KEY VOCABULARY

Low Level Language	A programming language which is closer to binary than English
High Level Language	An abstracted programming language which is closer to English than binary
Instruction Set	Binary code which tells the computer hardware what to do – OpCode and Operand
Machine Code	1 to 1 instructions coded in mnemonics (STO, ADD, MOD, DIV etc) which must be converted to binary to run
Abstraction	Removing a level of detail to allow focus on the problem solving rather than the specifics. *Python, and all other High Level languages are abstracted. You do not need to know the machine code to get something to happen*
Translator	A utility to convert High Level Code into binary machine code so it can be executed
Interpreter	A utility which translates High Level code on a line by line basis and executes the program as it goes in a special test environment
IDE	Integrated Development Environment
Text Editor	A place to type code, focused on the content of the file, not the look of the file
Error Diagnostics	To test a program and provide feedback to the coder so that errors can be fixed
Run Time Environment	Part of an IDE which allows a piece of code to be tested without installation

Working the Machine:
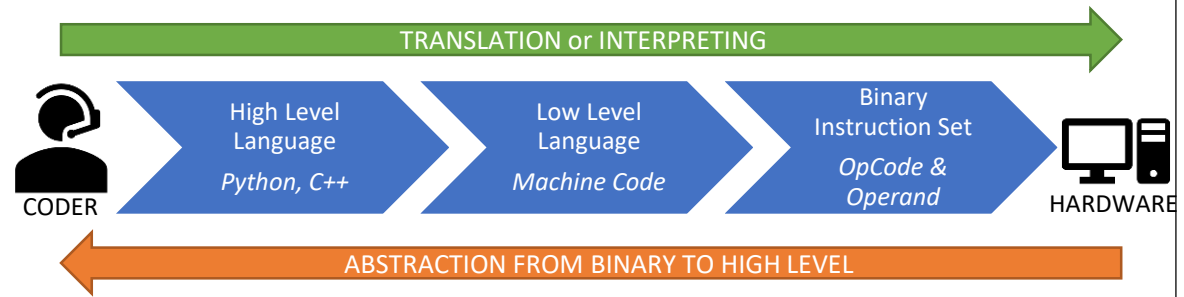
For coders to be able to write code quickly, high-level coding language have been made which allow the coder to use *almost* natural language (like English) to solve problems. These *ABSTRACTED LANGAUGES* must be converted into binary code instructions that the CPU can execute in order to work. This conversion of instructions is done in 1 of 2 ways. They are either *interpreted*, one line at a time, and executed immediately, or they are *translated* by converting the entire code file in one go, then attempting to run the program only once the converter has finished *compiling. c*

Features of an Integrated Development Environment (IDE)

FEATURE	PURPOSE and BENEFITS
Text Editor	An IDE's text editor is where the code is typed. It is not concerned with the look of the code, but usability. Additional features of IDE text editors are: line numbers, code colouring by context, automatic indentation, autocomplete, code-folding, overview 'map', multiple cursors
Error Diagnostics	IDEs will give real-time feedback to the coder to show any obvious errors before compiling. These are often with highlighting or line markers. Additionally, any errors which show up during compiling are flagged with helpful guidance to the coder about the error type and the line number
Compiler	A utility which attempts to turn the program into a runnable program. This will either be a translator/compiler or an interpreter
Run-Time Environment	A 'safe sandbox' where code can be tried out without installing it to the computer. Often ring-fenced from the main machine to prevent accidents.