**\_\_\_\_\_**

**General syntax :**

class Base {

public: // public members go here

protected: // protected members go here

private: // private members go here

};

**Examples:**

#include <iostream>

using namespace std;

class rectangleType

{

protected:

double length;

double width;

public:

rectangleType();

rectangleType( double L, double w);

~rectangleType();

void setDimension ( double L, double w);

double getLength();

double getWidth();

double area();

double perimeter();

void print();

};

rectangleType::rectangleType()‏

{ length = 0; width = 0;}

rectangleType::rectangleType( double L, double w)‏

{ setDimension( L , w); }

rectangleType::~rectangleType(){ }

void rectangleType::setDimension( double L, double w)‏

{ if ( L >= 0 ) length = L;

else length = 0;

if ( w >= 0 )width= w;

else width = 0;

}

double rectangleType::getLength()‏

{ return length;}

double rectangleType::getWidth()‏

{ return width;}

double rectangleType::area()‏

{ return length \* width;}

double rectangleType::perimeter()‏

{ return 2 \* ( length + width );}

void rectangleType::print()‏{

cout<<"Length = "<< length << " ; Width = " << width;

}

int main()

{ double x,y;

cout<<" Enter the length and width of the rectangle R1: ";

cin>>x>>y;

rectangleType R1(x,y), R2(12,4), R3(9,10);

cout<<" the area of R1= "<<R1.area()<<endl;

cout<<" the perimeter of R1= "<<R1.perimeter()<<endl;

cout<<" the area of R2= "<<R2.area()<<endl;

cout<<" the perimeter of R2= "<<R2.perimeter()<<endl;

cout<<" the area of R3= "<<R3.area()<<endl;

cout<<" the perimeter of R3= "<<R3.perimeter()<<endl;

return 0;

}

#include <iostream>

using namespace std;

//========================

class Line

{ public:

double length;

void setLength( double len );

double getLength();

};

void Line::setLength( double len )

{ length = len;}

// Member functions definitions

double Line::getLength()

{ return length ;}

//=================================================

// Main function for the program

int main( )

{ Line l1;

// set line length

l1.setLength(6.0);

cout << "Length of line : " << l1.getLength() <<endl;

// set line length without member function

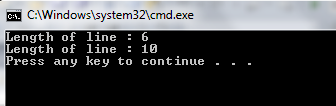
l1.length = 10.0; // OK: because length is public

cout << "Length of line : " << l1.length <<endl;

return 0;

}

**Output :**

****

#include <iostream>

using namespace std;

class Box

{

public:

double length; // Length of a box

double breadth; // Breadth of a box

double height; // Height of a box

void volume(); // to calculate volume

};

void Box::volume()

{ double volume;

volume = height \* length \*breadth;

cout << "Volume of Box : " << volume <<endl;

}

int main( )

{

Box Box1; // Declare Box1 of type Box

Box Box2; // Declare Box2 of type Box

double volume = 0.0; // Store the volume of a box here

// box 1 specification

Box1.height = 5.0;

Box1.length = 6.0;

Box1.breadth = 7.0;

// box 2 specification

Box2.height = 10.0;

Box2.length = 12.0;

Box2.breadth = 13.0;

// volume of box 1

cout << "Volume of Box1 : " <<endl;

Box1.volume();

// volume of box 2

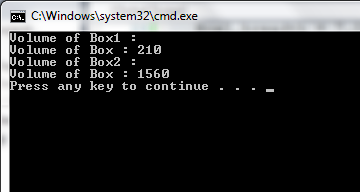
cout << "Volume of Box2 : " <<endl;

Box2.volume();

return 0;

}

**Output :**

****