**Example of Data Encapsulation and Abstraction**

#include <iostream> // using IO functions

#include <string> // using string

using namespace std;

// Class circle<<<Attributes(Variables)<<Behaviour(Methods)

int a;

// variable of datatype integer>>>>Accessing class Integer in the C++ library via object a

class Circle //ADT Circle

{

private:

double radius; //Member variables or Attributes

string color;

public :

Circle(double r=1.4,string c="Red")

//Construct>>>classes>>Instantiation//Set the values to the variables

{

radius=r; //1.4

color=c; // red

}

//Member functions or Methods//Get the values for the variables

double getRadius()

{

return radius;

}

string getColor()

{

return color;

}

//Member Function to manipulate the data

double areaCircle()

{

return radius\*radius\*3.14;

}

};

int main()

{ Circle c1;

cout<<c1.getRadius()<<c1.getColor()<<c1.areaCircle();

Circle c2(2.1);

cout<<"\n"<<c2.getRadius()<<c2.getColor()<<c2.areaCircle();

return 0;

}