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CSE 21
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ASSIGNMENT 5

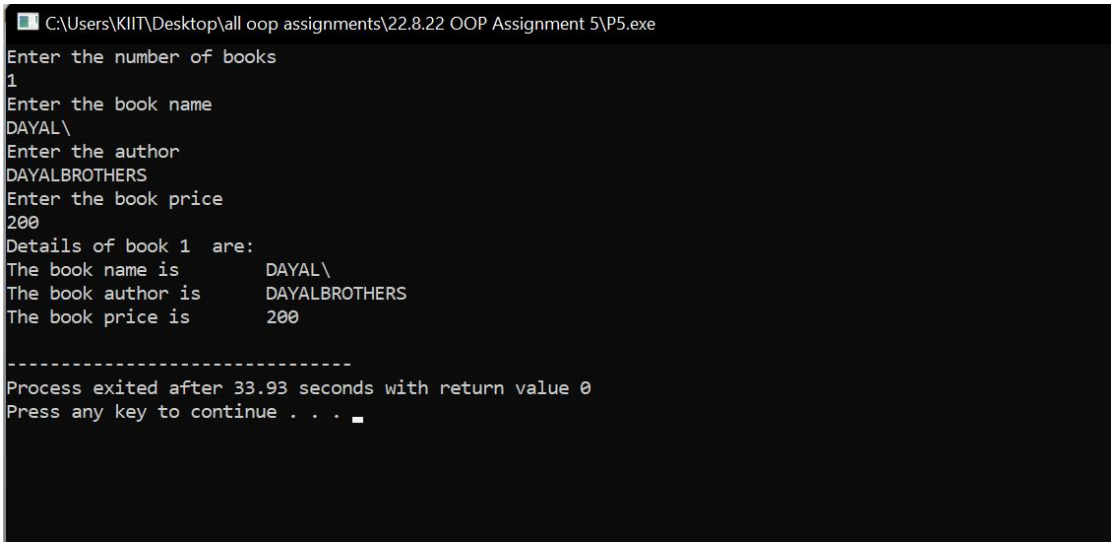
5.

```
#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 :



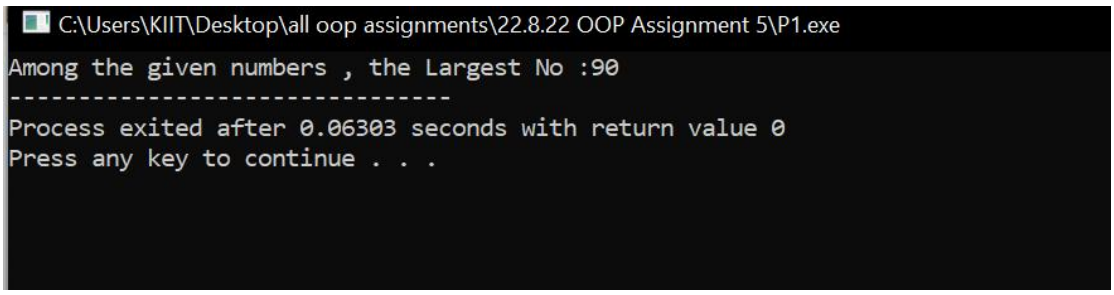
1.

```
 #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 :



2.

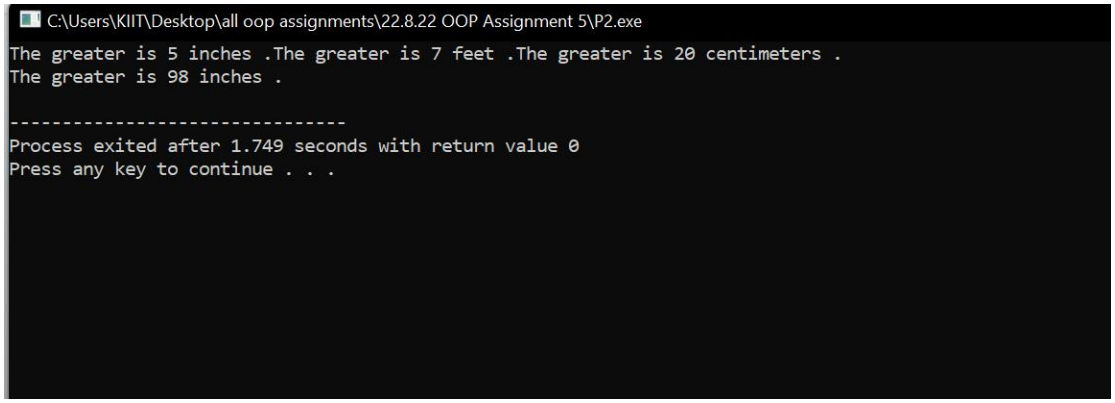
```
#include<stdio.h>
using namespace std;
class distance1;
class distance2;
class distance1{
        int inches1;
        int feet1;
        int centi1;
        int meter1;
        public:
                void getdata(int i1, int f1,int c1,int m1)
                {
                        inches1=i1;
                        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.centi1<o2.centi2)
	{
		g3=o2.centi2;
		printf("The greater is %d centimeters .\n",g3);
	}
	else {
		g3=o1.centi1;
		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 :

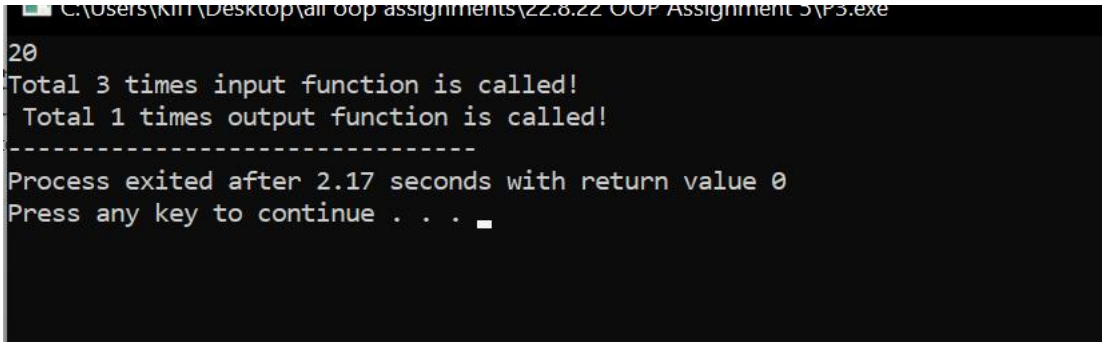


3.

```
#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 :



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 :