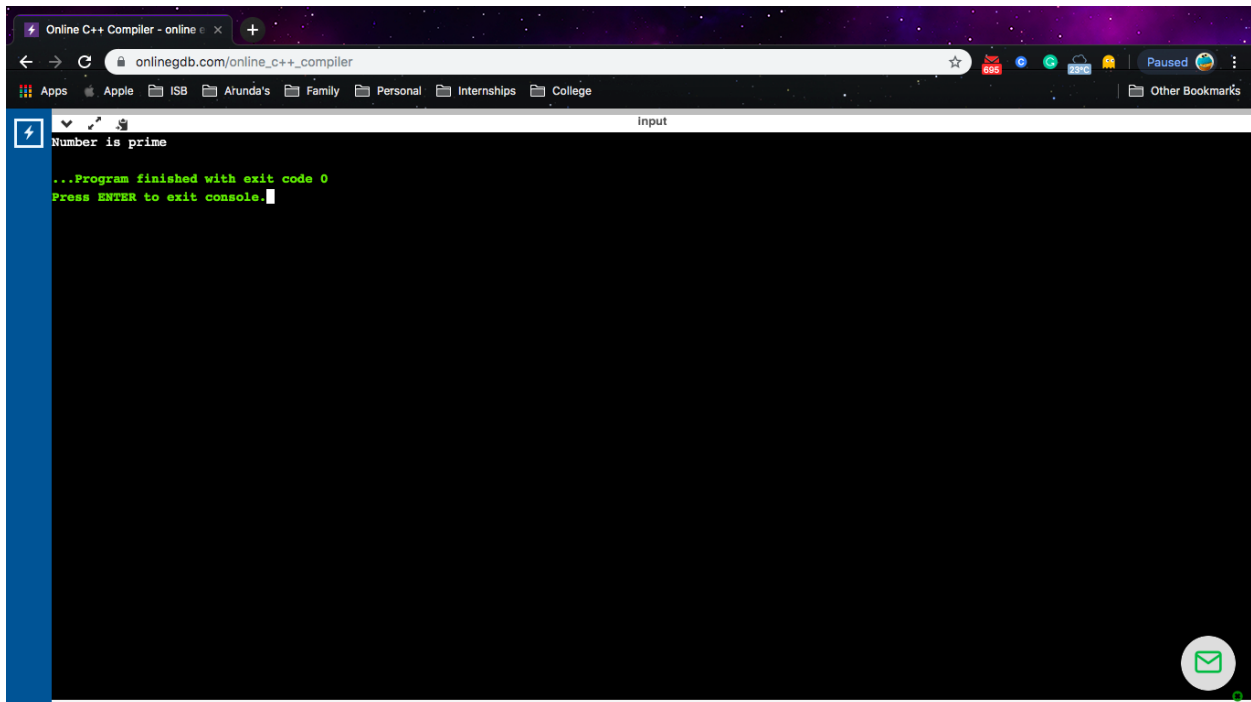
...Program finished with exit code 0
Press ENTER to exit console.
```

Member Function Overriding

```
#include<iostream>
using namespace std;
class Number
{
    public:
    void show()
    {
        cout<<"Number";
    }
};
class Prime: public Number
{
    public:
    void show()
    {
        cout<<"Number is prime";
    }
};
int main(void)
{
```

```
Prime p = Prime();  
p.show();  
return 0;  
}
```

Output

A screenshot of a web browser displaying an online C++ compiler. The browser's address bar shows 'onlinegdb.com/online_c++_compiler'. The compiler interface has a dark theme. On the left, there is a blue vertical bar. The main area is divided into two sections: 'Input' at the top and a larger area below. The 'Input' section contains the text 'Number is prime'. The main area shows the output of the program: '...Program finished with exit code 0' and 'Press ENTER to exit console.' followed by a cursor. The browser's taskbar at the bottom shows various icons, including a mail icon in the bottom right corner.

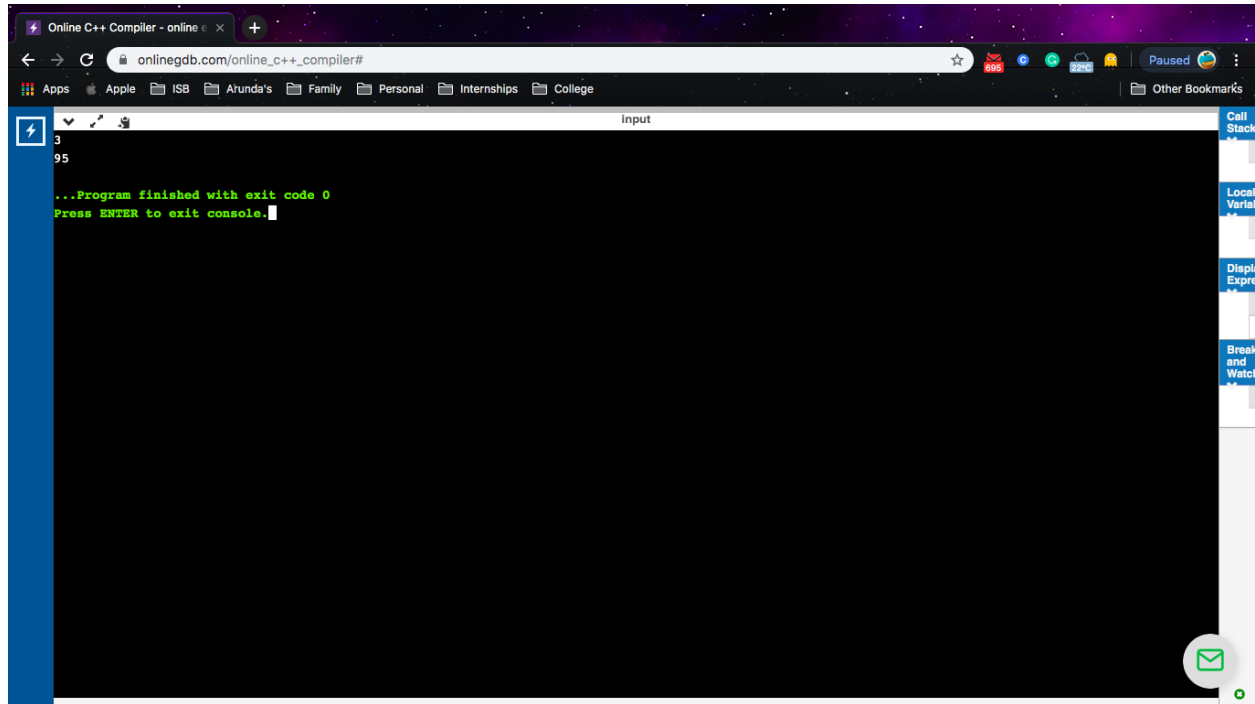
```
Online C++ Compiler - online g  
onlinegdb.com/online_c++_compiler  
Apps Apple ISB Arunda's Family Personal Internships College  
Input  
Number is prime  
...Program finished with exit code 0  
Press ENTER to exit console.
```

Member Function Overloading

```
#include<iostream>  
using namespace std;  
int sub(int x,int y)  
{  
    cout<<x-y;  
}  
int sub(int x,int y,int z)  
{  
    cout<<x+y+z;  
}  
int main()  
{  
    sub(8,5);
```

```
cout<<"\n";  
sub(10,15,70);  
}
```

Output



Friend function overriding

```
#include<iostream>  
using namespace std;  
class complex  
{  
    float real,imag;  
    public:  
    complex()  
    {  
        real=imag=0;  
    }  
    complex(float r,float i)  
    {  
        real = r;  
        imag =i;
```

```
}
friend complex operator - (complex c)
{
    c.real=-c.real;
    c.imag=-c.imag;
    return c;
}
void display()
{
    cout<<"\nReal:"<<real;
    cout<<"\nImag:"<<imag;
}
};
int main()
{
    complex c1(1,2),c2;
    c1.display;
    c2=-c1;
    cout<<"\nAfter negation\n";
    c2.display();
}
```