

Glossary

- **Algorithm:** An unambiguous set of rules or a precise step-by-step guide to solve a problem or achieve a particular objective.
- **Arithmetic bugs:** Errors in a program caused by problems with mathematical calculations, such as dividing by zero, working with numbers that are too large to store, or loss of precision owing to rounding.
- **Computer networks:** Computers and their connections, allowing data to be transferred – typically at very high speed – between one computer and another.
- **Conceptual bugs:** Errors in programs owing to a misunderstanding of the system or processes being modelled.
- **Creative Commons:** A licensing scheme where the creator of an original work allows others to use it without seeking further permission, subject to a number of agreed conditions: <http://creativecommons.org>.
- **Debug:** To fix the errors in a program.
- **Input:** Data supplied to a computer, typically via the keyboard or mouse.
- **Internet:** Global network connecting computers and local networks using automated switches, routers and fibreoptic, copper wire and radio connections.
- **Internet Protocol (IP) addresses:** Numeric addresses uniquely specifying computers directly connected to the internet, also used on private networks to uniquely identify computers on that network.
- **ISPs:** Internet service providers.
- **Mail client:** Software running on a computer (including tablets and smartphones) that allows emails to be sent and received, e.g. Microsoft Outlook.
- **Mail server:** A service that sends email messages out to the internet or receives email messages from the internet.
- **Malware:** Software designed with malicious intent, such as viruses, trojan horses, rootkits and keyloggers.
- **Multi-thread bugs:** Errors in programs that involve more than one process running simultaneously, such as two processes where each is waiting for the other to complete, or one process racing ahead of the other.
- **Network switch:** Dedicated computer hardware that routes data packets to particular connections according to their IP address header.
- **Off-by-one bugs:** An error in a program caused when a loop repeats once too many or too few times, usually fixed by checking the end connection of the loop.
- **Output:** Information produced by computer processing systems, typically on the screen or through speakers.
- **Packets of data:** A small set of numbers that get transmitted together via the internet, typically enough for 1000 or 1500 characters.
- **Performance bugs:** Poor functioning of computer programs owing to inadequate interfacing with hardware components (such as memory or disk) or inefficient algorithm design.
- **Programs:** A stored set of instructions encoded in a language understood by the computer that does some form of computation, processing input and/or stored data to generate output.
- **Repetition:** A programming construct in which one or more instructions are repeated, perhaps a certain number of times, until a condition is satisfied or until the program is stopped.
- **'Rushes' of footage:** Raw, unedited footage.
- **Screencast:** A way of recording the action on a computer screen; often accompanied by a voice-over.
- **Selection:** A programming construct in which the instructions that are executed are determined by whether a particular condition is met.
- **Sequence:** To place programming instructions in order, with each executed one after the other.
- **Spam:** Unwanted, unsolicited advertising, typically by email.
- **Spoofed links:** Links that look as though they point to one website but actually point to another.
- **Sprite:** A computer graphics object that can be controlled (programmed) independently of other objects or the background.
- **Variables:** A way in which computer programs can store, retrieve or change simple data, such as a score, the time left, or the user's name.
- **Web server:** A service running on a computer (or sometimes the computer itself) that returns HTML data for a web page when it receives a request via the local network or the internet.
- **World wide web:** A service provided by computers connected to the internet (web servers), in which pages of hypertext (web pages) are transmitted to users; the pages typically include links to other web pages and may be generated by programs automatically.