The paint mode determines how objects are drawn in a window.

By default, new output to a window overwrites any preexisting contents.

However, it is possible to have new objects **XORed** onto the window by using *setXORMode*(), as follows:

```
void setXORMode(Color  xorColor)
```

Here, *xorColor* specifies the color that will be **XORed** to the window when an object is drawn.

The advantage of XOR mode is that the new object is always guaranteed to be visible no matter what color the object is drawn over.

To return to overwrite mode, call *setPaintMode*(), shown here:

```
void setPaintMode()
```

Example

For example, the following program displays cross hairs that track the mouse pointer.

The cross hairs are **XORed** onto the window and are always visible, no matter what the underlying color is.

```
// Demonstrate XOR mode.
import java.awt.Color;
import java.awt.Graphics;
import java.awt.event.MouseEvent;
import java.awt.event.MouseMotionAdapter;

import javax.swing.JFrame;
import javax.swing.JPanel;
```

```
class XOR extends JPanel {
   int chsX = 100, chsY = 100;

   public XOR() {
      addMouseMotionListener(new MouseMotionAdapter() {
         public void mouseMoved(MouseEvent me) {
            int x = me.getX();
            int y = me.getY();
            chsX = x - 10;//from   w w  w  .  d e  mo 2s
.c o m
            chsY = y - 10;
            repaint();
         }
      });
   }

   public void paint(Graphics g) {
      g.drawLine(0, 0, 100, 100);
      g.setColor(Color.blue);
      g.drawLine(40, 25, 250, 180);
      g.setColor(Color.green);
      g.drawRect(10, 10, 60, 50);
      g.fillRect(100, 10, 60, 50);
      g.setColor(Color.red);
      g.drawRoundRect(190, 10, 60, 50, 15, 15);
      g.fillRoundRect(70, 90, 140, 100, 30, 40);

      g.setColor(Color.cyan);
      g.drawLine(20, 150, 400, 40);

      // xor cross hairs
      g.setXORMode(Color.black);
      g.drawLine(chsX - 10, chsY, chsX + 10, chsY);
      g.drawLine(chsX, chsY - 10, chsX, chsY + 10);
      g.setPaintMode();
```

```
    }
}

public class Main {
    public static void main(String[] argv) {
        JFrame frame = new JFrame();

        frame.add(new XOR());
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setSize(500, 600);
        frame.setVisible(true);
    }
}
```