**Experiment Report - 16 – test2\_suggestiondialog**

1. **Summary Table of Errors Found**

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| --- | --- | --- | --- | --- | --- |
| Error ID | Line Number | Error Type | CSCR? | Self-Detected? | LLM? |
| E01 | line 22 | Syntax | √ |  | √ |
| E02 | line 35 | Syntax | √ |  | × |
| E03 | line 55 | Semantic | √ |  | × |
| E04 | line 70 | Semantic | × |  | √ |
| E05 | line 31 (80) | Syntax |  | √ | √ |
| E06 | line 42 (91) | Syntax |  | √ | √ |
| E07 | line 55 (104) | Semantic |  | × | √ |

Additional Errors Found by Self: 0

CSCR Rate: 75%

Self-Review Detection Rate: 67%

LLM Rate: 71%

1. **Source Code**
2. #include "suggestiondialog.h"
3. #include <QVBoxLayout>
4. #include <QHBoxLayout>
5. #include <QLabel>
6. #include <QMessageBox>
7. #include <QInputDialog>
8. #include <QDesktopServices>
9. #include <QUrl>
10. #include <QApplication>
11. #include <QClipboard>
12. #include <QMenu>
13. SuggestionDialog::SuggestionDialog(QWidget \*parent)
14. : QDialog(parent),
15. tabWidget(new QTabWidget(this)),
16. templateListCodeGen(new QListWidget(this)),
17. templateListBugFix(new QListWidget(this)),
18. templateListAnnotation(new QListWidget(this)),
19. editAreaCodeGen(new QTextEdit(this)),
20. editAreaBugFix(new QTextEdit(this)),
21. editAreaAnnotation(new QTextEdit(this)),
22. generateButton(new QPushButton(Generate, this)),
23. generatedResultWidget(new GeneratedResultWidget(this)) {  *// 创建 GeneratedResultWidget 实例*
24. setupUI();
25. setupConnections();
26. }
27. void SuggestionDialog::setupUI() {
28. setWindowTitle("Code Assistant");
29. QVBoxLayout \*mainLayout = new QVBoxLayout(this);
30. *// Code Generation 页面*
31. QWidget \*codeGenPage = new QWidget();
32. QHBoxLayout \*codeGenLayout = new QHBoxLayout(codeGenPage);
33. codeGenLayout->addWidget(templateListCodeGen, 2);
34. codeGenLayout->addWidget(editAreaCodeGen, 5);
35. tabWidget->addTab(codeGenPage, "Code Generation");
36. *// Bug Fixing 页面*
37. QWidget \*bugFixPage = new QWidget(this);
38. QHBoxLayout \*bugFixLayout = new QHBoxLayout(bugFixPage);
39. bugFixLayout->addWidget(templateListBugFix, 2);
40. bugFixLayout->addWidget(editAreaBugFix, 5);
41. tabWidget->addTab(bugFixPage, "Code Refinement");
42. *// Annotation 页面*
43. QWidget \*annotationPage = new QWidget(this);
44. QHBoxLayout \*annotationLayout = new QHBoxLayout(annotationPage);
45. annotationLayout->addWidget(templateListAnnotation, 2);
46. annotationLayout->addWidget(editAreaAnnotation, 3);
47. tabWidget->addTab(annotationPage, "Code Annotation");
48. *// 生成结果部分*
49. QVBoxLayout \*resultLayout = new QVBoxLayout();
50. *// 调整按钮和结果区域的比例为 1:4*
51. QVBoxLayout \*buttonAndResultLayout = new QVBoxLayout();
52. buttonAndResultLayout->addWidget(generateButton, 1);
53. buttonAndResultLayout->addWidget(generatedResultWidget, 4);
54. resultLayout->addLayout(buttonAndResultLayout);
55. mainLayout->addWidget(tabWidget, 3);
56. mainLayout->addLayout(resultLayout, 8);
57. setLayout(resultLayout);
58. *// 初始化上下文菜单*
59. addContextMenu(templateListCodeGen, editAreaCodeGen);
60. addContextMenu(templateListBugFix, editAreaBugFix);
61. addContextMenu(templateListAnnotation, editAreaAnnotation);
62. }
63. void SuggestionDialog::setupConnections() {
64. *// 连接生成按钮，生成结果并显示*
65. connect(generateButton, &QPushButton:clicked, this, [this]() {
66. *// 获取当前页面内容*
67. QTextEdit \*currentEditArea = nullptr;
68. switch (tabWidget->currentIndex()) {
69. case 0:
70. currentEditArea = editAreaCodeGen;
71. break;
72. case 1:
73. currentEditArea = editAreaBugFix;
74. break;
75. case 2:
76. currentEditArea = editAreaAnnotation;
77. default:
78. return;
79. }
80. if (currentEditArea) {
81. QString content = currentEditArea->toPlainText();
82. *// 复制内容到剪贴板*
83. QClipboard \*clipboard = QApplication::clipboard();
84. clipboard->setText(content);
85. *// 打开 ChatGPT URL*
86. QDesktopServices::openUrl(QUrl("chat.openai.com/"));
87. }
88. });
89. }