

PyQt5 Basics Tutorial

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Contents

Introduction	2
Installing PyQt5	2

Introduction

PyQt5 is, in my opinion a much better GUI module than the python default; tkinter, however it does require a much greater programming knowledge and confidence than tkinter. You will likely need to be able to debug silent crashes (due to the C++ backend of PyQt – errors there aren't piped back to Python properly) and have some knowledge of OOP and a basic understanding of lambda functions.

Despite these extra requirements, it does allow for a much more professional looking project and is much more powerful.

For this guide I will be using python 3.7 but it should work for most versions of Python after 3.2.

There are two sites that have PyQt related docs on them:

<http://pyqt.sourceforge.net/Docs/PyQt5/> and

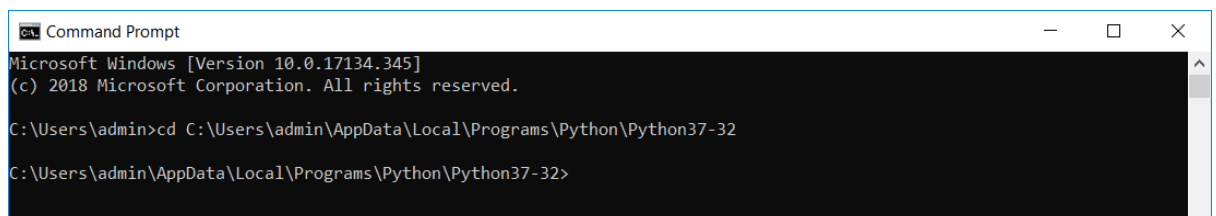
<https://doc.qt.io/qt-5/reference-overview.html>

The second is a much better site but is for the C++ version (Qt) so requires you to translate the code there into Python. Make sure for both that you're on the PyQt5 version!

If you have any suggestions for this tutorial feel free to make an issue.

Installing PyQt5

1. Navigate to the python install directory. Mine is located at:
'C:\Users\admin\AppData\Local\Programs\Python\Python37-32'
There are multiple possible locations python could be installed to, so make sure yours is correct.
2. Open a command prompt and cd to your python install directory:
`cd <your python path>`

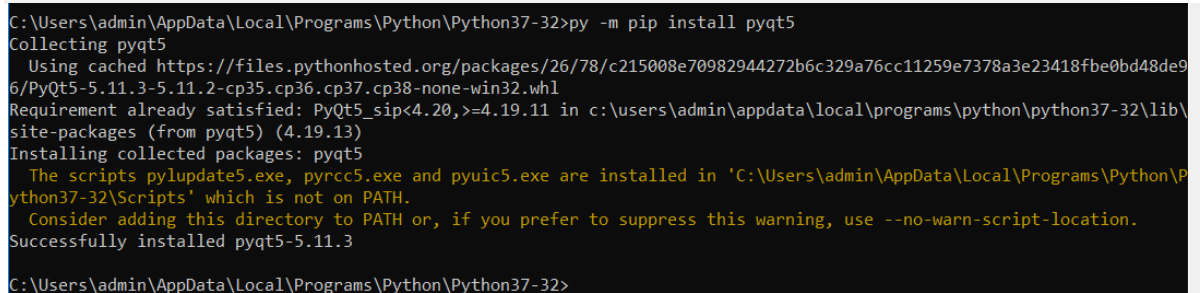


```
Command Prompt
Microsoft Windows [Version 10.0.17134.345]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\admin>cd C:\Users\admin\AppData\Local\Programs\Python\Python37-32
C:\Users\admin\AppData\Local\Programs\Python\Python37-32>
```

3. Use pip to install PyQt5:

```
py -m pip install pyqt5
```



```
C:\Users\admin\AppData\Local\Programs\Python\Python37-32>py -m pip install pyqt5
Collecting pyqt5
  Using cached https://files.pythonhosted.org/packages/26/78/c215008e70982944272b6c329a76cc11259e7378a3e23418fbd48de96/PyQt5-5.11.3-5.11.2-cp35.cp36.cp37.cp38-none-win32.whl
Requirement already satisfied: PyQt5_sip<4.20,>=4.19.11 in c:\users\admin\appdata\local\programs\python\python37-32\lib\site-packages (from pyqt5) (4.19.13)
Installing collected packages: pyqt5
  The scripts pylupdate5.exe, pyrcc5.exe and pyuic5.exe are installed in 'C:\Users\admin\AppData\Local\Programs\Python\Python37-32\Scripts' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed pyqt5-5.11.3

C:\Users\admin\AppData\Local\Programs\Python\Python37-32>
```

The output should look something like this – the important part is the line 'Successfully installed pyqt5-x.x.x'

4. You can test that PyQt has been installed correctly by quickly booting up a python shell and attempting to import it. Enter:

`python`

then

`import PyQt5` (once the shell opens)

```
C:\Users\admin\AppData\Local\Programs\Python\Python37-32>python
Python 3.7.1 (v3.7.1:260ec2c36a, Oct 20 2018, 14:05:16) [MSC v.1915 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import PyQt5
>>>
```

If you get no errors, it is installed correctly!