Programming: Translators and Editors

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| **A** | **Translators vocab** | |
| **Assembly language** | | A simple low-level language where opcodes are replaced with mnemonics and the *instruction set* is small (maybe 9 instructions) |
| **Compiler** | | A program which turns *source code* into *object code* and saves it as an executable file |
| **High-level** (language) | | A language which is easy to read and requires *translating* before the computer understands it |
| **Instruction set** | | The full list of commands available within a language |
| **Interpreter** | | A *translator* which translates *source code* as it is read, stopping if it reaches an error |
| **Linker** | | A tool which can combine different compiled codes |
| **Low-level** (language) | | A language which is close to the format read by the computer |
| **Machine code** | | Code written in binary |
| **Object code** | | Another word for machine code |
| **One-to-many** | | A language where one written instruction corresponds to a number of actions by the processor |
| **One-to-one** | | A language where one written instruction corresponds to one action by the processor |
| **Runtime environment** | | Everything you need to run a program |
| **Source code** | | The original code before compiling |
| **Translation** | | Conversion of high-level language to machine code |
| **Translator** | | A program which converts high-level language or assembly language to machine code |

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| **B** | **Command breakdown** | |
| **Opcode** | | The part of the instruction which tells the CPU what operation is to be done |
| **Operand** | | The part of the instruction which is to be operated on |

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| **C** | **A single command at different levels** | | |
|  | | **Opcode** | **Operand** |
| **Machine code** | | 0000 0001 | 0010 1110 |
| **Hex** | | 01 | 2E |
| **Assembly** | | ADD | 2E |
| **Python** | | + | num |
| **Effect** | | adds | the value at 0010 1110 (named num) |

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| **D** | **Editor vocab** | |
| **Editor** | | A program which allows the user to write code |
| **IDE** | | Integrated Development Environment - Software for writing code incorporating an editor, debugging tools, an interpreter and/or compiler |
| **Pretty printing** | | A feature of an editor which makes code easier to read by colouring and indenting |
| **GUI builder** | | An IDE for developing a graphical user interface |