Qt Primer

ESE3005

to begin, first have a look at this tutorial:

https://doc.qt.io/qtcreator/creator-writing-program.html

note the following from the tutorial...

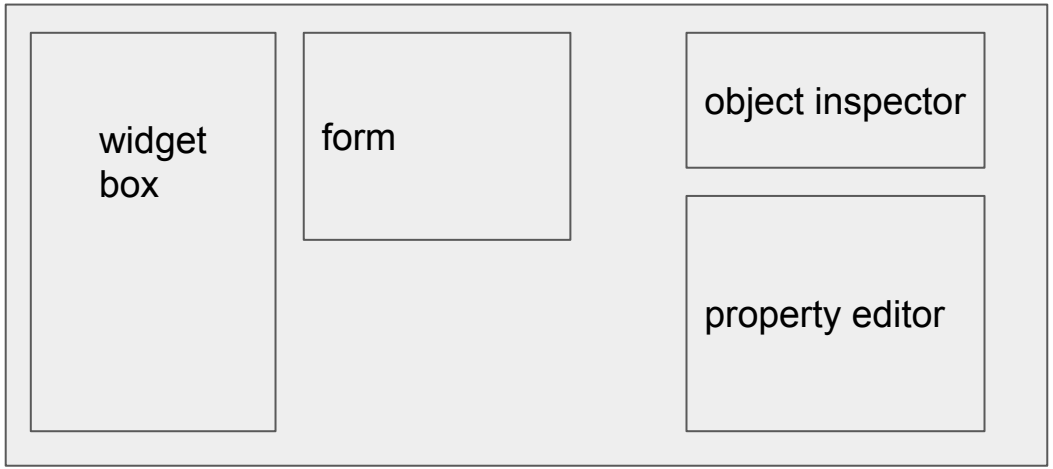
To call a find function when users select the Find button, you use the Qt signals and slots mechanism. A signal is emitted when a particular event occurs and a slot is a function that is called in response to a particular signal. Qt widgets have predefined signals and slots that you can use directly from Qt Designer. To add a slot for the find function:

- Right-click the Find button to open a context-menu.
- Select Go to Slot > clicked(), and then select OK.

A private slot, `on_findButton_clicked()` , is added to the header file, textfinder.h and a private function, `TextFinder::on_findButton_clicked()` , is added to the source file, textfinder.cpp.

Qt Widgets for Desktop Applications

- a nice way to quickly prototype an application
- a good way to learn the basics of Qt Creator
- Forms -> mainwindow.ui gives you Design Mode



Qt Creator Design Mode

Qt Widget Applications (event loop)

event occurs (e.g., the user clicks on the QUIT button).

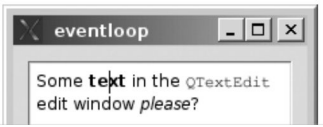
Example 9.5 shows a simple application that initiates the event loop by calling `exec()`.

EXAMPLE 9.5 src/eventloop/main.cpp

```
[ . . . . ]

int main(int argc, char * argv[]) {
    QApplication myapp(argc, argv);          ❶

    QWidget rootWidget;
    setGui(&rootWidget);

    rootWidget.show();                       ❷
    return myapp.exec();                     ❸
};
```

❶ Every GUI, multithreaded, or event-driven Qt Application must have a QApplication object defined at the top of main().
❷ Show our widget on the screen.
❸ Enter the event loop.

When we run this app, we first see a widget on the screen as shown in the following figure.



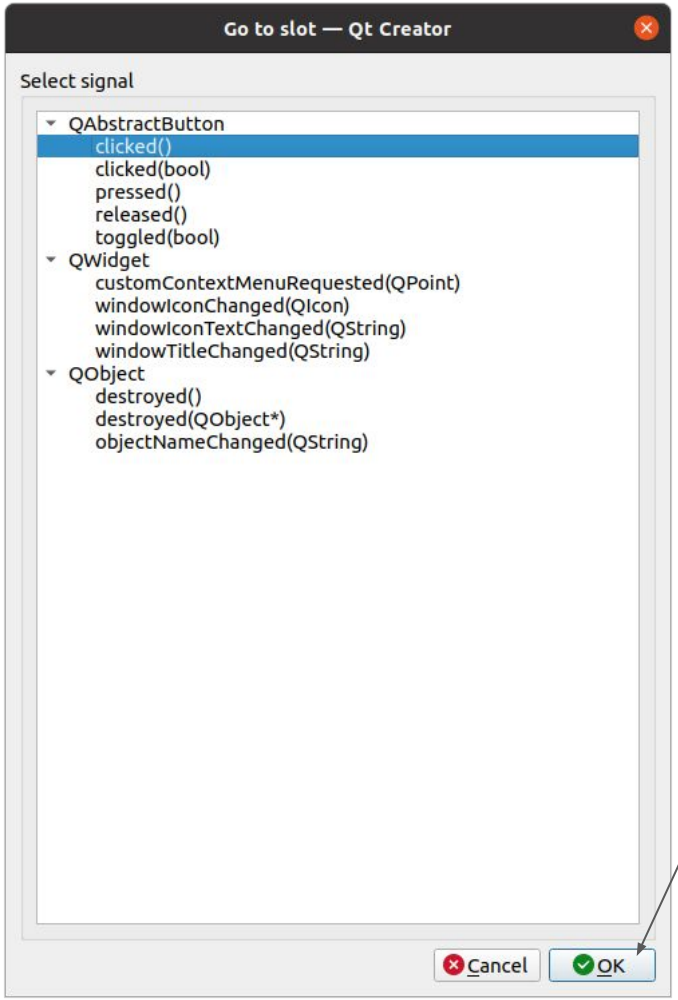
Qt Widgets (cont'd)

please view Qt tutorial at:

https://www.youtube.com/watch?v=TIUTO8GjSGo

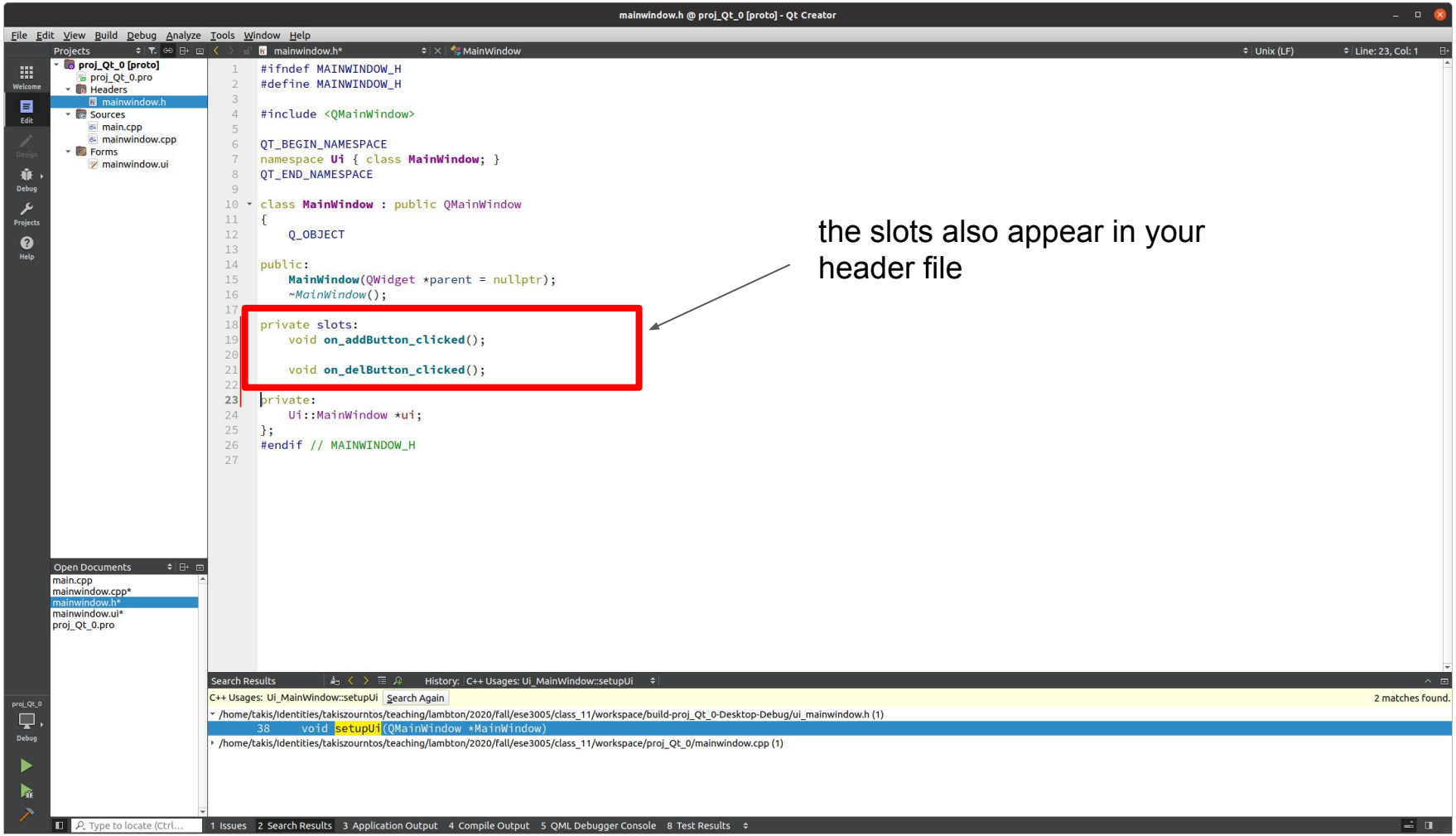
in particular note:

- the addition of the *onButtonClicked*() method in mainwindow.h and mainwindow.cpp;
- the *connect(ui->pushButton, SIGNAL(), this SLOT())* line added to mainwindow.cpp



click OK
and you will be taken
to the .cpp file, where
you will see a method
has been added to
handle the “on click” scenario
for the del button

this **slot** code was added by Qt when you specified the “clicked()” **signal**


mainwindow.h @ proj_Qt_0 [proto] - Qt Creator
File Edit View Build Debug Analyze Tools Window Help
Projects
proj_Qt_0 [proto]
proj_Qt_0.pro
Headers
mainwindow.h
Sources
main.cpp
mainwindow.cpp
Forms
mainwindow.ui
mainwindow.h*
MainWindow
Unix (LF)
Line: 23, Col: 1
#ifndef MAINWINDOW_H
#define MAINWINDOW_H
#include <QMainWindow>
QT_BEGIN_NAMESPACE
namespace Ui { class MainWindow; }
QT_END_NAMESPACE
class MainWindow : public QMainWindow
{
Q_OBJECT
public:
MainWindow(QWidget *parent = nullptr);
~MainWindow();
private slots:
void on_addButton_clicked();
void on_delButton_clicked();
private:
Ui::MainWindow *ui;
};
#endif // MAINWINDOW_H
the slots also appear in your header file
Open Documents
main.cpp
mainwindow.cpp*
mainwindow.h*
mainwindow.ui*
proj_Qt_0.pro
Search Results
C++ Usages: Ui_MainWindow::setupUi
Search Again
2 matches found.
/home/takis/Identities/takiszourntos/teaching/lambton/2020/fall/ese3005/class_11/workspace/build-proj_Qt_0-Desktop-Debug/ui_mainwindow.h (1)
38 void setupUi(QMainWindow *MainWindow)
/home/takis/Identities/takiszourntos/teaching/lambton/2020/fall/ese3005/class_11/workspace/proj_Qt_0/mainwindow.cpp (1)
1 Issues
2 Search Results
3 Application Output
4 Compile Output
5 QML Debugger Console
8 Test Results