

BTE5052 Softwaredesign und Projekte

01.03.2016 / Vorbereitung Projektarbeit

Versionskontrolle mit Git

Qt Framework / Qt Creator

Template Spieleentwicklung

<https://github.com/BenAxiamo/GitAndQtIntroduction/>

GIT

<http://gitref.org/>

<https://www.youtube.com/watch?v=Fwdg8-thBAc&feature=youtu.be>

<http://github.com>

Qt

<http://www.qt.io/download/>

http://www.slideshare.net/isbviетnam/meet-qt-intro-50454957?qid=f37c1530-2d39-42ff-9b58-740357aae61e&v=&b=&from_search=2

Important classes and concepts

QObject

Container: QList

QTimer

QDebug

QProperty

Signals and slots

Model View (MV)

QObject

<http://doc.qt.io/qt-5/qobject.html#details>

Base class for all Qt Classes

Provides Signal / Slot mechanism

Maintain Object hierarchy

QObject

```
#ifndef MAINGAME_H
#define MAINGAME_H

#include <QObject>                                     //Include QObject so the type is known

class MainGame : public QObject                       //Inherit from QObject
{
    Q_OBJECT                                           //Insert Q_OBJECT Macro, needed by MOC to work
public:
    explicit MainGame(QObject *parent = 0);           //Parent / Children relations for hierarchy
    ~MainGame();

signals:

public slots:
};

#endif // MAINGAME_H
```

Q_Property

A property has: Name, type, read / write / notify
Bind it to a QML object -> automatic update

How to get Help

Auto Completion

Type . or -> after object, or type ctrl->space

Context sensitive help

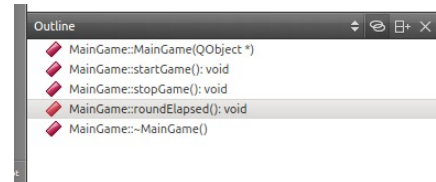
Mark a word (e.g. QTimer and press F1), online help open

Navigate within Code

<Ctrl> click on method name jumps between definition and implementation

The outline window shows all methods in current class

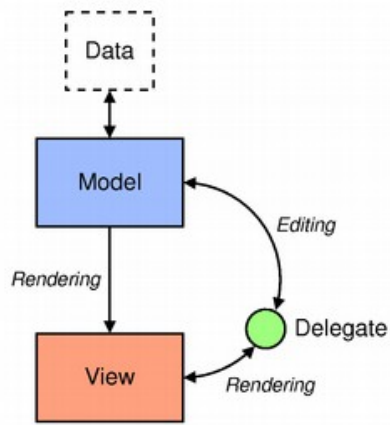
Use the examples on the home page in QCreator!



Model View

<http://doc.qt.io/qt-5/qtquick-modelviewsdata-modelview.html>

<http://doc.qt.io/qt-5/qtquick-modelviewsdata-cppmodels.html>



Examples

From QML to C++

- Calling a C++ slot from Qml

- Connect to a C++ signal

Examples

From C++ to QML

- Expose a single object

- Populate a QML list from C++

Qt Quick Controls

QML General:

<http://doc.qt.io/qt-5/qtqml-index.html>

QtQuick Controls:

<http://doc.qt.io/qt-5/qtquickcontrols-overview.html>

Qml / C++ integration:

<http://doc.qt.io/qt-5/qtqml-cppintegration-topic.html>

Exposing a C++ Object to QML with ContextProperty

<http://doc.qt.io/qt-5/qtqml-cppintegration-contextproperties.html>