```java
/*
 * Chris Tjon - Wed 4pm - Ex 7.9 - Elevator Program
 */
package elevator;

import java.awt.*;
import java.applet.Applet;
import java.awt.event.*;

public class Elevator extends Applet implements ActionListener
{
    private Button upButton;
    private Button downButton;
    private boolean up;
    private boolean down;

    public void init ()
    {
        upButton = new Button("Up");
        add(upButton);
        upButton.addActionListener(this);
        downButton = new Button("Down");
        add(downButton);
        downButton.addActionListener(this);

    }

    public void paint (Graphics g)
    {
            if (up) // Up Button Pressed
            {
                    showStatus("Going Up!");
        g.drawRect(40, 80, 60, 100);
    }
            else if (down) // Down Button Pressed
            {
                    showStatus("Going Down!");
        g.drawRect(40, 180, 60, 100);
            }
            else  // Initial Starting Position - Down
                    g.drawRect(40, 180, 60, 100);

    }

    public void actionPerformed(ActionEvent event)
    {
            // Determine which button was pressed & repaint
        if (event.getSource() == upButton)
        {
            up = true;
            down = false;
        }
        if (event.getSource() == downButton)
        {
            up = false;
            down = true;
```
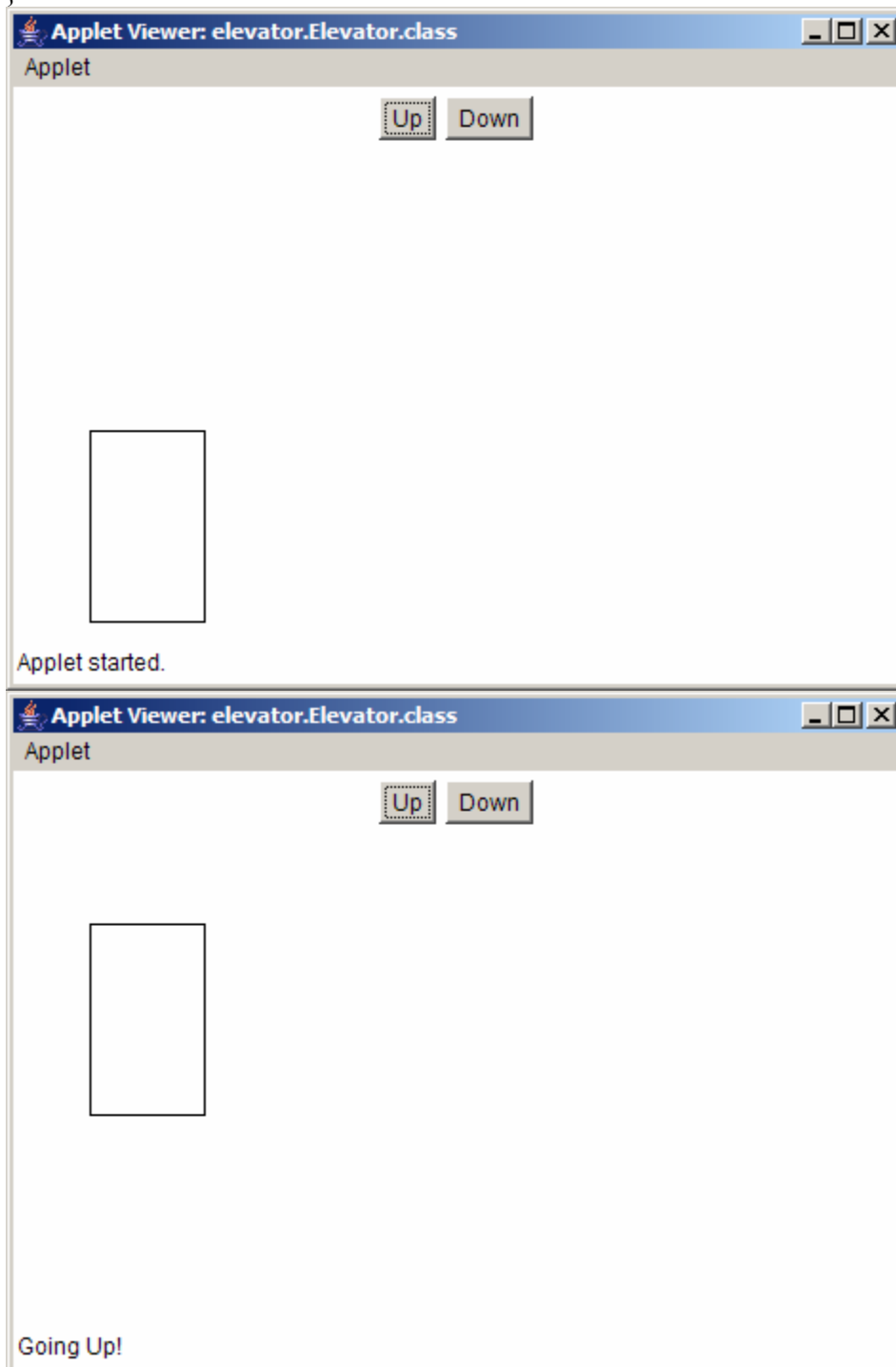
```
        }
    repaint();
    }
}
```

Up   Down

Up   Down

Going Up!

```
/*
 * Chris Tjon - Wed 4pm - Ex 7.2 - Card Dealer
 */
package dealer;

import java.awt.*;
import java.applet.Applet;
import java.awt.event.*;

public class Dealer extends Applet implements ActionListener
{
   private Button dealButton;
   private String card;
   private String suit; // Spades, Diamonds, Hearts, Clubs
   private String value; // A,2,3,4,5,6,7,8,9,10,J,Q,K

   public void init ()
   {
      dealButton = new Button("Deal");
      add(dealButton);
      dealButton.addActionListener(this);
   }

   public void paint (Graphics g)
   {
         if ((value != null) && (suit != null))
                  showStatus("Your Card is " + value + " of " + suit);
   }

   public void actionPerformed(ActionEvent event)
   {
         int suitNum = (int)((Math.random() * 4) + 1);
         int valueNum = (int)((Math.random() * 13) + 1);

         switch (suitNum)
                  {
                  case 1: suit = "Hearts"; break;
                  case 2: suit = "Diamonds"; break;
                  case 3: suit = "Spades"; break;
                  case 4: suit = "Clubs"; break;
         }

         switch (valueNum)
                  {
                  case 1: value = "Ace"; break;
                  case 2: value = "2"; break;
                  case 3: value = "3"; break;
                  case 4: value = "4"; break;
                  case 5: value = "5"; break;
                  case 6: value = "6"; break;
                  case 7: value = "7"; break;
                  case 8: value = "8"; break;
                  case 9: value = "9"; break;
                  case 10: value = "10"; break;
                  case 11: value = "Jack"; break;
                  case 12: value = "Queen"; break;
```

```
                    case 13: value = "King"; break;
          }
      repaint();
    }
}
```

```java
/*
 * Chris Tjon - Wed 4pm - Ex 8.2 - Random Numbers in While Loop
 */
package randomnumbers;

import java.awt.*;
import java.applet.*;

public class RandomNumbers extends Applet
{

    public void paint (Graphics g)
    {
        int numCount = 0;
        double randomNum;

        while (numCount < 10)
        {
            randomNum = Math.random();
            g.drawString("Random Number "
                            + (numCount + 1)
                                + " is "
                                + randomNum,
                                50, (50 + (numCount * 20)));
            numCount++;
        }
    }
}
```

Applet Viewer: randomnumbers.RandomNumbers.class

Applet

Random Number 1 is 0.9354237995136323

Random Number 2 is 0.05051472926097722

Random Number 3 is 0.9029605141123672

Random Number 4 is 0.16568357197809702

Random Number 5 is 0.574067736464203

Random Number 6 is 0.9876956342487528

Random Number 7 is 0.7515330657093877

Random Number 8 is 0.19963394237431986

Random Number 9 is 0.9795684455727576

Random Number 10 is 0.71325314486298

Applet started.