

```
*Shape.java × *Square.java *Rectangle.java *PrintShapes.java
1 package lessonEndProject;
2
3 public class Shape {
4     public void displayArea()
5     {
6         System.out.println("The shape is not having any area calculation method");
7     }
8 }
9
10
```

```
*Shape.java    *Square.java    *Rectangle.java    *PrintShapes.java X
package lessonEndProject;
import java.util.ArrayList;
public class PrintShapes {
    public static void main(String[] args) {
        // TODO Auto-generated method stub

        ArrayList<Shape> sh = new ArrayList<>();

        try {
            sh.add(new Rectangle(4,6));
            sh.add(new Square(-1));

            for(Shape shape: sh)
            {
                shape.displayArea();
            }
        } catch (Exception e)
        {
            e.printStackTrace();
        }
        finally {
            System.out.println("program executed Successfully");
        }
    }
}
```

```
*Shape.java    *Square.java    *Rectangle.java    *PrintShapes.java X
1 package lessonEndProject;
2 import java.util.ArrayList;
3 public class PrintShapes {
4     public static void main(String[] args) {
5         // TODO Auto-generated method stub
6
7         ArrayList<Shape> sh = new ArrayList<>();
8
9         try {
10            sh.add(new Rectangle(4,6));
11            sh.add(new Square(-1));
12
13            for(Shape shape: sh)
14            {
15                shape.displayArea();
16            }
17        } catch (Exception e)
18        {
19            e.printStackTrace();
20        }
21        finally {
22            System.out.println("program executed Successfully");
23        }
24    }
25 }
```

```
*Shape.java  *Square.java  *Rectangle.java  *PrintShapes.java
2
3 public class Rectangle extends Shape{
4
5     int length;
6     int width;
7
8
9     public Rectangle(int length, int width )
10    {
11        // using the below code, we are initializing the arguments of the constructor
12        this.length = length;
13        this.width = width;
14    }
15    public double calculateArea()
16    {
17        return length*width;
18    }
19
20    public void displayArea()
21    {
22        System.out.println( "the area of rectangle is:" + calculateArea());
23    }
24 }
```

```
*Shape.java  *Square.java  *Rectangle.java  *PrintShapes.java
1 package lessonEndProject;
2
3 public class Square extends Shape{
4
5     int length;
6
7
8     public Square(int length )
9     {
10        this.length = length;
11    }
12    public double calculateArea()
13    {
14        return length*length;
15    }
16
17    public void displayArea()
18    {
19        System.out.println( "the area of square is:" + calculateArea());
20    }
21 }
```