

Kit's Code-Cracking Guide to Programming

Think like a fox, code like a pro: Solve the puzzle, master the machine!

- **What is an algorithm?** An algorithm is a precise, step-by-step sequence of instructions designed to complete a specific task or solve a problem.
- **Why do we use sequencing?** In programming, the order of instructions is vital; if the sequence is incorrect, the output will not function as intended.
- **How do we fix errors?** When a program does not behave as expected, we 'debug' the code by systematically searching for mistakes and correcting the logical flow.
- **What is logical reasoning?** We use logical reasoning to predict how a program will behave, allowing us to spot potential issues before we even start typing code.
- **What are inputs and outputs?** An input is the data provided to a computer program, while the output is the result or action that the computer produces based on that data.

Did you know? Did you know? The first computer programmer was a mathematician named Ada Lovelace in the 1840s! Long before modern screens existed, she realised that machines could follow complex sequences of instructions to complete tasks beyond simple arithmetic.

Key vocabulary: Algorithm · Sequence · Debug · Variable · Input · Output · Logical Reasoning