

GLOSSARY OF 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 set of instructions that we complete in order to achieve a task. You could write an algorithm to complete mundane tasks such as making a cup of tea or to complete complex tasks such as calculating the odds that a team will win a football match. In computing an algorithm refers to the set of instructions that a computer follows in the order in which they are given.
Application	A self-contained program that performs a specific function for end users.

Binary	Binary is the language computers use. It is a series of 1s and 0s and is also used in mathematics.
Browser	A piece of software that enables a user to locate, retrieve and display information on the world wide web.

Coding	Putting information and commands into a program, making it possible for u to create software, apps and websites.
Communication Technology	Equipment that we use to communicate with, such as a mobile phone or tablet.
Compile	When we program, we use human words in our codes and programs. However the computer doesn't understand human words, so we have to compile the program – using a compiler – which converts the human words into binary.
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 logic/thinking	Describes the decision-making progress used in programming and writing algorithms.
Computer science	The scientific study of computation, applied to both hardware and software, covering both theoretical and practical concerns.

Data	Information
Debug	Checking the code in a computer program to ensure it works, and changing it if it doesn't. When writing a computer program things will often go wrong. When writing a program you have to test and debug your program to ensure that it produces correct results.
Decomposition	The process by which a large, difficult problem can be broken down into a series of smaller, simpler problems, thus making the overall problem easier to solve
Digital literacy	The ability to access and manipulate digital content and understand the implications of its creation and distribution.

E-safety/online 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
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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
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Hardware	The physical part of a computer, which uses electrical signals to complete the calculations needed to make software run. Examples of hardware are the computer circuit board, memory, processor and/or other equipment related to a computer, such as printers, monitors and keyboard.
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Input	The data/information that goes into the computer.
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	When making any decision a certain amount of logic is involved; for example, when deciding what to wear in the morning, you make a logical decision based on the season, weather and any number of other factors. Computational logic is used to allow a program to decide what to do and when. For example you may write code that says: "When the user clicks this button, perform this calculation."
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Network	Computers linked within a building or area
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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	Information that comes out of the computer.

Procedure or function	Used in programming to break a complex task down into simple steps or sections.
Program	A collection of instructions or algorithms designed to simplify processes, whether that be writing a Word document or connecting to a website. A computer program is written using a programming language, which allows a computer scientist to teach a computer how to achieve a result. Examples of programming languages are Scratch, Java, Python, C++ and Ruby
Programming language	Computers are very good at completing lots of mathematical functions in a short space of time, however they don't have the ability to think for themselves. Programming languages bridge this gap and allow us to teach a computer how to do things.

Repetition	Sometimes called iteration, when part of a program repeats itself. For example, in animation you may repeat the movements of a character to make it look like it's moving along.
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Selection	When you choose part of something. For example, when you copy and paste text, the passage that you highlight to copy is called the selection.
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	In a program we have to control what happens and when in order to produce correct results. A sequence helps us to ensure that things happen in the correct order.
Software	Created using a programming language and is the non-physical part of a computer. Software can be written once and sold multiple times, for instance Microsoft doesn't have to rebuild Microsoft Word every time they have a new customer, they just make a copy of the files they already have.
System (operating system)	The Operating System sits between the software and hardware and acts as a translator. It tells the hardware when to run calculations and passes the answers back to the software so that it can decide what calculations to run next.

Variable	A piece of information in a program that we want to store, but is able to change. We can compare it to a box in which we put information. This information could be a number, and during the program we might change the initial number (for example as part of the scoring system in a game).
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World Wide Web	This is like the Operating System for the internet. We use the web to help us communicate with and over the internet.
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