```
 1  /*
 2     Chapter 4:   Programming Assignment 1
 3     Programmer:  Mike Brown
 4     Date:        March 27, 2009
 5     Filename:    CommissionApplet.Java
 6     Purpose:     This applet calculates sales commision using a sales
        amount
 7                  (input by the user) and a sales code (chosen from among
                    option buttons).
 8  */
 9
10  import java.awt.*;
11  import java.applet.*;
12  import java.awt.event.*;
13  import java.text.DecimalFormat;
14
15  public class CommissionApplet extends Applet implements ItemListener
16  {
17      //declare variables and construct a color
18      double dollars, answer;
19      int empCode;
20      Image dollarSign;
21      Color darkRed = new Color(160,50,0);
22
23      //Create components for Applet
24      Label promptLabel = new Label("Enter the sales amount (do not use
        commas or dollar signs):");
25          TextField salesField = new TextField(20);
26
27      Label codeLabel = new Label ("Select the appropriate commission
        code:");
28
29      CheckboxGroup codeGroup = new CheckboxGroup();
30          Checkbox telephoneBox = new Checkbox("Telephone Sales", false,
            codeGroup);
31          Checkbox inStoreBox = new Checkbox("In-Store Sales", false,
            codeGroup);
32          Checkbox outsideBox = new Checkbox("Outside Sales", false,
            codeGroup);
33          Checkbox hiddenBox = new Checkbox("", true, codeGroup);
34
35      Label outputLabel = new Label("Click an option button to calculate
        the sales commission.");
36
37      public void init()
38      {
39          setBackground(darkRed);
40          setForeground(Color.white);
41          add(promptLabel);
42          add(salesField);
43          salesField.requestFocus();
44          salesField.setForeground(Color.black);
45          add(codeLabel);
46          add(telephoneBox);
47          telephoneBox.addItemListener(this);
48          add(inStoreBox);
49          inStoreBox.addItemListener(this);
50          add(outsideBox);
51          outsideBox.addItemListener(this);
52          add(outputLabel);
53      }
54
55      //This method is triggered by the user clicking an option button
56      public void itemStateChanged(ItemEvent choice)
57      {
58          try
59          {
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 60              dollars = getSales();
 61              empCode = getCode();
 62              answer = getComm(dollars,empCode);
 63              output(answer,dollars);
 64          }
 65
 66          catch (NumberFormatException e)
 67          {
 68              outputLabel.setText("You must enter a dollar amount greater
                 that zero.");
 69              hiddenBox.setState(true);
 70              salesField.setText("");
 71              salesField.requestFocus();
 72          }
 73      }
 74
 75      public double getSales()
 76      {
 77          double sales = Double.parseDouble(salesField.getText());
 78
 79          if (sales <= 0) throw new NumberFormatException();
 80
 81          return sales;
 82      }
 83
 84      public int getCode()
 85      {
 86          int code = 0;
 87          if(telephoneBox.getState()) code = 1;
 88          else
 89              if (inStoreBox.getState()) code = 2;
 90              else
 91                  if (outsideBox.getState()) code = 3;
 92          return code;
 93      }
 94
 95      public double getComm(double sales, int code)
 96      {
 97          double commission = 0.0;
 98          switch(code)
 99          {
100              case 1:
101                  commission = .10 * sales;
102                  break;
103
104              case 2:
105                  commission = .14 * sales;
106                  break;
107
108              case 3:
109                  commission = .18 * sales;
110                  break;
111          }
112          return commission;
113      }
114
115      public void output(double commission, double sales)
116      {
117          DecimalFormat twoDigits = new DecimalFormat("$#,000.00");
118          outputLabel.setText("Your commission on sales of " + twoDigits.
             format(sales) + " is " + twoDigits.format(commission));
119      }
120
121      public void paint (Graphics g)
122      {
123          dollarSign = getImage(getDocumentBase(), "dollarSign.gif");
124          g.drawImage(dollarSign, 12,28,this);
```

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125       }
126   }
```