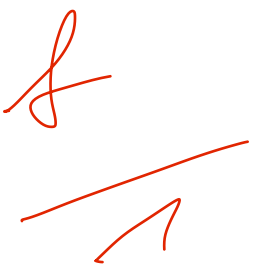
```java
package de.its.sw;

public class GUIZeit extends javax.swing.JFrame {

    Wecker[] uhren = new Radiowecker[2];
    String ausgabe;
    public GUIZeit() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated
    Code">//GEN-BEGIN:initComponents
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
        btnAusgeben = new javax.swing.JButton();
        btnSortieren = new javax.swing.JButton();
        jScrollPane2 = new javax.swing.JScrollPane();
        taAusgabe = new javax.swing.JTextArea();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        btnAusgeben.setText("ausgeben");
        btnAusgeben.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                btnAusgebenActionPerformed(evt);
            }
        });

        btnSortieren.setText("sortieren");
        btnSortieren.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                btnSortierenActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
            LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.
                Alignment.LEADING)
                    .addComponent(btnSortieren, javax.swing.GroupLayout.DEFAULT_SIZE,
                     javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addComponent(btnAusgeben)
                        .addGap(0, 0, Short.MAX_VALUE)))
                .addContainerGap())
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
            LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(btnAusgeben)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(btnSortieren)
                .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.
                MAX_VALUE))
        );

        taAusgabe.setColumns(20);
        taAusgabe.setRows(5);
        jScrollPane2.setViewportView(taAusgabe);
```

```
68
69          javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane
            ());
70          getContentPane().setLayout(layout);
71          layout.setHorizontalGroup(
72              layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
73              .addGroup(layout.createSequentialGroup()
74                  .addContainerGap()
75                  .addComponent(jScrollPane2, javax.swing.GroupLayout.DEFAULT_SIZE, 333
                    , Short.MAX_VALUE)
76                  .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
77                  .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.
                    swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.
                    PREFERRED_SIZE)
78                  .addContainerGap())
79          );
80          layout.setVerticalGroup(
81              layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
82              .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, layout.
                createSequentialGroup()
83                  .addContainerGap()
84                  .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.
                    Alignment.TRAILING)
85                      .addComponent(jScrollPane2, javax.swing.GroupLayout.DEFAULT_SIZE,
                         278, Short.MAX_VALUE)
86                      .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
                        javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
87                  .addContainerGap())
88          );
89
90          pack();
91      }// </editor-fold>//GEN-END:initComponents
92
93      private void btnAusgebenActionPerformed(java.awt.event.ActionEvent evt) {
        //GEN-FIRST:event_btnAusgebenActionPerformed
94
95          Zeit zeit1 = new Zeit(8, 0);
96          Zeit zeit2 = new Zeit(10, 30);
97          Zeit zeit4 = new Zeit(12, 0);
98          Zeit zeit5 = new Zeit(13, 30);
99
100         uhren[0] = new Wecker(zeit1, zeit2);
101         uhren[1] = new Radiowecker(zeit4, zeit5, 50);
102
103         for (int i = 0; i < uhren.length - 1; i++) {
104             ausgabe = uhren[i].getAusgabe();
105             ausgabe = ausgabe + "\n";
106         }
107         for (int i = 0; i < uhren.length - 1; i++) {
108             uhren[i].setSommerzeit(true);
109         }
110         for (int i = 0; i < uhren.length - 1; i++) {
111             ausgabe = uhren[i].getAusgabe();
112             ausgabe = ausgabe + "\n";
113         }
114
115         taAusgabe.setText(ausgabe);
116
117
118     }//GEN-LAST:event_btnAusgebenActionPerformed
119
120     private void btnSortierenActionPerformed(java.awt.event.ActionEvent evt) {
        //GEN-FIRST:event_btnSortierenActionPerformed
121         TimeComparator cn = new TimeComparator();
122
123         int result = cn.compare(uhren[0].zeit,uhren[1].zeit);
124         if(result ==0){
125                 cn.compare(uhren[0].zeit,uhren[1].zeit);
126                 }
127         taAusgabe.setText(ausgabe);
128
129     }//GEN-LAST:event_btnSortierenActionPerformed
130
```



```
131
132         // Variables declaration - do not modify//GEN-BEGIN:variables
133         private javax.swing.JButton btnAusgeben;
134         private javax.swing.JButton btnSortieren;
135         private javax.swing.JPanel jPanel1;
136         private javax.swing.JScrollPane jScrollPane2;
137         private javax.swing.JTextArea taAusgabe;
138         // End of variables declaration//GEN-END:variables
139     }
140
```