

Stock Market - Python Technical Analysis

The Stock Market Technical Analysis Calculator is created using GUI Development Software. The programs used in the creation of the Stock Market Calculator includes the following: Qt, PyQt, and Qt Designer. Qt is a Widget Toolkit Application for creating Graphical User Interfaces in C++. PyQt is a Widget Toolkit Application for creating Graphical User Interfaces in Python. Qt Designer is a Software Application for designing computer-generated “.ui” Files. These .ui files can be converted to “.py” files through the “pyuic.py” file in the PyQt4 Library.

RAII Guidelines:

Resource Acquisition Is Initialization or RAII, is a C++ programming technique that allows for the User to create dynamically allocated memory using the “new” keyword without having to call the corresponding “delete” keyword. In short, the Compiler is able to delete dynamically allocated memory via a destructor when the dynamically allocated object goes out of scope. This way the User does not need to call “delete” and memory leaks are prevented. RAII guidelines act as a type of garbage collection, however, memory leaks are still possible.

PyQt:

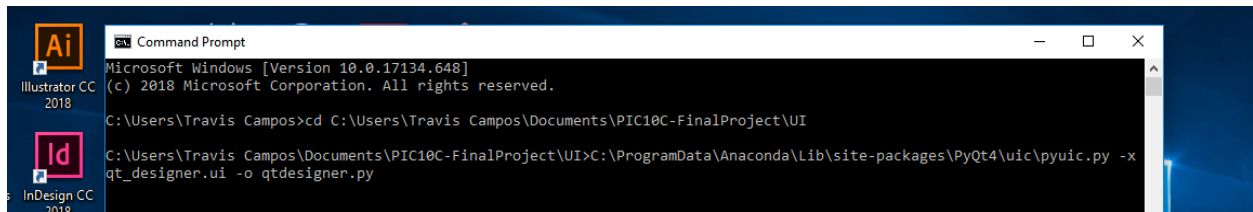
PyQt is a Python Module designed for GUI development. Unlike the C++ version of Qt, PyQt does not deal with dynamic memory in any way. As a high-level programming language, Python does not require the User to handle pointers or dynamic memory, making memory leaks impossible. However, high-level Programming Languages like Python often lack the numerous customization features of low-level Programming languages like C++. Python is a very strong programming language for short development time and simple code structure. However, these strengths are counterbalanced by Python’s slow run-time and lack of customization. C++ programming with Qt can be used to develop far more complex Graphical user Interfaces.

Qt Designer:

Qt Designer is a Tool in the Qt Creator Software Kit. Qt Designer is a GUI Editor that allows the User to develop Graphical User Interfaces in a simple and efficient manner. The User Design in the GUI Editor is converted to XML code. The XML code is computer generated, and fully compatible with C++ code in Qt. In order to use Qt Designer in Python, the User must navigate through the Command Line Interface and convert the “.ui” File to a “.py” File.

Command Line:

Command Line Interface input required to convert “.ui” File to “.py” File.



C:\Users\TravisCampos\Documents\PIC10CFinalProject\UI>
C:\ProgramData\Anaconda\Lib\site-packages\PyQt4\uic\pyuic.py -x qt_designer.ui -o
qtdesigner.py