

ReminderFile.java

```
1 import java.awt.*;
2 import java.awt.event.*;
3 import java.util.*;
4
5 import java.io.FileInputStream;
6 import java.io.FileOutputStream;
7 import java.io.IOException;
8 import java.io.ObjectInputStream;
9 import java.io.ObjectOutputStream;
10
11 import javax.swing.*;
12 import javax.swing.table.*;
13
14 /**
15  *
16  * @author Ayisha S.R. Sowkathali, Sifaben Vahora
17  *
18  *      ReminderFile.java
19  *
20  */
21 public class ReminderFile {
22
23     // creates a window
24     JFrame jfrm = new JFrame("Appointment Reminder Application");
25     JLabel label;
26     DefaultTableModel model;
27     Calendar cal = new GregorianCalendar();
28     JTable table;
29     String month;
30     int year;
31     int day;
32     JTextArea appointmentArea = new JTextArea(10, 10);
33     JButton okButton = new JButton("Add Appointment");
34
35     // list of appointments
36     ArrayList<SetAppointment> appointmentList;
37     String fileName = "data.txt";
38     CellRenderer cr;
39
40     ReminderFile() {
41         loadData();
42         jfrm.setLayout(new BorderLayout());
43
44         // Making buttons
45         okButton.addActionListener(new ActionListener() {
46             public void actionPerformed(ActionEvent ae) {
47                 saveAppointment();
48             }
49
50         });
51         jfrm.add(okButton, BorderLayout.SOUTH);
52         label = new JLabel();
53         label.setHorizontalAlignment(SwingConstants.CENTER);
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54
55 JButton b1 = new JButton("<Previous");
56 b1.addActionListener(new ActionListener() {
57     public void actionPerformed(ActionEvent ae) {
58         cal.add(Calendar.MONTH, -1);
59         updateMonth();
60     }
61 });
62 JButton b2 = new JButton("Next>");
63 b2.addActionListener(new ActionListener() {
64     public void actionPerformed(ActionEvent ae) {
65         cal.add(Calendar.MONTH, +1);
66         updateMonth();
67     }
68 });
69
70 JPanel panel = new JPanel();
71 panel.setLayout(new FlowLayout());
72 panel.add(b1, FlowLayout.LEFT);
73 panel.add(label, FlowLayout.CENTER);
74 panel.add(b2, FlowLayout.RIGHT);
75
76 String[] columns = { "Sun", "Mon", "Tue", "Wed", "Thu", "Fri", "Sat" };
77 model = new DefaultTableModel(null, columns);
78 table = new JTable(model);
79
80 table.addMouseListener(new MouseAdapter() {
81     @Override
82     public void mouseClicked(final MouseEvent e) {
83         if (e.getClickCount() == 1) {
84             final JTable jTable = (JTable) e.getSource();
85             try {
86                 day = (Integer) jTable.getValueAt(jTable.getSelectedRow(),
jTable.getSelectedColumn());
87                 displayAppointment();
88             } catch (Exception ex) {
89                 day = -1; // empty cal cell
90             }
91         }
92     }
93 });
94
95
96 JScrollPane tablePane = new JScrollPane(table);
97 JScrollPane appointmentAreaPane = new JScrollPane(appointmentArea);
98 JPanel middlePanel = new JPanel(new GridLayout(1, 2, 2, 20));
99 middlePanel.add(tablePane);
100 middlePanel.add(appointmentAreaPane);
101
102 panel.setBackground(Color.LIGHT_GRAY);
103
104 jfrm.add(panel, BorderLayout.NORTH);
105 jfrm.add(middlePanel, BorderLayout.CENTER);

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106
107     this.updateMonth();
108
109     jfrm.pack();
110     jfrm.setResizable(true);
111     jfrm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
112     jfrm.setVisible(true);
113 }
114
115 /*
116  * Method to display appointment
117  */
118 private void displayAppointment() {
119     if (day == -1) {
120         return;
121     }
122     appointmentArea.setText("");
123     SetAppointment app = new SetAppointment(month, year, day, "");
124     if (appointmentList.contains(app)) {
125         int index = appointmentList.indexOf(app);
126         appointmentArea.setText(appointmentList.get(index).appointment);
127     }
128 }
129
130 /*
131  * Method to save appointment set to the file for later use
132  */
133 private void saveAppointment() {
134     String appData = appointmentArea.getText();
135
136     if (appData == null || appData.trim().length() == 0) {
137         JOptionPane.showMessageDialog(null, "Enter Appointment Details!");
138         return;
139     }
140     if (day == -1) {
141         JOptionPane.showMessageDialog(null, "Select correct date!");
142         return;
143     }
144
145     SetAppointment app = new SetAppointment(month, year, day, "");
146     int index = appointmentList.indexOf(app);
147
148     if (index >= 0) {
149         appointmentList.get(index).appointment = appointmentArea.getText();
150     } else {
151         app = new SetAppointment(month, year, day, appointmentArea.getText());
152         appointmentList.add(app);
153     }
154     writeFile();
155     table.repaint();
156     JOptionPane.showMessageDialog(null, "Appointment Added!");
157
158 }

```

```

159
160  /*
161   * Method to update month according to which button is clicked.
162   */
163  void updateMonth() {
164      cal.set(Calendar.DAY_OF_MONTH, 1);
165      month = cal.getDisplayName(Calendar.MONTH, Calendar.LONG, Locale.US);
166      year = cal.get(Calendar.YEAR);
167      label.setText(month + " " + year);
168
169      int startDay = cal.get(Calendar.DAY_OF_WEEK);
170      int numberOfDays = cal.getActualMaximum(Calendar.DAY_OF_MONTH);
171      int weeks = cal.getActualMaximum(Calendar.WEEK_OF_MONTH);
172
173      model.setRowCount(0);
174      model.setRowCount(weeks);
175
176      int date = startDay - 1;
177      for (int day = 1; day <= numberOfDays; day++) {
178          int r = date / 7;
179          int c = date % 7;
180          model.setValueAt(day, r, c);
181
182          date++;
183      }
184      for (int i = 0; i < table.getColumnModel().getColumnCount(); i++) {
185          TableColumn col = table.getColumnModel().getColumn(i);
186          cr = new CellRenderer(appointmentList);
187          SetAppointment app = new SetAppointment(month, year, day, "");
188          cr.setCurrent(app);
189          col.setCellRenderer(cr);
190      }
191  }
192
193  /*
194   * Method to load data from file
195   */
196  private void loadData() {
197      try {
198
199          FileInputStream fis = new FileInputStream(fileName);
200          ObjectInputStream ois = new ObjectInputStream(fis);
201          appointmentList = extracted(ois);
202          ois.close();
203
204      } catch (Exception fne) {
205          appointmentList = new ArrayList<SetAppointment>();
206      }
207  }
208
209  /*
210   * Method to extract data from Array
211   */

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ReminderFile.java

```
212     @SuppressWarnings("unchecked")
213     private ArrayList<SetAppointment> extracted(ObjectInputStream ois) throws IOException,
ClassNotFoundException {
214         return (ArrayList<SetAppointment>) ois.readObject();
215     }
216
217     /*
218     * Method to write data to the file
219     */
220     private void writeFile() {
221         try {
222             FileOutputStream fos = new FileOutputStream(fileName);
223             ObjectOutputStream oos = new ObjectOutputStream(fos);
224             oos.writeObject(appointmentList);
225             oos.close();
226         } catch (Exception e) {
227
228         }
229     }
230 }
231
```