ScoreboardPanel.java

```java
1   import javax.swing.*;
2   import java.awt.*;
3   import java.io.BufferedReader;
4   import java.io.FileReader;
5   import java.io.IOException;
6
7   public class ScoreboardPanel extends JPanel {
8       public ScoreboardPanel(GameFrame gameFrame) {
9           setLayout(new BorderLayout());
10
11          setBackground(new Color(224, 255, 255)); // Set background color to light cyan
12
13          JLabel title = new JLabel("Scoreboard", SwingConstants.CENTER);
14          title.setFont(new Font("Arial", Font.BOLD, 24)); // Set font and size
15          title.setForeground(new Color(70, 130, 180)); // Set text color to steel blue
16          add(title, BorderLayout.NORTH); // Add title label to the top of the panel
17
18          JTextArea scoreArea = new JTextArea();
19          scoreArea.setEditable(false);
20          scoreArea.setFont(new Font("Arial", Font.PLAIN, 18)); // Set font and size
21          scoreArea.setForeground(new Color(70, 130, 180)); // Set text color to steel blue
22          scoreArea.setBackground(new Color(224, 255, 255)); // Set background color to light cyan
23
24          try (BufferedReader reader = new BufferedReader(new FileReader("scoreboard.txt"))) {
25              String line;
26              while ((line = reader.readLine()) != null) {
27                  scoreArea.append(line + "\n"); // Append game result to text area
28              }
29          } catch (IOException e) {
30              scoreArea.setText("No game results found."); // Display message if no game results are found
31          }
32
33          JScrollPane scrollPane = new JScrollPane(scoreArea);
34          add(scrollPane, BorderLayout.CENTER); // Add scroll pane with text area to the center of the panel
35
36          JButton backButton = new JButton("Back to Main Menu");
37          backButton.setFont(new Font("Arial", Font.PLAIN, 18)); // Set font and size
38          backButton.setBackground(new Color(176, 224, 230)); // Set background color to powder blue
39          backButton.setForeground(new Color(25, 25, 112)); // Set text color to midnight blue
40          backButton.addActionListener(e -> gameFrame.showMainMenuPanel()); // Switch to main menu panel when button is clicked
```

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41
42          add(backButton, BorderLayout.SOUTH); // Add back button to the bottom of the panel
43      }
44  }
45
```