

NAME : SOUMIK GHOSH
CSE 21
ROLL : 21052924
OOP LAB ASSIGNMENT 6

1.

```
#include<iostream>
using namespace std;
class complex{
    int real;
    int imaginary;
public:
    complex(){
        real=0;
        imaginary=0;
    }
    complex(int real,int imaginary){
        this->real=real;
        this->imaginary=imaginary;
    }
    complex (int real){
        this->real=real;
        imaginary=0;
    }
    void display(){
        cout<<real<<"+"<<imaginary<<"i"<<endl;
    }
    ~complex(){
        cout<<"Destructor called."<<endl;
    }
};

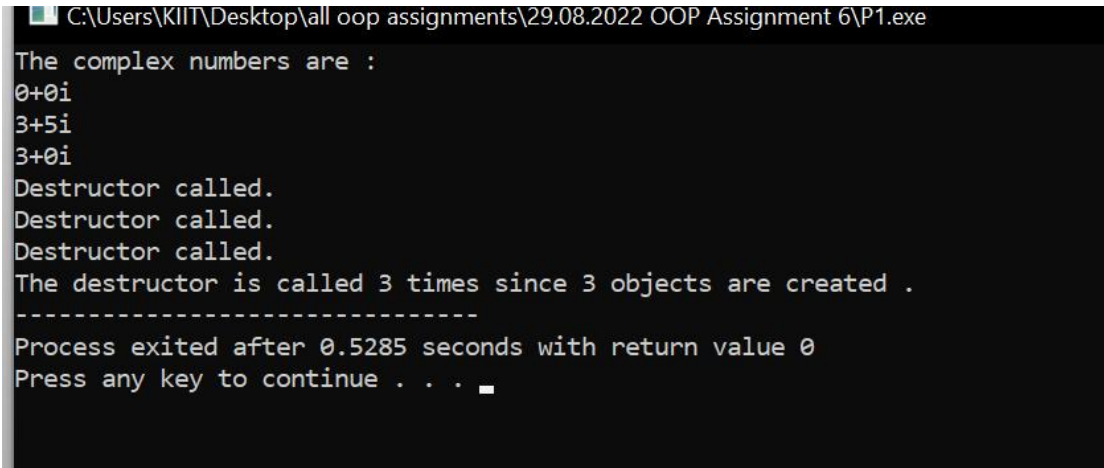
int main()
{
    cout<<"The complex numbers are : \n";
```

```

{
    complex c;
    c.display();
    complex c1(3,5);
        c1.display();
    complex c2(3);
    c2.display();
}
cout<<"The destructor is called 3 times since 3 objects are
created.";
return 0;
}

```

OUTPUT :



```

C:\Users\KLIT\Desktop\all oop assignments\29.08.2022 OOP Assignment 6\P1.exe
The complex numbers are :
0+0i
3+5i
3+0i
Destructor called.
Destructor called.
Destructor called.
The destructor is called 3 times since 3 objects are created .
-----
Process exited after 0.5285 seconds with return value 0
Press any key to continue . . . 

```

2.

```

#include<iostream>
using namespace std;
class Time{
    int hh;
    int mm;
public:
    Time(){
        hh=0;
        mm=0;
    }
}

```

```

    }
    Time(int hours,int minutes){
        this->hh=hours;
        this->mm=minutes;
    }
    Time(int hours){
        this->hh=hours;
        mm=0;
    }
    void display(){
        cout<<hh<<" hours and "<<mm<<" minutes."<<endl;
    }
    ~Time(){
    }

};

int main()
{
    cout<<"The timings are : \n";
    {
        Time t1;
        t1.display();
        Time t2(2,7);
        t2.display();
        Time t3(9);
        t3.display();
    }
    return 0;
}

```

OUTPUT :

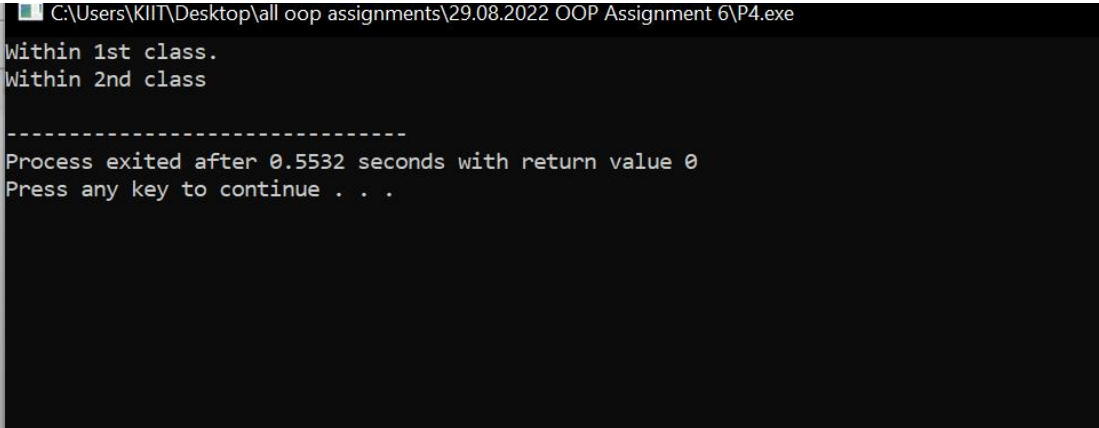
```
The timings are :  
0 hours and 0 minutes.  
2 hours and 7 minutes.  
9 hours and 0 minutes.  
  
-----  
Process exited after 0.4369 seconds with return value 0  
Press any key to continue . . .
```

4.

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

```
class A  
{  
    public:  
    A()  
    {  
        cout << "Within 1st class." << endl;  
    }  
};  
class B : public A  
{  
    public:  
    B()  
    {  
        cout << "Within 2nd class" << endl;  
    }  
};  
int main() {  
  
    B b;  
  
    return 0;  
}
```

OUTPUT :



```
C:\Users\KLIT\Desktop\all oop assignments\29.08.2022 OOP Assignment 6\P4.exe
Within 1st class.
Within 2nd class

-----
Process exited after 0.5532 seconds with return value 0
Press any key to continue . . .
```

3.

```
#include<iostream>
using namespace std;
class strings{
    string A;
    int len;
    public :
        strings (string A){
            this->A=A;
            this->len=len;
        }
        void display(){
            cout<<A<<endl;
        }
        friend void con(strings A1,strings A2);
};
void con(strings A1,strings A2){
    string A3;
    A3=A1.A+A2.A;
    cout<<A3<<endl;
}
int main()
{
    string s1,s2;
    cout<<"Enter String 1and String 2:";
```

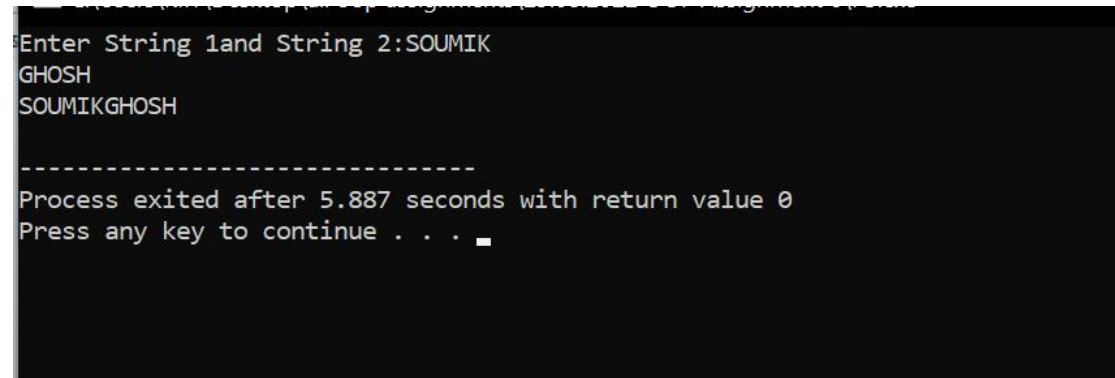
```

cin>>s1>>s2;
strings n(s1);
strings n2(s2);
con(n,n2);

return 0;
}

```

OUTPUT :



```

Enter String 1and String 2:SOUMIK
GHOSH
SOUMIKGHOSH

-----
Process exited after 5.887 seconds with return value 0
Press any key to continue . . .

```

5/A -

```

#include<iostream>
using namespace std;
class A{
    char ch;
    public:

        // A(A &o1){
        //     ch =new char [100];
        //     ch=(o1.ch);
        // }
        void getdata(char c){
            ch=c;
        }
        void show(){
            cout<<ch;
        }
};

```

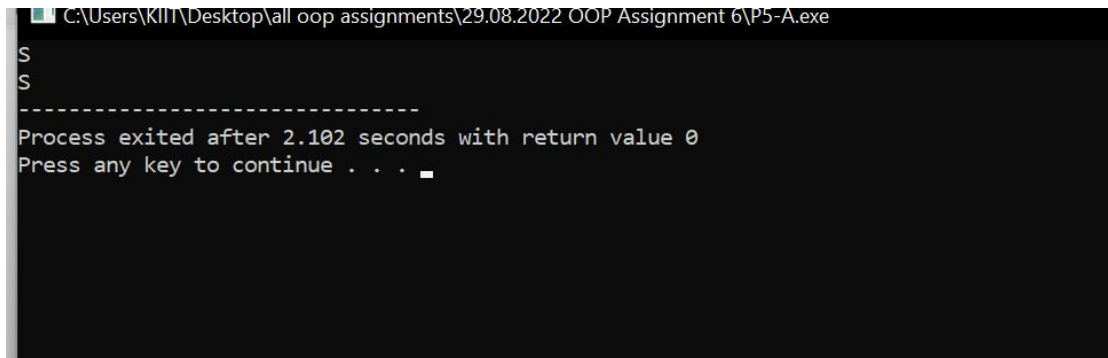
```

int main()
{
    A a;
    char str='S';
    a.getdata(str);
    a.show();
    A b=a;
    cout<<endl;
    b.show();

    return 0;
}

```

OUTPUT :



```

C:\Users\Kili\Desktop\all oop assignments\29.08.2022 OOP Assignment 6\P5-A.exe
S
S
-----
Process exited after 2.102 seconds with return value 0
Press any key to continue . . .

```

5/B -

```

#include<iostream>
using namespace std;
class A{
    char *ch;
    public:
        A(){
            ch=new char [100];

        }
        A(A &o1){
            ch =new char [100];

```

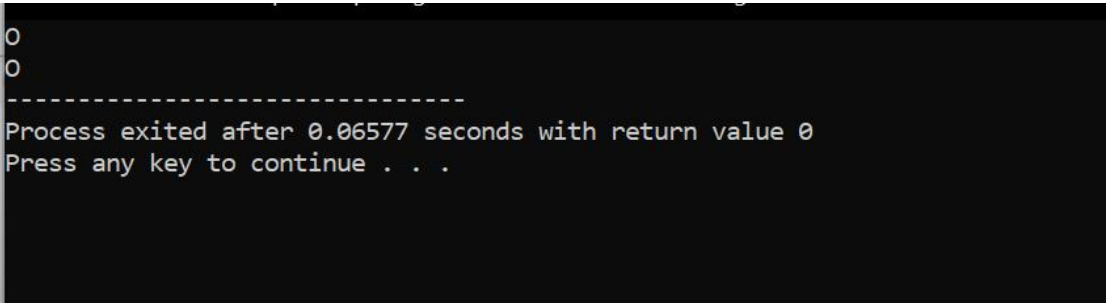
```

        ch=(o1.ch);
    }
    void getdata(char *c){
        *ch=*c;
    }
    void show(){
        cout<<*ch;
    }
};
int main()
{
    A a;
    char str[]="OOP";
    a.getdata(str);
    a.show();
    A b=a;
    cout<<endl;
    b.show();

    return 0;
}

```

OUTPUT :



```

O
O
-----
Process exited after 0.06577 seconds with return value 0
Press any key to continue . . .

```