

Glossary of computing terms

This is a glossary of terms in the computer science context – the words may sometimes (but not always) have different meanings in other contexts.

- **Abstraction** Reducing complexity by focusing on the essential features of an algorithm or data representation and omitting unnecessary detail.
- **Algorithm** A precise step by step method for solving a problem. Named after Iranian mathematician Muhammad ibn Musa al-Khwarizmi.
- **Application** A self-contained program that performs a specific function for end users.
- **Boolean logic / digital logic**
A system of reasoning with truth values, true and false, using logical operations such as and, or, and not. Named after British mathematician George Boole.
- **Browser** A piece of software that enables a user to locate, retrieve and display information on the world wide web.
- **Complexity** The way that a solution to a problem scales as the size of the input increases, considering both the number of computational steps and the memory space required.
- **Computation** Performing a calculation by executing the instructions of a program on a computational device.
- **Computational device / digital device**
A computer or other programmable device that performs computation.
- **Computational thinking**
The ability to analyse ways to solve problems using appropriate algorithms and data representations, taking account of the complexity of possible solutions.
- **Computer science** The scientific study of computation, applied to both hardware and software, covering both theoretical and practical concerns.
- **Data** Information which can be stored, retrieved and manipulated in digital form using digital devices.

- **Debug** To find, remove and / or change errors in computer code.
- **Digital artifacts / digital content**
Images, videos, text or data, or a combination of these, which are made on a digital device.
- **Digital literacy** The ability to access and manipulate digital content and understand the implications of its creation and distribution.
- **Data representation** The various ways data can be represented as words, numbers and pictures in the memory of a computational device.
- **E-safety** Understanding and applying rules to mitigate against the risks to personal safety and privacy of personal information in using digital devices of all kinds.
- **Function** A small section of computational code that performs a specific operation. In particular, a function takes inputs, or arguments, and returns outputs, or results.
- **Hardware** Physical items of computing kit such as desktop hard drives, printers and scanners
- **Input** The data that feeds into a computation. A stimulus to which a real-time application will respond.
- **Internet** A global network of computers which are linked, allowing the exchange of data. It uses various data transfer protocols which can be seen in the top bar of a browser, such as Hyper Text Transfer Protocol (http).
- **Logic** A systematic approach to reasoning. The rules that underlie an algorithm used for an application. Can also refer to digital components in computer hardware.
- **Network** A number of computational devices connected together, allowing sharing of resources and cooperation between devices in the solution of a problem. Also the hardware used to establish connections between devices on a network.
- **Operating system** The program that enables the computer to start and access different sorts of software on the computer, examples include Microsoft Windows and iOS for Mac.

- Output The data that results from a computation. A response generated by a real-time application to stimulus.
- Procedure A small section of computational code that performs a specific operation. Unlike a function, a procedure does not return a result but may be to change the data stored in objects in computer memory.
- Program/code(verb) To create or modify a program.
- Program code(noun) A sequence of instructions for a computational device, written in an appropriate programming language, for implementing an algorithm that manipulates appropriate data representations for solving a problem.
- Programming language

A formal language for representing statements, or commands, and data values used in a program. A programming language has a precise syntax that defines the valid ways for combining the symbols used to denote variables and data values. Examples used on schools include Scratch, Python and SmallBASIC.
- Search technologies Algorithms used by applications known as search engines to trawl the internet for digital content matching search terms given by a user. Results are normally presented in the form of links to relevant content.
- Sequence A number of program statements, to be executed one after another.
- Software The programs that enable computers to undertake specific functions.
- Variable A symbol in the code for a program that represents a data value or data object that can be changed during the course of computation