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1 package project3;
2
3 import javax.swing.*;
4 import java.awt.*;
5 import java.awt.event.ActionEvent;
6 import java.awt.event.ActionListener;
7 import java.text.ParseException;
8 import java.text.SimpleDateFormat;
9 import java.util.Date;
10 import java.util.GregorianCalendar;
11
12 public class soldOnDialog extends JDialog implements ActionListener {
13
14     private JTextField txtName;
15     private JTextField txtDate;
16     private JTextField txtCost;
17
18     private JButton okButton;
19     private JButton cancelButton;
20     private int closeStatus;
21     private Auto auto;
22     static final int OK = 0;
23     static final int CANCEL = 1;
24
25     private static final int[] DAYS_IN_MONTH = {0, 31, 28, 31, 30, 31, 30, 31,
26         31, 30, 31, 30, 31};
27
28     /*
29      * Instantiate a Custom Dialog as 'modal' and wait for the
30      * user to provide data and click on a button.
31      */
32
33     @param parent reference to the JFrame application
34     @param auto an instantiated object to be filled with data
35     *****
36
37     public soldOnDialog(JFrame parent, Auto auto) {
38         // call parent and create a 'modal' dialog
39         super(parent, true);
40
41         this.auto = auto;
42         setTitle("Sold to dialog box");
43         closeStatus = CANCEL;
44         setSize(400,200);
45
46         // prevent user from closing window
47         setDefaultCloseOperation(WindowConstants.DO_NOTHING_ON_CLOSE);
48
49         // instantiate and display two text fields
50         txtName = new JTextField("Joe",30);
51         txtDate = new JTextField("10/17/2018",15);
52         txtCost = new JTextField("14000.00",15);
53
54         JPanel textPanel = new JPanel();
55         textPanel.setLayout(new GridLayout(4,2));
56         textPanel.add(new JLabel("Name of Buyer: "));
57         textPanel.add(txtName);

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57     textPanel.add(new JLabel("Sold on Date: "));
58     textPanel.add(txtDate);
59     textPanel.add(new JLabel("Sold for ($): "));
60     textPanel.add(txtCost);
61     getContentPane().add(textPanel, BorderLayout.CENTER);
62
63     // Instantiate and display two buttons
64     okButton = new JButton("OK");
65     cancelButton = new JButton("Cancel");
66     JPanel buttonPanel = new JPanel();
67     buttonPanel.add(okButton);
68     buttonPanel.add(cancelButton);
69     getContentPane().add(buttonPanel, BorderLayout.SOUTH);
70     okButton.addActionListener(this);
71     cancelButton.addActionListener(this);
72
73     setVisible (true);
74
75 }
76
77 /*****
78  Respond to either button clicks
79  @param e the action event that was just fired
80  *****/
81 public void actionPerformed(ActionEvent e) {
82
83     JButton button = (JButton) e.getSource();
84
85     // if OK clicked the fill the object
86     if (button == okButton) {
87         // save the information in the object
88         closeStatus = OK;
89         SimpleDateFormat df = new SimpleDateFormat("MM/dd/yyyy");
90         GregorianCalendar temp = new GregorianCalendar();
91
92         String tempName;
93         double tempCost;
94         String tempDate;
95         int day;
96         int month;
97         int year;
98
99         try {
100             tempName = txtName.getText();
101             tempCost = Double.parseDouble(txtCost.getText());
102             String[] dates = txtDate.getText().split("/");
103             String months;
104             String days;
105             String years;
106             if (dates.length == 3){
107                 months = dates[0];
108                 days = dates[1];
109                 years = dates[2];
110             }
111             else
112                 throw new IllegalArgumentException();

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113
114         month = Integer.parseInt(months);//Converts the Strings into integers
115         day = Integer.parseInt(days);
116         year = Integer.parseInt(years);
117         if (month < 1 || day < 1 || year < 1950 || month > 12)
118             throw new IllegalArgumentException();
119
120         if (!isLeapYear(year)) {
121             if (day > DAYS_IN_MONTH[month])
122                 throw new IllegalArgumentException();
123         }
124         else if (month == 2 && day > 29) {
125             throw new IllegalArgumentException();
126         }
127
128         if (tempName.equals(""))
129             throw new Exception();
130         if (tempCost <= 0)
131             throw new NumberFormatException();
132     }
133     catch (NumberFormatException e2){
134         JOptionPane.showMessageDialog(null,
135             "Enter a selling price above 0");
136         return;
137     }
138     catch (IllegalArgumentException e5){
139         JOptionPane.showMessageDialog(null,
140             "Enter a correct date with the format month/day/year");
141         return;
142     }
143     catch (Exception e3){
144         JOptionPane.showMessageDialog(null,
145             "Enter the name of the Buyer");
146         return;
147     }
148
149     try{
150         GregorianCalendar tempCheck = new GregorianCalendar();
151         Date dateCheck = df.parse(txtDate.getText());
152         tempCheck.setTime(dateCheck);
153         if (tempCheck.compareTo(auto.getBoughtOn()) == -1)
154             throw new Exception();
155     }
156     catch (Exception t){
157         JOptionPane.showMessageDialog(null,
158             "Enter a date after the car was bought");
159         return;
160     }
161
162     Date d = null;
163     try {
164         d = df.parse(txtDate.getText());
165         temp.setTime(d);
166     }
167     catch (ParseException e1) {
168         JOptionPane.showMessageDialog(null, "Invalid Date");

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169         // unreachable because the date has already been checked
170     }
171     auto.setNameOfBuyer(txtName.getText());
172     auto.setSoldOn(temp);
173     auto.setSoldPrice(Double.parseDouble(txtCost.getText()));
174 }
175
176 if (button == cancelButton){
177     txtCost.setText("50000");
178     dispose();
179     return;
180 }
181
182 JOptionPane.showMessageDialog(null,
183     "For the sales person, be sure to thank " +
184     auto.getNameOfBuyer() + " for buying the " +
185     auto.getAutoName() + "! The price" +
186     " difference was: $" + auto.getSoldBoughtDifference());
187 // make the dialog disappear
188 dispose();
189 }
190
191 /*****
192  Return a String to let the caller know which button
193  was clicked
194
195  @return an int representing the option OK or CANCEL
196  *****/
197 public int getCloseStatus(){
198     return closeStatus;
199 }
200
201 public static boolean isLeapYear(int year) {
202     return year % 4 == 0 && (year % 100 != 0 || year % 400 == 0);
203 }
204 }

```