Glossary of Terms

The glossary includes definitions of terms used in the NYS K-12 Computer Science and Digital Fluency Standards. Unless indicated, these definitions were *adopted directly* from the K-12 Computer Science Framework. Using the same sources as indicated. As noted in the Framework, these terms are defined for readers of the framework and are not necessarily intended to be the definitions or terms that are presented to students.

abstraction	(process): The process of reducing complexity by focusing on the main idea. By hiding details irrelevant to the question at hand and bringing together related and useful details, abstraction reduces complexity and allows one to focus on the problem. (product): A new representation of a thing, a system, or a problem that helpfully reframes a problem by hiding details irrelevant to the question at hand. [MDESE, 2016]
accessibility	The design of products, devices, services, or environments for people who experience disabilities. Accessibility standards that are generally accepted by professional groups include the Web Content Accessibility Guidelines (WCAG) 2.0 and Accessible Rich Internet Applications (ARIA) standards.
algorithm*	A step-by-step process to complete a task. Algorithms should always produce the same results if given the same inputs.
Application (app)	A type of application software designed to run on a mobile device, such as a smartphone or tablet computer. Also known as a mobile application. [Techopedia]
Artificial Intelligence (AI)	Colloquially, the term "artificial intelligence" is applied when a machine mimics "cognitive" functions that humans associate with other human minds, such as "learning" and "problem solving". [Wikipedia]
CIA Triad	[*C*onfidentiality, *I*ntegrity and *A*vailability] A model designed to guide policies for information security within an organization. Confidentiality is a set of rules that limits access to information (e.g., requiring passwords). Integrity is the assurance that the information is trustworthy and accurate (e.g., providing read-only access to people who should not edit a document). Availability is a guarantee of reliable access to the information by authorized people (e.g., keeping a backup copy in case the original data is lost or damaged). [Tech Target]

cipher	In cryptography, a cipher is an algorithm for performing encryption or decryption—a series of well-defined steps that can be followed as a procedure. [Wikipedia]
classic algorithm*	Classic algorithms are existing solutions to common computer science problems that can be reused. Some examples are Binary Search, Merge Sort, Quick Sort.
computational artifact	Anything created by a human using a computational thinking process and a computing device. A computational artifact can be, but is not limited to, a program, image, audio, video, presentation, or web page file. [College Board, 2016]
conditional	A programming language feature that determines the flow of control of a program. A conditional can appear in the form of a conditional statement (if - then), conditional expression (Boolean expression), or conditional construct (functional programming). [MDESE, 2016]
control structures*	control: (in general) The power to direct the course of actions. (in programming) The use of elements of programming code to direct which actions take place and the order in which they take place. Examples: Conditionals and loops
cyberbullying	Cyberbullying or cyberharassment is a form of bullying or harassment using electronic means. Cyberbullying is when someone, typically a teenager, bullies or harasses others on the internet and in other digital spaces, particularly on social media sites. Harmful bullying behavior can include posting rumors, threats, sexual remarks, a victims' personal information, or pejorative labels (i.e. hate speech). [Wikipedia]
cryptography	Cryptography involves creating written or generated codes that allow information to be kept secret. Cryptography converts data into a format that is unreadable for an unauthorized user, allowing it to be transmitted without unauthorized entities decoding it back into a readable format, thus compromising the data [Techopedia]
data structure	A particular way to store and organize data within a computer program to suit a specific purpose so that it can be accessed and worked with in appropriate ways. [TechTarget]
debugging	The process of finding and correcting errors (bugs) in programs. [MDESE, 2016]

decompose; decomposition	decompose (v): To break down into components. decomposition (n): The act of breaking down a problem or system into components. [MDESE, 2016]
digital artifact	Any type of item produced and stored as digital/electronic version. Examples of digital artifacts include digital documents, presentations, programs and codes, video and audio files, images and photographs. [WikiEducator]
digital citizenship	The norms of appropriate, responsible behavior with regard to the use of technology. [MDESE, 2016]
digital footprint	A digital footprint is a trail of data you create while using the Internet. It includes the websites you visit, emails you send, and information you submit to online services. [Tech Terms]
digital tools	Digital tools are applications that produce, manipulate, or store data in a digital format, e.g., word processors, drawing programs, image/video/music editors, simulators, Computer-Aided Design (CAD) applications, publishing programs, etc. Digital tools are critical for conducting research, communicating, collaborating and creating in social, work, and personal environments. The use of digital tools is integral to success in school and career. [MDESE, 2016]
embedded systems	Hardware and software which forms a component of some larger system and which is expected to function without human intervention. [FOLOC]
iterative	Involving the repeating of a process with the aim of approaching a desired goal, target, or result. [MDESE, 2016]
loop	A programming structure that repeats a sequence of instructions determined by a conditional statement. [Tech Terms]
remix	The process of creating something new from something old. Originally a process that involved music, remixing involves creating a new version of a program by recombining and modifying parts of existing programs, and often adding new pieces, to form new solutions. [Kafai & Burke, 2014]
safeguards	Actions, devices, procedures, techniques, or other measures that reduce the vulnerability of an information system. Safeguards may include security features, management constraints, personnel security, and security of physical structures, areas, and devices. [NIST]

troubleshooting	A systematic approach to problem solving that is often used to find and resolve a problem, error, or fault within software or a computing system. [Techopedia, TechTarget]
user interface	The space where interactions between humans and machines occur. The goal of this interaction is to allow effective operation and control of the machine from the human end, whilst the machine simultaneously feeds back information that aids the operators' decision-making process.[Wikipedia]
variable*	A symbolic name that is used to keep track of a value that can change while a program is running. Variables are not just used for numbers; they can also hold text (called 'strings', which can be single characters or many sentences) or logical values (true or false). [CAS, 2013; Techopedia] Note: This definition differs from its use in Math.

*Denotes revision of definition by The NYS Computer Science and Digital Fluency Executive Standards Committee

References

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College Board, 2016	**College Board Advanced Placement® Computer Science Principles** College Board. (2016). *AP Computer Science Principles course and exam description.* New York, NY: College Board. https://secure-media.collegeboard.org/digitalServices/pdf/ap/ap-computer-science-principles-course-and-exam-description.pdf
FOLDOC	**Free On-Line Dictionary of Computing** Free on-line dictionary of computing. (n.d.). Retrieved from https://foldoc.org
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NIST	**National Institute of Standards and Technology- U.S. Department of Commerce** Computer Security Resource Center Glossary. (n.d.). Retrieved from https://csrc.nist.gov/glossary

Tech Terms	**Tech Terms** Tech terms computer dictionary. (n.d.). Retrieved from https://www.techterms.com
Techopedia	**Techopedia** Techopedia technology dictionary. (n.d.). Retrieved from https://www.techopedia.com/dictionary
TechTarget	**TechTarget Network** TechTarget network. (n.d.). Retrieved from https://www.techtarget.com/network
WikiEducator	**WikiEducator** WikiEducator. (n.d). Retreived from https://wikieducator.org
Wikipedia	**Wikipedia** Wikipedia: The free encyclopedia. Glossary of Computer Science (n.d.). Retrieved from https://en.wikipedia.org/wiki/Glossary_of_computer_science