Starting with Python

Wrestling with Python

Overview

- What is Python?
- How do I get hold of a copy?
- The IDLE Python Environment
- Python Commands
- Making a Python Program

What is Python?

- Python has been around for a while
- It was invented by Guido van Rossum as a general purpose scripting language which supports a wide range of programming styles and techniques
- It is named after the TV show
  - Of course

Do we need another language?

- We probably don't
- But Python is very interesting for a number of reasons:
  - Designed to be easy to read and learn
  - Works on lots of systems
  - Is being promoted as the "native" language for the Raspberry Pi

What is Python?

- Python is a *scripting* language that you can use to write programs
  - A *scripting* language is used to give commands to an *interpreter* that then acts on each command
- This not quite the same as some programming languages which are converted into low level instructions

Scripting Languages

- Scripting languages are slightly slower to run than compiled languages (but this doesn't really matter)

- To execute a script you run the interpreter and feed it the script it is working on

- You can also feed the interpreter one line of Python at a time, which is interesting

Learning Python

- Python is great to learn
  - But there are some pitfalls
- Like everything else to do with computers, you would think that everything was there for the best possible reason and works in the best possible way
  - This is not necessarily always the case though
  - We just have to deal with this

Python Versions

- Python has now reached Version 3.n
  - But there is a large legacy of Python code out there that is based on Version 2.n
- This is not an issue for the purpose of this course, because everything we will mention runs on both versions
- But you may need to remember this when looking at existing code
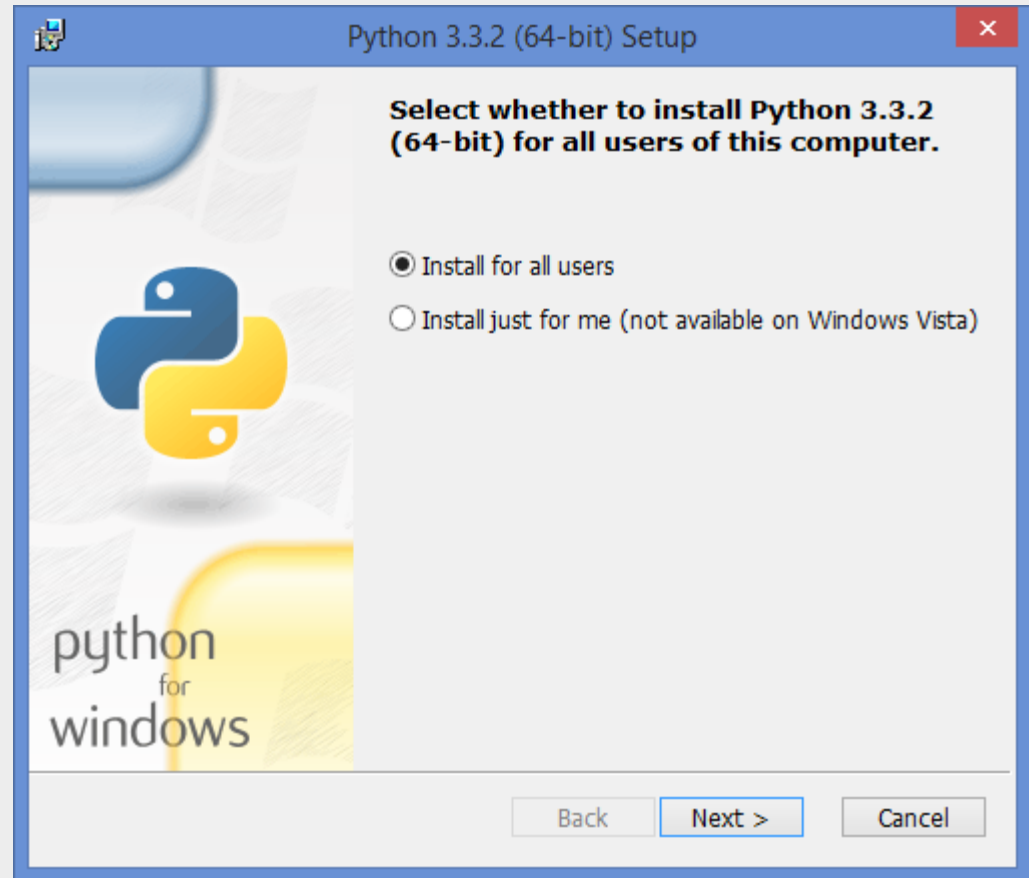 - We are going to use Version 3.3.2

Getting Python

- You can download Python from
  - http://www.python.org/download/
- You just need to run the MSI installer package

Python Installer

- Install for all users and select the default destination directory

Running Python

- When you install python you get a number of things
  - Python command line
  - IDLE Python development environment
- We are going to do everything in IDLE for the time being
- We can look at the other environments later

What we are going to do...

- Get the IDLE development environment going
- See how Python can obey Python statements that we enter
- Experiment with entering and processing data
- Discover how Python holds and converts values