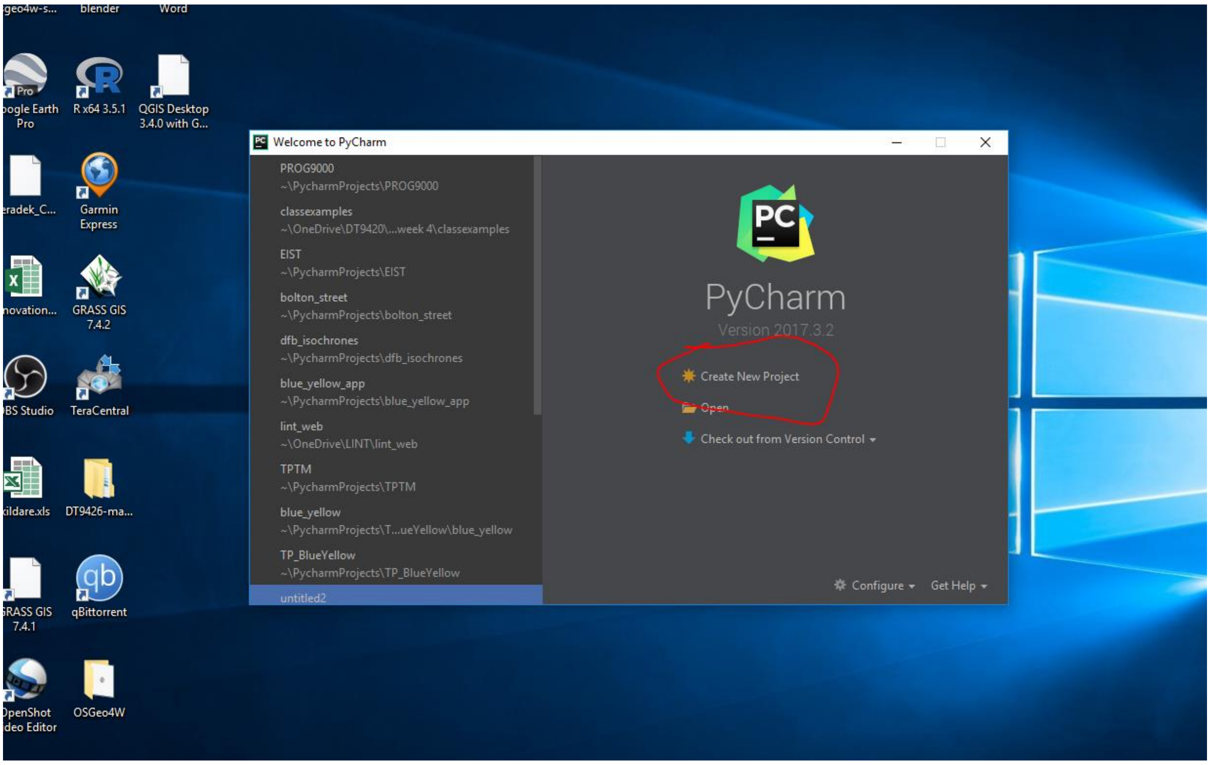
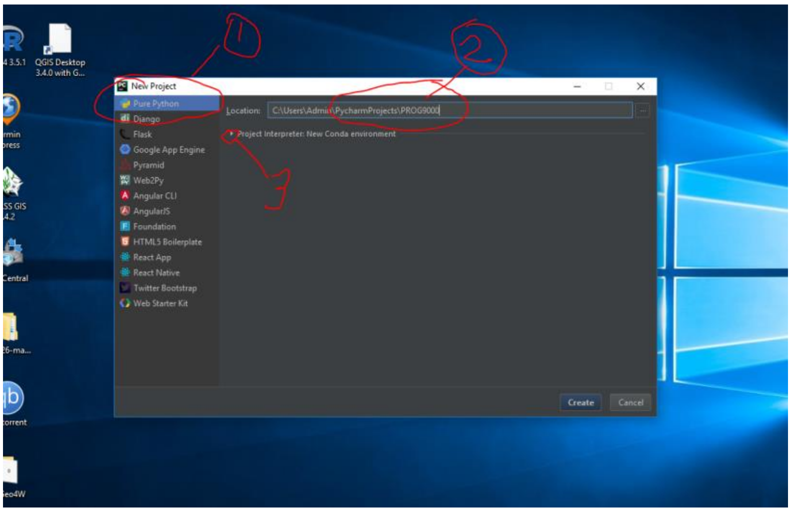
Setting Up Pycharm IDE

In order to enable development of code with PyCharm, it is necessary to configure a new project. This can be a tricky task, but it enables use of all the features of PyCharm.

This is the workflow to enable development with PyQt5 GUI tools. First of all, open Pycharm and start a new project, as below..





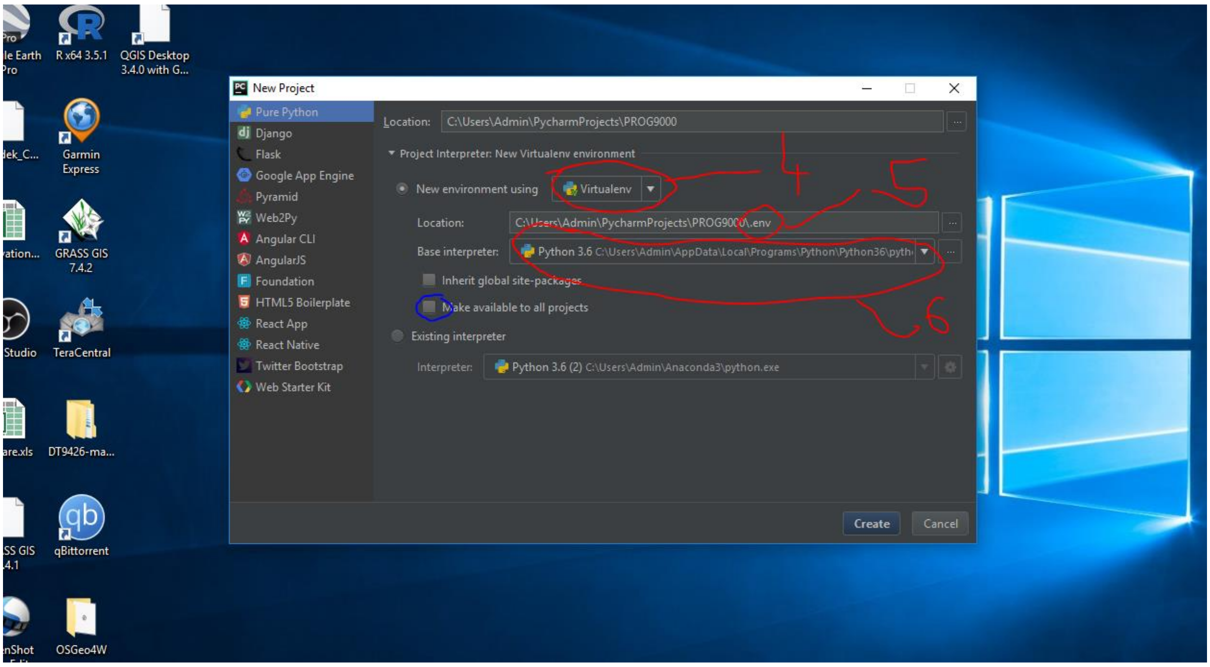
Location: C:\Users\Admin\PycharmProjects\PROG9000

▸ Project Interpreter: New Conda environment

1. Select Pure Python in the left hand menu (the options might look slightly different if you are using the Community Edition (shown is the Professional Edition)).

2. Give the project a sensible name – as I’ve said many times, good file management discipline is really important for coding. I have a folder called “PycharmProjects”, and I’ve given the project a name “PROG9000”.

3. Click the expansion button for the “Project Intrepreter”. This is where you set the version of Python that you are going to use for this project.



Location: C:\Users\Admin\PycharmProjects\PROG9000

▾ Project Interpreter: New Virtualenv environment

● New environment using Virtualenv

Location: C:\Users\Admin\PycharmProjects\PROG9000\.env

Base interpreter: Python 3.6 C:\Users\Admin\AppData\Local\Programs\Python\Python36\pyth

□ Inherit global site-packages

□ Make available to all projects

○ Existing interpreter

Interpreter: Python 3.6 (2) C:\Users\Admin\Anaconda3\python.exe

4. We’re going to use a process called virtual environment, “venv”. This will isolate your code from the rest of the Python stuff on your computer and remove the chance of dependency clashes. Another option here is “Conda” – this is the Anaconda virtual environment option. Use this if you’re writing a program that will need only packages in the Anaconda distribution (scientific, analysis etc. list here https://anaconda.org/anaconda/repo).

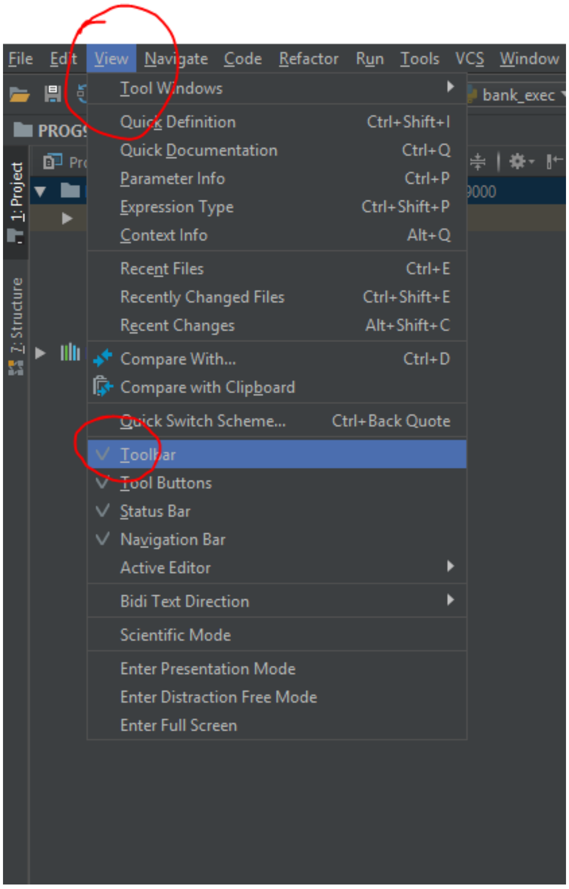
   More info here: https://docs.python.org/3/tutorial/venv.html

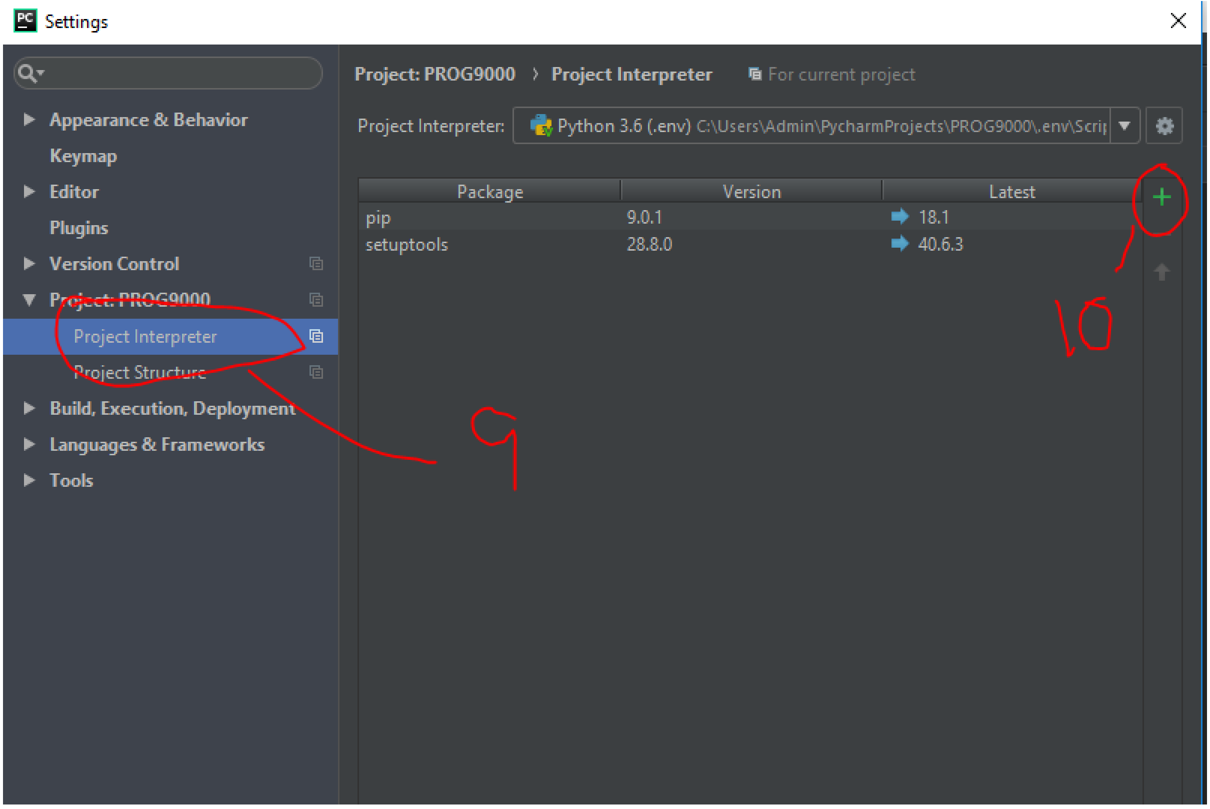
5. Location is where you create the venv – usually a folder in the directory you’ve et for your project. It’s ok to use the default here.

6. Base interpreter – this is for selecting the version of python you want. If you pick the one bundled with Anaconda (look for the Anaconda folder name in the path to the python exe), you won't be able to install packages freely. If you do not have Python installed (besides the Anaconda version), you will need to install it. You can find the install instructions here: https://www.python.org/downloads/, download a recent version. It's usually better not to install the very latest, as it still may be buggy – I think Python 3.6.7 is a good bet right now (December 2018). In the dialog for "Base Intrepreter", select the path to the Python executable (python3.exe). It's usually found in a path such as the one here: C:\Users\Admin\AppData\Local\Programs\Python\Python36\python.exe depending on where you downloaded your Python in the first place. You can make this venv available to all projects by ticking the box circled in blue, which is a good idea if you don't want or need to be setting up a new venv every time you start a new project.

7. Click the "Create" button at the bottom of the dialog. It will take a little while for the project to get set up.

8. Once your project is open, you need to install the packages you need for the project. In our case, it is PyQt5. Click the wrench icon in the toolbar (you may need to turn on the toolbar in the "View menu").





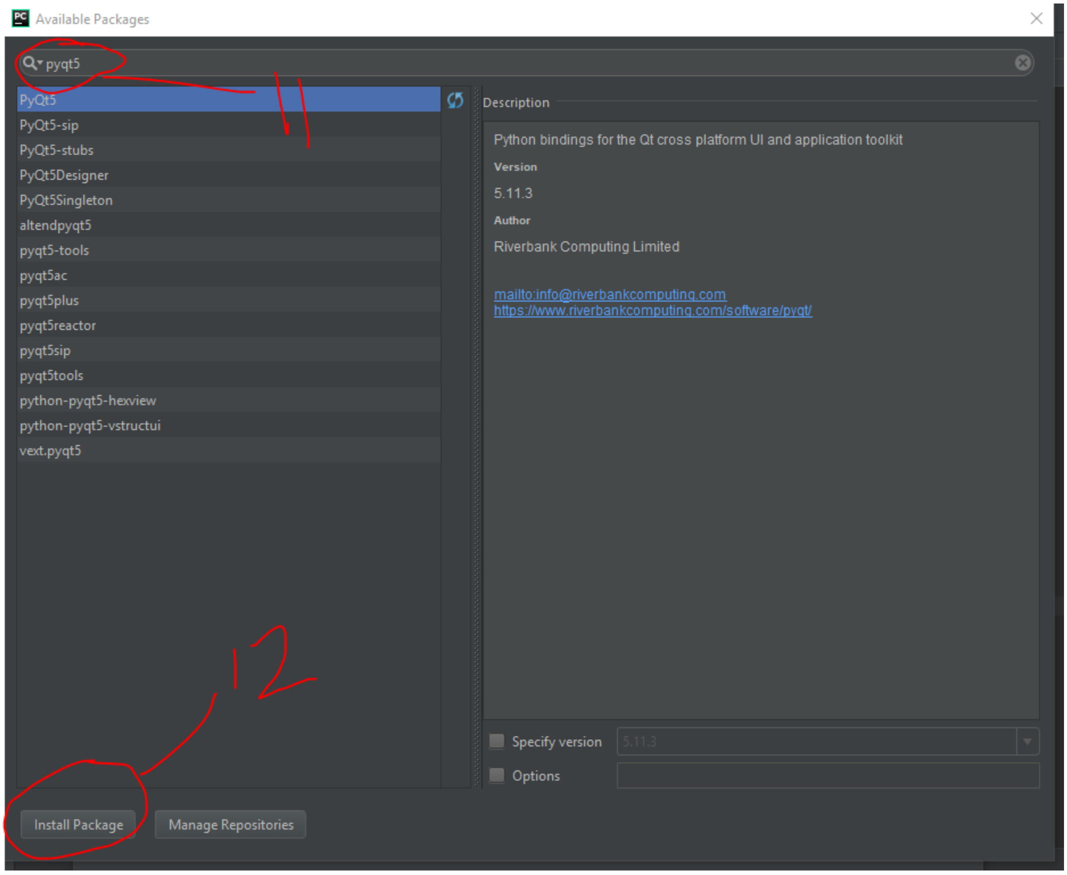
Project Interpreter: Python 3.6 (.env) C:\Users\Admin\PycharmProjects\PROG9000\.env\Scri

Package	Version	Latest
pip	9.0.1	➡ 18.1
setuptools	28.8.0	➡ 40.6.3

9. Go to the “Project: ______” option in the left hand side menu, and click the “Project Intrepreter”.

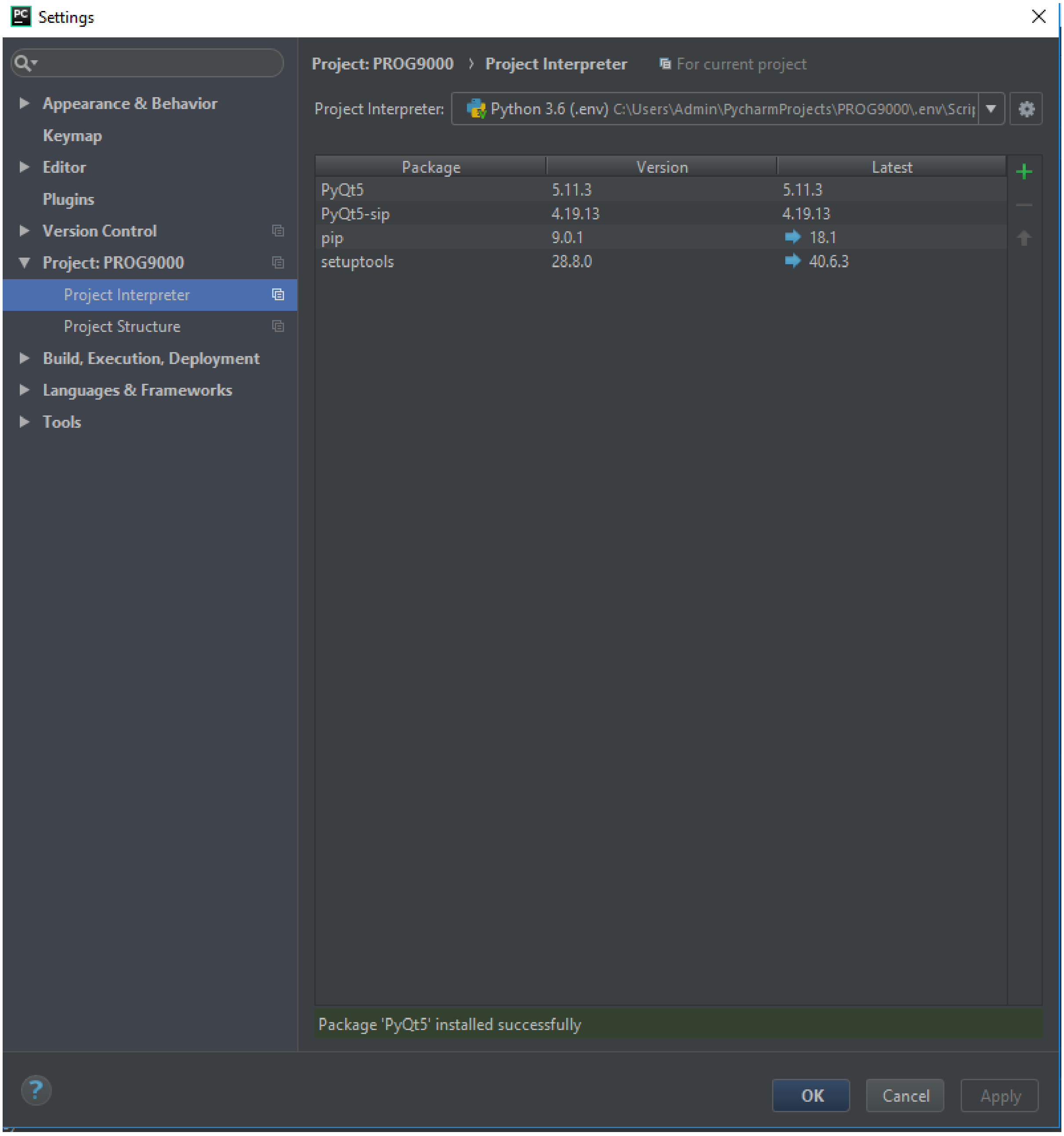
10. The menu for the project interpreter is shown – you can change the interpreter via this pane if you need to. Check that it has the right python. In the case above, it shows Python 3.6 in the virtual

environment ".venv". Below, you can see a list of all the packages installed for this interpreter. Here you can see there are only two currently installed; pip and setuptools. These are both packages that enable the download and installation of new packages for this project. Click the green "+" button.



11. Search for the package you need – it's best to type the full name, as for well-used packages like PyQt5, there can be many different variations. You want the exact right one. The dialog will filter for packages meeting the search string – PyQt5 is highlighted. If not choose it from the list.

12. Click the "Install Package' button. When it's installed, it will show up in the packages list, as below.



Project Interpreter: Python 3.6 (.env) C:\Users\Admin\PycharmProjects\PROG9000\.env\Scrip

Package	Version	Latest
PyQt5	5.11.3	5.11.3
PyQt5-sip	4.19.13	4.19.13
pip	9.0.1	➡ 18.1
setuptools	28.8.0	➡ 40.6.3

Package 'PyQt5' installed successfully

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