

52 QStandardItemModel案例界面

在这个案例中，借助QStandardItemModel模型和QTableView视图，以二维表格形式展示文本文件中的数据。第一步，先构建项目的基本框架和用户界面。

52.1 创建项目

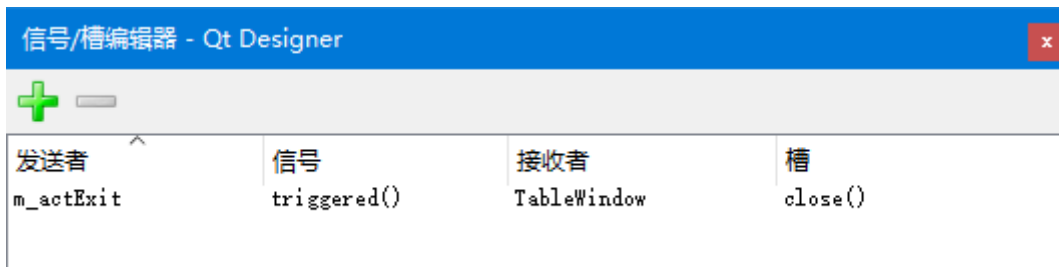
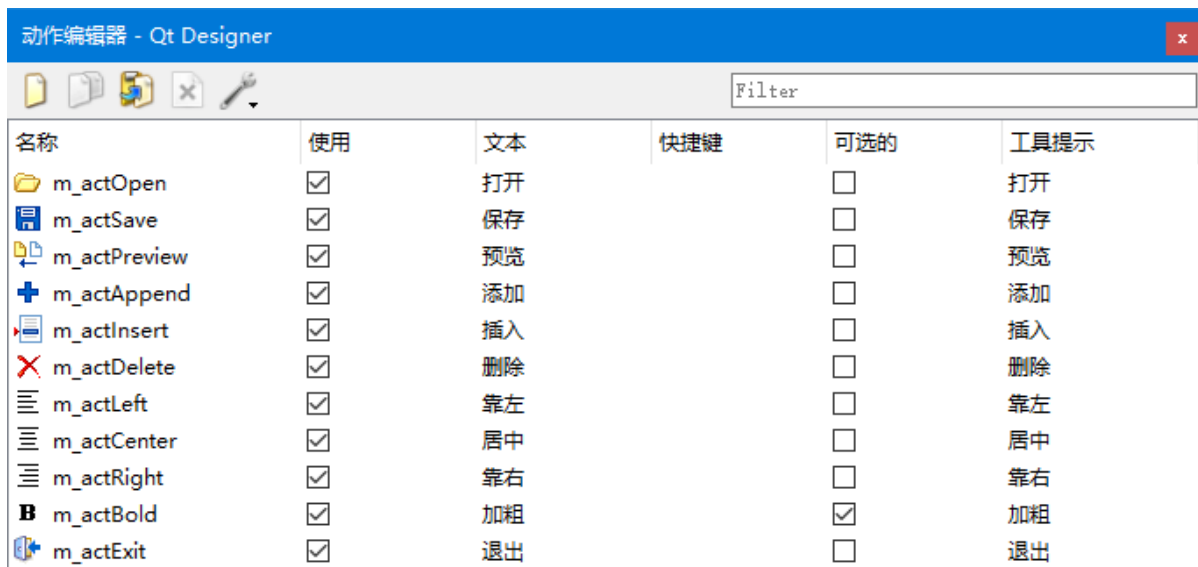
通过QtCreator，在C:\Users\Minwei\Projects\Qt路径下，创建名为Table的项目。

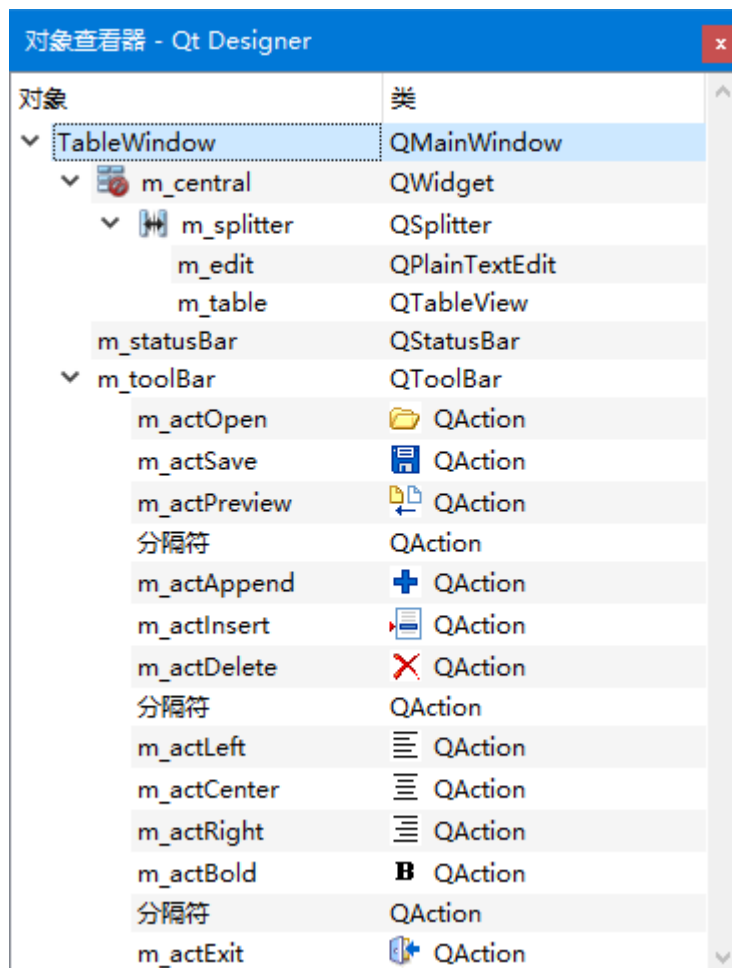
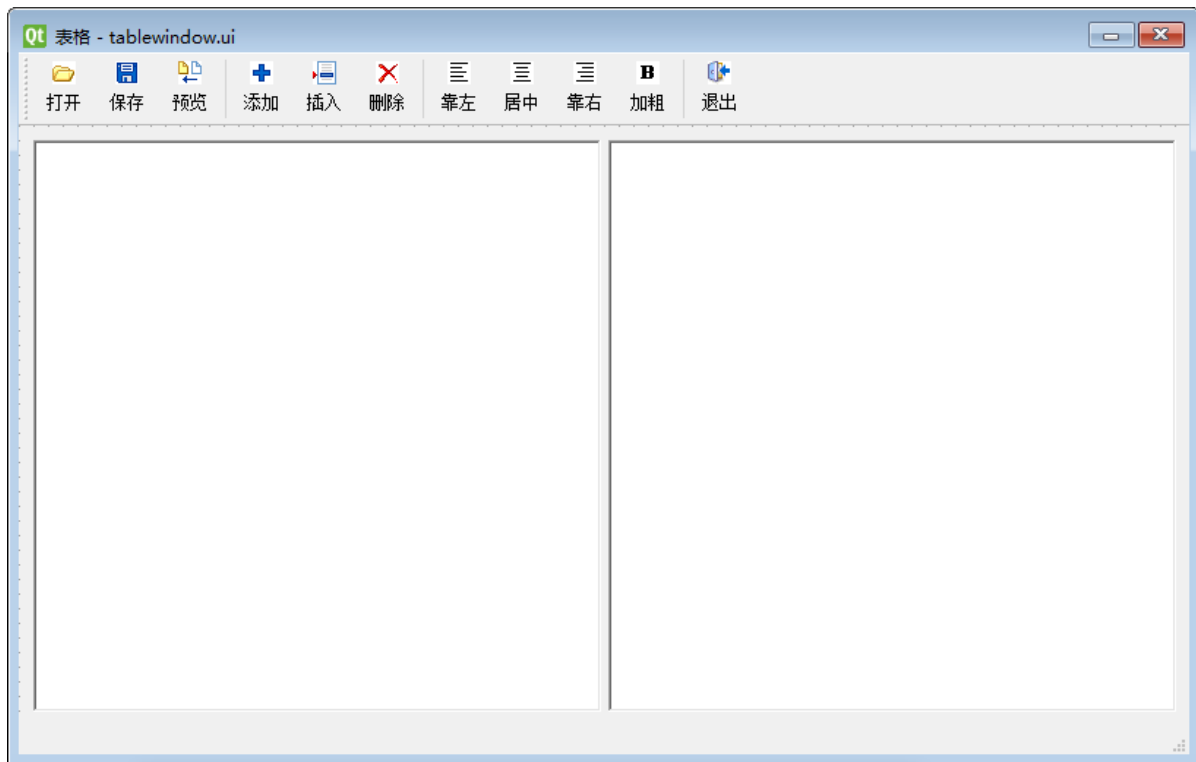
52.2 添加资源

C:\Users\Minwei\Projects\Qt\Table\Table.qrc:

```
1 <RCC>
2     <qresource prefix="/">
3         <file>images/open.bmp</file>
4         <file>images/save.bmp</file>
5         <file>images/preview.bmp</file>
6         <file>images/append.bmp</file>
7         <file>images/insert.bmp</file>
8         <file>images/delete.bmp</file>
9         <file>images/left.bmp</file>
10        <file>images/center.bmp</file>
11        <file>images/right.bmp</file>
12        <file>images/bold.bmp</file>
13        <file>images/exit.bmp</file>
14    </qresource>
15 </RCC>
```

52.3 设计界面





C:\Users\Minwei\Projects\Qt\Table\tablewindow.ui:

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <ui version="4.0">
3   <class>Tablewindow</class>
4   <widget class="QMainWindow" name="Tablewindow">
5     <property name="geometry">
6       <rect>

```

```
7     <x>0</x>
8     <y>0</y>
9     <width>800</width>
10    <height>480</height>
11    </rect>
12  </property>
13  <property name="windowTitle">
14    <string>表格</string>
15  </property>
16  <widget class="QWidget" name="m_central">
17    <widget class="QSplitter" name="m_splitter">
18      <property name="geometry">
19        <rect>
20          <x>10</x>
21          <y>10</y>
22          <width>781</width>
23          <height>391</height>
24        </rect>
25      </property>
26      <property name="orientation">
27        <enum>Qt::Horizontal</enum>
28      </property>
29      <widget class="QTableView" name="m_table">
30        <property name="frameShape">
31          <enum>QFrame::WinPanel</enum>
32        </property>
33      </widget>
34      <widget class="QPlainTextEdit" name="m_edit">
35        <property name="frameShape">
36          <enum>QFrame::WinPanel</enum>
37        </property>
38        <property name="readOnly">
39          <bool>true</bool>
40        </property>
41      </widget>
42    </widget>
43  </widget>
44  <widget class="QStatusBar" name="m_statusBar"/>
45  <widget class="QToolBar" name="m_toolBar">
46    <property name="windowTitle">
47      <string>工具栏</string>
48    </property>
49    <property name="toolButtonStyle">
50      <enum>Qt::ToolButtonTextUnderIcon</enum>
51    </property>
52    <attribute name="toolBarArea">
53      <enum>TopToolBarArea</enum>
54    </attribute>
55    <attribute name="toolBarBreak">
56      <bool>false</bool>
57    </attribute>
58    <addaction name="m_actOpen"/>
59    <addaction name="m_actSave"/>
60    <addaction name="m_actPreview"/>
61    <addaction name="separator"/>
62    <addaction name="m_actAppend"/>
```

```
63 <addaction name="m_actInsert"/>
64 <addaction name="m_actDelete"/>
65 <addaction name="separator"/>
66 <addaction name="m_actLeft"/>
67 <addaction name="m_actCenter"/>
68 <addaction name="m_actRight"/>
69 <addaction name="m_actBold"/>
70 <addaction name="separator"/>
71 <addaction name="m_actExit"/>
72 </widget>
73 <action name="m_actOpen">
74 <property name="icon">
75 <iconset resource="Table.qrc">
76 <normaloff>:/images/open.bmp</normaloff>:/images/open.bmp</iconset>
77 </property>
78 <property name="text">
79 <string>打开</string>
80 </property>
81 <property name="toolTip">
82 <string>打开</string>
83 </property>
84 </action>
85 <action name="m_actSave">
86 <property name="icon">
87 <iconset resource="Table.qrc">
88 <normaloff>:/images/save.bmp</normaloff>:/images/save.bmp</iconset>
89 </property>
90 <property name="text">
91 <string>保存</string>
92 </property>
93 <property name="toolTip">
94 <string>保存</string>
95 </property>
96 </action>
97 <action name="m_actPreview">
98 <property name="icon">
99 <iconset resource="Table.qrc">
100 <normaloff>:/images/preview.bmp</normaloff>:/images/preview.bmp</iconset>
101 </property>
102 <property name="text">
103 <string>预览</string>
104 </property>
105 <property name="toolTip">
106 <string>预览</string>
107 </property>
108 </action>
109 <action name="m_actAppend">
110 <property name="icon">
111 <iconset resource="Table.qrc">
112 <normaloff>:/images/append.bmp</normaloff>:/images/append.bmp</iconset>
113 </property>
114 <property name="text">
115 <string>添加</string>
116 </property>
```

```
117     <property name="toolTip">
118         <string>添加</string>
119     </property>
120 </action>
121 <action name="m_actInsert">
122     <property name="icon">
123         <iconset resource="Table.qrc">
124
125         <normaloff>:/images/insert.bmp</normaloff>:/images/insert.bmp</iconset>
126     </property>
127     <property name="text">
128         <string>插入</string>
129     </property>
130     <property name="toolTip">
131         <string>插入</string>
132     </property>
133 </action>
134 <action name="m_actDelete">
135     <property name="icon">
136         <iconset resource="Table.qrc">
137
138         <normaloff>:/images/delete.bmp</normaloff>:/images/delete.bmp</iconset>
139     </property>
140     <property name="text">
141         <string>删除</string>
142     </property>
143     <property name="toolTip">
144         <string>删除</string>
145     </property>
146 </action>
147 <action name="m_actLeft">
148     <property name="icon">
149         <iconset resource="Table.qrc">
150
151         <normaloff>:/images/left.bmp</normaloff>:/images/left.bmp</iconset>
152     </property>
153     <property name="text">
154         <string>靠左</string>
155     </property>
156     <property name="toolTip">
157         <string>靠左</string>
158     </property>
159 </action>
160 <action name="m_actCenter">
161     <property name="icon">
162         <iconset resource="Table.qrc">
163
164         <normaloff>:/images/center.bmp</normaloff>:/images/center.bmp</iconset>
165     </property>
166     <property name="text">
167         <string>居中</string>
168     </property>
169     <property name="toolTip">
170         <string>居中</string>
171     </property>
172 </action>
173 <action name="m_actRight">
```

```
170     <property name="icon">
171         <iconset resource="Table.qrc">
172             <normaloff>:/images/right.bmp</normaloff>:/images/right.bmp</iconset>
173     </property>
174     <property name="text">
175         <string>靠右</string>
176     </property>
177     <property name="toolTip">
178         <string>靠右</string>
179     </property>
180 </action>
181 <action name="m_actBold">
182     <property name="checkable">
183         <bool>true</bool>
184     </property>
185     <property name="icon">
186         <iconset resource="Table.qrc">
187             <normaloff>:/images/bold.bmp</normaloff>:/images/bold.bmp</iconset>
188     </property>
189     <property name="text">
190         <string>加粗</string>
191     </property>
192     <property name="toolTip">
193         <string>加粗</string>
194     </property>
195 </action>
196 <action name="m_actExit">
197     <property name="icon">
198         <iconset resource="Table.qrc">
199             <normaloff>:/images/exit.bmp</normaloff>:/images/exit.bmp</iconset>
200     </property>
201     <property name="text">
202         <string>退出</string>
203     </property>
204     <property name="toolTip">
205         <string>退出</string>
206     </property>
207 </action>
208 </widget>
209 <resources>
210     <include location="Table.qrc"/>
211 </resources>
212 <connections>
213     <connection>
214         <sender>m_actExit</sender>
215         <signal>triggered()</signal>
216         <receiver>Tablewindow</receiver>
217         <slot>close()</slot>
218     <hints>
219         <hint type="sourcelabel">
220             <x>-1</x>
221             <y>-1</y>
222         </hint>
223         <hint type="destinationlabel">
224             <x>399</x>
225             <y>299</y>
```

```
226     </hint>
227     </hints>
228     </connection>
229 </connections>
230 </ui>
```

52.4 功能框架

C:\Users\Minwei\Projects\Qt\Table\tablewindow.h:

```
1  #ifndef TABLEWINDOW_H
2  #define TABLEWINDOW_H
3
4  #include <QMainWindow>
5  #include <QLabel>
6
7  QT_BEGIN_NAMESPACE
8  namespace Ui { class Tablewindow; }
9  QT_END_NAMESPACE
10
11 class Tablewindow : public QMainWindow
12 {
13     Q_OBJECT
14
15 public:
16     Tablewindow(QWidget *parent = nullptr);
17     ~Tablewindow();
18
19 private slots:
20     void on_m_actOpen_triggered();
21     void on_m_actSave_triggered();
22     void on_m_actPreview_triggered();
23
24     void on_m_actAppend_triggered();
25     void on_m_actInsert_triggered();
26     void on_m_actDelete_triggered();
27
28     void on_m_actLeft_triggered();
29     void on_m_actCenter_triggered();
30     void on_m_actRight_triggered();
31     void on_m_actBold_triggered(bool checked);
32
33 private:
34     Ui::Tablewindow *ui;
35     QLabel* m_labCurFile;
36     QLabel* m_labCellPos;
37     QLabel* m_labCellText;
38 };
39
40 #endif // TABLEWINDOW_H
```

C:\Users\Minwei\Projects\Qt\Table\tablewindow.cpp:

```
1  #include "tablewindow.h"
```

```

2 #include "ui_tablewindow.h"
3
4 Tablewindow::Tablewindow(QWidget *parent)
5     : QMainWindow(parent)
6     , ui(new Ui::Tablewindow)
7     , m_labCurFile(new QLabel("当前文件: "))
8     , m_labCellPos(new QLabel(" 单元格位置: "))
9     , m_labCellText(new QLabel(" 单元格内容: "))
10  {
11     ui->setupUi(this);
12
13     ui->m_splitter->setStretchFactor(0, 348);
14     ui->m_splitter->setStretchFactor(1, 152);
15     setCentralWidget(ui->m_splitter);
16
17     m_labCurFile->setMinimumWidth(420);
18     ui->m_statusBar->addWidget(m_labCurFile);
19     m_labCellPos->setMinimumWidth(190);
20     ui->m_statusBar->addWidget(m_labCellPos);
21     m_labCellText->setMinimumWidth(190);
22     ui->m_statusBar->addWidget(m_labCellText);
23 }
24
25 Tablewindow::~Tablewindow()
26 {
27     delete ui;
28 }
29
30 void Tablewindow::on_m_actOpen_triggered()
31 {
32 }
33
34 void Tablewindow::on_m_actSave_triggered()
35 {
36 }
37
38 void Tablewindow::on_m_actPreview_triggered()
39 {
40 }
41
42 void Tablewindow::on_m_actAppend_triggered()
43 {
44 }
45
46 void Tablewindow::on_m_actInsert_triggered()
47 {
48 }
49
50 void Tablewindow::on_m_actDelete_triggered()
51 {
52 }
53
54 void Tablewindow::on_m_actLeft_triggered()
55 {
56 }
57

```



```
58 void Tablewindow::on_m_actCenter_triggered()  
59 {  
60 }  
61  
62 void Tablewindow::on_m_actRight_triggered()  
63 {  
64 }  
65  
66 void Tablewindow::on_m_actBold_triggered(bool checked)  
67 {  
68 }
```

52.5 测试验证

运行效果如图所示：

