**Experiment Report - 29 - test4\_codehistory**

1. **Summary Table of Errors Found**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Error ID | Line Number | Error Type | Self-Detected? | Peer 1 Found? | Peer 2 Found? |
| E01 | line 23 | Syntax | √ | √ | √ |
| E02 | line 35 | Syntax | × | √ | × |
| E03 | line 53 | Logic | √ | × | × |

Additional Errors Found by Self: 0

Self-Review Detection Rate: 67%

Peer 1 Detection Rate: 67%

Peer 2 Detection Rate: 33%

1. **Source Code**
2. #include "codehistory.h"
3. #include "historylinenumberarea.h"
4. #include <QPainter>
5. #include <QTextBlock>
6. CodeHistory::CodeHistory(QWidget \*parent)
7. : QPlainTextEdit(parent),
8. lineNumberArea(new HistoryLineNumberArea(this)), // 初始化行号区域
9. highlighter(new SyntaxHighlighter(this->document())) // 初始化语法高亮
10. {
11. // 设置编辑器的初始宽度和高亮当前行的功能
12. connect(this, &QPlainTextEdit::blockCountChanged, this, &CodeHistory::updateLineNumberAreaWidth);
13. connect(this, &QPlainTextEdit::updateRequest, this, &CodeHistory::updateLineNumberArea);
14. connect(this, &QPlainTextEdit::cursorPositionChanged, this, &CodeHistory::highlightCurrentLine);
15. updateLineNumberAreaWidth(0);
16. highlightCurrentLine();
17. setEditorFont("Courier",10); // 默认字体设置
18. }
19. void CodeHistory::updateLineNumberAreaWidth(int /\* newBlockCount \*/)
20. {
21. setViewportMargins(lineNumberAreaWidth(), 0, 0);
22. }
23. void CodeHistory::highlightCurrentLine()
24. {
25. QList<QTextEdit::ExtraSelection> extraSelections;
26. if (!isReadOnly()) {
27. QTextEdit::ExtraSelection selection;
28. QColor lineColor = QColor(Qt::yellow).lighter(160);
29. selection.format.setBackground(lineColor);
30. selection.format.setProperty(QTextFormat:FullWidthSelection, true);
31. selection.cursor = textCursor();
32. selection.cursor.clearSelection();
33. extraSelections.append(selection);
34. }
35. setExtraSelections(extraSelections);
36. }
37. void CodeHistory::updateLineNumberArea(const QRect &rect, int dy)
38. {
39. if (dy) {
40. lineNumberArea->scroll(0, dy);
41. } else {
42. lineNumberArea->update(0, rect.y(), lineNumberArea->width(), rect.height());
43. }
44. if (rect.contains(viewport()->rect())) {
45. updateLineNumberAreaWidth();
46. }
47. }