PyQT GUIs

Python GUIs

- Python wasn't originally desined for GUI programming
- In the interest of "including batteries" the `tkinter` was included in the Python standard library
  - `tkinter` is a Python wrapper around the Tcl/Tk GUI toolkit
  - Tk must be installed on your system (included in most Unixes, additional install on Mac and Windows)
  - Tk is old and weak
- Many other GUI libraries were created for Python. wxPython, PyGTK, and PyQt/PySide the most popular
- PyQt/PySide was once difficult to install because Qt was difficult to install, but the Anaconda folks fixed that.
- So we'll use PyQt, PyQt4 to be precise.

PyQt

- Qt is a C++ library originally created by Norwegian company Troll Tech.
- Qt has always enjoyed a reputation as a well-designed and powerful GUI framework.
- The KDE project chose to base their popular KDE (K Desktop Environment) graphical shell for Linux.
- Like most modern GUI frameworks, Qt (and PyQt) makes heavy use of objects.

Hello, PyQt

```python
import sys
from PyQt4 import QtGui

app = QtGui.QApplication(sys.argv)

w = QtGui.QWidget()
w.setWindowTitle('Hello PyQt!')
w.show()
sys.exit(app.exec_())
```

Online: helloqt.py

Basic PyQt App Outline

1. Create a `QApplication` object
2. Create a main application window (`QWidget` object)
3. Set paramters of the main window, create and add child widgets, etc.
4. Show main application window
5. Start the app (`app.exec_()`)

Examples

- helloqt.py
- label.py
- button.py
- counter.py