**Program 1**

**Create a class named as “Area”, having functions**

* **Make a constructor**
* **Area of triangle ((height \* base)/2)**
* **Area of rectangle (length\*width)**
* **Area of square (r2)**
* **Area of circle (pi \*r\*2)**

#include<iostream>

#include<conio.h>

using namespace std;

class Area

{

float triangle, rectangle, circle, square;

public:

Area()

{

triangle = 0;

rectangle = 0;

circle = 0;

square = 0;

}

void set\_Triangle(float b,float h)

{

triangle = (b\*h)/2;

}

void set\_Rectangle(float l, float w)

{

rectangle = l\*w;

}

void set\_Circle(float r)

{

circle = (3.14\*r\*r);

}

void set\_Square(float s)

{

square = s\*s;

}

void display()

{

cout << "\nArea of a triangle is:" << triangle << endl;

cout << "\nArea of a circle is:" << circle << endl;

cout << "\nArea of a rectangle is:" << rectangle << endl;

cout << "\nArea of a square is:" << square << endl;

}

};

void main()

{

Area obj;

float base, height,width, radius, length,side;

cout << "----------Area of Triangle----------" << endl;

cout << "Enter the Base of a triangle:" << endl;

cin >> base;

cout << "Enter the Height of a triangle:" << endl;

cin >> height;

obj.set\_Triangle(base,height);

cout << "\n----------Area of Circle----------" << endl;

cout << "Enter the Radius of circle:" << endl;

cin >> radius;

obj.set\_Circle(radius);

cout << "\n----------Area of Rectangle----------" << endl;

cout << "Enter the lenght of rectangle:" << endl;

cin >> length;

cout << "Enter the Width of rectangle:" << endl;

cin >> width;

obj.set\_Rectangle(length,width);

cout << "\n----------Area of Square----------" << endl;

cin >> side;

obj.set\_Square(side);

obj.display();

system("pause");

}

**Program 2**

**Write a program which has class name as “pizza” which have following function**

* **Make constructor to initialize the data-members**
* **“display” to display the menu**
* **“order” function to take the order from customer**
* **“bill” function to calculate the customer bill**

**For this purpose, create two object to access the class “pizza” functionalities.**

#include<iostream>

#include<conio.h>

using namespace std;

class Pizza

{

string name;

int quantity,menu\_order;

public:

Pizza()

{

name = "Pizza";

menu\_order = 1;

quantity = 1;

}

void display\_menu()

{

cout << "-\_-\_-\_-\_-\_-\_- MENU -\_-\_-\_-\_-\_-\_-" << endl;

cout << "1.Pizza" << endl;

cout << "2.Burger" << endl;

cout << "3.Salad" << endl;

}

void order(int ord\_er,int qty)

{

menu\_order = ord\_er;

quantity = qty;

switch (menu\_order)

{

case 1:

cout << "------Pizza------" << endl;

break;

case 2:

cout << "------Burger------" << endl;

break;

case 3:

cout << "------Salad------" << endl;

break;

default:

cout << "Invalid Input" << endl;

}

}

void bill()

{

int r;

if (menu\_order == 1)

{

r = quantity \* 350;

cout << "\nTotal bill is:" << r << endl;

}

else if (menu\_order == 2)

{

r = quantity \* 180;

cout << "\nTotal bill is:" << r << endl;

}

else if (menu\_order == 3)

{

r = quantity \* 150;

cout << "\nTotal bill is:" << r << endl;

}

else

{

cout << "\nBill error" << endl;

}

}

};

void main()

{

int n,n1;

Pizza obj;

obj.display\_menu();

cout << "Enter the order number:" << endl;

cin >> n;

cout << "Enter the quantity:" << endl;

cin >> n1;

obj.order(n, n1);

obj.bill();

system("pause");

}

**Program 3**

**A phone number such as (0300) 345-8900 can be thought of as having three parts:**

* **the area code (0300)**
* **the exchange code (345)**
* **the number (8900)**

**Write a program that uses class a class to store these part of a phone number separately. Call the class phone. Create two class objects of type phone. Initialize one and have the user input a number for other one. Display the both number.**

#include<iostream>

#include<conio.h>

#include<string>

using namespace std;

class phone

{

int exchange\_code,phone\_no;

string area\_code;

public:

phone(string a\_c, int e\_x, int p\_n)

{

set\_number(a\_c,e\_x,p\_n);

}

void set\_number(string a\_c, int e\_x, int p\_n)

{

area\_code = a\_c;

exchange\_code = e\_x;

phone\_no = p\_n;

}

void display()

{

cout << "your phone no. is(" << area\_code << ")" << exchange\_code << " " << phone\_no << endl;

}

};

void main()

{

phone obj1("0300", 345, 8900), obj2("0300", 345, 8900);

obj1.display();

obj2.display();

int e\_x, p\_n;

string a\_c;

cout << "Enter your desired number(into three parts):" << endl;

cin >> a\_c>>e\_x>>p\_n;

obj1.set\_number(a\_c, e\_x, p\_n);

obj1.display();

cout << "Enter your desired number(into three parts):" << endl;

cin >> a\_c >> e\_x >> p\_n;

obj2.set\_number(a\_c, e\_x, p\_n);

obj2.display();

system("pause");

}