**Lab-4 Assignment**

**1)C++ program to display the money of Reema and Seetha**

**Algorithm:** We had given Reema money is 200 which we stored outside as a global variable where any function can access it. We are creating function named amount and printing Seetha money. In main we can get the Reema money using scope resolution operator and by accessing the function we can get Seetha money.

**Logic:**

#include<iostream>

using namespace std;

int r=200;

int amount()

{

int s=100;

cout<<"\nMoney of Seetha is "<<s;

}

int main()

{

cout<<"Money of Reema is "<<::r;

amount();

cout<<"Submitted by Gelle Hruthesh Reddy Admn.No 20BCB7031"<<endl;

return 0;

}

**Output:**

**Text

Description automatically generated**

**2)C++ program for function overloading to achieve polymorphism**

**Algorithm:** In this programwe are declaring twofunctions with same name called bike but in one it will take three inputs and in another it will take two inputs. In main function we are getting the information from user and then we are printing the details of the bikes whose function names are same which is overloading.

**Logic:**

#include<iostream>

#include<string.h>

using namespace std;

void bike(string bikename, string colour, int amount)

{

cout<<"\*\*\*\*Details of the first bike\*\*\*\*"<<endl;

cout<<"Name of the first bike: "<<bikename<<endl;

cout<<"Colour of the first bike: "<<colour<<endl;

cout<<"Price of the first bike: "<<amount<<endl;

}

void bike(string bikename, int amount)

{

cout<<"\*\*\*\*Details of the second bike\*\*\*\*"<<endl;

cout<<"Name of the second bike: "<<bikename<<endl;

cout<<"Price of the second bike: "<<amount<<endl;

}

int main()

{

string bikename1,bikename2;

string colour1,colour2;

int amount1,amount2;

cout<<"Enter the name of the first bike: "<<endl;

cin>>bikename1;

cout<<"Colour of the first bike: "<<endl;

cin>>colour1;

cout<<"Enter the amount of the first bike: "<<endl;

cin>>amount1;

cout<<"Enter the name of the second bike: "<<endl;

cin>>bikename2;

cout<<"Enter the amount of the second bike: "<<endl;

cin>>amount2;

bike(bikename1,colour1,amount1);

bike(bikename2,amount2);

cout<<"Submitted by Gelle Hruthesh Reddy Admn.No 20BCB7031"<<endl;

return 0;

}

**Output:**

**Text

Description automatically generated**

**3)C++ program for operator overloading**

**Algorithm:** In this program we have created the class named Box assigning the variables. We create functions to get the area, length, breadth, and price of the boxes to calculate by operator overloading. As there are 2 boxes we create Box1, Box2 for different values and assign the values for the different boxes. We calculate the total amount using ‘+’,Difference of amount using ‘-‘,and we got area using ‘\*’ operators.

**Logic:**

#include <iostream>

using namespace std;

class Box{

double length;

double breadth;

double amount1;

double amount2;

public:

double Area(){

return length\*breadth;

}

void Length(double len){

length=len;

}

void Breadth(double bre){

breadth=bre;

}

double Amount1(double a1){

amount1=a1;

}

double Amount2(double a2){

amount2=a2;

}

};

int main() {

Box Box1;

Box Box2;

double area1,area2;

double TA=0;

double difference=0;

double area=0;

Box1.Length(20);

Box1.Breadth(30);

Box1.Amount1(100);

Box2.Length(20);

Box2.Breadth(30);

Box2.Amount2(250);

area1=Box1.Area();

area2=Box2.Area();

TA=Box2.Amount2(250)+Box1.Amount1(100);

cout<<"Total amount is "<<TA<<endl;

cout<<"Area of Box1 : "<<area1<<endl;

area1=Box1.Area();

cout<<"Area of Box2 : "<<area2<<endl;

area2=Box2.Area();

difference=Box2.Amount2(250)-Box1.Amount1(100);

cout<<"Difference of amount is "<<difference<<endl;

cout<<"Submitted by G.Hruthesh Reddy,Admn.no 20BCB7031"<<endl;

return 0;

}

**Output:**

**A screenshot of a computer

Description automatically generated**

**Time of Submission:20/9/2021,12.00**