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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 boughtOnDialogCar extends JDialog implements ActionListener {
13
14     private JTextField txtName;
15     private JTextField txtDate;
16     private JTextField txtTrimPackage;
17     private JTextField turbo;
18     private JTextField txtCost;
19     private JButton okButton;
20     private JButton cancelButton;
21     private JComboBox<String> combobox;
22     private int closeStatus;
23     private Auto auto;
24     static final int OK = 0;
25     static final int CANCEL = 1;
26
27     private static final int[] DAYS_IN_MONTH = {0, 31, 28, 31, 30, 31, 30, 31,
28         31, 30, 31, 30, 31};
29
30     /*
31      * Instantiate a Custom Dialog as 'modal' and wait for the
32      * user to provide data and click on a button.
33      */
34     @param parent reference to the JFrame application
35     @param auto an instantiated object to be filled with data
36     *****
37
38     public boughtOnDialogCar(JFrame parent, Auto auto) {
39         // call parent and create a 'modal' dialog
40         super(parent, true);
41
42         this.auto = auto;
43         setTitle("Buying a Car");
44         closeStatus = CANCEL;
45         setSize(400,200);
46
47         // prevent user from closing window
48         setDefaultCloseOperation(WindowConstants.DO_NOTHING_ON_CLOSE);
49
50         // instantiate and display two text fields
51         txtName = new JTextField("Fusion",30);
52         txtDate = new JTextField(15);
53         turbo = new JTextField("True",15);
54         txtTrimPackage = new JTextField("ST",15);
55         txtCost = new JTextField("10000.00", 15);
56

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57     String[] autoStrings = {"Car"};
58
59     combobox = new JComboBox<>(autoStrings);
60     txtDate.setText("8/8/2019");
61     JPanel textPanel = new JPanel();
62     textPanel.setLayout(new GridLayout(7,2));
63
64     textPanel.add(new JLabel(""));
65     textPanel.add(combobox);
66     textPanel.add(new JLabel(""));
67     textPanel.add(new JLabel(""));
68
69     textPanel.add(new JLabel("Name of Car: "));
70     textPanel.add(txtName);
71     textPanel.add(new JLabel("bought on Date: "));
72     textPanel.add(txtDate);
73     textPanel.add(new JLabel("Trim Package: "));
74     textPanel.add(txtTrimPackage);
75     textPanel.add(new JLabel("Turbo: "));
76     textPanel.add(turbo);
77     textPanel.add(new JLabel("Amount Paid for: "));
78     textPanel.add(txtCost);
79
80     getContentPane().add(textPanel, BorderLayout.CENTER);
81
82     // Instantiate and display two buttons
83     okButton = new JButton("OK");
84     cancelButton = new JButton("Cancel");
85     JPanel buttonPanel = new JPanel();
86     buttonPanel.add(okButton);
87     buttonPanel.add(cancelButton);
88     getContentPane().add(buttonPanel, BorderLayout.SOUTH);
89     okButton.addActionListener(this);
90     cancelButton.addActionListener(this);
91
92     setVisible (true);
93 }
94
95 /******
96 Respond to either button clicks
97 @param e the action event that was just fired
98 ******/
99 public void actionPerformed(ActionEvent e) {
100
101     JButton button = (JButton) e.getSource();
102
103     // if OK clicked the fill the object
104     if (button == okButton) {
105         // save the information in the object
106         closeStatus = OK;
107         SimpleDateFormat df = new SimpleDateFormat("MM/dd/yyyy");
108         GregorianCalendar temp = new GregorianCalendar();
109         String tempName;
110         double tempCost;
111         int day;
112         int month;

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113         int year;
114
115         try {
116             tempName = txtName.getText();
117             tempCost = Double.parseDouble(txtCost.getText());
118             String[] dates = txtDate.getText().split("/");
119             String months;
120             String days;
121             String years;
122             if (dates.length == 3){
123                 months = dates[0];
124                 days = dates[1];
125                 years = dates[2];
126             }
127             else
128                 throw new IllegalArgumentException();
129
130             month = Integer.parseInt(months);//Converts the Strings into integers
131             day = Integer.parseInt(days);
132             year = Integer.parseInt(years);
133             if (month < 1 || day < 1 || year < 1950 || month > 12)
134                 throw new IllegalArgumentException();
135
136             if (!isLeapYear(year)) {
137                 if (day > DAYS_IN_MONTH[month])
138                     throw new IllegalArgumentException();
139             }
140             else if (month == 2 && day > 29) {
141                 throw new IllegalArgumentException();
142             }
143             if (tempName.equals(""))
144                 throw new Exception();
145             if (tempCost <= 0)
146                 throw new NumberFormatException();
147         }
148         catch (NumberFormatException e2){
149             JOptionPane.showMessageDialog(null, "Enter a cost above 0");
150             return;
151         }
152         catch (IllegalArgumentException e5){
153             JOptionPane.showMessageDialog(null,
154                 "Enter a correct date with the format month/day/year");
155             return;
156         }
157         catch (Exception e3){
158             JOptionPane.showMessageDialog(null, "Enter the name of the Car");
159             return;
160         }
161
162         if (combobox.getSelectedIndex() == 1) {
163             Date d = null;
164             try {
165                 d = df.parse(txtDate.getText());
166                 temp.setTime(d);
167             }
168             catch (ParseException e1) {

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169         JOptionPane.showMessageDialog(null, "Invalid Date");
170         //unreachable because the date is checked before this
171     }
172     auto.setBoughtOn(temp);
173     auto.setAutoName(txtName.getText());
174     ((Car) auto).setTrim(txtTrimPackage.getText());
175     auto.setBoughtCost(Double.parseDouble(txtCost.getText()));
176
177 }
178
179 else {
180     Date d = null;
181     try {
182         d = df.parse(txtDate.getText());
183         temp.setTime(d);
184
185     } catch (ParseException e1) {
186         JOptionPane.showMessageDialog(null, "Invalid Date");
187         //unreachable because the date is checked before this
188     }
189
190     auto.setBoughtOn(temp);
191     auto.setAutoName(txtName.getText());
192     auto.setBoughtCost(Double.parseDouble(txtCost.getText()));
193     ((Car) auto).setTrim(txtTrimPackage.getText());
194
195     if (turbo.getText().equalsIgnoreCase("true"))
196         ((Car) auto).setTurbo(true);
197     else
198         ((Car) auto).setTurbo(false);
199
200 }
201 }
202
203 if (button == cancelButton){
204     txtCost.setText("50000");
205 }
206
207 // make the dialog disappear
208 dispose();
209 }
210
211 /******
212 Return a String to let the caller know which button
213 was clicked
214
215 @return an int representing the option OK or CANCEL
216 *****/
217 public int getCloseStatus(){
218     return closeStatus;
219 }
220
221 public static boolean isLeapYear(int year) {
222     return year % 4 == 0 && (year % 100 != 0 || year % 400 == 0);
223 }
224 }

```