

1.

### **Program code:**

```
class Box {
    double height;
    double depth;
    double width;
    Box(double height,double depth,double width){
        this.height = height;
        this.depth = depth;
        this.width = width;
    }
    public double volume(){
        return height*depth*width;
    }
}

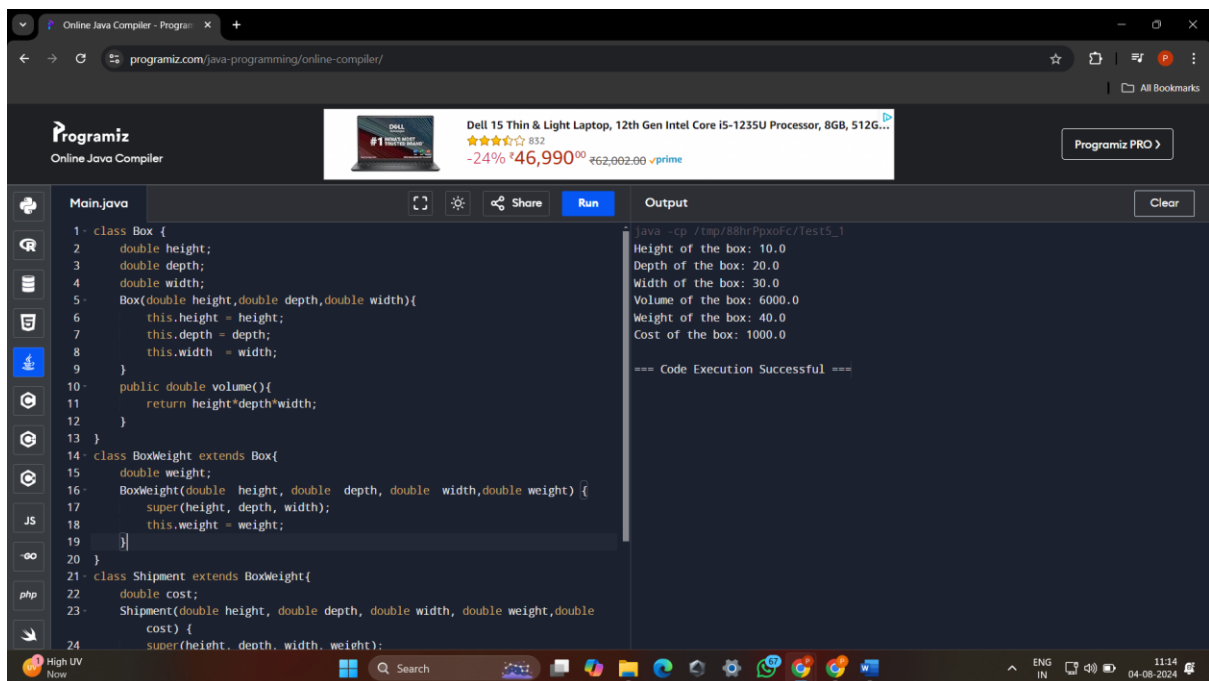
class BoxWeight extends Box{
    double weight;
    BoxWeight(double height, double depth, double width,double weight) {
        super(height, depth, width);
        this.weight = weight;
    }
}

class Shipment extends BoxWeight{
    double cost;
    Shipment(double height, double depth, double width, double weight,double cost) {
        super(height, depth, width, weight);
        this.cost = cost;
    }
}

public class Test5_1 {
    public static void main(String[] args) {
```

```
Shipment obj = new Shipment(10,20,30,40,1000);  
System.out.println("Height of the box: "+obj.height);  
System.out.println("Depth of the box: "+obj.depth);  
System.out.println("Width of the box: "+obj.width);  
System.out.println("Volume of the box: "+obj.volume());  
System.out.println("Weight of the box: "+obj.weight);  
System.out.println("Cost of the box: "+obj.cost);  
}  
}
```

# OUTPUT:



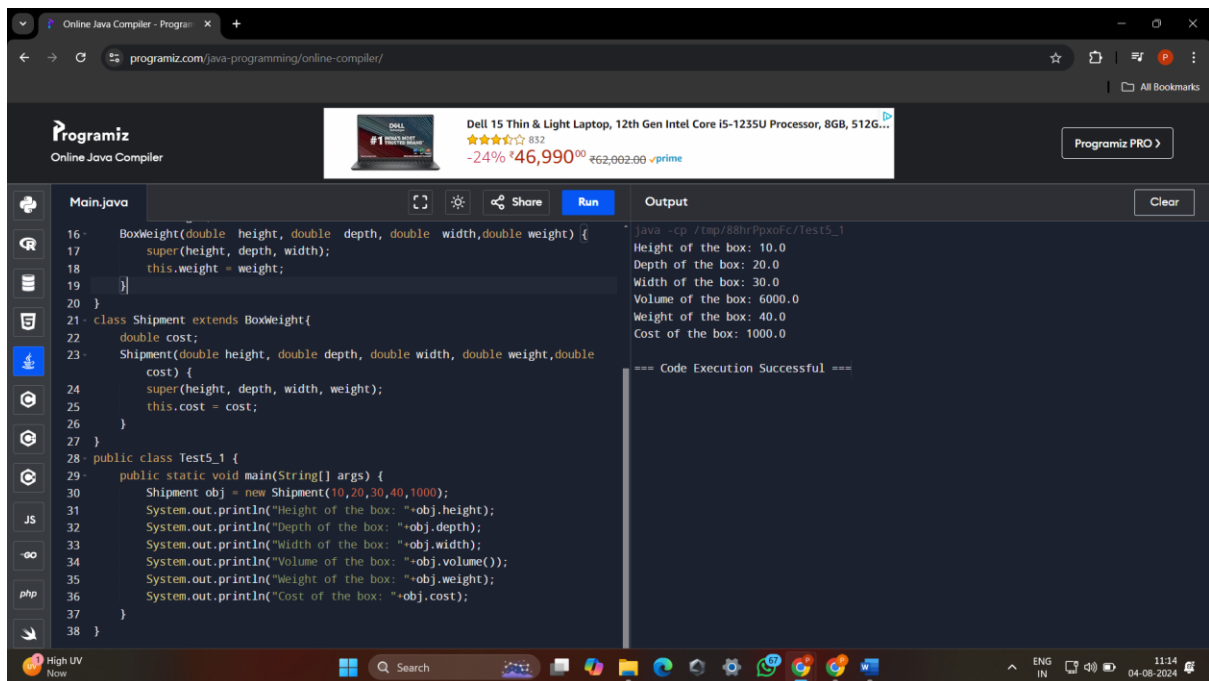
The screenshot shows the Programiz Online Java Compiler interface. The 'Main.java' file contains the following code:

```
1 class Box {
2     double height;
3     double depth;
4     double width;
5     Box(double height,double depth,double width){
6         this.height = height;
7         this.depth = depth;
8         this.width = width;
9     }
10    public double volume(){
11        return height*depth*width;
12    }
13 }
14 class BoxWeight extends Box{
15     double weight;
16     BoxWeight(double height, double depth, double width,double weight) {
17         super(height, depth, width);
18         this.weight = weight;
19     }
20 }
21 class Shipment extends BoxWeight{
22     double cost;
23     Shipment(double height, double depth, double width, double weight,double
24         cost) {
25         super(height, depth, width, weight);
26     }
27 }
```

The 'Output' panel shows the result of the compilation:

```
java -cp /tmp/88hrPpxofc/Test5_1
Height of the box: 10.0
Depth of the box: 20.0
Width of the box: 30.0
Volume of the box: 6000.0
Weight of the box: 40.0
Cost of the box: 1000.0

=== Code Execution Successful ===
```



The screenshot shows the Programiz Online Java Compiler interface with the 'Main.java' file updated to include a main method. The code is as follows:

```
16 BoxWeight(double height, double depth, double width,double weight) {
17     super(height, depth, width);
18     this.weight = weight;
19 }
20 }
21 class Shipment extends BoxWeight{
22     double cost;
23     Shipment(double height, double depth, double width, double weight,double
24         cost) {
25         super(height, depth, width, weight);
26         this.cost = cost;
27     }
28 }
29 public class Test5_1 {
30     public static void main(String[] args) {
31         Shipment obj = new Shipment(10,20,30,40,1000);
32         System.out.println("Height of the box: "+obj.height);
33         System.out.println("Depth of the box: "+obj.depth);
34         System.out.println("Width of the box: "+obj.width);
35         System.out.println("Volume of the box: "+obj.volume());
36         System.out.println("Weight of the box: "+obj.weight);
37         System.out.println("Cost of the box: "+obj.cost);
38     }
39 }
```

The 'Output' panel shows the result of the compilation:

```
java -cp /tmp/88hrPpxofc/Test5_1
Height of the box: 10.0
Depth of the box: 20.0
Width of the box: 30.0
Volume of the box: 6000.0
Weight of the box: 40.0
Cost of the box: 1000.0

=== Code Execution Successful ===
```