

NAME - SOUMIK GHOSH

CSE 21

ROLL : 21052924

ASSIGNMENT 5

5.

```
#include<iostream>
```

```
using namespace std;
```

```
class Book{
```

```
    private:
```

```
        string bookName, bookAuthor;
```

```
        double price;
```

```
    public:
```

```
        Book (){
```

```
        }
```

```
        Book(string n, string a, double p){
```

```
            bookName = n;
```

```
            bookAuthor = a;
```

```
            price = p;
```

```
        }
```

```
        void setDetails(string n, string a, double p){
```

```
            bookName = n;
```

```
            bookAuthor = a;
```

```
            price = p;
```

```
        }
```

```
        string getName(){
```

```
            return bookName;
```

```
        }
```

```
        string getAuthor(){
```

```
            return bookAuthor;
```

```
        }
```

```
        double getPrice(){
```

```
            return price;
```

```

        }
        void printBook(){
            cout<<"The book name
is\t"<<bookName<<endl;
            cout<<"The book author
is\t"<<bookAuthor<<endl;
            cout<<"The book price is\t"<<price<<endl;
        }
        friend void display(int x);

};
void display(int x ){
    string bookName, bookAuthor;
    double price;

    Book arr[x];

    for(int i=0; i<x; i++){
        cout<<"Enter the book name\n";
        cin>>bookName;
        cout<<"Enter the author \n";
        cin>>bookAuthor;
        cout<<"Enter the book price\n";
        cin>>price;
        arr[i].setDetails(bookName,bookAuthor,price);
    }
    for(int i=0; i<x; i++){
        cout<<"Details of book "<<(i+1)<<" are:\n";
        arr[i].printBook();
    }
}
int main(){
    int x;
    cout<<"Enter the number of books\n";

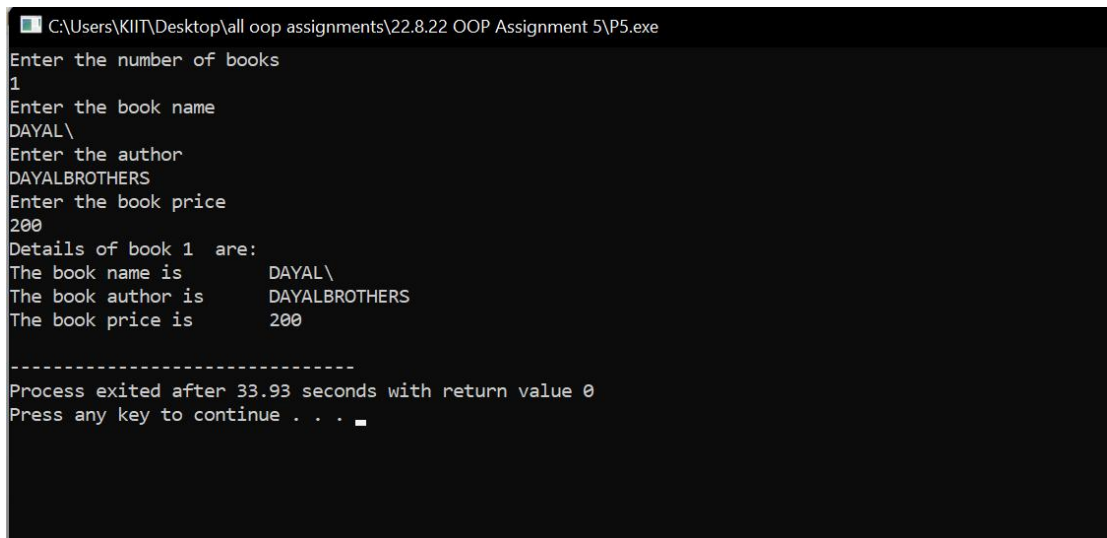
```

```

        cin>>x;
        display(x);
    }

```

OUTPUT :



```

C:\Users\KIIT\Desktop\all oop assignments\22.8.22 OOP Assignment 5\P5.exe
Enter the number of books
1
Enter the book name
DAYAL\
Enter the author
DAYALBROTHERS
Enter the book price
200
Details of book 1 are:
The book name is      DAYAL\
The book author is    DAYALBROTHERS
The book price is     200

-----
Process exited after 33.93 seconds with return value 0
Press any key to continue . . .

```

```

1.
#include<iostream>
using namespace std;
class THIRD;
class TWO;
class ONE{
    int a;
    public:
    void getdata(int X){
        a=X;
    }
    friend void largest(ONE &,TWO &,THIRD &);
};
class TWO{

```

```

    int b;
    public:
    void getdata(int X){
        b=X;
    }
    friend void largest(ONE &,TWO &,THIRD &);

};

class THIRD{
    int c;
    public:
    void getdata(int X){
        c=X;
    }
    friend void largest(ONE &,TWO &,THIRD &);

};

void largest(ONE &o1,TWO &o2,THIRD &o3){
    int large;
    if(o2.b<o1.a && o3.c<o1.a)
        large=o1.a;
    else if(o1.a<o2.b && o3.c<o2.b)
        large=o2.b;
    else
        large=o3.c;
    cout<<"Largest No :"<<large;
}

int main()
{
    ONE s1;
    TWO s2;
    THIRD s3;
    s1.getdata(90);
    s2.getdata(67);
    s3.getdata(16);

```

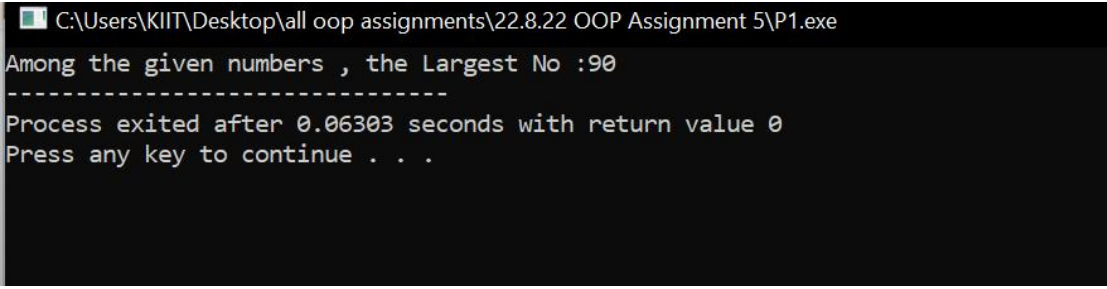
```

printf("Among the given numbers , the ");
largest(s1,s2,s3);

return 0;
}

```

OUTPUT :



```

C:\Users\KIIT\Desktop\all oop assignments\22.8.22 OOP Assignment 5\P1.exe
Among the given numbers , the Largest No :90
-----
Process exited after 0.06303 seconds with return value 0
Press any key to continue . . .

```

2.

```

#include<stdio.h>
using namespace std;
class distance1;
class distance2;
class distance1{
    int inches1;
    int feet1;
    int centi1;
    int meter1;
public:
    void getdata(int i1, int f1,int c1,int m1)
    {
        inches1=i1;
        feet1=f1;
        centi1=c1;
    }
}

```

```

        meter1=m1;
    }
    friend void greater(distance1 &, distance2 &);
};

class distance2{
    int inches2;
    int feet2;
    int centi2;
    int meter2;
public:
    void getdata(int i2, int f2, int c2, int m2)
    {
        inches2=i2;
        feet2=f2;
        centi2=c2;
        meter2=m2;
    }
    friend void greater(distance1 &, distance2 &);
};

void greater(distance1 &o1, distance2 &o2)
{
    int g1,g2,g3,g4;
    if(o1.inches1<o2.inches2)
    {
        g1=o2.inches2;
        printf("The greater is %d inches .",g1);
    }
    else {
        g1=o1.inches1;
        printf("The greater is %d inches .",g1);
    }
    if(o1.feet1<o2.feet2)
    {
        g2=o2.feet2;
        printf("The greater is %d feet .",g2);
    }
}

```

```

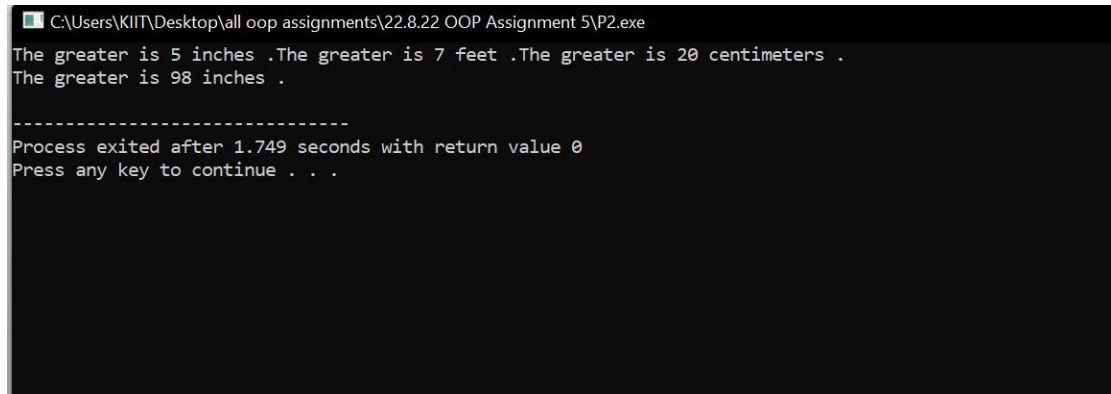
    }
    else {
        g2=o1.feet1;
        printf("The greater is %d feet .",g2);
    }
    if(o1.centimeter1<o2.centimeter2)
    {
        g3=o2.centimeter2;
        printf("The greater is %d centimeters .\n",g3);
    }
    else {
        g3=o1.centimeter1;
        printf("The greater is %d inches .\n",g3);
    }
    if(o1.meter1<o2.meter2)
    {
        g4=o2.meter2;
        printf("The greater is %d inches .\n",g4);
    }
    else {
        g4=o1.meter1;
        printf("The greater is %d inches .\n",g4);
    }
}
int main()
{
    distance1 D1;
    distance2 D2;
    D1.getdata(2,6,8,10);
    D2.getdata(5,7,20,98);
    greater(D1,D2);

    return 0;
}

```

```
}
```

OUTPUT :



```
C:\Users\KILIT\Desktop\all oop assignments\22.8.22 OOP Assignment 5\P2.exe
The greater is 5 inches .The greater is 7 feet .The greater is 20 centimeters .
The greater is 98 inches .

-----
Process exited after 1.749 seconds with return value 0
Press any key to continue . . .
```

3.

```
#include<iostream>
using namespace std;
int c=0,ct=0;
class data1{
    int n1;
    public:

        void input(int n){

            n1=n;
            c=c+1;
        }
        void output(){
            ct+=1;
            cout<<n1<<endl;
            cout<<"Total "<<c<<" times input function is called!";
        }

};

int main()
{
    data1 d1;
```



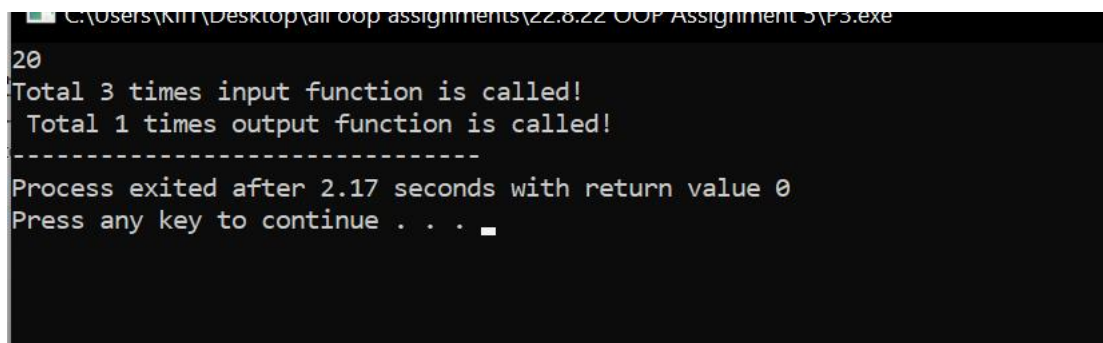
```

d1.input(10);
d1.input(15);
d1.input(20);
d1.output();
cout<<"\n Total "<<ct<<" times output function is called!";

return 0;
}

```

OUTPUT :



```

C:\Users\KIR\Desktop\all oop assignments\22.8.22 OOP Assignment 5\p3.exe
20
Total 3 times input function is called!
Total 1 times output function is called!
-----
Process exited after 2.17 seconds with return value 0
Press any key to continue . . .

```

4.

```

#include<iostream>
#include<bits/stdc++.h>
using namespace std;
class student{
    int rollno;
    string name;
    int marks[3];
    int tmarks=0;
    int avgmarks=0;

public :

    void getdata(int rollno,string name,int mark[]){
        this->name=name;
    }
}

```

```

        this->rollno=rollno;
        for(int i=0;i<3;i++){
            marks[i]=mark[i];
            tmarks+=marks[i];
        }

    }

    void display(){
        cout<<"Student Name:"<<name<<endl;
        cout<<"Rollno:"<<rollno<<endl;
        cout<<"Total Marks:"<<tmarks<<endl;
        cout<<"Avg Marks:"<<(tmarks/3)<<endl;

    }

```

```

};

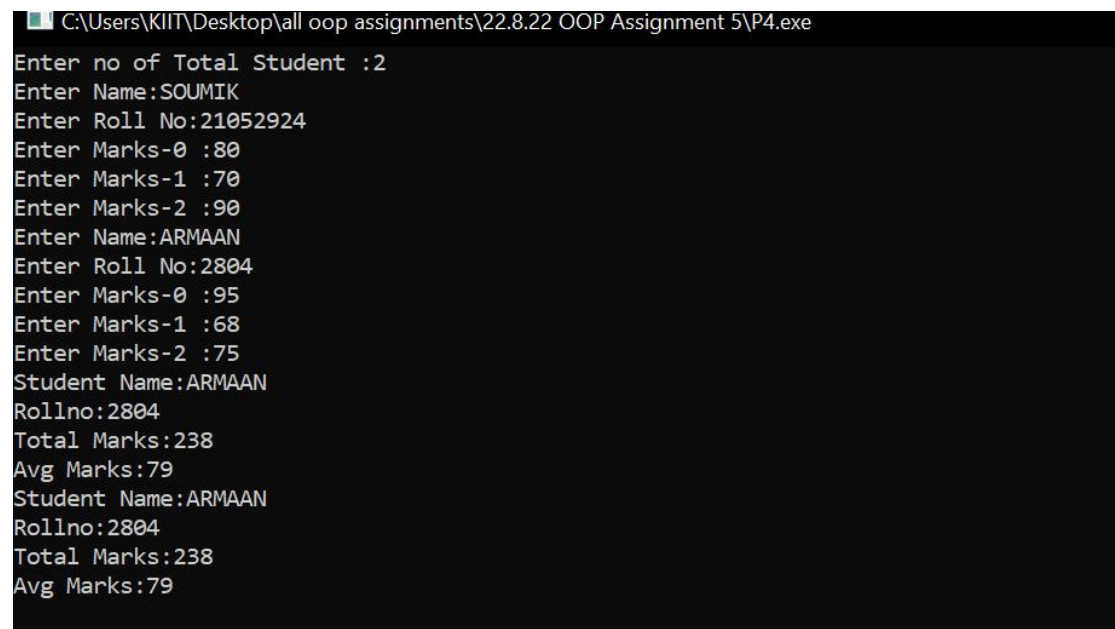
int main()
{
    int n,rno,marks[3];
    string name;
    cout<<"Enter no of Total Student :";
    cin>>n;
    student s[n];
    for(int i=0;i<n;i++){
        cout<<"Enter Name:";
        cin>>name;
        cout<<"Enter Roll No:";
        cin>>rno;

        for(int j=0;j<3;j++){
            cout<<"Enter Marks-"<<j<<" :";
            cin>>marks[j];
        }
    }
}

```

```
}  
for(int i=0;i<n;i++){  
    s[i].getdata(rno,name,marks);  
    s[i].display();  
}  
return 0;  
}
```

OUTPUT :



```
C:\Users\KIIT\Desktop\all oop assignments\22.8.22 OOP Assignment 5\P4.exe  
Enter no of Total Student :2  
Enter Name:SOU MIK  
Enter Roll No:21052924  
Enter Marks-0 :80  
Enter Marks-1 :70  
Enter Marks-2 :90  
Enter Name:ARMAAN  
Enter Roll No:2804  
Enter Marks-0 :95  
Enter Marks-1 :68  
Enter Marks-2 :75  
Student Name:ARMAAN  
Rollno:2804  
Total Marks:238  
Avg Marks:79  
Student Name:ARMAAN  
Rollno:2804  
Total Marks:238  
Avg Marks:79
```