JTableFrameViewer.java

```
import javax.swing.JFrame;

/**
   This program shows a frame with a table that displays
   powers and factorial n.
*/
public class JTableFrameViewer
{
   public static void main(String[] args)
   {
      JFrame frame = new JTableFrame();
      frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
      frame.setVisible(true);
   }
}
```

JTableFrame.java

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

public class JTableFrame extends JFrame
{
   public double factorial (int n)
   {
       if (n<=1)
            return 1.0;
       else
          return n*factorial(n-1);
   }

   public JTableFrame()
   {
      this.setSize(1200,300);

            // column headings
      String headings [] = {"n", "n^2", "n^3", "2^n", "3^n", "n!"};

            // put table entries in an array
      String table[][] = new String[10][6];
      for (int i=0; i<10; i++)
      {
         int j=(i+1)*10;
         table[i][0] = ""+j;
         table[i][1] = ""+(int) Math.pow(j,2);
         table[i][2] = ""+(int) Math.pow(j,3);
         table[i][3] = ""+Math.pow(2,j);
         table[i][4] = ""+Math.pow(3,j);
         table[i][5] = ""+factorial(j);
```

```
      }

            //create JTable with this array and headings
      JTable tableList = new JTable(table, headings);
      tableList.setFont(new Font("Courier New",Font.PLAIN,12));

            //add table to scrollpane  to make it scrollable
      JScrollPane scroll = new JScrollPane(tableList);
      add(scroll,BorderLayout.CENTER);
   }
}
```

RectangleComponentViewer.java

```
import javax.swing.JFrame;

/**
   This program displays a RectangleComponent
*/
public class RectangleComponentViewer
{
   public static void main(String[] args)
   {
      final RectangleComponent component = new RectangleComponent();
      JFrame frame = new JFrame();
      frame.add(component);
      frame.setSize(FRAME_WIDTH, FRAME_HEIGHT);
      frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
      frame.setVisible(true);
   }

   private static final int FRAME_WIDTH = 300;
   private static final int FRAME_HEIGHT = 400;
}
```

RectangleComponent.java

```
import java.awt.Graphics;
import java.awt.Graphics2D;
import java.awt.Rectangle;
import javax.swing.JComponent;
import java.awt.event.MouseListener;
import java.awt.event.MouseEvent;

/**
   This component lets the user move a rectangle by clicking the mouse.
*/

public class RectangleComponent extends JComponent
   implements MouseListener
{
   public RectangleComponent()
```

```
   {
         // The rectangle that the paint method draws
      box = new Rectangle(BOX_X, BOX_Y, BOX_WIDTH, BOX_HEIGHT);
      addMouseListener(this);
   }

   public void paintComponent(Graphics g)
   {
      Graphics2D g2 = (Graphics2D) g;
      g2.draw(box);
   }

   /**
      Moves the rectangle to the given location.
      @param x the x-position of the new location
      @param y the y-position of the new location
   */

   public void moveTo(int x, int y)
   {
      box.setLocation(x, y);
      repaint();
   }

   public void mousePressed(MouseEvent event)
   {
      int x = event.getX();
      int y = event.getY();
      moveTo(x, y);
   }

      // Do-nothing methods
   public void mouseReleased(MouseEvent event) {}
   public void mouseClicked(MouseEvent event) {}
   public void mouseEntered(MouseEvent event) {}
   public void mouseExited(MouseEvent event) {}

   private Rectangle box;
   private static final int BOX_X = 100;
   private static final int BOX_Y = 100;
   private static final int BOX_WIDTH = 20;
   private static final int BOX_HEIGHT = 30;
}
```

JFileChooserDemo.java

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

// demonstrate a JFileChooser

public class JFileChooserDemo {
   public static void main(String[] args)
   {
       // construct a simple frame
      JFrame frame = new JFrame();
      frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
      frame.setSize(300,200);

      JPanel panel = new JPanel();
      JLabel label = new JLabel("Choose a file");
      panel.setLayout(new BorderLayout());
      panel.add(label,BorderLayout.NORTH);

      JLabel label2 = new JLabel("");
      panel.add(label2,BorderLayout.CENTER);

      frame.add(panel);
      frame.setVisible(true);

      // open a JFileChooser object
      JFileChooser chooser = new JFileChooser();
      int returnVal = chooser.showOpenDialog(frame);

      // if file chosen, confirm the details
      if (returnVal == JFileChooser.APPROVE_OPTION) {
         label2.setText("You chose to open this file: " +
                  chooser.getSelectedFile().getName());
      }
   }
}
```

CloseDemoViewer.java

```
import javax.swing.*;

// Constructs a simple frame with a single exit button
// Disables normal exit button on top right of window

public class CloseDemoViewer {
   public static void main(String[] args)
   {
      // construct a simple frame
      JFrame frame = new CloseDemo();
      frame.setDefaultCloseOperation(JFrame.DO_NOTHING_ON_CLOSE);
      frame.setSize(100,100);
      frame.setVisible(true);
   }
}
```

CloseDemo.java

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

public class CloseDemo extends JFrame implements ActionListener
{
   public CloseDemo()
   {
      JButton button = new JButton("Exit");
      button.addActionListener(this);
      JPanel panel = new JPanel();
      panel.add(button);
      add(panel);
   }

   public void actionPerformed(ActionEvent e)
   {
      System.exit(0);
   }
}
```