

## PAILLOR GLOSSARY

### A

1. **Algorithm** - A set of rules or a step-by-step process designed to perform a specific task or solve a particular problem.
2. **Analytics** - The systematic computational analysis of data or statistics, often used for discovering, interpreting, and communicating meaningful patterns in data.
3. **Application** - A computer software designed to help the user to perform singular or multiple related specific tasks.
4. **Architecture** - The conceptual structure and logical organization of a computer or computer-based system.
5. **API (Application Programming Interface)** - A set of protocols, routines, and tools for building software and applications, allowing different software entities to communicate with each other.
6. **Artifact** - Any byproduct produced during the software development process, such as documentation, diagrams, or code.
7. **Authentication** - The process of verifying the identity of a user or process.
8. **Authorization** - The process of determining if a particular user, process, or device has the rights to perform a specific action or access specific resources.
9. **Availability** - The degree to which a system or component is operational and accessible when required for use.
10. **Agile** - A methodology used in software development that emphasizes flexibility, collaboration, customer feedback, and rapid response to changes.
11. **Asset** - Any valuable item, digital or physical, that is owned by an individual or organization.
12. **Assessment** - The evaluation or estimation of the nature, quality, or ability of someone or something.
13. **Asynchronous** - Operations that occur without a predetermined or fixed time frame, allowing processes to run independently of one another.
14. **Automation** - The use of technology to perform tasks with reduced human intervention.
15. **Adware** - Any software application that displays advertising banners while the program is running.
16. **Affiliate Marketing** - A marketing arrangement by which an online retailer pays commission to an external website for traffic or sales generated from its referrals.
17. **Analytics** - The discovery, interpretation, and communication of meaningful patterns in data.
18. **Anomaly Detection** - The identification of items, events, or observations which do not conform to an expected pattern in a dataset.
19. **Applet** - A small application designed to run within another application or on a web page.

20. **Augmented Reality (AR)** - An interactive experience of a real-world environment where objects residing in the real world are enhanced by computer-generated perceptual information.

## B

1. **Bandwidth** - The maximum rate of data transfer across a given path, often measured in bits per second (bps).
2. **Blockchain** - A distributed database or ledger technology that maintains a continuously growing list of records, called blocks, secured from tampering and revision.
3. **Byte** - A unit of digital information that most commonly consists of eight bits, representing a single character of data.
4. **Benchmark** - A standard or point of reference against which things may be compared or assessed, often used in performance evaluations of software or hardware.
5. **Browser** - A software application used to access and navigate the internet.
6. **Bootstrap** - A process of starting up a computer system or a technique in statistics for estimating the distribution of a statistic.
7. **Bot** - A software application that runs automated tasks (scripts) over the Internet, performing tasks much faster than a human could.
8. **Back-end** - The part of a software system or website that is not directly accessed by the user, typically responsible for storing and managing data.
9. **Bug** - An error, flaw or fault in a computer program or system that causes it to produce an incorrect or unexpected result, or to behave in unintended ways.
10. **Binary** - A base-2 numeral system or binary number system, using only two symbols: typically 0 (zero) and 1 (one).
11. **BIOS (Basic Input/Output System)** - Firmware used to perform hardware initialization during the booting process (power-on startup), and to provide runtime services for operating systems and programs.
12. **Bit** - The smallest unit of data in computing, represented by a 0 or 1 in binary notation.
13. **Backup** - A copy of data made to prevent loss of information, allowing recovery in the event of data loss.
14. **Bandwidth Throttling** - The intentional slowing of internet service by an internet service provider. It can also refer to the management of data transfer rate in other network contexts.
15. **Bloatware** - Unwanted software included on a new computer or mobile device by the manufacturer, typically consuming system resources and reducing performance.

16. **Blockchain** - A system in which a record of transactions made in bitcoin or another cryptocurrency is maintained across several computers that are linked in a peer-to-peer network.
17. **BI (Business Intelligence)** - Technologies, applications, strategies, and practices for the collection, integration, analysis, and presentation of business information.
18. **Breadcrumb** - A navigation aid used in user interfaces, indicating the path from the home page to the current page.
19. **Buffer** - A region of memory used to temporarily hold data while it is being moved from one place to another.
20. **Bytecode** - A form of instruction set designed for efficient execution by a software interpreter or virtual machine, as opposed to direct execution by hardware.

## C

1. **Cache** - A hardware or software component that stores data so future requests for that data can be served faster.
2. **Cloud Computing** - The delivery of computing services—servers, storage, databases, networking, software, analytics, intelligence, and more—over the Internet (“the cloud”) to offer faster innovation, flexible resources, and economies of scale.
3. **CPU (Central Processing Unit)** - The primary component of a computer that performs most of the processing inside a computer.
4. **CSS (Cascading Style Sheets)** - A style sheet language used for describing the presentation of a document written in HTML or XML.
5. **Cybersecurity** - The practice of protecting systems, networks, and programs from digital attacks.
6. **CRM (Customer Relationship Management)** - Technology for managing all your company’s relationships and interactions with customers and potential customers.
7. **Cryptography** - The practice and study of techniques for secure communication in the presence of third parties called adversaries.
8. **Code** - A system of signals, such as letters, words, sounds, or symbols, used to represent instructions or data.
9. **Compiler** - A special program that processes statements written in a particular programming language and turns them into machine language or "code" that a computer's processor uses.

10. **Concurrency** - The ability of different parts or units of a program, algorithm, or problem to be executed out-of-order or in partial order, without affecting the final outcome.
11. **Container** - A lightweight, stand-alone, executable package of software that includes everything needed to run a piece of software, including the code, runtime, libraries, environment variables, and config files.
12. **Content Management System (CMS)** - A software application or set of related programs that are used to create and manage digital content.
13. **Cookie** - Data sent by an internet server to a browser, which is returned by the browser each time it subsequently accesses the same server, used to identify the user or track their access to the server.
14. **Crowdsourcing** - The practice of obtaining information or input into a task or project by enlisting the services of a large number of people, either paid or unpaid, typically via the Internet.
15. **Cyber-Physical System (CPS)** - A mechanism controlled or monitored by computer-based algorithms, tightly integrated with the internet and its users.
16. **Chatbot** - A software application used to conduct an on-line chat conversation via text or text-to-speech, in lieu of providing direct contact with a live human agent.
17. **Cloud Storage** - A model of computer data storage in which the digital data is stored in logical pools, said to be on "the cloud", the physical storage spans multiple servers (and often locations), and the physical environment is typically owned and managed by a hosting company.
18. **Concurrency Control** - The management of simultaneous operations on data in a database system without having them interfere with each other.
19. **Cyberspace** - The notional environment in which communication over computer networks occurs.
20. **Circuit Breaker** - A design pattern used in software development that stops the application from trying to perform an operation that's likely to fail, often used when interacting with remote services or APIs.

## D

1. **Data** - Quantitative or qualitative values of a variable; often used to refer to information in various forms stored digitally.
2. **Database** - A structured set of data held in a computer, especially one that is accessible in various ways.
3. **Data Mining** - The process of discovering patterns and knowledge from large amounts of data. The data sources can include databases, data warehouses, the web, etc.

4. **Debugging** - The process of identifying and removing errors from computer hardware or software.
5. **Decryption** - The process of converting encrypted data back into its original form, so it can be understood.
6. **Deep Learning** - A subset of machine learning in artificial intelligence (AI) that has networks capable of learning unsupervised from data that is unstructured or unlabeled.
7. **Deployment** - The process of making software application available for use.
8. **Design Pattern** - A general repeatable solution to a commonly occurring problem in software design.
9. **Digital** - Involving or relating to the use of computer technology.
10. **DNS (Domain Name System)** - The system by which internet domain names and addresses are tracked and regulated.
11. **Docker** - An open platform for developing, shipping, and running applications in containers, which allow a developer to package up an application with all of the parts it needs.
12. **Document Management System (DMS)** - A system used to track, manage, and store documents to reduce paper and organize records.
13. **Domain** - In networking, a domain is a set of network resources for a group of users that share a common data management and security environment.
14. **Download** - The process of receiving data over a network from another source, often from the internet.
15. **Driver** - Software that allows your computer to communicate with hardware or devices.
16. **Dynamic** - In computing, dynamic usually refers to operations or objects that are changeable and can be modified after creation.
17. **Data Integrity** - The accuracy and consistency of data stored in a database, data warehouse, or other construct.
18. **Data Structure** - A particular way of organizing data in a computer so that it can be used effectively.
19. **Data Type** - An attribute of data which tells the compiler or interpreter how the programmer intends to use the data.
20. **Denial of Service (DoS)** - An attack on a computer or network that reduces, restricts or prevents accessibility of system resources to legitimate users.

## E

1. **E-commerce** - Buying and selling of goods and services over the internet.
2. **Encryption** - The process of converting information or data into a code, especially to prevent unauthorized access.

3. **Endpoint** - A remote computing device that communicates back and forth with a network to which it is connected.
4. **Enterprise Resource Planning (ERP)** - Business management software—usually a suite of integrated applications—that a company can use to collect, store, manage, and interpret data from many business activities.
5. **Ethernet** - A system for connecting a number of computer systems to form a local area network, with protocols to control the passing of information and to avoid simultaneous transmission by two or more systems.
6. **Email** - Electronic mail, a method of exchanging messages between people using electronic devices.
7. **Emulator** - Hardware or software that enables one computer system to behave like another computer system.
8. **Entity** - In computing, an entity can refer to any identifiable object with a well-defined role in the application or data model.
9. **Environment Variable** - A dynamic-named value that can affect the way running processes will behave on a computer.
10. **Exception** - An event, which occurs during the execution of a program, that disrupts the normal flow of the program's instructions.
11. **Executable** - A file that is capable of being executed or run as a program in the computer.
12. **Extranet** - A website that allows controlled access to partners, vendors and suppliers or an authorized set of customers – normally to a subset of the information accessible from an organization's intranet.
13. **Encryption Key** - A random string of bits created specifically for scrambling and unscrambling data.
14. **Elasticity** - In cloud computing, the ability to scale computing resources up or down easily, with minimal friction.
15. **Embedding** - In the context of machine learning, the representation of data in a form that's readable to the algorithm; in web development, inserting content or code from another source into a web page.
16. **Event** - An action or occurrence recognized by software, often originating asynchronously from the external environment, that may be handled by the software.
17. **E-Waste** - Discarded electrical or electronic devices. Used electronics which are destined for reuse, resale, salvage, recycling, or disposal.
18. **Extension** - A piece of software that adds additional features to a more significant software application.
19. **Exabyte** - A unit of information or computer storage equal to one quintillion bytes.

20. **Expert System** - A computer system that emulates the decision-making ability of a human expert, by following the rules a human would. It is a part of artificial intelligence.

## F

1. **Framework** - A basic structure underlying a system, concept, or text, often referring to software frameworks designed to support the development of applications, components, or systems.
2. **Firewall** - A network security device that monitors and filters incoming and outgoing network traffic based on an organization's previously established security policies.
3. **Firmware** - A specific class of computer software that provides the low-level control for a device's specific hardware.
4. **Function** - In computing, a named section of a code that performs a specific task.
5. **Front-end** - The part of a software system or website that the user interacts with directly.
6. **FTP (File Transfer Protocol)** - A standard network protocol used for the transfer of computer files between a client and server on a computer network.
7. **Fiber Optics** - A technology that uses glass (or plastic) threads (fibers) to transmit data. A fiber optic cable consists of a bundle of glass threads, each of which is capable of transmitting messages modulated onto light waves.
8. **Fintech** - A combination of the terms "financial" and "technology," it refers to the use of technology to deliver financial services and products to consumers.
9. **Fragmentation** - In computing, the process or state of breaking or being broken into small or separate parts, particularly in reference to memory or disk storage.
10. **Failover** - The automatic switching to a redundant or standby computer server, system, hardware component or network upon the failure or abnormal termination of the previously active application, server, system, hardware component, or network.
11. **FaaS (Function as a Service)** - A cloud computing service that provides a platform allowing customers to develop, run, and manage application functionalities without the complexity of building and maintaining the infrastructure typically associated with developing and launching an app.
12. **Feature** - In machine learning and pattern recognition, a feature is an individual measurable property or characteristic of a phenomenon being observed.
13. **FPGA (Field-Programmable Gate Array)** - An integrated circuit designed to be configured by a customer or a designer after manufacturing – hence "field-programmable".
14. **Flux** - In programming, particularly in React applications, Flux is a pattern that helps in keeping the data unidirectional.

15. **Fuzzy Logic** - A form of many-valued logic in which the truth values of variables may be any real number between 0 and 1. It is employed to handle the concept of partial truth, where the truth value may range between completely true and completely false.
16. **Freeware** - Software that is available free of charge.
17. **Fragmentation** - The division of a database or computer storage into multiple, smaller parts, often to improve efficiency and speed.
18. **Forensics** - In the context of computer and digital forensics, the application of investigation and analysis techniques to gather and preserve evidence from a particular computing device in a way that is suitable for presentation in a court of law.
19. **Fault Tolerance** - The ability of a system to continue operating without interruption when one or more of its components fail.
20. **Full-Stack Developer** - A technology expert who can handle all the work of databases, servers, systems engineering, and clients. Depending on the project, what customers need may be a mobile stack, a Web stack, or a native application stack.

## G

1. **GUI (Graphical User Interface)** - A user interface that allows users to interact with electronic devices through graphical icons and visual indicators, as opposed to text-based interfaces, typed command labels, or text navigation.
2. **Gigabyte** - A unit of digital information that is equal to 1,024 megabytes or 1,073,741,824 bytes, commonly used to measure storage capacity.
3. **Gateway** - A network node that connects two networks using different protocols together. It acts as an entrance to another network.
4. **Git** - A distributed version control system used for tracking changes in source code during software development.
5. **GPU (Graphics Processing Unit)** - A specialized electronic circuit designed to rapidly manipulate and alter memory to accelerate the creation of images in a frame buffer intended for output to a display device.
6. **Gantt Chart** - A type of bar chart that illustrates a project schedule, named after its inventor, Henry Gantt, who designed such a chart around the years 1910–1915.
7. **Garbage Collection** - In computer science, garbage collection is a form of automatic memory management. The garbage collector, or just collector, attempts to reclaim garbage, or memory occupied by objects that are no longer in use by the program.



8. **Gateway** - In telecommunications, a gateway is a network node equipped for interfacing with another network that uses different protocols.
9. **GDPR (General Data Protection Regulation)** - A regulation in EU law on data protection and privacy in the European Union and the European Economic Area. It also addresses the transfer of personal data outside the EU and EEA areas.
10. **Geocoding** - The process of converting addresses (like "1600 Amphitheatre Parkway, Mountain View, CA") into geographic coordinates (like latitude 37.423021 and longitude -122.083739), which you can use to place markers on a map, or position the map.
11. **Gesture Recognition** - The ability of a device to identify and respond to the different gestures of an individual.
12. **Git** - A free and open-source distributed version control system designed to handle everything from small to very large projects with speed and efficiency.
13. **GPL (GNU General Public License)** - A widely used free software license, which guarantees end users the freedom to run, study, share, and modify the software.
14. **Graph Database** - A database that uses graph structures for semantic queries with nodes, edges, and properties to represent and store data.
15. **Grid Computing** - A distributed architecture of large numbers of computers connected to solve a complex problem. In the grid computing model, servers or personal computers run independent tasks and are loosely linked by the Internet or low-speed networks.
16. **Growth Hacking** - A process of rapid experimentation across marketing channels and product development to identify the most effective, efficient ways to grow a business.
17. **GUI Testing** - The process of testing a product's graphical user interface to ensure it meets its specifications. This is not just about the aesthetic aspect but also includes testing the functional parts of the application that are visible to a user.
18. **Gigabit** - A unit of digital information or computer storage equal to one billion bits.
19. **GraphQL** - A query language for APIs and a runtime for fulfilling those queries with your existing data. GraphQL provides a complete and understandable description of the data in your API, gives clients the power to ask for exactly what they need and nothing more.
20. **Gamification** - The application of game-design elements and game principles in non-game contexts to improve user engagement, organizational productivity, learning, crowdsourcing, employee recruitment, and more.

1. **HTML (HyperText Markup Language)** - The standard markup language for documents designed to be displayed in a web browser.
2. **HTTP (HyperText Transfer Protocol)** - The foundation of data communication for the World Wide Web, defining how messages are formatted and transmitted.
3. **HTTPS (HyperText Transfer Protocol Secure)** - An extension of HTTP used for secure communication over a computer network, widely used on the Internet.
4. **Hash** - A function that converts an input (or 'message') into a fixed-size string of bytes. The output, typically a 'digest', is designed to be unique to each unique input.
5. **Heap** - A type of data structure that is used in computer science to represent a priority queue.
6. **Host** - In network computing, a host is a computer that is accessible over a network.
7. **Hyperlink** - A reference to data that a reader can directly follow either by clicking or by hovering. It points to a whole document or to a specific element within a document.
8. **Hypervisor** - Software that creates and runs virtual machines (VMs). A computer on which a hypervisor runs one or more virtual machines is called a host machine.
9. **Hardware** - The collection of physical parts of a computer system, including the computer itself and related devices such as monitors, keyboards, and mice.
10. **Hadoop** - An open-source software framework used for distributed storage and processing of large sets of data using the MapReduce programming model.
11. **Hertz (Hz)** - A unit of frequency in the International System of Units (SI) that measures the number of cycles per second of a periodic phenomenon.
12. **Hashing** - The process of converting a given key into another value. A hash function is used to generate the new value according to a mathematical algorithm.
13. **HCI (Human-Computer Interaction)** - The study of how people interact with computers and to design technologies that let humans interact with computers in novel ways.
14. **Hybrid Cloud** - A cloud computing environment that uses a mix of on-premises, private cloud, and third-party public cloud services with orchestration between the platforms.
15. **Hexadecimal** - A base-16 number system that uses sixteen distinct symbols, typically the numbers 0 to 9 to represent values zero to nine, and A, B, C, D, E, F (or alternatively a-f) to represent values ten to fifteen.
16. **HTTP/2** - The second major version of the HTTP network protocol, used by the World Wide Web, which focuses on performance improvements.
17. **High Availability** - Refers to systems that are durable and likely to operate continuously without failure for a long time.

18. **Honeypot** - A security mechanism set to detect, deflect, or, in some manner, counteract attempts at unauthorized use of information systems.
19. **Headless Browser** - A web browser without a graphical user interface, controlled programmatically used for automation, testing web pages, and scraping web data.
20. **Heap Memory** - An area of dynamically allocated memory that a program manages directly via calls to specialized functions or operators.

I

1. **Internet** - A global network connecting millions of computers, allowing them to communicate.
2. **IP Address (Internet Protocol Address)** - A unique string of numbers separated by periods or colons that identifies each computer using the Internet Protocol to communicate over a network.
3. **IoT (Internet of Things)** - The network of physical objects—devices, vehicles, appliances—embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet.
4. **Interface** - The point of interaction or communication between a computer and any other entity, such as a printer or human user.
5. **IDE (Integrated Development Environment)** - A software application that provides comprehensive facilities to computer programmers for software development.
6. **Iteration** - The repetition of a process in a computer program, typically within a loop.
7. **Infrastructure as a Service (IaaS)** - A form of cloud computing that provides virtualized computing resources over the internet.
8. **Inheritance** - A principle of object-oriented programming in which a class can inherit properties and methods from another class.
9. **Index** - In databases, an index is a data structure that improves the speed of data retrieval operations on a database table at the cost of additional writes and storage space to maintain the index data structure.
10. **IPSec (Internet Protocol Security)** - A framework of open standards for ensuring private communications over the Internet.
11. **Integration Testing** - A level of software testing where individual units are combined and tested as a group to expose faults in the interaction between units.
12. **Immutable** - An object whose state cannot be modified after it is created.

13. **Impedance Matching** - In electronics, a technique used to minimize reflections and maximize the power transfer of electrical signals.
14. **Inference** - In artificial intelligence, the process of using a trained model to make predictions.
15. **Injection Attack** - A type of attack in which malicious code is inserted into a program or system to exploit vulnerabilities in order to gain control of a system or access sensitive information.
16. **ISO (International Organization for Standardization)** - An independent, non-governmental international organization with a membership of 164 national standards bodies.
17. **ISP (Internet Service Provider)** - A company that provides individuals and organizations access to the Internet and other related services.
18. **ICMP (Internet Control Message Protocol)** - A network layer protocol used by network devices to diagnose network communication issues.
19. **Interoperability** - The ability of computer systems or software to exchange and make use of information.
20. **IDE (Integrated Drive Electronics)** - An interface standard for connecting storage devices like hard drives and optical drives to a computer's motherboard.

## J

1. **JavaScript** - A high-level, dynamic, untyped, and interpreted programming language, widely used for web development to create interactive effects within web browsers.
2. **JSON (JavaScript Object Notation)** - A lightweight data-interchange format, easy for humans to read and write and easy for machines to parse and generate.
3. **Java** - A high-level programming language developed by Sun Microsystems, designed to run on a variety of platforms, including Windows, Mac OS, and the various versions of UNIX.
4. **JQuery** - A fast, small, and feature-rich JavaScript library designed to simplify the client-side scripting of HTML.
5. **JDK (Java Development Kit)** - A software development environment used for developing Java applications and applets. It includes the Java Runtime Environment (JRE), an interpreter/loader (Java), a compiler (javac), an archiver (jar), a documentation generator (Javadoc) and other tools needed in Java development.
6. **JVM (Java Virtual Machine)** - An abstract computing machine that enables a computer to run a Java program. There are JVMs for many hardware and software platforms.

7. **JIRA** - A proprietary issue tracking product developed by Atlassian that allows bug tracking and agile project management.
8. **JPEG (Joint Photographic Experts Group)** - A commonly used method of lossy compression for digital images, particularly for those images produced by digital photography.
9. **JSP (JavaServer Pages)** - A technology that helps software developers create dynamically generated web pages based on HTML, XML, or other document types.
10. **JIT (Just-In-Time)** - Compilation that translates code during runtime rather than prior to execution, often used in Java environments to improve performance.
11. **JWT (JSON Web Token)** - An open standard (RFC 7519) that defines a compact and self-contained way for securely transmitting information between parties as a JSON object.
12. **J2EE (Java 2 Platform, Enterprise Edition)** - A platform-independent, Java-centric environment from Sun for developing, building and deploying web-based enterprise applications online.
13. **JNI (Java Native Interface)** - A framework that allows Java code running in a Java Virtual Machine (JVM) to call and be called by native applications (programs specific to a hardware and operating system platform) and libraries written in other languages such as C and C++.
14. **JPA (Java Persistence API)** - A Java application programming interface specification that describes the management of relational data in applications using Java Platform, Standard Edition, and Java Platform, Enterprise Edition.
15. **JDBC (Java Database Connectivity)** - An API for the programming language Java, which defines how a client may access a database. It provides methods for querying and updating data in a database.
16. **JAR (Java Archive)** - A package file format typically used to aggregate many Java class files and associated metadata and resources (text, images, etc.) into one file for distribution.
17. **JMS (Java Message Service)** - A Java Message Oriented Middleware (MOM) API for sending messages between two or more clients.
18. **JUnit** - A simple framework to write repeatable tests, with an emphasis on testing Java projects.
19. **JSONP (JSON with Padding)** - A method used to request data from a server residing in a different domain than the client.
20. **Jekyll** - A simple, blog-aware, static site generator perfect for personal, project, or organization sites, often used with GitHub Pages for easy deployment.

1. **Kernel** - The central part of an operating system, managing system resources and communication between hardware and software components.
2. **Key** - In cryptography, a piece of information that controls the operation of a cryptography algorithm. In databases, a key is an attribute or set of attributes that uniquely identifies a record.
3. **Kilobyte (KB)** - A unit of digital information equal to 1,024 bytes, used to quantify digital information and storage capacity.
4. **Kubernetes** - An open-source platform designed to automate deploying, scaling, and operating application containers.
5. **KPI (Key Performance Indicator)** - A measurable value that demonstrates how effectively a company is achieving key business objectives.
6. **KVM (Kernel-based Virtual Machine)** - A virtualization module in the Linux kernel that allows the kernel to function as a hypervisor.
7. **Kerberos** - A network authentication protocol designed to provide strong authentication for client/server applications by using secret-key cryptography.
8. **Keyword** - A word or phrase that is a topic of significance. In programming, a keyword is a word that is reserved by a program because the word has a special meaning.
9. **Knowledge Base** - A centralized repository for information: a public library, a database of related information about a particular subject.
10. **Kafka** - An open-source stream-processing software platform developed by LinkedIn and donated to the Apache Software Foundation, used for building real-time data pipelines and streaming apps.
11. **Keystroke Logging** - The act of tracking and recording every keystroke entry made on a computer, often covertly so that the person using the keyboard is unaware that their actions are being monitored.
12. **Knapsack Problem** - A problem in combinatorial optimization: Given a set of items, each with a weight and a value, determine the number of each item to include in a collection so that the total weight is less than or equal to a given limit and the total value is as large as possible.
13. **K-nearest neighbors (KNN)** - A simple, versatile, and widely used algorithm in machine learning for classification and regression.
14. **Kerning** - The process of adjusting the spacing between characters in a proportional font, usually to achieve a visually pleasing result.
15. **Kernel Density Estimation (KDE)** - A non-parametric way to estimate the probability density function of a random variable.
16. **Kickstarter** - A crowdfunding platform focused on creativity and merchandising, which allows people to pledge money to support projects from the initial idea to the delivery of the project.

17. **Kiosk Mode** - A setting for electronic devices that restricts user interaction and application execution to specific tasks.
18. **Kibibyte (KiB)** - A unit of data equal to 1,024 bytes, reflecting the binary multiplication system, as opposed to the decimal system used for kilobytes (KB).
19. **Kinematics** - The branch of mechanics that describes the motion of points, bodies (objects), and systems of bodies (groups of objects) without considering the forces that cause them to move.
20. **Kybernetes** - The Greek word from which "Kubernetes" derives, meaning "helmsman" or "pilot", reflecting the tool's role in guiding containerized applications.

## L

1. **LAN (Local Area Network)** - A network that connects computers and devices in a limited geographical area such as home, school, computer laboratory, or office building.
2. **Latency** - The delay before a transfer of data begins following an instruction for its transfer. In networking, it's often referred to as the time taken for a packet to travel from source to destination.
3. **Load Balancing** - The process of distributing network or application traffic across multiple servers to ensure no single server becomes overwhelmed by demand, improving reliability and speed.
4. **Linux** - A family of open-source Unix-like operating systems based on the Linux kernel, an operating system kernel first released on September 17, 1991, by Linus Torvalds.
5. **Logic Gate** - A device that performs a basic logical function; digital circuits are built from logic gates. The functions include AND, OR, NOT, NAND, NOR, XOR, and XNOR.
6. **LDAP (Lightweight Directory Access Protocol)** - An open, vendor-neutral, industry-standard application protocol for accessing and maintaining distributed directory information services over an Internet Protocol (IP) network.
7. **Lambda Function** - Also known as an anonymous function, a function defined, and possibly called, without being bound to an identifier. Lambda functions are widely used in programming languages like Python.
8. **Leakage** - In electronics, leakage refers to the gradual loss of stored charge from a capacitor. In software, it refers to unintended information disclosure or memory leaks.

9. **LIFO (Last In, First Out)** - An abbreviation for last in, first out, a method used in data structures where the last element added to the structure must be the first one to be removed.
10. **Linker** - A computer utility program that takes one or more object files generated by a compiler and combines them into a single executable program.
11. **LISP (List Processing)** - A family of computer programming languages with a long history and a distinctive, fully parenthesized prefix notation.
12. **Logical Operation** - An operation corresponding to a logical function that operates according to Boolean algebra or binary logic.
13. **LTE (Long Term Evolution)** - A standard for wireless broadband communication for mobile devices and data terminals, based on the GSM/EDGE and UMTS/HSPA technologies.
14. **Luminance** - A measure of the intensity of light emitted from a surface per unit area in a given direction. It's used in various contexts including photography, videography, and lighting.
15. **LAMP (Linux, Apache, MySQL, PHP/Python/Perl)** - A popular open-source web development platform that uses Linux as the operating system, Apache as the web server, MySQL as the relational database management system, and PHP, Python, or Perl as the object-oriented scripting language.
16. **Leverage** - In business, the use of various financial instruments or borrowed capital to increase the potential return of an investment.
17. **Licensing** - The granting of permission to use intellectual property rights, such as trademarks, patents, or technology, under defined conditions.
18. **Lifecycle** - In technology, refers to the stages through which a product or project goes from conception through retirement, encompassing stages such as planning, development, launch, maintenance, and phase-out.
19. **Logic Bomb** - A piece of code intentionally inserted into a software system that will set off a malicious function when specified conditions are met.
20. **Lookup Table** - A data structure, often an array or associative array, used to replace a runtime computation with a simpler lookup operation.

## M

1. **Machine Learning** - A subset of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed.
2. **Malware** - Malicious software designed to harm, exploit, or otherwise compromise a computer, network, or server.



3. **Metadata** - Data that provides information about other data, such as the author, date of creation, and file size.
4. **Microprocessor** - A computer processor on a microchip, the engine that goes into motion when you turn your computer on.
5. **Middleware** - Software that lies between an operating system and the applications running on it, enabling communication and data management.
6. **Modem** - A device or program that enables a computer to transmit data over, for example, telephone or cable lines.
7. **Moore's Law** - The observation that the number of transistors on integrated circuits doubles approximately every two years, leading to the continuous increase in computing power.
8. **Multitasking** - The ability of a computer to execute several tasks concurrently by switching among them to utilize the CPU efficiently.
9. **MySQL** - An open-source relational database management system based on SQL (Structured Query Language).
10. **MVC (Model-View-Controller)** - A software architectural pattern for implementing user interfaces on computers. It divides a given software application into three interconnected parts to separate internal representations of information from the ways that information is presented to or accepted from the user.
11. **Machine Code** - A computer programming language consisting of binary or hexadecimal instructions that a computer can respond to directly.
12. **Mesh Network** - A network topology in which each node relays data for the network. All mesh nodes cooperate in the distribution of data in the network.
13. **Microservices** - A style of software architecture that structures an application as a collection of loosely coupled services, which implement business capabilities.
14. **Middleware** - Software that provides common services and capabilities to applications outside of what's offered by the operating system.
15. **Multicore Processor** - A single computing component with two or more independent actual processing units (called "cores"), which read and execute program instructions.
16. **Multiplexing** - A method by which multiple analog or digital signals are combined into one signal over a shared medium.
17. **Multithreading** - The ability of a CPU, or a single core in a multi-core processor, to provide multiple threads of execution concurrently.
18. **Markup Language** - A system for annotating a document in a way that is syntactically distinguishable from the text. The most commonly used markup languages are HTML and XML.

19. **Man-in-the-Middle Attack** - A cyberattack where the attacker secretly intercepts and possibly alters the communication between two parties who believe they are directly communicating with each other.
20. **MPEG (Moving Picture Experts Group)** - A working group of authorities that was formed by ISO and IEC to set standards for audio and video compression and transmission.

## N

1. **Network** - A collection of computers, servers, mainframes, network devices, peripherals, or other devices connected to one another to allow the sharing of data.
2. **Neural Network** - A series of algorithms that endeavors to recognize underlying relationships in a set of data through a process that mimics the way the human brain operates.
3. **Node** - In networking, a node is any active, physical, electronic device attached to a network. In data structures, it refers to an element in a linked list or tree structure.
4. **Namespace** - A container that allows identifiers (names) within it to be associated with a particular context or area of code, thus preventing naming conflicts.
5. **NAT (Network Address Translation)** - A method of remapping an IP address space into another by modifying network address information in the IP header of packets while they are in transit across a traffic routing device.
6. **NoSQL** - A variety of technologies that are designed to accommodate a wide variety of data models, including key-value, document, columnar, and graph formats.
7. **Nonce** - A number or bit string used only once, in security engineering, or in computer science, a number used to vary the output in cryptographic operations.
8. **Normalization** - The process of organizing the fields and tables of a database to minimize redundancy and dependency by dividing large tables into smaller (and less redundant) tables and defining relationships between them.
9. **NFC (Near Field Communication)** - A set of communication protocols that enable two electronic devices, one of which is usually a portable device such as a smartphone, to establish communication by bringing them within 4 cm of each other.
10. **NIC (Network Interface Card)** - A hardware component that connects a computer to a network.

11. **NPM (Node Package Manager)** - A package manager for the JavaScript programming language. It is the default package manager for the JavaScript runtime environment Node.js.
12. **NAND** - A type of flash storage technology that stores data by using NAND logic gates, offering high capacity and endurance.
13. **Nginx** (pronounced as "engine-x") - An open-source web server that also serves as a reverse proxy, load balancer, mail proxy, and HTTP cache.
14. **Namespace** - In programming, a namespace is a container that allows developers to bundle all functionality under a unique, application-specific name.
15. **NLP (Natural Language Processing)** - A field of computer science, artificial intelligence, and computational linguistics concerned with the interactions between computers and human (natural) languages.
16. **NVMe (Non-Volatile Memory Express)** - An interface protocol built especially for Solid State Drives (SSDs). NVMe works with PCI Express (PCIe) to transfer data to and from SSDs.
17. **NAT Traversal** - A computer networking technique that establishes and maintains Internet protocol connections across gateways that implement Network Address Translation (NAT).
18. **Null** - In computer programming, a special marker used in several languages to denote a reference that does not refer to any object or where no data is present.
19. **Nyquist Rate** - The minimum rate at which a signal can be sampled without introducing errors, which is twice the highest frequency present in the signal.
20. **Nanotechnology** - The science, engineering, and technology conducted at the nanoscale, which is about 1 to 100 nanometers.

O

1. **Object-Oriented Programming (OOP)** - A programming paradigm based on the concept of "objects", which can contain data, in the form of fields, often known as attributes; and code, in the form of procedures, often known as methods.
2. **Operating System (OS)** - System software that manages computer hardware, software resources, and provides common services for computer programs.
3. **Open Source** - A type of software in which the source code is made freely available for possible modification and redistribution. Products include permission to use the source code, design documents, or content of the product.
4. **OAuth** - An open standard for access delegation, commonly used as a way for Internet users to grant websites or applications access to their information on other websites but without giving them the passwords.

5. **Overclocking** - The action of increasing the operating speed of a computer component beyond its stock performance settings to improve performance.
6. **Object** - In programming, an object is a data structure that contains data, in the form of fields, often known as attributes; and code, in the form of procedures, often known as methods.
7. **Opcode** - The portion of a machine language instruction that specifies the operation to be performed. An opcode is short for 'operation code'.
8. **Optimization** - In computing, optimization is the process of modifying a system to make some aspects of it work more efficiently or use fewer resources.
9. **ORM (Object-Relational Mapping)** - A programming technique for converting data between incompatible type systems in object-oriented programming languages.
10. **Outsource** - The business practice of hiring a party outside a company to perform services and create goods that traditionally were performed in-house by the company's own employees and staff.
11. **Overflow** - In computing, an overflow error occurs when a calculation exceeds the maximum limit of the variable used to store it.
12. **Offshore Development** - Refers to the practice of outsourcing tasks or projects to a third-party company or team located in a foreign country.
13. **Omnichannel** - A multi-channel approach to sales that seeks to provide the customer with a seamless shopping experience whether the client is shopping online from a mobile device, a laptop, or in a brick-and-mortar store.
14. **OpenSSL** - A robust, full-featured open-source toolkit implementing the Secure Sockets Layer (SSL v2/v3) and Transport Layer Security (TLS v1) protocols with full-strength cryptography world-wide.
15. **On-Premises** - A type of software delivery model that is installed and operates on computers on the premises of the person or organization using the software, rather than at a remote facility such as a server farm or cloud.
16. **Online Analytical Processing (OLAP)** - A category of software that allows users to analyze information from multiple database systems at the same time. It is a technology behind many Business Intelligence (BI) applications.
17. **Opcode Caching** - In PHP, opcode caching is the process of storing precompiled script bytecode in shared memory, thereby removing the need for PHP to load and parse scripts on each request.
18. **OSI Model (Open Systems Interconnection Model)** - A conceptual framework used to understand network interactions in seven layers: Physical, Data Link, Network, Transport, Session, Presentation, and Application.
19. **Outbound Marketing** - A traditional form of marketing where a company initiates the conversation and sends its message out to an audience.

20. **Overlay Network** - A computer network that is built on top of another network. Nodes in the overlay network are connected by virtual or logical links, each of which corresponds to a path, perhaps through many physical links, in the underlying network.

## P

1. **Protocol** - A set of rules or procedures for transmitting data between electronic devices, such as computers.
2. **Python** - A high-level, interpreted, general-purpose programming language known for its readability and support for multiple programming paradigms.
3. **Processor** - The central unit within a computer that interprets and executes instructions from hardware and software.
4. **Proxy Server** - A server that acts as an intermediary for requests from clients seeking resources from other servers, providing increased security and anonymity.
5. **Pixel** - The smallest unit of a digital image or graphic that can be displayed and edited on a computer screen.
6. **PHP (Hypertext Preprocessor)** - A popular general-purpose scripting language that is especially suited to web development, known for its ability to be embedded into HTML.
7. **Public Key Infrastructure (PKI)** - A set of roles, policies, hardware, software, and procedures needed to create, manage, distribute, use, store, and revoke digital certificates and manage public-key encryption.
8. **Packet** - A formatted unit of data carried by a packet-switched network. In networking, a packet represents a piece of a message broken down into a smaller, manageable size.
9. **Parallel Processing** - The method in computing of running two or more processors (cores, computers) in combination to handle separate parts of an overall task.
10. **Penetration Testing** - The practice of testing a computer system, network, or web application to find security vulnerabilities that an attacker could exploit.
11. **Permalink** - A permanent static hyperlink to a particular web page or entry in a blog.
12. **Polymorphism** - In programming, the ability to present the same interface for differing underlying forms (data types).
13. **PostgreSQL** - An advanced, open-source relational database management system that supports both SQL (relational) and JSON (non-relational) querying.
14. **Platform as a Service (PaaS)** - A cloud computing model that provides customers a complete platform—hardware, software, and infrastructure—for

developing, running, and managing applications without the cost, complexity, and inflexibility of building and maintaining that platform on their own.

15. **Plug-in** - A software component that adds a specific feature to an existing computer program, allowing customization.
16. **Predictive Analytics** - The use of data, statistical algorithms, and machine learning techniques to identify the likelihood of future outcomes based on historical data.
17. **Proxy** - In computer networks, a proxy server is a server (a computer system or an application) that acts as an intermediary for requests from clients seeking resources from other servers.
18. **Pseudocode** - An informal high-level description of the operating principle of a computer program or other algorithm, using a mixture of natural language and programming language to convey the logic.
19. **Public Cloud** - Cloud computing services offered by third-party providers over the public Internet, making them available to anyone who wants to use or purchase them.
20. **PWA (Progressive Web App)** - A type of application software delivered through the web, built using common web technologies including HTML, CSS, and JavaScript, intended to work on any platform that uses a standards-compliant browser.

## Q

1. **Quantum Computing** - A type of computing that takes advantage of quantum phenomena like superposition and quantum entanglement to perform operations on data.
2. **Query** - In computing, a query is a request for data or information from a database table or combination of tables. This data may be generated as results returned by Structured Query Language (SQL) or as pictorials, graphs, or complex results.
3. **QoS (Quality of Service)** - The overall performance of a telephony or computer network, particularly the performance seen by the users of the network.
4. **QR Code (Quick Response Code)** - A type of matrix barcode (or two-dimensional barcode) first designed in 1994 for the automotive industry in Japan. A barcode is a machine-readable optical label that contains information about the item to which it is attached.
5. **Queue** - In computer science, a queue is a collection in which the entities in the collection are kept in order and the principal (or only) operations on the collection are the addition of entities to the rear terminal position, known as

enqueue, and removal of entities from the front terminal position, known as dequeue.

6. **Quicksort** - A highly efficient sorting algorithm, serving as a systematic method for placing the elements of an array in order.
7. **Quad-Core** - A chip with four independent units called cores that read and execute central processing unit (CPU) instructions such as add, move data, and branch.
8. **Quota** - In computing, a quota is the limit on the amount of disk space or memory allocated to a particular user, application, or service.
9. **Quantization** - In digital signal processing, quantization is the process of mapping input values from a large set to output values in a (countable) smaller set, often with a finite number of elements.
10. **Query Language** - A computer programming language that allows retrieval and manipulation of data from a database and is used for querying the database information.
11. **Qubit** - The basic unit of quantum information—a quantum bit. Unlike a standard bit, which can be 0 or 1, a qubit can be in a state of 0, 1, or any quantum superposition of these states.
12. **Quantum Entanglement** - A physical phenomenon that occurs when pairs or groups of particles are generated, interact, or share spatial proximity in ways such that the quantum state of each particle cannot be described independently of the state of the others, even when the particles are separated by a large distance.
13. **Quantum Supremacy** - A term used to describe a point at which a quantum computer can perform a calculation that is impractical for a classical computer.
14. **Quaternary** - In data storage, a quaternary system is one that uses four distinct states or symbols to store data, as opposed to binary, which uses two.
15. **Query Plan** - In databases, a query plan is an ordered set of steps used to access or modify information in a SQL relational database management system.
16. **Queueing Theory** - A mathematical study of waiting lines, or queues. In queueing theory, a model is constructed so that queue lengths and waiting times can be predicted.
17. **Quorum** - The minimum number of members of an assembly or society that must be present at any of its meetings to make the proceedings of that meeting valid.
18. **Quantitative Analysis** - The use of mathematical and statistical modeling, measurement, and research to understand behavior. Quantitative analysts aim to represent a given reality in terms of a numerical value.
19. **Quartz** - In computer graphics, Quartz is a powerful 2D graphics engine and core technology that underlies both the advanced drawing capabilities of Quartz 2D and the animation capabilities of Quartz Composer.

20. **QuickTime** - An extensible multimedia framework developed by Apple Inc., capable of handling various formats of digital video, picture, sound, panoramic images, and interactivity.

## R

1. **RAM (Random Access Memory)** - A type of computer memory that can be accessed randomly; any byte of memory can be accessed without touching the preceding bytes.
2. **RDBMS (Relational Database Management System)** - A database management system based on the relational model introduced by E.F. Codd.
3. **REST (Representational State Transfer)** - An architectural style for designing networked applications, relying on a stateless, client-server, cacheable communications protocol.
4. **Router** - A networking device that forwards data packets between computer networks, performing traffic directing functions on the Internet.
5. **Ruby on Rails** - A server-side web application framework written in Ruby under the MIT License, which is a model-view-controller (MVC) framework, providing default structures for a database, a web service, and web pages.
6. **Runtime** - The period during which a computer program is executing, or the environment in which a program runs.
7. **Ransomware** - A type of malicious software designed to block access to a computer system until a sum of money is paid.
8. **RAID (Redundant Array of Independent Disks)** - A data storage virtualization technology that combines multiple physical disk drive components into one or more logical units for the purposes of data redundancy, performance improvement, or both.
9. **Regression Testing** - A type of software testing that ensures that previously developed and tested software still performs the same way after it is changed or interfaced with other software.
10. **Responsive Design** - An approach to web design that makes web pages render well on a variety of devices and window or screen sizes.
11. **RPC (Remote Procedure Call)** - A protocol that one program can use to request a service from a program located in another computer on a network without having to understand the network's details.
12. **RSS (Really Simple Syndication)** - A type of web feed that allows users and applications to access updates to online content in a standardized, computer-readable format.



13. **Rootkit** - A collection of computer software, typically malicious, designed to enable access to a computer or an area of its software that is not otherwise allowed and often masks its existence or the existence of other software.
14. **Robotic Process Automation (RPA)** - The technology that allows anyone to configure computer software, or a "robot" to emulate and integrate the actions of a human interacting within digital systems to execute a business process.
15. **Redux** - A predictable state container for JavaScript apps, often used with React to manage state in a more efficient way.
16. **ReCAPTCHA** - A free service from Google that helps protect websites from spam and abuse by asking users to solve a simple test that proves they are not a robot.
17. **Ruby** - A dynamic, open-source programming language with a focus on simplicity and productivity, notable for its elegant syntax that is natural to read and easy to write.
18. **Reverse Engineering** - The process of taking apart a piece of software or hardware to see how it works in order to duplicate or enhance the object.
19. **Reinforcement Learning** - An area of machine learning concerned with how software agents ought to take actions in an environment in order to maximize some notion of cumulative reward.
20. **Repository** - In version control systems, a repository is a central file storage location. It is used by version control systems to store multiple versions of files.

## S

1. **SQL (Structured Query Language)** - A standardized programming language used for managing relational databases and performing various operations on the data in them.
2. **SSL (Secure Sockets Layer)** - A standard security technology for establishing an encrypted link between a server and a client, typically a web server (website) and a browser, or a mail server and a mail client.
3. **Software Development Kit (SDK)** - A collection of software development tools in one installable package, often used to develop applications for a specific device or operating system.
4. **SaaS (Software as a Service)** - A software distribution model in which a third-party provider hosts applications and makes them available to customers over the Internet.
5. **Scrum** - An agile framework for managing knowledge work, with an emphasis on software development, characterized by a fixed-length iteration called a sprint, typically of two weeks.

6. **Server** - A computer or system that provides resources, data, services, or programs to other computers, known as clients, over a network.
7. **Solid State Drive (SSD)** - A type of mass storage device similar to a hard disk drive (HDD), but it stores data on solid-state flash memory instead of spinning disks.
8. **Search Engine Optimization (SEO)** - The process of increasing the quality and quantity of website traffic by increasing the visibility of a website or a web page to users of a web search engine.
9. **Semantic Web** - An extension of the World Wide Web through standards set by the World Wide Web Consortium (W3C) that aims to make Internet data machine-readable.
10. **Shell** - In computing, a shell is a user interface for access to an operating system's services. In most cases, a shell is a command-line interface.
11. **Spam** - Irrelevant or unsolicited messages sent over the Internet, typically to large numbers of users, for the purposes of advertising, phishing, spreading malware, etc.
12. **Syntax** - The set of rules that defines the combinations of symbols that are considered to be correctly structured programs or expressions in a programming language.
13. **Serialization** - The process of converting an object into a stream of bytes to store the object or transmit it to memory, a database, or a file. Its main purpose is to save the state of an object in order to be able to recreate it when needed.
14. **Scalability** - The capability of a system, network, or process to handle a growing amount of work, or its potential to be enlarged to accommodate that growth.
15. **Symmetric Encryption** - A type of encryption where the same key is used for both encrypting and decrypting the information.
16. **Subnet** - A logical subdivision of an IP network. The practice of dividing a network into two or more networks is called subnetting.
17. **SSH (Secure Shell)** - A cryptographic network protocol for operating network services securely over an unsecured network.
18. **Software Architecture** - The fundamental structures of a software system and the discipline of creating such structures and systems. Each structure comprises software elements, relations among them, and properties of both elements and relations.
19. **Source Code** - The fundamental component of a computer program that is created by a programmer. It can be read and easily understood by a human being.
20. **Sandbox** - In cybersecurity, a sandbox is an isolated environment on a network that mimics end-user operating environments. It is used to safely execute suspicious code without risking harm to the host device or network.

## T

1. **TCP/IP (Transmission Control Protocol/Internet Protocol)** - A set of networking protocols that allows two or more computers to communicate. It is the foundation of the internet.
2. **Token** - In programming, a token is a string of characters that are used as a unit in the syntax of the code. In cybersecurity, it often refers to a hardware or software piece that generates a secure authentication code.
3. **TLS (Transport Layer Security)** - A protocol that ensures privacy between communicating applications and their users on the internet.
4. **Terabyte (TB)** - A unit of digital data storage equal to approximately one trillion bytes, or 1,024 gigabytes.
5. **Thread** - The smallest sequence of programmed instructions that can be managed independently by a scheduler, which is typically a part of the operating system.
6. **Telemetry** - The automated process of collecting data from remote or inaccessible points and transmitting it to an IT system in a different location.
7. **TDD (Test-Driven Development)** - A software development process that relies on the repetition of a very short development cycle: requirements are turned into very specific test cases, then the software is improved to pass the new tests.
8. **Two-Factor Authentication (2FA)** - An extra layer of security used to ensure the security of online accounts beyond just a username and password.
9. **Topology** - The layout of a network. Includes how the devices are connected and how they communicate with each other.
10. **Transistor** - A semiconductor device used to amplify or switch electronic signals and electrical power.
11. **Tor (The Onion Router)** - A free and open-source software for enabling anonymous communication by directing internet traffic through a free, worldwide, volunteer overlay network.
12. **Turing Test** - A test of a machine's ability to exhibit intelligent behavior equivalent to, or indistinguishable from, that of a human.
13. **Typeface** - The design of lettering that can include variations in size, weight (bold), slope (italic), width, and so on. Each of these variations of the typeface is a font.
14. **Tag** - In web development, a tag can refer to HTML or XML code that delineates elements within a document. In software development and social media, tags are keywords or terms assigned to a piece of information.
15. **Template** - In software development, a template is a generic class or other unit of source code that can be used as the basis for unique units of code.

16. **Throttling** - The intentional slowing or speeding of an internet service by an Internet service provider (ISP). It can also refer to the regulation of the processing speed of a microprocessor based on the current demand.
17. **Tokenization** - The process of converting rights to an asset into a digital token on a blockchain. In data security, it refers to the process of substituting sensitive data elements with non-sensitive equivalents.
18. **Tunneling** - The practice of transporting a data packet over a network in a protocol envelope that is not supported by the network infrastructure.
19. **TDD (Time-Division Duplexing)** - A method of transmitting and receiving independent signals over a common signal path by means of synchronized switches at each end of the transmission line.
20. **TTL (Time To Live)** - A mechanism that limits the lifespan or lifetime of data in a computer or network. In networking, it specifies the number of hops that a packet can travel before being discarded or returned.

## U

1. **URL (Uniform Resource Locator)** - A reference to a web resource that specifies its location on a computer network and a mechanism for retrieving it.
2. **UI (User Interface)** - The means by which the user and a computer system interact, particularly the use of input devices and software.
3. **UX (User Experience)** - Encompasses all aspects of the end-user's interaction with the company, its services, and its products.
4. **UDP (User Datagram Protocol)** - A communications protocol that facilitates the exchange of messages between computing devices in a network. It's known for its low latency and loss tolerating connections between applications.
5. **Unicode** - A computing industry standard for the consistent encoding, representation, and handling of text expressed in most of the world's writing systems.
6. **UUID (Universally Unique Identifier)** - A 128-bit number used to identify information in computer systems.
7. **UML (Unified Modeling Language)** - A standardized modeling language enabling developers to specify, visualize, construct, and document artifacts of software systems.
8. **Ubuntu** - A Debian-based Linux operating system and distribution for personal computers, smartphones, and network servers.
9. **Uptime** - The time during which a computer or IT system is operational and functioning correctly.

10. **Underflow** - An error condition occurring when a computer arithmetic operation attempts to create a numeric value that is too small to be represented within the storage space allotted for that type of value.
11. **Upselling** - A sales technique where a seller invites the customer to purchase more expensive items, upgrades, or other add-ons in an attempt to make a more profitable sale.
12. **USB (Universal Serial Bus)** - An industry standard for cables, connectors, and protocols for connection, communication, and power supply between computers, peripherals, and other computers.
13. **Utility Computing** - The packaging of computing resources, such as computation and storage, as a metered service similar to a traditional public utility, such as electricity.
14. **Upstream** - In software development, upstream refers to the direction in which changes or patches are made by original authors or maintainers of software projects.
15. **User Story** - In agile software development, a user story is an informal, natural language description of one or more features of a software system.
16. **Unicast** - Communication between a single sender and a single receiver over a network.
17. **UX Design** - The process of designing (digital or physical) products that are useful, easy to use, and delightful to interact with. It's about enhancing the experience that people have while interacting with your product and making sure they find value in what you're providing.
18. **UAT (User Acceptance Testing)** - The final phase of software testing where the actual software users test the software to ensure it can handle required tasks in real-world scenarios, according to specifications.
19. **URI (Uniform Resource Identifier)** - A string of characters used to identify a name or a resource on the Internet.
20. **Unsupervised Learning** - A type of algorithm that learns patterns from untagged data. The system tries to learn without a teacher.

## V

1. **Virtual Reality (VR)** - A simulated experience that can be similar to or completely different from the real world, often used for entertainment and education.
2. **Variable** - In programming, a variable is a storage location paired with an associated symbolic name, which contains some known or unknown quantity of information referred to as a value.

3. **VPN (Virtual Private Network)** - A service that encrypts your internet traffic and protects your online identity by hiding your IP address.
4. **Vector Graphics** - The use of polygons to represent images in computer graphics, as opposed to raster graphics which are composed of pixels.
5. **VLAN (Virtual Local Area Network)** - A group of hosts with a common set of requirements that communicate as if they were attached to the same broadcast domain, regardless of their physical location.
6. **VM (Virtual Machine)** - An emulation of a computer system that provides the functionality of a physical computer.
7. **Version Control** - A system that records changes to a file or set of files over time so that you can recall specific versions later.
8. **VoIP (Voice over Internet Protocol)** - A technology that allows you to make voice calls using a broadband Internet connection instead of a regular (or analog) phone line.
9. **Volatile Memory** - Computer memory that requires power to maintain the stored information, such as RAM.
10. **Vulnerability** - A weakness which can be exploited by a threat actor, such as an attacker, to perform unauthorized actions within a computer system.
11. **Validation** - The process of checking if something satisfies a certain criterion. In web development, it often refers to the process of checking if the data entered into a web application is correct.
12. **Viewport** - The visible area of a webpage on the user's screen, which changes size based on the device used to view the site.
13. **Virtualization** - The process of creating a virtual version of something, including virtual computer hardware platforms, storage devices, and computer network resources.
14. **VCS (Version Control System)** - A software tool that helps software teams manage changes to source code over time.
15. **VHDL (VHSIC Hardware Description Language)** - A hardware description language used in electronic design automation to describe digital and mixed-signal systems such as field-programmable gate arrays and integrated circuits.
16. **VFX (Visual Effects)** - The process by which imagery is created or manipulated outside the context of a live action shot in film making and video production.
17. **Virus** - A type of malicious software program ("malware") that, when executed, replicates itself by modifying other computer programs and inserting its own code.
18. **Virtual Host** - A method of hosting multiple domain names (with separate handling of each name) on a single server (or pool of servers).

19. **Value Proposition** - A promise of value to be delivered, communicated, and acknowledged. It is also a belief from the customer about how value will be delivered, experienced, and acquired.
20. **VBA (Visual Basic for Applications)** - An implementation of Microsoft's event-driven programming language Visual Basic 6, which was declared legacy in 2008, and its associated integrated development environment (IDE), built into most Microsoft Office applications.

## W

1. **Web Application** - A software application that runs on a web server, unlike computer-based software programs that are run locally on the operating system of the device.
2. **Wi-Fi** - A family of wireless network protocols, based on the IEEE 802.11 family of standards, that are commonly used for local area networking of devices and Internet access.
3. **WAN (Wide Area Network)** - A telecommunications network that extends over a large geographical area for the primary purpose of computer networking.
4. **Widget** - A small gadget or control of your desktop or mobile application that serves a specific purpose, such as a calendar or a weather display.
5. **Web Server** - A system that stores, processes, and delivers web pages to clients. The communication between client and server takes place using the Hypertext Transfer Protocol (HTTP).
6. **Webhook** - A method of augmenting or altering the behavior of a web page or web application with custom callbacks. These callbacks may be maintained, modified, and managed by third-party users and developers who do not necessarily have to be affiliated with the originating website or application.
7. **WebSocket** - A computer communications protocol, providing full-duplex communication channels over a single TCP connection.
8. **WWW (World Wide Web)** - An information system where documents and other web resources are identified by Uniform Resource Locators (URLs), which may be interlinked by hypertext, and are accessible over the Internet.
9. **WPA (Wi-Fi Protected Access)** - A security protocol and security certification program developed by the Wi-Fi Alliance to secure wireless computer networks.
10. **Workflow** - The sequence of industrial, administrative, or other processes through which a piece of work passes from initiation to completion.
11. **Wildcard Character** - A character that may be used to substitute for any of a class of characters in a search or filtering operation, often used in file searches, regular expressions, and SQL queries.

12. **Worm** - A malware computer program that replicates itself in order to spread to other computers. It often uses a computer network to spread itself, relying on security failures on the target computer to access it.
13. **Write-Protect** - A physical or software mechanism that prevents modification or deletion of data on a device or within a file.
14. **WYSIWYG (What You See Is What You Get)** - A system in which content (text and graphics) displayed onscreen during editing appears in a form closely corresponding to its appearance when printed or displayed as a finished product.
15. **Wavelength-Division Multiplexing (WDM)** - A technology which multiplexes multiple optical carrier signals onto a single optical fiber by using different wavelengths (i.e., colors) of laser light to carry different signals.
16. **Web Crawling** - The process by which a search engine sends out a team of robots (known as crawlers or spiders) to find new and updated content.
17. **Watermark** - A faint design made in some paper during manufacture that is visible when held against the light and typically identifies the maker.
18. **Web Services** - Standardized ways of integrating web-based applications using the XML, SOAP, WSDL, and UDDI open standards over an Internet protocol backbone.
19. **Windows Registry** - A hierarchical database that stores low-level settings for the Microsoft Windows operating system and for applications that opt to use the registry.
20. **Wrapper** - In programming, a wrapper is any entity that encapsulates (wraps around) another item to make that item easier to use, understand, or manage.

## X

1. **XML (eXtensible Markup Language)** - A markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.
2. **XSS (Cross-Site Scripting)** - A security vulnerability typically found in web applications, which allows attackers to inject client-side scripts into web pages viewed by other users.
3. **XSLT (eXtensible Stylesheet Language Transformations)** - A language for transforming XML documents into other XML documents, or other formats such as HTML for web pages, plain text, or XSL Formatting Objects.
4. **XPath** - A query language that allows the selection of nodes from an XML document, navigating elements and attributes in an XML document.
5. **X86** - A family of instruction set architectures based on the Intel 8086 microprocessor and its 8088 variant.



6. **X509 Certificate** - A standard defining the format of public key certificates, used in many Internet protocols as well as for the digital signature of documents.
7. **XaaS (Everything as a Service)** - A term referring to the growing diversity of services available over the Internet via cloud computing as opposed to being provided locally, or on-premises.
8. **XMP (Extensible Metadata Platform)** - A standard created by Adobe Systems for processing and storing standardized and proprietary metadata, associated with digital documents, files, or assets.
9. **X11** - A windowing system for bitmap displays, common on UNIX-like operating systems.
10. **X-Frame-Options** - An HTTP response header used to indicate whether or not a browser should be allowed to render a page in a `<frame>`, `<iframe>`, `<embed>`, or `<object>`.
11. **Xen** - An open-source hypervisor providing services that allow multiple computer operating systems to execute on the same computer hardware concurrently.
12. **XDCC (Xabi DCC)** - A protocol that allows the transfer of files via IRC (Internet Relay Chat).
13. **XAML (eXtensible Application Markup Language)** - A declarative XML-based language developed by Microsoft that is used for initializing structured values and objects.
14. **XSRF/CSRF (Cross-Site Request Forgery)** - An attack that forces an end user to execute unwanted actions on a web application in which they're currently authenticated.
15. **XR (Extended Reality)** - A term referring to all real-and-virtual combined environments and human-machine interactions generated by computer technology and wearables, including augmented reality (AR), virtual reality (VR), and mixed reality (MR).
16. **X-Ray** - In computing, particularly web development, refers to tools or applications that inspect the structure of a webpage to analyze its contents and structure.
17. **X-Plane** - A flight simulation engine that can model the flight patterns of different aircraft types.
18. **X-Path Injection** - An attack technique used to exploit web sites that construct XPath (XML Path Language) queries from user-supplied input.
19. **X-Windows System** - A windowing system for bitmap displays, common on UNIX-like operating systems.
20. **Xmodem** - A protocol for file transfer developed in the early 1980s, used primarily for modem-to-modem communication.

## Y

1. **YAML (YAML Ain't Markup Language)** - A human-readable data serialization standard that can be used in conjunction with all programming languages and is often used for configuration files.
2. **Yottabyte** - A unit of information or computer storage equal to one septillion bytes (or a trillion terabytes). It's one of the largest data measures.
3. **Y2K (Year 2000 Problem)** - A class of computer bugs related to the formatting and storage of calendar data for dates beginning in the year 2000. It was a significant issue for computer systems and software as the 20th century transitioned into the 21st century.
4. **Yahoo** - An American web services provider that was once one of the most prominent Internet portals and search engines in the early days of the World Wide Web.
5. **Yield** - In computer programming, particularly in concurrency, yield is a function that allows a thread to yield its current use of the processor to other threads. In some programming languages, `yield` is used to pause and resume a generator function.
6. **Yoctosecond** - A unit of time in the International System of Units (SI) representing  $10^{-24}$  of a second. It is one of the smallest measurable units of time.
7. **YARN (Yet Another Resource Negotiator)** - A cluster management technology used with Apache Hadoop for resource management in the Hadoop ecosystem.
8. **Yagi Antenna** - A directional antenna consisting of a driven element such as a dipole or folded dipole and additional parasitic elements (a reflector and one or more directors) used for radio communications.
9. **YCbCr** - A color space used as a part of the color image pipeline in video and digital photography systems. YCbCr is derived from the RGB color model.
10. **Yield Management** - A variable pricing strategy, based on understanding, anticipating, and influencing consumer behavior in order to maximize revenue or profits from a fixed, perishable resource.
11. **YUV** - A color encoding system typically used as part of a color image pipeline. It encodes a color image or video taking human perception into account, allowing reduced bandwidth for chrominance components.
12. **Yottabit** - A unit of digital information or computer storage, equivalent to one septillion bits. It is one of the largest standardized size prefixes for data and digital information.
13. **Y Combinator** - An American seed money startup accelerator launched in March 2005. It has been used to launch over 2,000 companies, including some very successful ones like Dropbox, Airbnb, and Reddit.

14. **YIQ** - A color space used by the NTSC color TV system, employed mainly in North and Central America, and Japan. It is related to but different from the YUV color space.
15. **Young's Modulus** - A mechanical property that measures the stiffness of a solid material. It defines the relationship between stress (force per unit area) and strain (proportional deformation) in a material.
16. **Yocto Project** - An open-source collaboration project that provides templates, tools, and methods to help you create custom Linux-based systems for embedded products regardless of the hardware architecture.
17. **Yottaflops** - A unit of computing speed equal to one septillion ( $10^{24}$ ) floating-point operations per second, used in the field of high-performance computing.
18. **YAML Front Matter** - A section of YAML placed at the beginning of a file to define site variables or page-specific variables for static site generators.
19. **YUV Color Space** - Often used in video compression and broadcasting, it separates the luminance (Y) from the chrominance (U and V) components to optimize color representation.
20. **Yield Curve** - In finance, a curve that shows the relationship between interest rates earned on bonds (typically government bonds) and the length of time until the bonds mature.

## Z

1. **Zettabyte** - A unit of digital information storage that represents one sextillion bytes or  $10^{21}$  bytes. It's one of the largest data measurement units.
2. **Zero-Day Attack** - A cyber-attack that occurs on the same day a weakness is discovered in software, before the software developers have an opportunity to create a patch to fix the vulnerability.
3. **ZFS (Zettabyte File System)** - A high-capacity file system and logical volume manager designed by Sun Microsystems, known for its high storage capacity and data integrity verification.
4. **Zigbee** - A specification for a suite of high-level communication protocols using small, low-power digital radios for low-data-rate wireless networking, typically used in home automation, medical device data collection, and other low-power low-bandwidth needs.
5. **Z-Wave** - A wireless communications protocol used primarily for home automation. It is a mesh network using low-energy radio waves to communicate from appliance to appliance.

6. **Zombie Computer** - A computer connected to the internet that has been compromised by a hacker, computer virus, or trojan horse and can be used to perform malicious tasks under remote direction.
7. **Zero-Day Vulnerability** - A software security flaw that is known to the software vendor but doesn't have a patch in place to fix the flaw. It has the potential to be exploited by cybercriminals.
8. **z/OS** - A 64-bit operating system for IBM mainframes, designed for secure, high-volume, high-performance computing.
9. **ZIP** - A file format used for data compression and archiving, which supports lossless data compression. A ZIP file may contain one or more files or directories that may have been compressed.
10. **Z-Buffering** - A computer graphics technique used in 3D rendering to help determine which objects, or parts of objects, are visible and which are hidden behind other objects.
11. **Zabbix** - An open-source monitoring software tool for diverse IT components, including networks, servers, virtual machines, and cloud services.
12. **Zen Coding** - A fast way to write HTML and CSS code using abbreviations that expand to valid HTML tags or CSS properties. It is now known as Emmet.
13. **Zero Configuration Networking (Zeroconf)** - A set of technologies that automatically creates a usable network based on the Internet Protocol Suite (TCP/IP) without manual operator intervention or special configuration servers.
14. **ZetaScale** - Software technology designed to enable scalable and super-fast data processing in next-generation data centers and cloud environments.
15. **ZIF Socket (Zero Insertion Force Socket)** - A type of CPU socket on a motherboard that allows for the easy insertion of a CPU chip without the need for applying force.
16. **Zipline** - A Pythonic algorithmic trading library. It is an event-driven system for backtesting trading strategies on historical (backtest) and real-time data.
17. **Zoho** - A comprehensive suite of online productivity, collaboration, and business applications for businesses of all sizes.
18. **Zone File** - A text file that describes a DNS zone. A DNS zone is a subset of the global Domain Name System namespace. The zone file contains mappings between domain names and IP addresses and other resources, organized in the form of resource records (RR).
19. **Zsh (Z Shell)** - A Unix shell that can be used as an interactive login shell and as a powerful command interpreter for scripting. Zsh is an extended Bourne shell with a large number of improvements, including some features from bash, ksh, and tcsh.

20. **Zuul** - An edge service that provides dynamic routing, monitoring, resiliency, security, and more. It is part of the Netflix OSS suite of services and tools for building a distributed microservices architecture.