Bangladesh University of Business and Technology

(BUBT)

Lab Report

Lab Report No: 04

Course: Object Oriented Programming Lab

Course Code:CSE 112

Date of Submission:

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Problem 1:

Code:

```
#include<bits/stdc++.h>
using namespace std;
class student
{
private:
   string name;
   long long ID;
   float marks;
public:
   student(string s, long long i, float m)
   {
      name = s;
      ID = i;
      marks = m;
   }

   void display()
   {
      cout<<"Name of the student : "<<name<<endl;
      cout<<"ID no : "<<ID<<endl;
      cout<<"Marks : "<<marks<<endl;
   }
   float update(float f)
   {
      marks = f;
      return marks;
   }
};
int main()
{
   cout<<"Enter a student name: ";
   string s;
   getline(cin,s);
   cout<<endl;
```

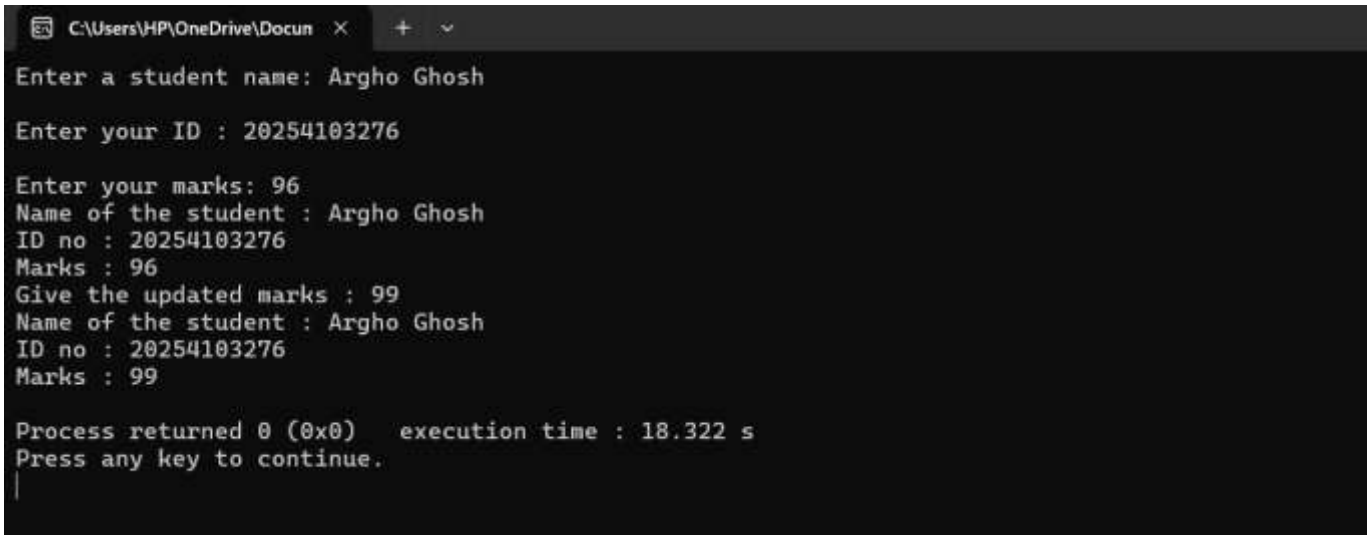
```
    cout<<"Enter your ID : ";
    long long r;
    cin>>r;
    cout<<endl;
    cout<<"Enter your marks: ";
    float a;
    cin>>a;


    student b(s,r,a);

    b.display();
    cout<<"Give the updated marks : ";
    float up;
    cin>>up;
    b.update(up);
    b.display();


}
```

Output:



Problem 2:

Code:

```
#include<bits/stdc++.h>
```

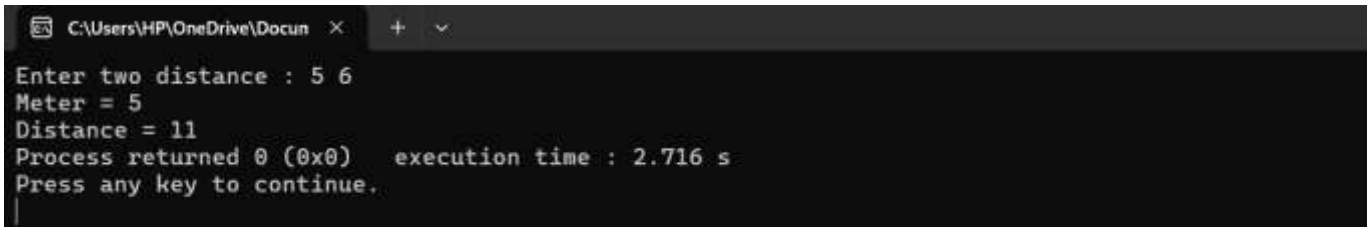
```
using namespace std;
class Distance
{
private :
   int meter;
public:
   Distance(int m)
   {
      meter = m;

   }
   int getMeter()
   {
      return meter;
   }
   Distance(Distance &a)
   {
      meter = a.meter;
   }
   void show()
   {
      cout<<"Meter = "<<meter<<endl;
   }
};
int addDistance(Distance a1, Distance a2)
{
   int sum = a1.getMeter() + a2.getMeter();
   return sum;
}
int main()
{
cout<<"Enter two distance : ";
int a,b;
cin>>a>>b;
Distance n(a);
Distance f(n);
Distance m(b);
```

```
n.show();
cout<<"Distance = "<<addDistance(n,m);

}
```

Output:



Problem 3:

Code:

```
#include<bits/stdc++.h>
using namespace std;
class phone
{
private:
   string brand;
   string model;
   int price;
public:
   phone()
   {
      brand = "Unknown";
      model = "unknown";
      price = 0;

   }

   phone(string b,string m,int p=0)
   {
      brand = b;
      model = m;
      price = p;
```

```
    }
    phone (phone &a)
    {
        brand = a.brand;
        model = a.model;
        price = a.price;
    }
    void displayInfo();
    void isPremium(int p);

    string getBrand()
    {
        return brand;
    }
    string getModel()
    {
        return model;
    }
    int getPrice()
    {
        return price;
    }
};
void phone:: displayInfo()
    {
        cout<<"Brand = :"<<brand<<endl;
        cout<<"Model = :"<<model<<endl;
        cout<<"Price = : "<<price<<endl;
    }
void phone::isPremium(int p)
    {
        if(p>=30000)
        {
            cout<<"This is a premium phone!"<<endl;
        }
        else
        {
```

```
            cout<<"This is a budget phone"<<endl;
        }
    }
int main()
{
    cout<<"Enter brand name : ";
    string s1;
    getline(cin, s1);
    cout<<endl;
    cout<<"Enter model name : ";
    string s2;
    getline(cin, s2);
    cout<<endl;
    cout<<"Enter price of the phone : ";
    int p1;
    cin>>p1;
    cout<<"Default constructor"<<endl;
    phone b;
    b.displayInfo();

    phone b1(s1,s2,p1);
    cout<<"Parameterised constructor "<<endl;
    phone b2(b1);
    b2.displayInfo();
    cout<<"Pointer"<<endl;
    phone *b3;
    b3 = &b1;
    b3->displayInfo();
    b3->isPremium(p1);



return 0;
}
```

Output:


C:\Users\HP\OneDrive\Docum
Enter brand name : Redmi
Enter model name : Rx-100
Enter price of the phone : 60000
Default constructor
Brand = :Unknown
Model = :unknown
Price = : 0
Parameterised constructor
Brand = :Redmi
Model = :Rx-100
Price = : 60000
Pointer
Brand = :Redmi
Model = :Rx-100
Price = : 60000
This is a premium phone!
Process returned 0 (0x0) execution time : 15.398 s
Press any key to continue.