

# Introduction to programming

Programming is writing computer code to create a program, in order to solve a problem. Programs consist of a series of instructions to tell a computer exactly what to do and how to do it.

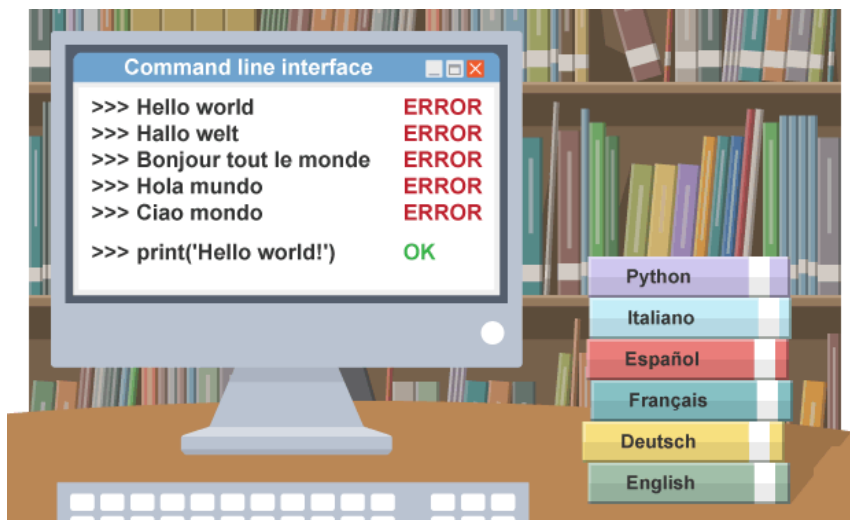
## What is programming?

Programming is writing computer code to create a program, to solve a problem. Programs are created to implement algorithms. Algorithms can be represented as pseudocode or a flowchart, and programming is the translation of these into a computer program.

To tell a computer to do something, a program must be written to tell it exactly what to do and how to do it. If an algorithm has been designed, the computer program will follow this algorithm, step-by-step, which will tell the computer exactly what it should do.

## What is a programming language?

A programming language is an artificial language that a computer understands. The language is made up of series of statements that fit together to form instructions. These instructions tell a computer what to do.



There are many different programming languages, some more complicated and complex than others. Among the most popular languages are:

- Python
- Java
- C++
- BASIC
- Scratch

Different languages work in different ways. For example, in Python all instructions are written in lowercase, but in BASIC they tend to be written in uppercase.

Programming languages are designed to be easy for a human to understand and write in. However, a computer cannot run programs written in these languages directly. Most programming languages have to be translated into machine code before the computer can execute the instructions.