

```
package ch8;

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

class Light extends JPanel {
    private static final long serialVersionUID = 1L;
    private boolean red;
    private boolean yellow;
    private boolean green;

    public Light() {
        red = false;
        yellow = false;
        green = false;
    }

    public void turnOnRed() {
        red = true;
        yellow = false;
        green = false;
        repaint();
    }

    public void turnOnYellow() {
        red = false;
        yellow = true;
        green = false;
        repaint();
    }

    public void turnOnGreen() {
        red = false;
        yellow = false;
        green = true;
        repaint();
    }

    public void paintComponent(Graphics g) {
        super.paintComponent(g);
        int px, py;
        px = this.getWidth() / 2;
        py = this.getHeight() / 2;
    }
}
```

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        if (red) {
            g.setColor(Color.RED);
            g.fillOval(px - 10, py - 35, 20, 20);
            g.setColor(Color.BLACK);
            g.drawOval(px - 10, py - 10, 20, 20);
            g.drawOval(px - 10, py + 15, 20, 20);
        } else if (yellow) {
            g.setColor(Color.YELLOW);
            g.fillOval(px - 10, py - 10, 20, 20);
            g.setColor(Color.BLACK);
            g.drawOval(px - 10, py - 35, 20, 20);
            g.drawOval(px - 10, py + 15, 20, 20);
        } else if (green) {
            g.setColor(Color.GREEN);
            g.fillOval(px - 10, py + 15, 20, 20);
            g.setColor(Color.BLACK);
            g.drawOval(px - 10, py - 10, 20, 20);
            g.drawOval(px - 10, py - 35, 20, 20);
        } else {
            g.setColor(Color.BLACK);
            g.drawOval(px - 10, py - 35, 20, 20);
            g.drawOval(px - 10, py - 10, 20, 20);
            g.drawOval(px - 10, py + 15, 20, 20);
        }
        g.drawRect(px - 15, py - 40, 30, 80);
    }
}

public class LightDemo extends JFrame implements ItemListener {
    private static final long serialVersionUID = 1L;

    private JRadioButton jrbRed, jrbYellow, jrbGreen;

    private ButtonGroup btg = new ButtonGroup();

    private Light light;

    public LightDemo() {
        super("交通路灯演示");
        light = new Light();

        JPanel p2 = new JPanel();
        jrbRed = new JRadioButton("红色");
        jrbYellow = new JRadioButton("黄色");
        jrbGreen = new JRadioButton("绿色");
        p2.add(jrbRed);
        p2.add(jrbYellow);
        p2.add(jrbGreen);
        btg.add(jrbRed);
        btg.add(jrbYellow);
        btg.add(jrbGreen);

        this.getContentPane().add(light, BorderLayout.CENTER);
        this.getContentPane().add(p2, BorderLayout.SOUTH);

        jrbRed.addItemListener(this);
        jrbYellow.addItemListener(this);
        jrbGreen.addItemListener(this);
    }
}

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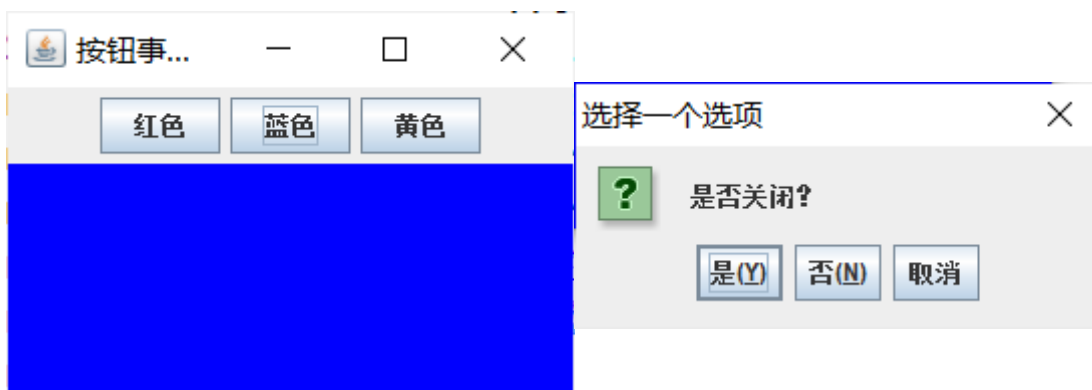
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        this.setSize(250, 180);
        this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        this.setVisible(true);
    }

    public void itemStateChanged(ItemEvent e) {
        if (jrbRed.isSelected())
            light.turnOnRed();
        else if (jrbYellow.isSelected())
            light.turnOnYellow();
        else if (jrbGreen.isSelected())
            light.turnOnGreen();
    }

    public static void main(String[] arg) {
        new LightDemo();
    }
}

```



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package ch8;

import javax.swing.*;
import java.awt.*;
import java.awt.event.*;

public class WinUI extends JFrame {

    private static final long serialVersionUID = 1L;

    private JButton btnRed, btnBlue, btnYellow;

    private JPanel p1Button, p1ShowColor;

    public WinUI() {
        super("按钮事件演示");
        this.setSize(300, 200);
        this.setLocation(200, 200);

        p1Button = new JPanel();
        p1ShowColor = new JPanel();
        Container con = this.getContentPane();
        con.add(p1Button, BorderLayout.NORTH);
        con.add(p1ShowColor, BorderLayout.CENTER);
        btnRed = new JButton("红色");
    }
}

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btnBlue = new JButton("蓝色");
btnYellow = new JButton("黄色");
p1Button.add(btnRed);
p1Button.add(btnBlue);
p1Button.add(btnYellow);

// 追加事件处理--匿名类(没有命名, 直接实例化)
btnRed.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent arg0) {
        p1ShowColor.setBackground(Color.RED);
    }
});

btnBlue.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent arg0) {
        p1ShowColor.setBackground(Color.BLUE);
    }
});

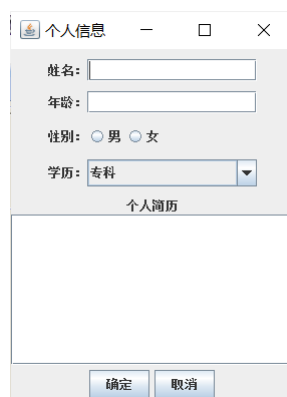
btnYellow.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent arg0) {
        p1ShowColor.setBackground(Color.YELLOW);
    }
});

// 追加一个this能响应窗口关闭动作
this.addWindowListener(new WindowAdapter() {
    public void windowClosing(WindowEvent arg0) {
        JOptionPane.showConfirmDialog(null, "是否关闭? ");
        System.exit(0);
    }
});

this.setVisible(true);
}

public static void main(String[] arg) {
    new WinUI();
}
}

```



```

package ch8;

import java.awt.*;
import java.awt.event.*;

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```

import javax.swing.*;

public class PersonInfo extends JFrame implements FocusListener, ActionListener
{
    private static final long serialVersionUID = 1L;

    private JTextField jtfName;
    private JTextField jtfAge;
    private JRadioButton jrbMan;
    private JRadioButton jrbWoman;
    private JComboBox jcbDegree;
    private JTextArea jtaDescription;

    public PersonInfo(String t) {
        super(t);
        this.setSize(300, 400);
        int wd = this.getSize().width / 8;

        Box b1 = Box.createHorizontalBox();
        b1.add(Box.createHorizontalStrut(wd));
        b1.add(new JLabel("姓名: "));
        jtfName = new JTextField(10);
        b1.add(jtfName);
        b1.add(Box.createHorizontalStrut(wd));

        Box b2 = Box.createHorizontalBox();
        b2.add(Box.createHorizontalStrut(wd));
        b2.add(new JLabel("年龄: "));
        jtfAge = new JTextField(5);
        jtfAge.addFocusListener(this);
        b2.add(jtfAge);
        b2.add(Box.createHorizontalStrut(wd));

        Box b3 = Box.createHorizontalBox();
        b3.add(Box.createHorizontalStrut(wd));
        b3.add(new JLabel("性别: "));
        jrbMan = new JRadioButton("男");
        jrbWoman = new JRadioButton("女");
        ButtonGroup bg = new ButtonGroup();
        bg.add(jrbMan);
        bg.add(jrbWoman);
        b3.add(jrbMan);
        b3.add(jrbWoman);
        b3.add(Box.createHorizontalStrut(this.getSize().width));

        Box b4 = Box.createHorizontalBox();
        b4.add(Box.createHorizontalStrut(wd));
        b4.add(new JLabel("学历: "));
        String[] dg = { "专科", "大学本科", "硕士", "博士", "其他" };
        jcbDegree = new JComboBox(dg);
        b4.add(jcbDegree);
        b4.add(Box.createHorizontalStrut(wd));

        jtaDescription = new JTextArea();
        JScrollPane p = new JScrollPane(jtaDescription);
        Box b5 = Box.createHorizontalBox();
        b5.add(new JLabel("个人简历"));
    }
}

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Box b = Box.createVerticalBox();
b.add(Box.createVerticalStrut(10));
b.add(b1);
b.add(Box.createVerticalStrut(10));
b.add(b2);
b.add(Box.createVerticalStrut(10));
b.add(b3);
b.add(Box.createVerticalStrut(10));
b.add(b4);
b.add(Box.createVerticalStrut(10));
b.add(b5);

JPanel p1 = new JPanel();
JButton btnOk = new JButton("确定");
JButton btnCancel = new JButton("取消");
p1.add(btnOk);
p1.add(btnCancel);
btnCancel.addActionListener(this);
btnOk.addActionListener(this);

this.getContentPane().add(b, BorderLayout.NORTH);
this.getContentPane().add(p, BorderLayout.CENTER);
this.getContentPane().add(p1, BorderLayout.SOUTH);

this.setVisible(true);
this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
}

public static void main(String[] arg) {
    new PersonInfo("个人信息");
}

public void focusGained(FocusEvent e) {
}

public void focusLost(FocusEvent e) {
    if (jtfAge.getText().trim().equals(""))
        return;
    // 输入的内容是否正确?
    try {
        int age = Integer.parseInt(jtfAge.getText().trim());
        if (age <= 0 || age > 200)
            throw new Exception();
    } catch (Exception ex) {
        JOptionPane.showMessageDialog(this, "年龄输入错误!");
        jtfAge.setText("");
    }
}

public void actionPerformed(ActionEvent e) {
    if (e.getActionCommand().trim().equals("确定")) {
        boolean isOk = true;
        if (jtfName.getText().trim().equals(""))
            isOk = false;
        else if (jtfAge.getText().trim().equals(""))
            isOk = false;
        else if (!(jrbMan.isSelected() || jrbWoman.isSelected()))

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        isok = false;
    else if (jtaDescription.getText().trim().equals(""))
        isok = false;
    if (isok == false)
        JOptionPane.showMessageDialog(this, "缺少内容未填写!");
} else {
    jtfName.setText("");
    jtfAge.setText("");
    jrbMan.setSelected(false);
    jrbWoman.setSelected(false);
    jcbDegree.setSelectedIndex(0);
    jtaDescription.setText("");
}
}
}
}

```



```

package ch67;

import javax.swing.*;
import java.awt.event.*;
import java.awt.*;
import java.io.*;

public class Imageviewer {
    public static void main(String[] args) {
        ImageviewerFrame fm = new ImageviewerFrame();
        fm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        fm.setVisible(true);
    }
}

class ImageviewerFrame extends JFrame {
    private static final long serialVersionUID = 1L;

    private JFileChooser chooser;

    private JLabel lbl;

    private static final int DEFAULT_WIDTH = 300;
    private static final int DEFAULT_HEIGHT = 400;
}

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public ImageViewerFrame() {
    this.setTitle("图片浏览");
    this.setSize(DEFAULT_WIDTH, DEFAULT_HEIGHT);

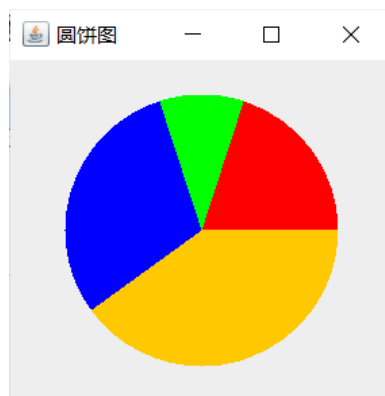
    chooser = new JFileChooser();
    chooser.setCurrentDirectory(new File("."));

    lbl = new JLabel();
    this.getContentPane().add(lbl, BorderLayout.CENTER);

    JMenuBar mbr = new JMenuBar();
    this.setJMenuBar(mbr);
    JMenu menu = new JMenu("File");
    mbr.add(menu);
    JMenuItem mitem = new JMenuItem("Open");
    menu.add(mitem);
    mitem.addActionListener(new ActionListener() {
        public void actionPerformed(ActionEvent e) {
            int result = chooser.showOpenDialog(null);
            if (result == JFileChooser.APPROVE_OPTION) {
                String name = chooser.getSelectedFile().getAbsolutePath();
                System.out.println(name);
                lbl.setIcon(new ImageIcon(name));
            }
        }
    });

    JMenuItem mexit = new JMenuItem("Exit");
    menu.add(mexit);
    mexit.addActionListener(new ActionListener() {
        public void actionPerformed(ActionEvent e) {
            System.exit(0);
        }
    });
}
}

```



```
package ch67;
```

/\*编写程序，使用圆饼图显示作业、平时测验、期中考试和期末考试占总成绩的百分比。

假设作业占20%，用红色显示；测验10%，用绿色显示；期中占30%，用蓝色表示；期末占40%，用橙色显示。\*/

```
import java.awt.*;
```

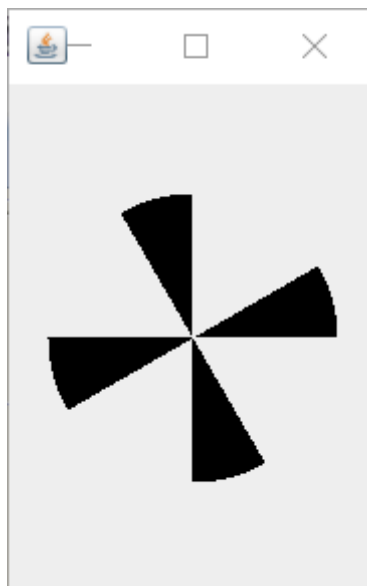
```
import javax.swing.*;
```



```

class PiePanel extends JPanel{
    private int project,quiz,midterm, fina;
    public PiePanel(int p,int q,int m,int f){
        project=p;
        quiz=q;
        midterm=m;
        fina=f;
    }
    public void paintComponent(Graphics g){
        super.paintComponent(g);
        int xCenter=this.getSize().width/2;
        int yCenter=this.getSize().height/2;
        int radius=(int)(Math.min(getSize().width,getSize().height)*0.4);
        int x=xCenter-radius;
        int y=yCenter-radius;
        g.setColor(Color.RED);
        g.fillArc(x,y,2*radius,2*radius,0,project*360/100);
        g.setColor(Color.GREEN);
        g.fillArc(x,y,2*radius,2*radius,project*360/100,quiz*360/100);
        g.setColor(Color.BLUE);
        g.fillArc(x,y,2*radius,2*radius,(project+quiz)*360/100,midterm*360/100);
        g.setColor(Color.ORANGE);
        g.fillArc(x,y,2*radius,2*radius,
(project+quiz+midterm)*360/100,fina*360/100);
    }
}
public class Pie extends JFrame{
    private static final long serialVersionUID = 1L;
    public Pie(String title,int p,int q,int m,int f){
        super(title);
        PiePanel pnl=new PiePanel(p,q,m,f);
        this.getContentPane().add(pnl);
        this.setSize(300,300);
        this setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        this.setVisible(true);
    }
    public static void main(String[] args){
        new Pie("圆饼图",20,10,30,40);
    }
}

```



```

package ch67;

import javax.swing.*;
import java.awt.*;

public class TestArcs extends JFrame{
    public TestArcs(){
        setTitle("showArcs");
        getContentPane().add(new ArcsPanel());
    }
    public static void main(String[] args){
        TestArcs fm=new TestArcs();
        fm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        fm.setSize(200,300);
        fm.setVisible(true);
    }
}

class ArcsPanel extends JPanel{
    public void paintComponent(Graphics g) {
        super.paintComponent(g);
        int xCenter=this.getSize().width/2;
        int yCenter=this.getSize().height/2;
        int radius=(int)(Math.min(getSize().width,getSize().height)*0.4);
        int x=xCenter-radius;
        int y=yCenter-radius;
        g.setColor(Color.BLACK);
        g.fillArc(x,y,2*radius,2*radius,0,30);
        g.fillArc(x,y,2*radius,2*radius,90,30);
        g.fillArc(x,y,2*radius,2*radius,180,30);
        g.fillArc(x,y,2*radius,2*radius,270,30);
    }
}

```