Bouncing of a Ball Java Program

```
import java.applet.Applet;
import java.awt.Color;
import java.awt.Graphics;
/*<applet code= "Bounce.class" height=900 width=900>
</applet>*/
class Ball
                    {
                     int x,y,radius,dx,dy;
                     Color BallColor;

                    public Ball(int x,int y,int radius,int dx,int dy,Color bColor)
                    {
                      this.x=x;
                      this.y=y;
                      this.radius=radius;
                      this.dx=dx;
                      this.dy=dy;
                      BallColor=bColor;
                    }
                    }
                    public class Bounce extends Applet implements Runnable{
                    Ball redBall;
                      public void init()
                      {
```

```
        redBall=new Ball(250,80,50,2,4,Color.red);

        Thread t=new Thread(this);
        t.start();
      }

     public void paint(Graphics g)
     {
        g.setColor(redBall.BallColor);

          setBackground(Color.pink);
           //g.setcolor(redBall.BallColor);
           g.fillOval(redBall.x, redBall.y,
redBall.radius,redBall.radius);

     g.drawLine(150,400,50,500);
     g.drawLine(150,400,450,400);
     g.drawLine(50,500,350,500);
     g.drawLine(450,400,350,500);
     g.drawRect(50,500,20,100);
     g.drawRect(330,500,20,100);
     g.drawLine(450,400,450,500);
     g.drawLine(430,500,450,500);
     g.drawLine(430,500,430,420);

      }
```

```
public void run()
{
  while(true)
  {
   try
     {
        displacementOperation(redBall);

        Thread.sleep(20);
        repaint();
     }
   catch(Exception e){}
   }
 }
public void displacementOperation(Ball ball)
{

 if(ball.y >= 400 || ball.y <= 0)
 {
  ball.dy=-ball.dy;
 }

  ball.y=ball.y+ball.dy;

 }
}
```