

```
//Program demonstarting multilevel inheritance
```

```
class Box
{
```

```
    private double width;
    private double height;
    private double depth;
```

```
//Construct Clone of an Object
```

```
    Box(Box ob)
    {
        width =ob.width;
        height =ob.height;
        depth = ob.depth;
    }
```

```
//Constructors used when all dimentions are specified
```

```
    Box(double w,double h,double d)
    {
        width =w;
        height =h;
        depth = d;
    }
```

```
//Constructor used when no dimentions specified
```

```
    Box()
    {
        width =-1;
        height =-1;
        depth = -1;
    }
```

```
//Constructor used when cube is created
```

```
    Box(double len)
    {
        width=height=depth=len;
    }
```

```
//Compute and return volume
```

```
    double volume()
    {
        return(width*height*depth);
    }
```

```
}
```

```
//Add weight
```

```
class BoxWeight extends Box
```

```
{
    double weight;                //Weight of the box
```

```
//Construct clone of an object
```

```
    BoxWeight(BoxWeight ob)
    {
```

```
        //Pass object to the constructor
```

```

        super(ob);
        weight=ob.weight;
    }

//Constructor when all the parameteres are specified
BoxWeight(double w, double h, double d, double m)
{
    super(w,h,d);
    weight=m;
}

//default constructor
BoxWeight()
{
    super();
    weight=-1;
}

//Constructor used when cube is created
BoxWeight(double len, double m)
{
    super(len);
    weight=m;
}
}

//Add Shipment Costs
class Shipment extends BoxWeight
{
    double cost;

//Construct clone of an object
    Shipment(Shipment ob)                //Pass object to constructor
    {
        super(ob);
        cost=ob.cost;
    }

//Constructor when all the parameters are specified
    Shipment(double w, double h, double d, double m,double c)
    {
        super(w,h,d,m);
        cost=c;
    }

//default constructor
    Shipment()
    {
        super();
        cost=-1;
    }

//Constructor used when cube is created
    Shipment(double len, double m, double c)

```

```

    {
        super(len,m);
        cost=c;
    }
}

class DemoShipment1
{
    public static void main(String args[])
    {
        Shipment shipment1 = new Shipment(10,20,15,10,3.41);
        Shipment shipment2 = new Shipment(2,3,4,0.76,1.28);
        double vol;

        vol=shipment1.volume();

        System.out.println("Volume of Shipment 1 is: " + vol);
        System.out.println("Weight of shipment 1 is: " + shipment1.weight);
        System.out.println("Shipping Cost: $" + shipment1.cost);
        System.out.println();

        vol=shipment2.volume();

        System.out.println("Volume of Shipment 2 is: " + vol);
        System.out.println("Weight of shipment 2 is: " + shipment2.weight);
        System.out.println("Shipping Cost: $" + shipment2.cost);
        System.out.println();
    }
}

```