
Network Programming with Qt

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What is Qt

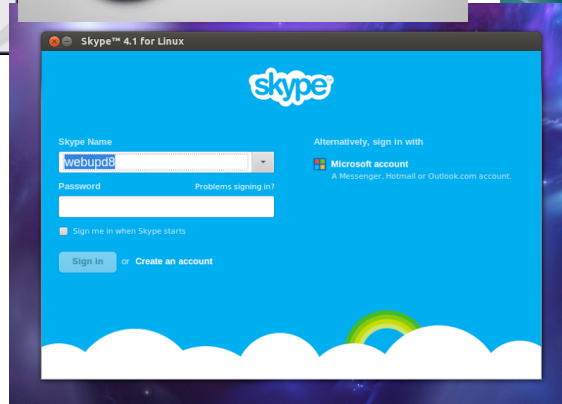
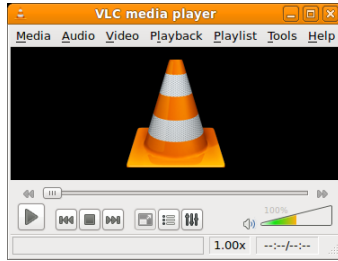
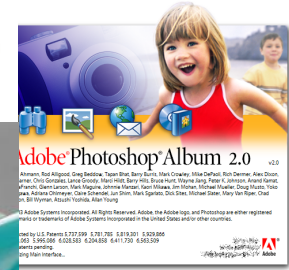
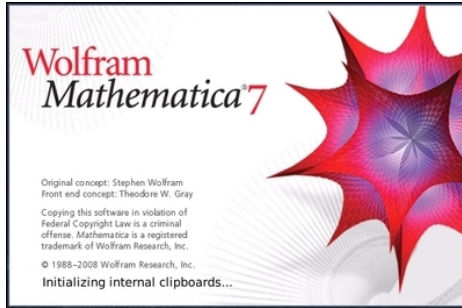
- C++ Library
 - Gives extra functions to C++
- Object Oriented
- Cross Platform
 - Windows, Linux, Mac, Android
- Developed by Nokia (now by Qt-project.org)

Official Site : <http://qt-project.org/>

What can I do with Qt ?

- Build GUIs (Graphical User Interfaces)
 - Network Programming
 - Handling Databases (like MySQL, Oracle etc)
 - Multi-threaded programming
 - Graphics for computer games (OpenGL)
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Which Software use Qt Libraries ?



http://en.wikipedia.org/wiki/Category:Software_that_uses_Qt

Learning Qt

My Tutorial

- <http://kusemanohar.wordpress.com/2012/08/19/qt-beginners-tutorial/>

Books

The famous ones

- <http://catalog.ust.hk/catalog/archives/734729>
- <http://catalog.ust.hk/catalog/archives/645062>

Other Books

- <http://catalog.ust.hk/catalog/search/Qt>

Youtube

- <http://www.youtube.com/playlist?list=PL2D1942A4688E9D63>

Other useful guides

- http://qt-project.org/resources/getting_started
 - <http://qt-project.org/wiki/developer-guides>
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My suggestion

1. Install Qt Creator on your PC/Mac/Linux
2. Understand today's toy project
3. Go through my tutorial.

<http://kusemanohar.wordpress.com/2012/08/19/qt-beginners-tutorial/>

If you still want to learn more follow a book from library

Installation

- I also have a section on Qt Installation in my tutorial
 - In case you are installing on windows make sure you have C/C++ compiler installed.
 - Either of Visual Studio or MinGW
 - Download Qt from : <http://qt-project.org/downloads>
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Today's Toy Project



What the Toy Project should do?

A GUI

- An input field for your name

- Button (Say Hi)

- Pop-up

- Greeting on the application

Demonstration

I have put this demonstration on youtube

<http://www.youtube.com/watch?v=dcjgzlezwE0>

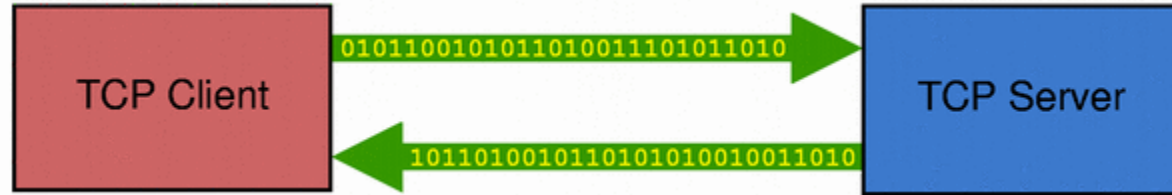
Things to Take away

- Know how to create a Qt project
- Know how to create a GUI form
- Understand what I mean with event programming
- Understand connect() in Qt
- Understand how to retrieve text from QLineEdit and how to write text on the application
 - `QString input = ui->lineEdit->text();`
 - `ui->label->setText( input + QString( "this is appended" ) );`

Network Programming with Qt



Client - Server Model



1. Connect to server
2. Event-1 : Send data
3. Event-2 : Receive data
4. repeat

1. Start listening on a port
2. Event-1 : Incoming connection
3. Event-2 : accept connection
4. Event-3 :
 - a. Receive data from client,
 - b. Process this data
 - c. Send this as response

Toy Network Project

Aim : Client sends some text to the server.
Server converts this to upper case and
responds the same

Lets call

KClient

KServer

Demonstration of Toy Network Project

I have put this demonstration on youtube

<http://www.youtube.com/watch?v=EzQICMXvaxY>

You can download the source code from

https://dl.dropboxusercontent.com/u/28068989/Qt_Network.zip
