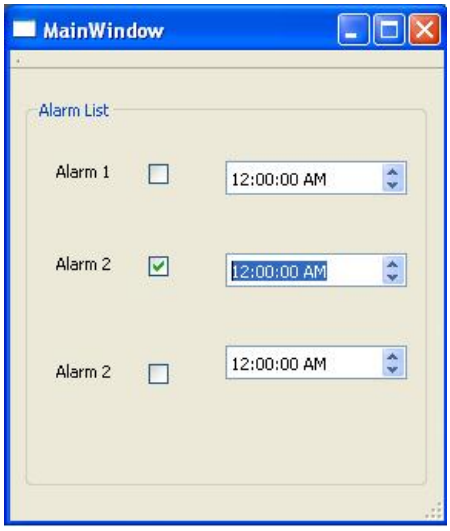
How to create alarm list in Qt

This code example shows shows how to layout a number of `QWidgets` in a `MainWindow` application, including `QLabel`, `QCheckBox`, and `QTimeEdit`. The `QCheckBox` and `QTimeEdit` are connected using **signal and slot** mechanism. The code is the UI layer for an "alarm" application - however the actual alarm code is not included.

Warning: The article title is deceptive - this doesn't actually show how to set alarms. It demonstrates how to layout a basic UI using QWidgets



Header file

```
#ifndef MAINWINDOW_H
#define MAINWINDOW_H

#include <QMainWindow>

namespace Ui {
    class MainWindow;
}

class MainWindow : public QMainWindow {
    Q_OBJECT
public:
    MainWindow(QWidget *parent = 0);
    ~MainWindow();

protected:
    void changeEvent(QEvent *e);

private:
    Ui::MainWindow *ui;
};

#endif // MAINWINDOW_H
```

Source file

```
#include "mainwindow.h"
#include "ui_mainwindow.h"
```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```
MainWindow::MainWindow(QWidget *parent) :
    QMainWindow(parent),
    ui(new Ui::MainWindow)
{
    ui->setupUi(this);
}

MainWindow::~MainWindow()
{
    delete ui;
}

void MainWindow::changeEvent(QEvent *e)
{
    QMainWindow::changeEvent(e);
    switch (e->type()) {
    case QEvent::LanguageChange:
        ui->retranslateUi(this);
        break;
    default:
        break;
    }
}
```

ui_mainwindow.cpp

```
#ifndef UI_MAINWINDOW_H
#define UI_MAINWINDOW_H

#include <QtCore/QVariant>
#include <QtGui/QAction>
#include <QtGui/QApplication>
#include <QtGui/QButtonGroup>
#include <QtGui/QCheckBox>
#include <QtGui/QGroupBox>
#include <QtGui/QHeaderView>
#include <QtGui/QLabel>
#include <QtGui/QMainWindow>
#include <QtGui/QMenuBar>
#include <QtGui/QStatusBar>
#include <QtGui/QTimeEdit>
#include <QtGui/QToolBar>
#include <QtGui/QWidget>

QT_BEGIN_NAMESPACE

class Ui_MainWindow
{
public:
    QWidget *centralWidget;
    QGroupBox *groupBox;
    QLabel *label;
    QLabel *label_2;
```


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```
    QLabel *label_3;
    QCheckBox *checkBox;
    QCheckBox *checkBox_2;
    QCheckBox *checkBox_3;
    QTimeEdit *timeEdit;
    QTimeEdit *timeEdit_2;
    QTimeEdit *timeEdit_3;
    QMenuBar *menuBar;
    QToolBar *mainToolBar;
    QStatusBar *statusBar;

    void setupUi(QMainWindow *MainWindow)
    {
        if (MainWindow->objectName().isEmpty())
            MainWindow->setObjectName(QString::fromUtf8("MainWindow"));
        MainWindow->resize(600, 400);
        centralWidget = new QWidget(MainWindow);
        centralWidget->setObjectName(QString::fromUtf8("centralWidget"));
        groupBox = new QGroupBox(centralWidget);
        groupBox->setObjectName(QString::fromUtf8("groupBox"));
        groupBox->setGeometry(QRect(10, 20, 261, 251));
        label = new QLabel(groupBox);
        label->setObjectName(QString::fromUtf8("label"));
        label->setGeometry(QRect(20, 40, 46, 13));
        label_2 = new QLabel(groupBox);
        label_2->setObjectName(QString::fromUtf8("label_2"));
        label_2->setGeometry(QRect(20, 100, 46, 13));
        label_3 = new QLabel(groupBox);
        label_3->setObjectName(QString::fromUtf8("label_3"));
        label_3->setGeometry(QRect(20, 170, 46, 13));
        checkBox = new QCheckBox(groupBox);
        checkBox->setObjectName(QString::fromUtf8("checkBox"));
        checkBox->setGeometry(QRect(80, 40, 70, 17));
        checkBox_2 = new QCheckBox(groupBox);
        checkBox_2->setObjectName(QString::fromUtf8("checkBox_2"));
        checkBox_2->setGeometry(QRect(80, 100, 70, 17));
        checkBox_3 = new QCheckBox(groupBox);
        checkBox_3->setObjectName(QString::fromUtf8("checkBox_3"));
        checkBox_3->setGeometry(QRect(80, 170, 70, 17));
        timeEdit = new QTimeEdit(groupBox);
        timeEdit->setObjectName(QString::fromUtf8("timeEdit"));
        timeEdit->setGeometry(QRect(130, 40, 118, 22));
        timeEdit_2 = new QTimeEdit(groupBox);
        timeEdit_2->setObjectName(QString::fromUtf8("timeEdit_2"));
        timeEdit_2->setGeometry(QRect(130, 100, 118, 22));
        timeEdit_3 = new QTimeEdit(groupBox);
        timeEdit_3->setObjectName(QString::fromUtf8("timeEdit_3"));
        timeEdit_3->setGeometry(QRect(130, 160, 118, 22));
        MainWindow->setCentralWidget(centralWidget);
        menuBar = new QMenuBar(MainWindow);
        menuBar->setObjectName(QString::fromUtf8("menuBar"));
        menuBar->setGeometry(QRect(0, 0, 600, 20));
        MainWindow->setMenuBar(menuBar);
        mainToolBar = new QToolBar(MainWindow);
        mainToolBar->setObjectName(QString::fromUtf8("mainToolBar"));
        MainWindow->addToolBar(Qt::TopToolBarArea, mainToolBar);
        statusBar = new QStatusBar(MainWindow);
```


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```
        statusBar->setObjectName(QString::fromUtf8("statusBar"));
        MainWindow->setStatusBar(statusBar);

        retranslateUi(MainWindow);

        QMetaObject::connectSlotsByName(MainWindow);
    } // setupUi

    void retranslateUi(QMainWindow *MainWindow)
    {
        MainWindow->setWindowTitle(QApplication::translate("MainWindow", "MainWindow",
0, QApplication::UnicodeUTF8));
        groupBox->setTitle(QApplication::translate("MainWindow", "Alarm List", 0,
QApplication::UnicodeUTF8));
        label->setText(QApplication::translate("MainWindow", "Alarm 1", 0,
QApplication::UnicodeUTF8));
        label_2->setText(QApplication::translate("MainWindow", "Alarm 2", 0,
QApplication::UnicodeUTF8));
        label_3->setText(QApplication::translate("MainWindow", "Alarm 2", 0,
QApplication::UnicodeUTF8));
        checkBox->setText(QString());
        checkBox_2->setText(QString());
        checkBox_3->setText(QString());
    } // retranslateUi

};

namespace Ui {
    class MainWindow: public Ui_MainWindow {};
} // namespace Ui

QT_END_NAMESPACE

#endif // UI_MAINWINDOW_H
```

Code example

The full source code presented in this article is available here File:Alarmlist.zip

Further Information

- Creating a signal to slot connection in Qt Designer
- Archived:How to create your first Qt application

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