import java.awt.*;

/**
* A Lens has a certain color and can either be turned on
* (the color) or turned off (black).
*
* @version 1
*/

public class Lens extends Canvas
{
    private Color onColor;                // color on
    private Color offColor = Color.black; // color off
    private Color currentColor;           // color the lens is now

    private final static int SIZE = 100;  // how big is this Lens?
    private final static int OFFSET = 20; // offset of Lens in Canvas

    /**
    * Construct a Lens to display a given color.
    *
    * The lens is black when it's turned off.
    *
    * @param color the color of the lens when it is turned on.
    */

    public Lens( Color color )
    {
        this.setBackground( Color.black );
        this.onColor = color;
        this.setSize( SIZE , SIZE );
        this.turnOff();
    }

    /**
    * How this Lens paints itself.
    *
    * @param g a Graphics object to manage brush and color information.
    */

    public void paint( Graphics g )
    {
        g.setColor( this.currentColor );
        g.fillOval( OFFSET, OFFSET,
        SIZE - OFFSET*2, SIZE - OFFSET*2 );
    }

    /**
    * Have this Lens display its color.
    */

    public void turnOn()
    {
        this.repaint();
    }

    /**
    * Darken this lens.
    */

    public void turnOff()
    {
        this.repaint();
    }
}