# What is Programming and Python?

**Programming Languages**
This bit is easy, a programming language is how we tell the computer what we want it to do.  The problem is that computers don't really understand anything except ones and zeros (binary), but humans aren't that good at using binary, so we invented these programming languages to communicate with the computer because they are close to being a version of (very structured) English, but at the same time they are easy to translate into binary for the computer, so that everyone is happy. So the program that translates our work into binary (that the computer can understand) is called an "interpreter" (FYI, a different type of translator is called a "complier").

**Python**
Python is a programming language, designed by Guido van Rossum, who developed the first Python interpreter in 1991. He designed it to be easy-to-use and easy to write programs with. The name of the language is a tribute to the comedy group Monty Python, and their brand of zany humour is infused in a lot of Python reference materials.

The Tab key on your keyboard is really important when you are programming in Python. The spacing (or indentation) you put in your programs helps tell the interpreter where different sections of a Python program are, e.g.:

```
Section 1
        Section 2
                Section 3
        Section 4
Section 5
```
But we'll talk more about that later.

Python has a core set of functions built into it, and there all loads of extra features you can add into it from known and trusted sources (called "libraries") that allow you to do even more fun stuff with Python. Some things Python is really good at include; storing data, interacting with web sites, creating nice visual content, controlling robots and other devices, designing games, etc.

**Open Source Software**
One last thing, many versions of the Pyton interpreter are free, and not copyrighted, so people can use them, modify them, improve them, and distribute them. This type of software is called "open source" software. The idea of which is that software should be free, and it goes back to the very roots of computer programming, where it was taken for granted that everyone would share programs so that programmers could learn from each other. Many people view this type of software as being important in a political sense, and important for democracy.