EU Digital Framework
for Sign Languages

GLOSSARY

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INTRODUCTION

This document aims to collect 500 terms related to the semantic domain of digital and ICT. Developing a comprehensive and innovative language framework for Sign Languages, in order to enhance the accessibility of deaf workers and deaf VET students to professional settings, favoring their full integration and a fair and equitable treatment. This approach could unlock new career paths and improve communication between not only deaf people, but also between deaf and hearing people that use sign languages.
International Sign is the communication code chosen in order to reach the most deaf people all over Europe. IS is the *lingua franca* used by deaf people coming from different countries in order to communicate and talk. It can be compared to the use that hearing people usually do in English.

1. COMPUTER SCIENCE

1)	***Abstraction***	An abstraction keeps only the most important information about something in order to make it easier to use. In computer science abstraction is used to understand and solve problems such as organizing data to be stored in a database.
2)	***Acrobat***	Acrobat is a coding system developed by Adobe Systems for electronic publishing applications.
3)	***Agile Software Development***	An approach to software development under which requirements and solutions evolve through the collaborative effort of self-organizing and cross-functional teams and their customer(s)/end user(s). It advocates adaptive planning, evolutionary development, early delivery, and continual improvement, and it encourages rapid and flexible response to change.
4)	***Algorithm***	An algorithm is a procedure for solving a problem, based on conducting a sequence of specified actions. A computer program can be viewed as an algorithm.
5)	***Apple - Macintosh***	US computer company, manufacturer of the Macintosh range of computers. Macintosh is a range of microcomputers produced by Apple, from 1984 on. These computers have a particular graphical user interface. The success of Macintosh prompted other software companies to create their own graphical user interfaces.
6)	***Application (app)***	In computer software, an application is a type of programme which is designed for a particular function, for example: word processing.

7)	***Application Programming Interface (API)***	An Application Programming Interface is a set of functions and procedures used by computer programmes to request service from the operating system. An API works by communication and exchanging data with other systems, acting as a messenger between the user and the system. A good API makes it easier to develop a computer programme by providing all the building blocks, which are put together by the programmer.
8)	***Artificial Intelligence (AI)***	Artificial intelligence is the ability of a computer program or machine to think and learn. They work on their own without being encoded with commands. They can perceive their environment and take actions accordingly to achieve a goal.
9)	***Backing storage***	The backing storage is a memory outside the central processing unit used to store programs and data that are not in current use. Backing storage must be non-volatile, that is, its contents must not be lost when the power supply to the computer system is disconnected.
10)	***Bandwidth***	In computer networks bandwidth is used as a term for the date transfer bit rate. It refers to the amount of data that is carried or passed from one point to another in a network in a given time period (usually a second).
11)	***Benchmark***	Is a test to see how good a computer (the CPU or another piece of hardware) can do a task.
12)	***Beta Version***	A beta version is a pre-release version of software or an application program, usually distributed to a limited number of expert users. The distribution of beta versions allows users testing and feedback to the developer, so that any necessary modifications can be made before release.
13)	***Big Data***	A term used to refer to data sets that are very large and complex. It can be collected through the internet, social media and governments. It can be used for health care, insurance, media and advertisements. The analyses of bigger amounts of data makes the information you gain more reliable.
14)	***Binary Number***	A number used in mathematics and digital electronics that consists only of the symbols: 0 and 1.
15)	***Binary Search Algorithm***	Also simply binary search, half-interval search, logarithmic search, or binary chop. A search algorithm that finds the position of a target value within a sorted array.
16)	***BIOS***	Acronym of Basic Input/Output System. The part of the operating system that handles input and output.
17)	***Bit***	A bit can either refer to a binary digit (either 0 or 1) or it is used as a unit of measurement for the amount of data.

18)	***Blacklist (block list)***	In computing a blacklist is a form of access control. Someone whose data (e.g. e-mail address, user, …) is on the blacklist does not have access. The opposite is a whitelist, which means someone who is listed there has access.
19)	***BMP file format – (bitmap image file, device independent bitmap (DIB) file format, or simply bitmap)***	A BMP file format also known as bitmap is a file used to store images independently of the display device. A Bitmap is a binary image made of dots. Each dot is coded as a bit.
20)	***Boolean data type***	A Boolean data type can be either the value "true" or "false". In programming it can be used for branching, loops and conditional statements.
21)	***Boolean expression***	An expression used in programming language that is either true or false.
22)	***Booting***	Booting happens when you start a computer either through pressing a button or giving a software command. When you boot a computer the processor looks for instructions in the system ROM and executes them. It searches for a boot device that then loads the operating system.
23)	***BPS***	Abbreviation of Bits Per Second; it's the measure used in specifying data transmission rates.
24)	***Bug***	A bug is an error in a program. It can be an error in the logical structure of a program or a syntax error, such as a spelling mistake. Some bugs cause a program to fail immediately; others remain dormant, causing problems only when a particular combination of events occurs. The process of finding and removing errors from a program is called "debugging".
25)	***Byte***	A byte is a unit of measurement of the size of information on a computer. A byte consists of 8 bits.
26)	***Cache***	A cache is a temporary storage area that has copies of data that is often used. It's faster to use this copy then to re-fetch or re-calculate the original data.
27)	***CAD***	Acronym for Computer-Aided Design, it refers to the use of computers in creating and editing design drawings. CAD also allows such things as automatic testing of designs and multiple or animated three-dimensional views of designs. CAD systems are widely used in architecture, electronics, and engineering.
28)	***Central Processing Unit (CPU)***	The central processing unit is the main component of a computer, the part that executes individual program instructions and controls the operation of the other parts. It's also called "central processor" or "microprocessor".
29)	***Character***	For computers a character is a letter, number or punctuation that can be shown on screens.

30)	***Class***	Class and object are basic building blocks in object-oriented programming languages. A class is written by a programmer in a defined structure to create an object (computer science) in an object oriented programming language. It defines a set of properties and methods that are common to all objects of one type.
31)	***Client***	A client is a computer used by a user to connect to a network and make requests to servers.
32)	***Code library***	A collection of non-volatile resources used by computer programs, often for software development. These may include configuration data, documentation, help data, message templates, pre-written code and subroutines, classes, values or type specifications.
33)	***Coding***	Coding is the process of telling a computer to do certain things by giving it instructions. These instructions are called programs. A person who writes instructions is a computer programmer. The instructions come in different languages; they are called programming languages. There are many programming languages. Sometimes, programmers use special software, such as integrated development environments (IDEs), which have many special parts, including a text editor, to help them to type and edit programs.
34)	***Coding theory***	Coding theory is the study of properties of codes and how good they are for a use in the real world. Codes are used for data compression (where data is made smaller), cryptography (where data is changed into a form that not everyone can read), and error correction. Codes are studied by different scientific disciplines for designing data transmission methods that are efficient and reliable.
35)	***Comma-Separated Values (CSV)***	A comma-separated values (CSV) file stores information you usually find in a spreadsheet in a plain text file. The values are separated by a comma. Each line of the file is a data record. Each record consists of one or more fields that are separated by commas.
36)	***Computation***	Computation is the act of determining something by processing information. It involves using mathematical or logical rules. The study of computation is called Computer Science.
37)	***Computer***	A computer is a machine that accepts data as input, processes data using programmes and outputs the processed data as information. Computers have the ability to follow programmes and can therefore perform a wide range of tasks.

38)	***Computer architecture***	Computer architecture is the conceptual design and operational structure of a computer system. It is the technical drawings and functional descriptions of all design requirements. It is the science of selecting and interconnecting hardware components to create computers that meet functional, performance and cost goals.
39)	***Computer data storage***	Computer data storage are components of a computer that store data. The CPU fetches and changes data there. Memory that is close to the CPU is fast to access, but has smaller storage. Memory farther away is slower to access but has larger storage like hard drives or USB flash drives.
40)	***Computer ethics***	A field of philosophy that is concerned with how people working with computers should make decisions regarding professional and social behaviour.
41)	***Computer graphics***	Computer graphics are visual representations of data, made with the help of a computer. Computer graphics can be a series of images (video or animation) or a single image.
42)	***Computer network***	A computer network is a group of nodes (devices like a computer, a printer, etc.) that are linked together. They share resources and exchange data. Networks can be connected via cable or wireless technology.
43)	***Computer programming***	(See ***coding***) Computer programming is the process of telling a computer to do certain things by giving it instructions. These instructions are called programs. A person who writes instructions is a computer programmer. The instructions come in different languages; they are called programming languages. There are many programming languages. Sometimes, programmers use special software, such as integrated development environments (IDEs), which have many special parts, including a text editor, to help them to type and edit programs.
44)	***Computer science***	Computer science is the study of managing, transforming and encoding information. The theories, experiments and engineering in computer sciences are the basis for the design and use of computers.
45)	***Computer scientist***	A person who works in the field of computer science.
46)	***Computer security***	Computer security is intended to protect computers from theft or damage to their hardware, software or electronic data as well as from disorders.

47)	***Concurrency***	In concurrent computing, multiple calculations are made within overlapping time frames. It takes advantage of the concept that multiple threads or processes can make progress on a task asynchronously. This general approach to writing and executing computer programs is called concurrency. Concurrency is different from parallel computing, as parallel computing uses multiple processors, each of which is assigned a single, synchronous thread.
48)	***Conditional***	A feature of a programming language which performs different computations or actions depending on whether a programmer-specified Boolean condition evaluates to true or false. Apart from the case of branch predication, this is always achieved by selectively altering the control flow based on some condition.
49)	***Control flow (flow of control)***	The order in which sentences, instructions or functions calls of a program are done.
50)	***Creative Commons (CC)***	The Creative Commons is a non-profit organization that tries to make creative work available for others to use. They have released several copyright-licenses, known as Creative Common license, free of charge to the public.
51)	***css***	css is an abbreviation and stands for Cascading Style Sheets. They are a way to change the look of THML and XTHML web pages.
52)	***Cyberbullying***	Cyberbullying uses electronic information and media (e-mail, websites, ...) to harass a person or a group.
53)	***Cyberspace***	Cyberspace is a virtual computer world. It is used to facilitate online communication. It is an interactive and virtual environment for a broad range of participants.
54)	***Data center***	A Data center is a special building or room to house many running computer servers. It provides fast network connection between servers to process data.
55)	***Data mining***	Data mining is about finding new information in a lot of data.
56)	***Data science***	Data science is the study of the extraction of knowledge from data. It uses statistics, data analyses and machine learning methods to do it.
57)	***Data structure***	A data structure is a way of organizing data efficiently.
58)	***Data type***	A data type is an attribute of data which tell the compiler or interpreter how the programmer wants to use the data. Common data types are real, integer and Boolean. The data type limits the values that a variable or a function can have. The data type defines the operations that can be done with the data.

59)	***Database***	A database is a system for storing, organising and taking care of data.
60)	***Debugging***	In computer sciences debugging is the process of finding (and correcting) errors in a computer programme. This improves the quality of the product.
61)	***Delete***	To delete means to remove a file from the system. Files that have not been removed from the disc can be overwritten.
62)	***Desktop***	The desktop is a graphical representation of file systems, in which applications and files are represented by pictures (icons), which can be open by a single or double click of the mouse button. The desktop is a graphical interface, a command line interface.
63)	***Digital data***	Digital data is the representation of information for example as a number or a letter. Digital data is discrete and discontinuous.
64)	***Document***	A document is data associated with a particular application.
65)	***Document Image Processing (DIP)***	It's a process that scans documents for storage.
66)	***Documentation***	Documentation is a written text or an illustration that accompanies computer software or is included in the source code. The documentation explains how the software operates or how to use it.
67)	***Domain Name System (DNS)***	The Domain Name System is a system used to convert a computer's host name into an IP address on the internet. It converts a website name that people know into a number that the Internet actually uses.
68)	***Double click***	Double click it's the action of pressing and releasing the left mouse button twice in quick succession. Usually double clicking on an icon has the objective to open the application.
69)	***Download***	Downloading means getting information from another computer or server. The opposite of downloading is uploading, which is sending data to another computers. A download is a file offered for downloading or that has been downloaded, or the process of receiving such a file.
70)	***Driver***	A program that controls a peripherical device. Every device connected to the computer needs a driver program. The driver ensures that communication between the computer and the device is successful.
71)	***Emulator***	The emulator is an item of a software that allows one device to imitate the functioning of another. Usually, emulators are used to allow one make of computer to run programs written for a different make of computer.
72)	***End user***	Someone who uses a program to perform a task rather than someone who writes programs (a programmer).

73)	***Error***	A fault or a mistake that could be either in the software or on part of the user. It could cause a program to crash (stop running) or to produce unexpected results.
74)	***Excel***	Excel is a spradsheet program produced by Microsoft in 1985. Versions are available for Windows and Apple, too.
75)	***Executable***	A file that can be executed by the operating system.
76)	***Expanded memory/extended memory***	It refers to additional memory in an MS-DOS-based computer.
77)	***Export file***	A file stored by the computer in a standard format so that it can be accessed by other programs, possibly running on different makes of computer.
78)	***Expression***	In a programming language, a combination of one or more constants, variables, operators, and functions that the programming language interprets to produce another value. This process, as for mathematical expressions, is called evaluation.
79)	***Fax***	Common name for facsimile transmission or telefax. It refers to the transmission of images/printed textes/drawings over a telecommunications link, usually the telephone network. When placed on a fax machine, the original image/text/drawing is scanned by a transmitting device and converted into codes signals. These signals travel via the telephone lines to the receiving fax machine.
80)	***Feedback***	General principle whereby the result produced in an ongoing reaction become factors in modifying or changing the reaction. It is the principle used in self-regulating control systems.
81)	***Filename extension***	A filename extension is a suffix at the end of a filename. It is used to show the type of a computer file and it shows what programme can open the file.
82)	***Filter (software)***	A computer program or subroutine to process a stream, producing another stream. While a single filter can be used individually, they are frequently strung together to form a pipeline.
83)	***Flag***	An indicator that can be set or unset in order to signal whether a particular condition is true.
84)	***For loop***	In computer science, a for-loop (or “for loop”) is used to run specified lines of code repeatedly. In different languages, there are different keywords to specify this statement—ways to identify a for loop—but they all do the same task. Most languages use either “for” or “do” as keywords.

85)	***Formal methods***	Formal methods are mathematical techniques for the specification, development and verification of software and hardware. The use of these mathematical technics contributes to the reliability and robustness of the software and hardware.
86)	***Formal verification***	Formal verification is the process to prove that a piece of software or hardware works according to its specification.
87)	***Functional programming***	Functional programming is a style of building the structure and elements of computer programmes.
88)	***Game theory***	Game theory is the study of how and why people make decisions. It is used in social science, logic and computer sciences.
89)	***Generation***	Stage of development in computer electronics or a class of programming language.
90)	***Gigabyte***	A gigabyte (GB) is a unit of measurement for computers. A gigabyte is 1 billion bits.
91)	***Global variable***	In computer programming, a variable with global scope, meaning that it is visible (hence accessible) throughout the program, unless shadowed. The set of all global variables is known as the global environment or global state. In compiled languages, global variables are generally static variables, whose extent (lifetime) is the entire runtime of the program, though in interpreted languages (including command-line interpreters), global variables are generally dynamically allocated when declared, since they are not known ahead of time.
92)	***Graphics card***	A graphics card is a special circuit board that controls what is shown on a computer monitor and calculates 3D images and graphics.
93)	***Graphics processing***	Graphic processing means creating images, animation and graphics and displaying them on a computer screen.
94)	***Hackers***	Hackers are people who put into practice these hacking acts.
95)	***Hacking***	Unauthorized access to a computer, either for fun or for bad purposes.
96)	***Hash function***	The Hash function is a function. When a computer program is written, very often, large amounts of data need to be stored. These are normally stored as hash tables. In order to find the data again, some value is calculated.
97)	***Hash table***	A hash table is one type of tool for storing information. In computer science, these tools for keeping track of information, or data, are called data structures. A hash table is a data structure that uses a hash function to keep track of where data is put.

98)	***HTML-editor***	An HTML editor is a programme for editing HTML. Many HTML editors handle also related technologies such as JavaScript. There are text editors and WYSIWYG editors (what you see is what you get) where the interface resembles how the page will be displayed in a web browser.
99)	***HTTP (protocol)***	HTTP (hypertext transfer protocol) is an application layer protocol used as the main system for transmitting information on the web or in a typical client-server architecture. The protocol specifications are managed by the World Wide Web Consortium (W3C).
100)	***Human-Computer Interaction (HCI)***	Human-computer Interaction is a field of computer science that looks into the ways in which a human being uses a computer and interacts with it. HCI design technologies that let humans interact with computers in new ways.
101)	***IBM***	Abbreviation for International Business Machine. IBM is a multinational company, the oldest and the largest manufacturer of computers in the world.
102)	***Icon***	A small picture on the computer screen representing an application, a program or a function the user may manipulate or use. Icons make computers easier to use by allowing the user to point to and to click on them.
103)	***Input/Output (I/O)***	In the communication between a computer and another computer or a person there is input and output. Input is a signal received by the computer and output is a signal sent away from it.
104)	***Integer***	A datum of integral data type, a data type that represents some range of mathematical integers. Integral data types may be of different sizes and may or may not be allowed to contain negative values. Integers are commonly represented in a computer as a group of binary digits (bits). The size of the grouping varies so the set of integer sizes available varies between different types of computers. Computer hardware, including virtual machines, nearly always provide a way to represent a processor register or memory address as an integer.
105)	***Intellectual Property (IP)***	Intellectual property is the ownership of an idea by the person who invented it. It gives the inventor exclusive rights to this idea. That means nobody else can copy or reuse it. Examples for intellectual property are copyright, patents, trademarks and trade secrets.
106)	***Interface***	An interface is what a user uses on an operating system to make the computer do something. Some devices provide an interface that can both send and receive data e.g. A touchscreen, other can only send date e.g. A mouse.

107)	***Internal documentation***	Internal documentation in a computer software are comments within the source code. These comments include the notes on how and why parts of the code operate. It should provide future programmers a way to understand how the code works. The opposite is external documentation where the notes and explanations are in a separate document.
108)	***International Organization of Standardization (ISO)***	The International Organization of Standardization (ISO) was founded in 1947 to standardize technical terms, specifications, units… The headquarter is in Geneva.
109)	***Internet***	The internet is a world-wide communication network of computers. It consists of many smaller networks e.g. Private, public or business networks. The different networks are linked through different electronic, wireless and optical networking technologies
110)	***Internet bot***	An internet bot is a software application that runs automated tasks over the internet. They perform simple and repetitive takes very fast. Most often internet bots are used for web crawling which means analysing and filing of information from web servers.
111)	***IT - Information Technology***	IT (Information technology) includes all technology used to create, store, exchange and use different forms of information such as data, images, presentations. It refers to hardware, operation systems, network design and support.
112)	***Java***	A general-purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible. Compiled Java code can run on all platforms that support Java without the need for recompilation.
113)	***Java/Javascript***	JavaScript is a general-purpose programming language. It is the most public programming language.
114)	***JPEG***	Abbreviation for Joint Photographic Experts Group. JPEG refers to a compression standard set up by that group and now widely accepted for the storage and transmission of colour images.
115)	***Key field***	A key file is a selected field of a record that is used to identify that record uniquely. In a file of records it is the field used as the basis for sorting the file.
116)	***Keyboard***	An input device similar to a typewriter keyboard, used to enter instructions and data. There are many variations on the layout depending on the mark, the size, the function…
117)	***Kilobyte***	Abbreviated with "K" or "KB", a kilobyte is a unit of memory equal to 1.024 bytes.
118)	***Laptop***	A laptop is a portable computer, small enough to be used on the user's lap.

119)	***Library (computing)***	A collection of non-volatile resources used by computer programs, often for software development. These may include configuration data, documentation, help data, message templates, pre-written code and subroutines, classes, values, or type specifications.
120)	***List***	A list is an abstract data type that represents a countable number of ordered values. Lists are basic examples of containers as they contain other values.
121)	***Logic error***	In computer programming a logic error is a bug in a program that uses it to work incorrected. As a result you receive an unintended behaviour or output. Often the syntax of the program is correct so the error is difficult to find.
122)	***Logic programming***	Logic programming uses mathematical logic to write computer programmes. A logic programming language consists of a set of rules and facts. The most important logic programme languages are Prolog, ASP and Datalog.
123)	***Loop***	A loop means the repetition of execution of the same instructions.
124)	***Machine code***	It is a set of instructions that a computer's central processing unit (CPU) can understand and obey directly, without any translation. Each type of CPU has its own machine code.
125)	***Machine Learning (ML)***	Machine learning gives computers the ability to learn without being explicitly programmes. It is related to artificial intelligence. Machine learning algorithms build a mathematical model based on sample data to make prediction or decisions. Machine learning is used for spam filters, optical character recognise and search engines.
126)	***Mathematical logic***	Mathematical logic is a field of mathematics that tries to formalize logic. Mathematical logic shows reasoning with symbols. Important topics are expressive power of formal systems and the deductive power of formal proof systems. Mathematical logic is important for theoretical computer science.
127)	***Matrix***	In mathematics, a matrix, is a rectangle of numbers arranged in rows and columns.
128)	***Megabyte***	Abbreviated with "Mb", a megabyte is a unit of memory equal to 1.024 kilobytes.
129)	***Memory***	Computer memory is a temporary storage area. It holds data and instructions that the CPU needs. In order for a programme to run it first needs to be loaded from the storage into the memory. Memory is an important part of each computer.
130)	***Menu***	A list of options, displayed on screen, from which the user may make a choice by pointing the arrow moved by the mouse. Menus are used in graphical user interface systems.

131)	***Merge sort***	Merge sort (or mergesort) is an divide and conquer algorithm for sorting a list of items. Merge sort is a stable sorting algorithm, while quicksort is not. It has a worst-case complexity of O(n*log(n)). Merge sort is also highly parallelizable. It can be used for solving the inversion counting problem.
132)	***Method***	In object-oriented programming (OOP), a procedure associated with a message and an object. An object consists of data and behavior. The data and behavior comprise an interface, which specifies how the object may be utilized by any of various consumers of the object.
133)	***Modem***	A modem is a piece of computer hardware. It is used for communication between distant computers. The modem can send and receive data. To send data it changes digital data into analogue data (this is called modulation). To receive data it changes the analogue data into digital data (this is called demodulation).
134)	***Multitasking***	Multitasking or multiprogramming is a system in which one processor appears to run several different programs (or different parts of the same program) at the same time.
135)	***Notebook computer***	A notebook computer is a small laptop computer. They started to be produced in the early 1990s and have such name because of the dimensions.
136)	***Null character***	It is a character with the ASCII value 0. A null character is used by the programming languages, most notably C, to mark the end of a character string.
137)	***Null string***	A string, usually written by "-", that contain nothing or a null character. A null string is used in some programming languages to denote the last of a series of values.
138)	***Object***	An object can be a variable, a data structure, a function, or a method, and as such, is a value in memory referenced by an identifier. In the class-based object-oriented programming paradigm, object refers to a particular instance of a class, where the object can be a combination of variables, functions, and data structures. In relational database management, an object can be a table or column, or an association between data and a database entity (such as relating a person's age to a specific person).
139)	***Object code***	The product of a compiler. In a general sense object code is a sequence of statements or instructions in a computer language, usually a machine code language (i.e., binary) or an intermediate language such as register transfer language (RTL). The term indicates that the code is the goal or result of the compiling process, with some early sources referring to source code as a "subject program."

140)	***Offline***	Not connected, so that data can't be transferred to another device. The opposite is online.
141)	***Online***	Connected, so that data can be transferred to another device. The opposite is offline.
142)	***Open-Source Software (OSS)***	Open source is a software for which the source code is available to everyone. Anyone can change the source code to make it work differently. Open-source software is often developed publically and collaborative.
143)	***Operating System (OS)***	An operating system is a group of computer programmes that lets people interact with a computer. It manages computer hardware and software resources.
144)	***Optical fiber***	An optical fiber is a thin fiber of glass or plastic that carries light from one end to another. They are mainly used in telecommunications where they transmit data over long distances with a high bandwidth.
145)	***Parallel device***	A device that communicates binary data by sending the bits that represent each character simultaneously along a set of separate data lines.
146)	***Parallel processing***	It refers to the emerging computer technology that allows more than one computation at the same time.
147)	***Parallel running***	A method of implementing a new computer system in which the new system and the old system run together for a short while.
148)	***Parameter***	In computer programming, a special kind of variable, used in a subroutine to refer to one of the pieces of data provided as input to the subroutine.[b] These pieces of data are the values of the arguments (often called actual arguments or actual parameters) with which the subroutine is going to be called/invoked. An ordered list of parameters is usually included in the definition of a subroutine, so that, each time the subroutine is called, its arguments for that call are evaluated, and the resulting values can be assigned to the corresponding parameters.
149)	***Parity***	Parity of a number is the state of being either even or odd. A binary representation has even parity if it contains an even number of 1s and odd parity if it contains an odd number of 1s.
150)	***Peripheral device***	Any item of equipment attached to and controlled by a computer.
151)	***PIN (Personal Identification Number)***	A personal identification number is a unique number used as a password to establish the identity of a customer for instance in banking.
152)	***Platform***	A platform is an operating system. It works together with the hardware on which it runs.

153)	***Plotter***	It is a device specialized in the printing of vector graphics drawings.
154)	***Pop-up menu***	A pop-up menu is a menu that appears in a window when an option is selected with the mouse.
155)	***Printer***	An output device for producing printed copies of text or graphics. There are different kind of printers according to the different needs of printed materials.
156)	***Priority queue***	An abstract data type which is like a regular queue or stack data structure, but where additionally each element has a "priority" associated with it. In a priority queue, an element with high priority is served before an element with low priority. In some implementations, if two elements have the same priority, they are served according to the order in which they were enqueued, while in other implementations, ordering of elements with the same priority is undefined.
157)	***Processing cycle***	The sequence of steps performed repeatedly by a computer in the execution of a program.
158)	***Program lifecycle phase***	Program lifecycle phases are the stages a computer program undergoes, from initial creation to deployment and execution. The phases are edit time, compile time, link time, distribution time, installation time, load time, and run time.
159)	***Programming language***	Programming language is a type of written language that tells a computer what to day. They are used to write computer programmes. It is a set of instructions that the computer follow to do something.
160)	***Protocol***	An agree set of standards for the transfer of data between different devices. They cover transmission speed, format of data, and the signal required to synchronize the transfer.
161)	***Public-domain software***	Any computer program that is not under copyright and can therefore be used freely without charge.
162)	***Pull-down menu***	A list of options provided as part of a graphical user interface. The presence of a pull-down menu is usually indicated by a row next to the word. Then the user points at a word with the mouse, a full menu appears and the user can then select the required option.
163)	***Queue***	In computer sciences a queue is a data structure that is used for storing data before it is processed. The operation enqueue add the item to the back of the queue. The operation dequeue removes the item at the front of the queue.
164)	***QWERTY***	Standard arrangement of keys on a UK or US typewriter or computer keyboard. Q, W, E, R, T and Y are the first six keys on the top left alphabetic line.

165)	***RAM***	Acronym of random-access memory. It is a memory device in the form of a collection of integrated circuits (chips). RAM chips can both be read from and written to by the computer, but their contents are lost when the power is switched off.
166)	***Read-only storage***	Or ROM storage is a permanent means of storing data so that it can be read any number of times but can't be modified.
167)	***Response time***	The response time is the delay between entering a command and seeing its effects.
168)	***Router***	A router is a computer that moves data between computer networks. Routers make sure the traffic between computers goes where it needs to go. Data is often forwarded from one router to another until it reaches its destination.
169)	***SAA - Systems Application Architecture***	It is an IBM model for client-server computing. SAA makes use of common user access to ensure that command and keystrokes are used consistently in different applications.
170)	***Sampling***	Sampling is the measurement of an analogue signal at regular intervals. The result of the measurement can be converted into a digital signal.
171)	***Scalable font***	It is a font that can be used at any size and any resolution, on a screen or hard-copy device, such as a laser printer or image setter. Scalable fonts are always vector fonts.
172)	***Scanner***	A device that can produce a digital image of a document for input and storage in a computer.
173)	***Search algorithm***	A search algorithm is a method for finding a target value within a list. It checks each element of the list for the target value until a match is found or until all elements have been searched.
174)	***Secondary storage***	Secondary storage is also know as external memory. In contrast to primary storage it is not directly accessible by the CPU. The secondary storage also saves data when the power is switched off.
175)	***Sequence***	An action, or event, which leads to the next ordered action in a predetermined order. The sequence can contain any number of actions, but no actions can be skipped in the sequence.
176)	***Serial device***	A device that communicates binary data by sending the bits that represent each character one by one along a single data line.
177)	***Server***	A computer used as a store of software and data for use by other computers on a network.
178)	***Service level agreement***	A service level agreement (SLA) is a commitment between a service provider and a client on the quality and availability of the service as well as the responsibilities of the provider and the client.

179)	***Software***	Computer software or simply software is a set of instructions that tells a computer what to do. Software includes applications (e.g. A game, a word processor= and the operating system. Computer hardware and software require each other.
180)	***Software agent***	A software agent is a piece of software that is capable of making simple decisions to solve a problem. Agents can work alone or together with other agents or people. Agents are also know as bots.
181)	***Software construction***	Software construction is the creation of software through a combination of coding, verification, testing and debugging. It is related to software design and software testing.
182)	***Software deployment***	Software deployment includes all activities that need to happen before a software is available for use. A deployment process may include: the release of the software, the installation and activation of a software, updates for the software.
183)	***Software design***	Software design is the process creating a software solution for a problem. A software design may be a flow chart or a description of a planned sequence of events.
184)	***Software development***	Software development is the process of creating a computer software. It included the software release life cycle of preparing a design, coding the program, and fixing the bugs. The final goal is software release of a product that serves the wishes of users.
185)	***Source language***	The language in which a program is written. It is different to machine code (the form in which the program's instructions are carried out by the computer). Source languages are classified as high or low languages, according to whether each notation in the source language stands for many or only one instruction in machine code.
186)	***Spamming***	Advertising on the internet by broadcasting to all newsgroups regardless of relevance.
187)	***Spooling***	Spooling is the process in which information to be printed is stored temporarily in a file, the printing being carried out later. It is used to prevent a relatively slow printer from holding up the system at critical times, and to enable several computers or programs to share one printer.
188)	***Spreadsheets***	A program that mimics a sheet of ruled paper, divided into columns and rows. The user enters values in the sheet, then instructs the program to perform some operation and them, such as totalling a column or finding the average of a series of numbers.
189)	***Stack***	Stack is a method of storing data in which the most recent item stored will be the first to be retrieved. The technique is commonly called "last in, first out".

190)	***STEM***	An abbreviation for Science, Technology, Engineering and Mathematics.
191)	***String***	A group of characters manipulated as a single object by the computer. In its simplest form a string may consist of a single letter or word, but it can also be a combination of words, spaces and numbers.
192)	***Swap***	To swap means to move data in and out of memory.
193)	***Syntax error***	Syntax errors are errors caused by incorrect use of the programming language.
194)	***Teleworking***	Teleworking or smart working is the possibility of work from home rather than in an office. Even if the term became really widespread from 2020 during pandemic situation of Covid-19, it was first introduced in 1980s.
195)	***Test data***	Data designed to test whether a new computer program is functioning correctly. The expected results are written down and compared with the actual results obtained using the program.
196)	***Time sharing***	A way of enabling several users to access the same computer at the same time. The computer rapidly switches between user terminals and programs, allowing each user to work as if he/she had only use the system.
197)	***Trace***	A method of checking that a computer program is functioning correctly by causing the changing value of all the variables involved to be displayed while the program is running.
198)	***Translator program***	A program that translates another program written in a high level language or assembly language into the machine-code instructions that a computer can obey.
199)	***Trojan horse***	A trojan horse is a virus program that appears to function normally but causes damage to other files or circumverts security procedures.
200)	***Uniform Resource Locator (URL) - Colloquially web address.***	A reference to a web resource that specifies its location on a computer network and a mechanism for retrieving it. A URL is a specific type of Uniform Resource Identifier (URI), although many people use the two terms interchangeably. URLs occur most commonly to reference web pages (http), but are also used for file transfer (ftp), email (mailto), database access (JDBC), and many other applications.
201)	***Upload***	Uploading means sending information from one computer to another computer or server. The opposite of uploading is downloading, which is getting information from another computer.
202)	***User***	A person who uses a computer. To identify oneself a user has an account and a username and in most cases a password.

203)	***User agent***	A user agent is a software acting on behalf of an user. An example would be a web browser: It enables the end-user to interact with Web content.
204)	***User interface (UI)***	A user interface allows a user to interact with a machine. User interface provide input. That mean the user can change how the machine works or give it information. Afterwards the machine does something, this is called output. User interface are used in many ways: computer operate system, heavy machinery operate controls, hang tools, etc.
205)	***User interface design - Also user interface engineering.***	User interface design (UI) is the design of machines and software interface like a computer, phone, printer. The focus is to improve the usability by making the interaction as simple and efficient as possible.
206)	***User-friendly***	Term used to describe the ease of use of a computer system/platform/website, particularly for people who have little understanding of computer.
207)	***Utility program***	A systems program designed to perform a specific task related to the operation of the computer when requested to do so by the computer user.
208)	***Validation***	The validation is the process of checking input data to ensure that it is complete, accurate and reasonable. Although it would be impossible to guarantee that only valid data are entered into a computer, a suitable combination of validation checks should ensure that most errors are detected. Common validation checks includes: character-type check, field-length check, control-total check, hash-total check, parity check, check digit, range check.
209)	***Variable***	Variables are meaningful names that you give to values. The contents of variables can change during the execution of a program.
210)	***Virtual memory***	A technique whereby a portion of the computer backing storage memory is used as an extension of its immediate access memory.
211)	***Virus***	A piece of software that can replicate and transfer itself from one computer to another, without the user being aware of it. Some viruses are harmless but some others can damage or destroy data.
212)	***Web crawler - (Also spider, spiderbot, or simply crawler.)***	A web crawler or spider is a computer program that automatically fetches the contents of a web page. The program then analyses the content. Search engine often use web crawlers.
213)	***Wi-Fi***	Wi-Fi is a way of connection to a computer network using radio waves. It is often used for internet connections.

214)	***XHTML - Abbreviation of eXtensible HyperText Markup Language.***	XHTML is a mark-up used to design websites and webpages. It is based on both XML and THML. It is more strict than ordinary HTML so it will allow for web browser to display the same page correct between them.
215)	***Zero wait state***	Term applied to central processing units that run without waiting for slower chips.

2. ROBOTICS AND ARTIFICIAL INTELLIGENCE

a. Robotics

1)	***Accelerator board***	An accelerator board is an expansion board that provides an interface designed to increase processing power. It is a device that accelerates transmission or processing beyond the CPU's capabilities.
2)	***Articulate Robots***	A type of robot that has rotary joints which usually support each other in executing specific tasks. Each joint can be programmed to rotate or execute a specific type of motion.
3)	***Artificial life***	The simulation of the behaviour and other characteristics of life typically by computers, robots or biochemical processes
4)	***Augmenting Robots***	A type of robot that can be worn by a person to enhance or replace their physical capabilities. It can be used to provide "legs" for people who have limited mobility or a boost to people who need to lift heavy equipment as part of their job (e.g. lifting heavy bags of concrete on a construction site).
5)	***bar code***	pattern of bars and spaces that can be read by a computer. Bar codes are widely used in retailing, industrial distribution, public libraries. The code is read by a scanning device: tha computer determines the code from the widths of the bars and spaces.
6)	***Baxter robot***	A modern industrial robot designed specifically to interact safely with humans.
7)	***Brain-computer interface***	A direct connection between a brain and a computer, allowing the brain to command the computer or the computer to monitor the brain.
8)	***Colour Sensor***	A sensor which is able to detect changes or even the kind of colour in front of it.
9)	***Coordinates***	A set of numbers used to represent a position –often there are two or three dimensional positions.
10)	***Cybernetics***	The science of control and communication (in the animal and the machine) – the science of feedback systems – incorporating control, learning and interaction.
11)	***Cyborg***	A cybernetic organism comprising a mixture of organic and mechanical electronic components.

12)	***Distance Sensor***	A sensor which is able to detect changes in distance between objects (usually itself and another object).
13)	***Drones***	A drone object, is an unmanned aircraft that can be controlled remotely. Although that is not always the case, nowadays the term drone is used to describe small helicopters controlled remotely by humans that often have cameras and other peripherals attached. They are often used to capture aerial photos, surveillance or explore hard to reach places. Some drones have been used to racing competitions and attempts have been made to use drones for parcel deliveries.
14)	***Educational Robots***	Robots specifically designed to be used in education, usually to teach the fundamentals of programming or other sciences. While this might not always be the case, most modern educational robots are designed to be appealing to humans and can be programmed using simple building blocks of code for ease of learning/use.
15)	***Encoder***	In robotics this is a device used to generate pulses as a wheel turns, which can be used to measure velocity.
16)	***Fuzzy Logic***	A form of logic which deals with approximate values, as opposed to logic signals which are true or false only.
17)	***HCI (Human Computer Interaction)***	Abbreviation of human computer interaction. It is the exchange of information between a person and a computer, through the medium of a user interface, studied as a branch of ergonomics.
18)	***Hertz***	Abbreviated in "Hz", it is a unit of frequency (the number of repetitions of a regular occurrence in one second). The name comes from the German physicist Heinrich Hertz.
19)	***Humanoid Robots***	Sometimes referred to as androids, humanoid robots have the same body and build as the human body (torso, legs, feet, arms, head, etc.). While their design might not be ideal to be used in the manufacturing industry, they can be used for research and other scientific experiments.
20)	***Industrial Robot***	A type of robot that is used in the manufacturing industry. It can be programmed to automatically and accurately perform certain types of movement to execute a task
21)	***Joint***	A part of a robot manipulator which allows some form of rotation (humans also have joints at our wrist, elbow, shoulder, for instance).
22)	***Joystick***	The joystick is an input device that signals to a computer the direction and extent of displacement of a hand-held lever. The first models were similar to the joystick used to control the flight of an aircraft.

23)	***Laser printer***	A laser printer is a computer printer in which the image to be printed is formed by the action of a laser on a light-sensitive drum, then transferred to paper by means of an electronic charge.
24)	***Law of Robotics***	The laws defined by Isaac Asimov in his stories of robots – to define their behavior.
25)	***Light pen***	Electronic device (also called optical pen) that makes it possible to interact with a computer by operating on its monitor screen.
26)	***Light Sensor***	A sensor which is able to detect changes in light of a specific light spectrum. However, the most common type is the one that can "see" the same light as the human eye.
27)	***liquid-crystal display (LCD)***	This kind of display is based on the optical properties of particular substances called liquid crystals. This liquid is trapped between two glass surfaces provided with numerous electrical contacts with which an electric field can be applied to the liquid contained. Each electrical contact controls a small portion of the panel identifiable as a pixel. It was first used in 1965.
28)	***Mechatronics***	In engineering a combination of mechanical, electrical, control, computer and communication engineering.
29)	***Motion Sensor***	A specialised sensor which is able to detect movement at an area without needing any light "to see" (e.g. alarms in stores and banks).
30)	***Motor***	A mechanical component usually powered by electricity. It can rotate at very high speed to produce torque and generate force (e.g. a motor inside a robot can be used to generate torque and make the robot move its hands).
31)	***Pilot running***	A method of implementing a new computer system: the old system is gradually transferred to the new system over a period of time.
32)	***Pressure Sensor***	A sensor that can be attached to a robot to give it the ability to measure the amount of pressure of a gas or liquid inside a container.
33)	***Processor***	It is another name for the central processing unit (CPU) or microprocessor of a computer.
34)	***Prompt***	The prompt is a symbol displayed on a screen indicating that the computer is ready for input. The symbol used will vary from system to system and application to application.
35)	***Quadcopters***	A type of helicopter that uses four (quad) individual rotors to fly instead of just one. It is a design most commonly found in drones.

36)	***Raspberry Pi***	The Raspberry Pi is a series of single-board computers. They are low-cost, high-performance and the size of a credit card. The Raspberry Pi was developed in the UK by the Raspberry Pi Foundation. The Raspberry Pi Foundation's goal is to "advance the education of adults and children, particularly in the field of computers, computer science and related subjects. Many people have used Raspberry Pis to make things like cameras, video game consoles, robots, web servers and media centers.
37)	***Robot***	A robot is a machine that can move and do certain tasks. Robots are controlled by a computer program or electronic circuitry. They may be directly controlled by humans. They may be designed to look like humans, in which case their behaviour may suggest intelligence or thought but they do not have feelings. Most robots do a specific job, and they do not always look like humans. They can come in many forms. In fiction, however, robots usually look like people, and seem to have a life of their own.
38)	***Robotic Arm***	A robotic component (robot) which resembles and can replicate the actions of a human hand (e.g. grabbing, rotating, extending). It is usually used in industrial applications such as welding, spraying and assembling parts of another component.
39)	***Sensor***	A sensor is a device that measures a physical quantity and converts it into a 'signal' which can be read by an observer or by an instrument. For example, a mercury thermometer converts the measured temperature into the expansion and contraction of a liquid which can be read on a calibrated glass tube. Video cameras and digital cameras have an image sensor. There are many different types of sensors. Some are used in everyday objects, and some are separate.
40)	***Smart card***	A smart card is a plastic card with an embedded microprocessor and memory. It can store, for example, personal data, identification and bank account details, to enable it to be used as a credit or debit card. Other possible uses are hotel door "key" or passports.
41)	***Sound Sensor***	A sensor which is able to detect changes in sound, usually of specific sound wave frequency.
42)	***Stepper motor***	The stepper motor is an electric motor that can be precisely controlled by signals from computer. The motor turns through a precise angle each time it receives a signal pulse from the computer.
43)	***Terminal***	A device consisting of a keyboard and display screen to enable the operator to communicate with the computer. The terminal can be physically attached to the computer or linked wireless.
44)	***Touch Sensor***	A specialised sensor which is able to detect touch signals. Some touch sensors respond to pressure applied on their surface, whereas others only respond to human touch.

45)	***Transducer***	A device which converts energy from one form to another – eg motor speed to an electrical signal.
46)	***Turtle***	A turtle is a small computer-controlled wheeled robot. The turtle's movements are determined by programs written by a computer user, typically using the high-level programming language.
47)	***Yaw***	The rotation of a flying object about its vertical axis

b. Artificial intelligence

1)	***Artificial Intelligence (AI)***	The intelligence of machines such as robots or even simple software to perform tasks that humans do.
2)	***Business Intelligence***	The process of analysing data to identify useful information that can be used in the business sector to help make decisions based on mathematics.
3)	***Categorical Data***	Data that cannot be represented with numbers (e.g. hair colour, name, gender etc.)
4)	***Chat Bot***	An AI digital robot that can simulate human conversation in a way that seems almost natural. It is commonly used in support lines.
5)	***Classification***	The process of categorising data based on their characteristics.
6)	***Computer Vision***	An area of computer science and AI where computers are trained to mimic the human visual system in order to perform tasks (e.g. self-driving cars detecting humans, animals).
7)	***Console***	A console is a combination of keyboard and screen (also called terminal).
8)	***Emoticon***	Acronym of emoticon and icon. An emoticon is a symbol composed of punctuation marks designed to express some form of emotion in the form of a human face. Usually emoticons are used in text messages in order to convert nonverbal information used when speaking.
9)	***Evaluation***	The definition of methodology to determine how good or bad is an AI model.
10)	***Face Recognition***	The process of identifying a person based on their facial characteristics by using image recognition.
11)	***Fitness Function***	A function used in Genetic Algorithms to evaluate how good or optimal a solution is to a problem. It is used as a means of guiding the algorithm towards a good solution.
12)	***Flow chart***	The flow chart is a diagram, often used to show the possible paths that data can take through a system or program.

13)	***Genetic Algorithms***	Also known as evolutionary or biological algorithms. They are a form of AI that is inspired by biological evolution of organisms. They are designed in a way that allows them to find a sub-optimal solution to a problem (not the best solution, but one that is good enough) in a relatively short amount of time compared to some other methods. They work by creating a random population of solutions and comparing their effectiveness against each other. Good solutions are kept, bad ones are discarded and new random ones are introduced to the system to replace the discarded ones. This process is repeated for a number of times until a solution that is good enough is found.
14)	***Image Recognition***	The process of analysing visuals such as images and videos and identify their characteristics.
15)	***Information Gain***	A method used to determine how important a piece of information is in a dataset.
16)	***Knowledge-Based System (KBS)***	Abbreviated with "KBS", it is a computer program that uses an encoding of human knowledge to help solve problems. An example are chess-playing programs.
17)	***Labels***	The output of an AI model or the tags that a labelled dataset has for each of its samples.
18)	***Learning Rule***	A process based on mathematics which allows artificial neural networks to improve themselves and produce better outputs.
19)	***Linear Model***	A model that classifies its samples using a linear decision boundary to classify its samples.
20)	***Loss Function***	A way of evaluating how far off were the predictions made by an AI model in relation to a problem. It is used with optimization functions in order to reduce the error of predictions.
21)	***Machine Learning***	A sub-set of AI based on mathematics which is used in computer science for systems and algorithms to improve automatically based on data.
22)	***Neural Networks***	A combination of neurons linked together to form a network.
23)	***Non-Linear Model***	A model that classifies its samples using a non linear decision boundary.
24)	***Numerical Data***	Numerical data is data that can be represented with numbers.
25)	***Prediction***	The output of an AI model based on mathematics.
26)	***Probabilistic Models***	Machine learning models that utilise the power of probability to make predictions and classifications of data.
27)	***Regression***	A statistical method used to estimate the relation between a dependent variable and one or more independent variables.

28)	***Supervised Learning***	A type of AI model used on a dataset with labels which contains training examples as a point of reference.
29)	***Training Stage***	Also known as the traning phase, it is the process where an AI model starts to process data to learn from them and improve its predictions by changing its synaptic weights.
30)	***Turing Machine***	A mathematical model developed by Alan Turing which uses tapes and a set of rules that can determine whether a computer algorithm's logic can be constructed.
31)	***Turing Test***	A test proposed by Alan Turing for determining whether or not a computer is capable of thinking/behaving in a way that is indistinguishable from a human being.
32)	***Unsupervised Learning***	A type of AI model used on a dataset without labels.
33)	***Visualisation***	A method of giving form to the data usually in the form of a graph that can help us better understand the outputs of a model.

3. CLOUD NETWORKING

1)	***Advertising-based pricing model***	A pricing model whereby services are offered to customers at low or no cost, with the service provider being compensated by advertisers whose ads are delivered to the consumer along with the service.
2)	***Amazon Elastic Compute Cloud (EC2)***	Part of Amazon Web Services (AWS), EC2 provides scalable computing capacity in the cloud, which developers can use to deploy scalable applications.
3)	***Amazon Simple Storage Service (S3)***	Part of AWS, S3 allows for the storage and retrieval of data. It can also be used to host static websites.
4)	***Apache Hadoop***	An open-source software framework for distributed storage and processing of large sets of data.
5)	***AWS***	The organizational unit of Amazon that provides a variety of cloud services. AWS operates from 11 physical locations across North and South America, Europe, Asia, and Australia.
6)	***Content delivery network (CDN)***	A distributed system consisting of servers in discrete physical locations, configured in a way that clients can access the server closest to them on the network, thereby improving speeds.

7)	***Cloud***	A cloud refers to information being stored not on one's own computer but on a distant mass storage device accessible via the internet. Cloud computing is when computing services are provided by a company outside of where they are being used. The user can simply use storage, computing power or development environments, without having to worry how they work behind the scenes.
8)	***Cloud computing***	Cloud computing is when computing services are provided by a company outside of where they are being used. The user can simply use storage, computing power or development environments, without having to worry how they work behind the scenes.
9)	***Cloud portability***	The ability to move applications and data from one cloud provider to another. See also Vendor lock-in.
10)	***Cloud provider***	A company that provides cloud-based platform, infrastructure, application, or storage services to other organizations and/or individuals, usually for a fee.
11)	***Cloudsourcing***	Replacing traditional IT operations with lower-cost, outsourced cloud services.
12)	***Cloud storage***	A service that allows customers to save data by transferring it over the internet or another network to an offsite storage system maintained by a third party.
13)	***Cloudware***	Software that enables creating, deploying, running, or managing applications in the cloud.
14)	***Cluster***	A cluster is made of many individual computers that work together to solve a problem at hand. Clusters can have different forms: They can be whole computers working together, or only CPUs. These CPUs can communicate over a fast network, but they share the same hard disks, for example. Depending on the problem, solving it with a cluster of cheaper components can be less expensive that investing in better hardware that costs more.
15)	***Consumer cloud***	Cloud computing offerings targeted toward individuals for personal use, such as Dropbox or iCloud.
16)	***Content Management Interoperability Services (CMIS)***	An open standard for controlling content and document management systems and repositories using web protocols.
17)	***Customer self-service***	A feature that allows customers to provision, manage, and terminate services themselves, without involving the service provider, via a web interface or programmatic calls to service APIs.

18)	***Disruptive technology***	A business term that describes innovations that improve products or services in unexpected ways. These innovations change the methods used to accomplish a task, and re-shape the market for that task. Cloud computing is considered a disruptive technology because of its elasticity, flexible pricing models, and maintenance cost compared to traditional IT service provisioning.
19)	***Docker***	Open-source software that automates the deployment of applications inside virtualized software containers.
20)	***Elastic computing***	The ability to dynamically provision and deprovision computing and storage resources to stretch to the demands of peak usage, without the need to worry about capacity planning and engineering around uneven usage patterns.
21)	***Google App Engine***	A service that enables developers to create and run web applications on Google's infrastructure and share their applications via a pay-as-you-go, consumption-based plan with no setup costs or recurring fees.
22)	***Google Apps***	Google's Software as a Service (SaaS) product includes an office productivity suite, email, calendar, and file storage and sharing. Google Apps for Business includes an enterprise administration interface and archiving tools, and support for legal holds document discovery compliance. Google Apps for Education includes additional collaboration and reporting tools for classroom environments.
23)	***Hardware as a Service (HaaS)***	Also see IaaS.
24)	***Hosted application***	An internet-based or web-based application software program that runs on a remote server and can be accessed via an internet-connected PC or thin client. See also SaaS.
25)	***Hybrid cloud***	The combination of a public cloud provider (such as AWS) with a private cloud platform. The public and private cloud infrastructures operate independently of each other, and integrate using software and processes that allow for the portability of data and applications.
26)	***Infrastructure as a Service (IaaS)***	Cloud infrastructure services in which a virtualized environment is delivered as a service by the cloud provider. This infrastructure can include servers, network equipment, and software, including a complete desktop environment such as Windows or Linux.
27)	***Internal cloud***	A private cloud instance provided and supported by an IT department for internal use.
28)	***Microsoft Azure***	Microsoft's cloud platform that provides a myriad of Platform as a Service (PaaS) and IaaS offerings, including Microsoft-specific and third-party standards, for developers to deploy cloud applications and services.

29)	***Microsoft Office 365***	Microsoft Office (or Microsoft Office System) is a collection of computer programs made by Microsoft. It is a collection of office-related applications. Each application serves a unique purpose and offers a specific service to its users. The programs are created for all users. There are different versions of the software for home users and for business users. Some versions may offer more programs, and some versions cost less than others, but none are for free.
30)	***Middleware***	Software that sits between applications and operating systems, consisting of a set of services that enable interoperability in support of distributed architectures by passing data between applications. So, for example, the data in one database can be accessed through another database.
31)	***Multitenancy***	Multitenancy is the characteristic of an hardware to enables resources (and costs) to be shared among many users.
32)	***On-demand service***	A model by which a customer can purchase cloud services as needed; for instance, if customers need to utilize additional servers for the duration of a project, they can do so and then drop back to the previous level after the project is completed.
33)	***OpenStack***	A free and open-source cloud computing software platform used to control pools of processing, storage, and networking resources in a datacenter.
34)	***PaaS***	Cloud platform services, whereby the computing platform (operating system and associated services) is delivered as a service over the internet by the provider.
35)	***Pay as you go***	A cost model for cloud services that encompasses both subscription-based and consumption-based models, in contrast to the traditional IT cost model that requires up-front capital expenditures for hardware and software.
36)	***Private cloud***	Services offered over the internet or over a private internal network to select users. These services are not available to the general public.
37)	***Public cloud***	Services offered over the public internet. These services are available to anyone who wants to purchase the service.
38)	***Software as a Service (SaaS)***	Cloud application services, whereby applications are delivered over the internet by the provider so the applications don't have to be purchased, installed, and run on the customer's computers. SaaS providers were previously referred to as application service providers.
39)	***Salesforce***	An online SaaS company that is best known for delivering customer relationship management (CRM) software to companies over the internet.
40)	***Service migration***	The act of moving from one cloud service or vendor to another.
41)	***Service provider***	The company or organization that provides a public or private cloud service.

42)	***Service level agreement (SLA)***	A contractual agreement by which a service provider defines the level of service, responsibilities, priorities, and guarantees regarding availability, performance, and other aspects of the service.
43)	***Social Networking Service (SNS)***	Used in enterprises for collaboration, file sharing, and knowledge transfer; among the most common platforms are Microsoft's Yammer, and Salesforce's Chatter. Often called enterprise social software to differentiate between "traditional" SNS platforms such as Facebook or LinkedIn.
44)	***Software plus services***	The combination of cloud-hosted services with locally running software. This method allows for using the local system for processing power while relying on cloud operations for software license verification, portable identities, syncing between devices, and file storage.
45)	***Subscription-based pricing model***	A pricing model that lets customers pay a fee to use the service for a particular time period, often used for SaaS services. See also Consumption-based pricing model.
46)	***Utility computing***	A provisioning model in which services are available as needed, and users are charged for specific usage, in a manner similar to municipal utilities such as electricity or water.
47)	***Vendor lock-in***	Dependency upon a particular cloud vendor and low ability to migrate between vendors due to an absence of support for standardized protocols, APIs, data structures (schema), and/or service models.
48)	***Vertical cloud***	A cloud computing environment optimized for use and built around the compliance needs of specialized industries, such as healthcare, financial services, and government operations.
49)	***Virtual private data center***	Resources grouped according to specific business objectives.
50)	***Virtual private cloud (VPC)***	A private cloud that exists within a shared or public cloud, e.g., the Amazon VPC that allows Amazon EC2 to connect to legacy infrastructure on an IPsec VPN.

4. AUDIOVIDEO PRODUCTION

1)	***3D Movie***	3D (or 3-D) means three-dimensional, or having three dimensions. For example, a box is three-dimensional; it is solid, and not thin like a piece of paper. It has volume, a top and bottom, left and right (sides), as well as a front and back. You can turn the box around to view it from another side (called a face, surface or simply side). 3D movies are films that give the illusion of three-dimensional solidity, usually with the help of special viewing devices (glasses worn by viewers).

2)	***Actor***	An actor is a person who acts, or has a role (a part) in a movie, television show, play, or radio show. Actors may be professional or not.
3)	***Adobe Premiere Pro***	Adobe Premiere Pro is a timeline-based video editing software application developed by Adobe Systems and published as part of the Adobe Creative Cloud licensing program.
4)	***Ambiance***	The feeling or mood of a particular scene or setting.
5)	***Ambient light***	The natural light (usually soft) or surrounding light around a subject in a scene; also see background lighting.
6)	***Animation***	Animation is a way of making a movie from many still images. The images are put together one after another, and then played at a fast speed to give the illusion of movement.
7)	***Audio Visual & Integrated Experiences (AVIXA)***	An industry term that describes the next generation of AV integration companies that are utilizing new technologies solutions such as virtual reality and digital signage; highlights the growth potential of these emerging and evolving technologies and their connection with creating immersive and interactive experiences.
8)	***Augment Reality***	An enhanced filter on reality that utilizes innovative technologies to add digital information or graphics to a user's view of the real-world through the lens; this creates a 'composite view'; often used to superimpose images into potential final locations in a way that allows for testing for things, such as fit or style.
9)	***AVI***	A video file type used in the recording process and is not usually distributed. Stands for Audio Video Interleave format, created by Microsoft Corporation.
10)	***Background***	Refers to anything occurring in a rear plane of action (the background as opposed to the main action or attention in the foreground); abbreviated as b.g.
11)	***Bridging shot***	A transitional type of shot used to cover or 'bridge' a jump in time or place or other discontinuity; see also audio bridge and match-cut.
12)	***Building a scene***	Using dramatic devices such as increased tempo, volume, and emphasis to bring a scene to a climax.
13)	***Camera Angle***	The point of view (POV) or perspective (including relative height or direction) chosen from which to photograph a subject. Various camera angles, compositions, or positions include: front, behind, side, top, high (looking down), low (looking up), straight-on or eye-level (standard or neutral angle), tilted (canted or oblique), or subjective, etc.

14)	***Camera Movement***	The use of the camera to obtain various camera angles and perspectives. (See motion picture camera shots below, including the pan, tilt, track, and zoom; also boom/crane shots, Steadicam, or hand-held).
15)	***CD***	Abbreviation of Compact Disc. It consists of a plastic-coated metal disc on which data (like videos, audios, images, files…) can be written or read. Nowadays CDs are less and less used.
16)	***CGI***	Computer-Generated Imagery (CGI) is using computer graphics, especially in movies. These images are used for special effects, simulation, and commercials, amongst others. Sometimes the technology is used to produce a static background, which is then merged into the image; at other times it is used to produce animations in 2D or 3D.
17)	***CMYK***	Abbreviation of cyan-magenta-yellow-black. It refers to the four-colour separation used in most color printing processes. Usually on computer screens it's used the RGB method and so conversion is necessary on output for printing either on colour printers or as separations.
18)	***Colour corrections***	Colour correction by using color gels, or filters, is a process used in stage lighting, photography, television, cinematography and other disciplines, the intention of which is to alter the overall color of the light; typically the light color is measured on a scale known as color temperature, as well as along a green–magenta axis orthogonal to the color temperature axis.
19)	***Copy protection***	It refers to techniques used to prevent illegal copying of computer programs.
20)	***Digital compositing***	Digital compositing is the process of digitally assembling multiple images to make a final image, typically for print, motion pictures or screen display. It is the evolution into the digital realm of optical film compositing.
21)	***Dithering***	Dithering is commonly used in processing video and audio signals. In both fields it consists of information quantity reduction in order to obtain better final products.
22)	***Document camera***	A device that displays either 3D objects or pre-written text to the local screen or to video conference audiences. One of these is in each of the four videoconference-equipped lecture rooms.
23)	***Episode***	An episode is a singular part of a story, radio or television program, they often follow in an order. They are often 20- 40 minutes long, and follow the same storyline.
24)	***Field recording***	A video and audio recording method involving the transport of video and audio equipment to locations outside of the studio. Discovery Commons' field recording units can provide multi-camera, live webcast and computer display resources.

25)	***File sizes***	The measure of the size of a computer file, usually measured in bytes (B), megabytes (MB), kilobytes (KB), and gigabytes (GB). Video, audio, photography and graphics can take up a large amount of space on a hard drive. A 1- hour MP4 video file can often be as large as 300 MB. Some video-file types, such as AVI, are better suited for recording but are too large for posting on the web. Other file types, such as MP4 and Adobe Flash, are more compressed and, therefore, better suited for web distribution and streaming. Camtasia Studio, Adobe Premiere and similar editing programs convert large file sizes to smaller sizes for sharing or posting to the web.
26)	***Film***	Films (or movies) are a type of visual communication which uses moving pictures and sound to tell stories or teach people something. Most people watch films as entertainment or as a way to have fun. For some people, fun movies can mean movies that make them laugh, while for others it can mean movies that make them cry, or feel afraid.
27)	***Film speed***	Film speed is the measure of a photographic film's sensitivity to light, determined by sensitometry and measured on various numerical scales, the most recent being the ISO system.
28)	***Final Cut***	The last edited version of a film as it will be released; see also rough cut.
29)	***Flipped classroom***	Teaching method that requires students to watch a pre-recorded lecture before attending an interactive session with a teacher. This method contrasts to the traditional method in which students attend a lecture at school and then review the work at home.
30)	***Footage***	Any length, portion or sequence of film (either shot or to be shot) measured in feet; also refers to a particular sequence of events depicted in a motion picture.
31)	***Front projection***	A projector's beam projects to the screen from the audience side or front of the display. The video conferenced-equipped classrooms in the Terrance Donnelly Health Sciences Centre in Mississauga use front projection.
32)	***F-stop***	The scale measurement of the size of the opening of the iris (the opening that lets light in) on a lens; common f-stops are 1.4, 2, 2.8, 4, 5.6, 8, 11, 16, and 22; the smaller the number, the larger the opening, and the more light that is allowed.
33)	***Green Screen***	Green curtain or green studio wall that allows for the removal of the colour green from the video spectrum, in order that the green background can be replaced with something else, such as a photo or video of another location.

34)	***Handheld shot***	A shot taken with a handheld camera or deliberately made to appear unstable, shaky or wobbly; often used to suggest either documentary footage, 'realism,' news reporting or amateur cinematography; contrast with Steadicam.
35)	***HD, High Definition***	High-definition video (HDTV Video or HD video) is video of higher resolution and quality than standard-definition. While there is no standardized meaning for high-definition, generally any video image with considerably more than 480 vertical scan lines (North America) or 576 vertical lines (Europe) is considered high-definition. 480 scan lines is generally the minimum even though the majority of systems greatly pass that.
36)	***HTML5***	Hyper Text Markup Language (HTML) is a markup language for creating a webpage. HTML is a kind of programming language that can make a new webpage. Webpages are usually viewed in a web browser. They can include writing, links, pictures, and even sound and video. HTML is used to mark and describe each of these kinds of content so the web browser can display them correctly. HTML also adds meta information to a webpage. Meta information is usually not shown by web browsers and is data about the web page, e.g., the name of the person who created the page. Cascading Style Sheets (CSS) is used to style HTML elements while JavaScript is used for website behavior and also changing the HTML and CSS.
37)	***IMAX***	IMAX is a kind of movie projection system, which shows movies on a very large screen. It was first introduced in Japan in 1970.
38)	***Key Light***	This is the first and usually most important light that a photographer, cinematographer, or other scene composer will use in a lighting setup. The purpose of the key light is to highlight the form and dimension of the subject.
39)	***Lens***	A lens is a clear (transparent) object (like glass, plastic or even a drop of water) that changes the way things look by bending the light that goes through it. They may make things appear larger, smaller, or upside-down. Some places lenses are used include spectacles (eyeglasses), contact lenses, cameras, projectors, microscopes, telescopes, magnifying glasses, etc. Each eye also has a lens.
40)	***Lighting***	Lighting or illumination is the use of light to achieve a certain effect. Lighting includes the use of both artificial light sources like lamps and light fixtures, as well as natural illumination by capturing daylight. Lighting is a major factor in photography, movie making and television studios.

41)	***Lighting control***	The lecturer can control the room lighting both in the lecture theatre and at the remote location in a videconference using the Lighting controls on the lectern panel. The three blue buttons will change lighting in the local and remote lecture theatres while the four grey buttons change lighting only in the local room.
42)	***Media***	"Media" is plural word of "medium". Media collects all the means of communication, as radio and television, newspapers, magazines, and the internet, that reach or influence people.
43)	***Microchip***	"Microchip" is the popular name for the silicon chip or integrated circuit.
44)	***Microfiche***	It is the sheet of film on which printed text is photographically reduced.
45)	***MP4***	Video file format that compresses and reduces the file size from the original version while delivering a good quality reproduction. Most of Discovery Commons' edited video productions are output as MP4 files.
46)	***Multimedia***	Computer system that combines audio and video components to create an interactive application that uses text, sound, and graphics.
47)	***Pixel***	Term derived from picture element, it is a single dot on a computer screen. All screen images are made up of a collection of pixels, with each pixel being either off (dark) or on (colored) . The number of pixels available determines the screen's resolution.
48)	***Plasma display***	It is a type of flat display, which uses an ionized gas between two panels containing grids of wires. When current flows through the wires a pixel is charged causing it to light up.
49)	***Post***	A link to an item, such as a video, that is placed on a website. The item resides on a server somewhere, and when the user clicks the posted link, the video plays from that server.
50)	***Post Production***	Post-production is part of filmmaking, video production and photography processes. It is a major part in the making of movies, television programs, radio programs, advertising, audio recordings, photography, and digital art. It is a term for all stages of production occurring after the actual end of filming. Along with pre-production and production, it is one of the three phases of creating a movie or program.
51)	***Privacy button***	A button on the touch panel in the lecture rooms that allows the lecturer's microphones to be muted. When the Privacy button on the touch panel is flashing, both the lectern microphone and the wireless microphone connected to the lectern are muted. When the Privacy button is not flashing, both microphones are live.

52)	***Projector***	A projector that sends laptop, lectern PC or other electronic display information to a screen.
53)	***Rear Projection***	The projector's beam projects onto the screen from behind. The video conferenced-equipped classrooms in the Medical Sciences Building at the St. George campus use rear projection.
54)	***Record***	A collection of related data items or fields. A record usually forms part of a file.
55)	***Remote (Site, Audience or Participant)***	Refers to the site, audience or participant in the videoconference location that is not where the presenter is.
56)	***Remote control***	A remote control is a device used to issue commands (controlling it) from a distance to televisions, DVD players, doorbells and so on. A remote controller does not have a wire and can be held by hand. It has buttons for volume, changing television channels and more. Infrared or radio signals are used to communicate with the devices. Batteries make remote controls and controllers work. Mostly AAA, AA or coin battery size batteries are used.
57)	***Resolution***	The number of dots per unit length in which an image can be reproduced on a screen or printer.
58)	***Reverse motion***	Refers to a trick camera effect, created by running film backwards in the camera or during optical printing; aka reverse action.
59)	***RGB (red-green-blue)***	Abbreviation of red, green, blue. It refers to the method of connecting a colour screen to a computer, involving the three separate signals: red, green and blue. All the colours displayed by the screen can be made up from these three component colours.
60)	***Script***	Refers to the written text of a film - a blueprint for producing a film detailing the story, setting, dialogue, movements and gestures of actors, and the shape and sequence of all events in the film.
61)	***Setting***	The time (time period) and place in which the film's story occurs, including all of the other additional factors, including climate (season), landscape, people, social structures and economic factors, customs, moral attitudes, and codes of behaviour.

62)	***Share file***	File-sharing application for transferring large files available to Faculty of Medicine staff. This resource is excellent for those who want to share large video and audio files with faculty, staff, students both within and outside of the University of Toronto. Contact discovery.commons@utoronto.ca for account information. Sharefile is different from UTMedfiiles.ca, which is the tool that all presenters should use to send their presentations and any related materials to control room staff. Sharefile can be used to send files not associated with lecture -videoconferencing.
63)	***Shoot***	The process of filming or photographing any aspect of a motion picture with a camera; the plan for a shoot is termed a shooting schedule.
64)	***Single Camera Recording***	The recording of a lecture or meeting with one video camera. If scripted and planned well, single camera recordings can be edited to look like a multiple camera recording.
65)	***Slow motion***	Slow motion or slowmo is an effect in film-making whereby time appears to be slowed down.
66)	***SMART Monitor***	The interactive monitor at the lectern of the videoconference-equipped lecture rooms that allows the presenter to use a stylus to annotate and advance slides. Annotations are displayed on the lecture room screens and are recorded along with the rest of the presentation (if recording has been initiated).
67)	***Spoiler***	Information about the plot or ending of a film that may damage or impair the enjoyment of the film if known ahead of time; usually, critics or reviewers warn readers with a 'spoiler alert', or avoid revealing spoilers altogether.
68)	***Steadicam***	A hand-held camera technique using a stabilizing Steadicam (introduced in the late 70s), developed by inventor Garrett Brown, with a special, mechanical harness that allows the camera operator to take relatively smooth and steady shots, though hand-held, while moving along with the action.
69)	***Storyboard***	A storyboard is a way of planning animated films, movies, or television shows. A storyboard shows examples of what the artist wants to make before they are animated. It also lets artists organize their stories before they start to make the animation. Storyboarding, in the form it is known today, was developed at Walt Disney Productions. It was first used in the 1928 animated short film, Plane Crazy. The 1939 movie Gone with the Wind was the first to be completely storyboarded.
70)	***Streaming***	Refers to the delivery and receipt of online video provided by a host service, allowing the user to view the video without downloading it.

71)	***Streaming media***	Streaming media is multimedia where the user receives the media constantly using a platform over the Internet. Some examples are Netflix and Amazon Prime Video for movies and television series; and Spotify and Apple Music for music and other audio.
72)	***Student Cameras***	There are three student cameras in each of the videoconference-equipped lecture rooms. One of the cameras is set to a wide shot of all of the students, and two cameras will automatically frame students when they ask questions. When a student microphone button is pressed, the camera will frame the area where the student question came from. A second camera will frame the second person to press the microphone button and the cameras will alternate each time a student microphone button is pressed thereafter. When the student's microphone is live, the framed video of the student is available for the lecturer to see on the confidence monitor (this is the only way the lecturer will be able to see the student if the live mic is at the remote site). The students at the local site will also see the remote student on the large screen. When the student microphone is turned off, the screen will show either the wide shot of the students in the room or the next student camera, if there is another question or comment in the queue.
73)	***Studio***	Discovery Commons has a small video recording studio location available to the Faculty of Medicine to record educational projects and to broadcast live webcasts. Audio-visual technicians, high-definition cameras, professional lighting, green screen, microphones, and teleprompter are some of the available resources.
74)	***Teleprompter***	A device used primarily in the studio that allows a presenter to look into a camera and see text or their presentation at the same time.
75)	***Time-laps***	Time-lapse photography is a cinematography technique whereby each film frame is captured at a rate much slower than it will be played back. When replayed at normal speed, time appears to be moving faster and thus lapsing.
76)	***Tone***	The mood or atmosphere of a film scene, often revealed by the director in the way a film is directed, e.g., serious, humorous, satiric, amusing, etc.

77)	***Touch Panel***	The interface that is in the lecterns of the videoconference-equipped lecture rooms (and in many of the lecture rooms at U of T). In the videoconference-equipped lecture rooms, this panel provides access to lighting and sound control in the room, a map of the student microphones in the room, and the privacy button for the lecturer microphones, among other functions. Lecturers can become familiar with the touch panel to have more control over their presentations, or they can let control room staff provide support (the touch panel for each room is replicated in the control rooms).
78)	***Vector graphics***	Vector graphics are computer graphics that are stored in the computer memory by using geometric formulas. Vector graphics can be transformed without loss of picture resolution.
79)	***Video adapter***	A video adapter is an expansion board that allows display of graphics and colour.
80)	***Video Editing***	Video editing is the act of changing video by arranging or changing the order, or content of the video. It is used to show information in things like video essays, movies, television and adverts (commercials). Video editing has been used more in recent years because more people are able to use it than ever, since the wide spread use of personal computers.
81)	***Video Production***	Recording an event or scripted program using video camera(s), lighting and sound equipment. Videos can be recorded in a studio or in the field and can include a wide variety of variables depending on script requirements and budget.
82)	***Videoconference (web)***	Video conference refers to a communication over a distance between three or more people where video and audio is transmitted in near real-time. There are various software packages which make this possible.
83)	***Webcast***	A webcast is a type of media file used on the Internet. It is distributed using streaming media technology to many people at the same time. It is basically the same as broadcasting over the internet. Many radio and TV stations, as well as stations that are only on the internet, have webcasts. Businesses may have webcasts to give presentations or to teach people. Some people broadcast weddings or funerals through webcasts.

5. INTERNET OF THINGS

1)	***5G***	The fifth generation of mobile technologies designed for a future where many physical elements of the world are connected to the internet. It will be much faster than its predecessor (4G), and is projected to spur growth in the IoT industry especially.
2)	***Actuators***	Components that are responsible for moving or controlling a mechanism or a system. They require a source of energy which can be an electric voltage or signal triggered by an electrical system. There are many types of actuators that can do things like control pumps, lights, motors, valves, and many others.
3)	***Address***	In a computer memory, a number indicating a specific location, At each address, a single piece of data can be stored.
4)	***AIoT***	A term used to describe AI in conjunction with the IoT. This is often used when thinking about IoT in an analytics and data collection construct.
5)	***APIs (Application Programming Interfaces)***	Tools for building applications that perform commonly desired actions by using methods that already exist. For example, the Google Maps API allows anyone to embed high quality, digital maps on a webpage. You can think about these as building blocks that allow you to accomplish tasks without needing to build complex services from the ground up.
6)	***ARP (Address Resolution Protocol)***	A communication protocol that is used to convert an IP-address into a physical address. With this ability computers can communicate with each other, despite only knowing each other's IP addresses, by sending an ARP request which informs them about the other computer's MAC address.
7)	***Automation***	This is the process of performing a procedure or action without human assistance. It's often referred to in an industrial context via control systems for machinery or processes in factories, but also covers applications like setting your household thermostat to turn on at a certain time or when the temperature breaches a set threshold.
8)	***Back up***	A copy file that is transferred to another medium, usually a backing storage. The purpose of this is to have available a copy of a file that can be restored in case of a fault in the system.
9)	***Bluetooth***	Wireless technology standard that exchanges data between devices over short distances via radio waves.
10)	***Bluetooth Low Energy (BLE)***	Bluetooth technology that consumes less power than traditional Bluetooth but within a similar communication range.

11)	***Body Area Network (BAN)***	Body Area Network, also referred to as a Wireless Body Area Network (WBAN) or a Body Sensor Network (BSN), is a wireless network of wearable computing devices. BAN devices may be embedded inside the body, implants, or may be surface-mounted on the body in a fixed position, wearable technology, or may be accompanied devices which humans can carry in different positions, in clothes pockets, by hand or in various bags.
12)	***Brouter***	The brouter is a device for connecting computer networks that incorporates the facilities of both a bridge and a router. Brouters usually offer routing over a limited number of protocols, operating by routing where possible and bridging the remaining protocols.
13)	***Browser***	Any program that allows the user to search for and view data. Browsers are usually limited to a particular type of data, so, for example, a graphic browser will display graphics files stored in many different file formats.
14)	***BTLE (Bluetooth Low Energy)***	BTLE (Bluetooth 4.0) is a lower-energyconsumption version of Bluetooth wireless communications standard, which runs constantly, announcing a device's presence to local sensors and optimizing battery life for the device in question. In IoT, BLE allows for precise location and feature tracking without reduced battery life.
15)	***Cloud computing***	Also referred as "the cloud", this term describes computer software, systems, and services that run on the internet without direct management by a user, rather than on a computer. Systems in the cloud appear to be running on your computer, phone, or any other computing device but are actually running over the internet on a "cloud" of computers that are sharing services with each other.
16)	***Condition monitoring (CM)***	An aspect of predictive maintenance, condition monitoring refers to the process of monitoring an aspect of a machine to collect data that can indicate any significant changes that could lead to a breakdown or fault. The types of conditions monitored can vary from temperature, to vibration, to many other parameters.
17)	***Connectivity or Internet Connectivity***	This refers to the means of connecting something to the internet. There are various methods including WiFi, Ethernet, etc. Choosing your method of connectivity is an important factor when setting up your IoT system.
18)	***Cybersecurity***	This term refers to any method used to maintain a safe online presence. It includes passwords, two-factor authentication, user permissions, etc.

19)	***Dashboard***	In a software context, this term refers to any tool that can show a data set in a way that is simplified and easily interpreted by the user. Typically it shows charts, graphs, controls, and other data visualizations.
20)	***Data communications***	Sending and receiving data via any communications medium. The term usually implies that the data are digital rather than analogue.
21)	***Data compression***	The data compression refers to the techniques for reducing the amount of storage needed for a given amount of data.
22)	***Data input***	Entering data into a computer system.
23)	***Data security***	Data securities are precautions taken to prevent the loss or misuse of data, whether accidental or deliberate. These measures include actions that ensure that only authorized personnel can use a computer system or file.
24)	***Dead zones***	Areas with little to no cellular or internet connectivity. For example, deep underground mining areas that have limited connectivity can be considered “dead zones”.
25)	***Digital data transmission***	A way of sending data (pictures, sounds, words…) by converting all signals into numeric codes (usually binary numbers) before transmission and then reconverting them on receipt.
26)	***Digital transformation***	The process of using technology to change or create new methods of doing tasks. No longer only a cultural shift, digital transformation is now mainly used in a business context to describe the ongoing change in the nature of work and running organizations.
27)	***Eccobee***	A Canadian company that made the world's first WiFi-connected thermostat, only to spend the past three years watching the world fawn over its competitor Nest's futuristic design. Co-leader in the WiFi thermostat market, they are now broadening solutions for the commercial HVAC space. Their smart thermostat should be now an IoT hub because it can connect to multiple sensors in a building.
28)	***Edge Computing***	A method of optimizing cloud computing systems by performing data processing at the edge of the network, near the source of the data. Edge computing pushes applications, data and computing power (services) away from centralized points to the logical extremes of a network.
29)	***Edge Device***	A type of networking device that connects an internal local area network (LAN) with an external wide area network (WAN) or the Internet.

30)	***Edge of IoT***	The edge of the IoT is where the action is. It includes a wide array of sensors, actuators, and devices—those system end-points that interact with and communicate real-time data from smart products and services.
31)	***EDI - Electronic Data Interchange***	Abbreviation for electronic dissemination of information or electronic data interchange. It refers to the transfer of structured information in electronic form between computer systems in different organizations. EDI is mainly used for exchange of information relating to business transactions and for electronic transfer of funds.
32)	***eDiscovery***	The collection, identification, archiving, and delivery of Electronically Stored Information (ESI) requested by legal teams and courts as part of an investigation, litigation, audit, industry compliance or other activity.
33)	***EIS - Executive Information Systems***	Abbreviation for executive information systems. It is a software application that extract information from an organization's computer applications and data files and present the data in a form required by management.
34)	***Email***	Abbreviation of electronic mail, it is a telecommunication system that enables the users of a computer network to send messages to other users.
35)	***Embedded system***	A controller that has its own dedicated function within a larger system that is entrenched inside a complete device. These systems are often based on microcontrollers.
36)	***Energy-Harvesting Technologies***	This (also known as power harvesting or energy scavenging) is the process by which energy is derived from external sources (e.g., solar power, thermal energy, wind energy, salinity gradients, and kinetic energy), captured, and stored. Frequently, this term is applied when speaking about small, wireless autonomous devices, like those used in wearable electronics and wireless sensor networks. Traditionally, electrical power has been generated in large, centralized plants powered by fossil fuels, nuclear fission or flowing water. Large scale ambient energy, such as sun, wind and tides, is widely available but technologies do not exist to capture it with great efficiency. Energy harvesters currently does not produce sufficient energy to perform mechanical work, but instead provides very small amount of power for powering low-energy electronics. While the input fuel to large scale generation costs money (oil, coal, etc.), the 'fuel' for energy harvesters is naturally present and is therefore considered free. For example, temperature gradients exist from the operation of a combustion engine and in urban areas, there is also a large amount of electromagnetic energy in the environment because of radio and television broadcasting.

37)	*EnOcean*	An energy harvesting wireless technology used primarily in building automation systems, and is also applied to other applications in industry, transportation, logistics and smart homes.
38)	*Environmental monitoring*	The process of collecting and analyzing data on the environment at both large and small scales. In an IoT context, this often involves placing sensors in particular areas to measure things like soil moisture or water quality.
39)	*Equipment monitoring*	The process of collecting and analyzing data on a part of a machine or a piece of equipment. Often used for predictive maintenance and preventing downtime.
40)	*Ethernet*	A protocol for local area networks. Ethernet was developed principally by the Xenox Corporation in 1978.
41)	*FDDI (fibre-optic digital)*	Abbreviation for fibre-optic digital device interface. It is a series of network protocols, developed by American National Standards Institute, concerned with high-speed networks using fibre optics cable. FDDI supports data transmission rates of up to 100 Mb per second and is being introduced in many sites as a replacement for Ethernet. FDDI is one of the first steps taken to develop data transmission.
42)	*File transfer*	The transmission of a file from one machine to another. Those machines can be physically linked or not, they can be connected via the cloud.
43)	*Formatting*	It is the adding of control information such as track and sector numbers, which enables the data stored to be accessed correctly on a unit.
44)	*Gateway device*	A piece of hardware that acts as an access point between two networks. In an IoT context, this refers to the hardware device that connects edge devices such as sensors to the cloud.
45)	*Geotagging*	The process of tagging a photo, video or other types of media with coordinates such as marking its location.
46)	*GSM (Global System for Mobile Communications)*	The most widely used digital cellular network and the basis for mobile communication such as phone calls and the short message service (SMS).
47)	*Haystack (Project Haystack)*	An open source initiative to streamline working with data from the Internet of Things. We standardize semantic data models and web services with the goal of making it easier to unlock value from the vast quantity of data being generated by the smart devices that permeate our homes, buildings, factories, and cities. Applications include automation, control, energy, HVAC, lighting, and other environmental systems. Haystack creates a data tag and definition that all the parties in the Haystack community agree on.

48)	***Hyperlink***	The hyperlink is the lync from one document to another or from one place to another. It can be activated by clicking on the link with the mouse. Usually the link is highlighted in blue written.
49)	***Hypertext***	It is a software system allowing extensive cross-referencing between related sections of text and associated graphic material.
50)	***IAAS (Infrastructure As A Service)***	Refers to an on-demand business model for IT capacities. Instead of owning an IT infrastructure or server space you rent it and pay for it on a per-use basis. Those capacities are usually owned, maintained and provided by a cloud service. These are specific services that are essential for any IoT implementation to work properly. Such services provide support for essential features of the IoT.
51)	***IIoT (Industrial Internet of Things)***	Refers to the use of the Internet of Things in an industrial context. This includes IoT applications in manufacturing, energy management, supply chains, and more.
52)	***Industry 4.0 or Industrie 4.0***	Industry 4.0 refers to the promise of connecting the digital and the physical worlds through smart factories. Thanks to the emergence of cyber-physical systems, the internet of things, and cloud computing, some experts believe we are on the brink of a fourth industrial revolution. All of these technologies fall under the umbrella of Industry 4.0, which refers to the recent trend towards automation and data exchange in manufacturing.
53)	***Internet of Everything***	A term defined by Cisco Systems and basically means applying the IoT to everything, thus creating new capacities and smart processes in virtually every field we can think of. Cisco calls it the connection of “people, process, data and things”.
54)	***Interoperability***	The term describes a system’s ability to share information and services with another system ideally based upon common standards. Much of the success of the IoT relies on the ability of connected devices to operate seamlessly and effectively together.
55)	***IoMT (Internet of Medical Things)***	Internet of Things applications used in medical treatment, devices, facilities, and more. For example, wearable medical devices that can track and monitor patient health are being adopted around the world and can be considered one of the more mainstream applications of IoMT.
56)	***IoT (Internet of Things)***	Any system with the ability to transfer data over a network without requiring human interaction. For example, industrial sensors that collect data on the machine vibration and send that data to the cloud are a part of the Internet of Things, as are smart watches that can monitor your heart rate during exercise and send that information to an app on your phone.

57)	*IoT platform*	Multi-layer technology that enables the deployment, management, and automation of connected devices in an IoT system.
58)	*ITU-T*	ITU-T is the acronym for International Telecommunication Union - Telecommunication Standardization Bureau, which is the sector of the International Telecommunication Union (ITU) that deals with regulating telephone and telegraphic telecommunications. Until 1992 it was known as CCITT (Comité Consultatif International Téléphonique et Télégraphique).
59)	*Local Area Networking (LAN)*	A local area networking is an internet connection restricted to a single room or building. LAN enables around 500 devices to be connected together.
60)	*Low-Power Radio Network*	A network with limited range that enables smart objects to communicate with each other wirelessly; also referred to as Wireless Personal Area Network (WPAN). The standard IEEE 802.15.4, Bluetooth is another example of a low-power radio standard.
61)	*LTE (Long Term Evolution)*	A mobile cellular standard that provides faster Down- and Upload speeds. Despite being marketed as a fourth generation standard it does not fulfill all of the technical requirements.
62)	*M2M (machine-to-machine)*	M2M refers to direct communications between machines, using any channel. It can include industrial instrumentation, signaling, telemetry, and more.
63)	*MAC address*	Short for “media access control address”, this term refers to a unique identifier assigned to a device for communications within a network segment such as Ethernet, Wi-Fi, and Bluetooth.
64)	*MAN*	A Metropolitan Area Network (MAN) is a computer network that is larger than a single building Local Area Network (LAN) but is located in a single geographic area that is smaller than a Wide Area Network (WAN).
65)	*Mesh Networking*	With mesh networking, all of the devices in the network can communicate with each other, rather than having to connect with one central hub. This makes the size and area of the network virtually unlimited, which is why it is so useful for industrial IoT operations like large connected sensor networks.
66)	*Modbus*	A communication protocol that is mainly used to connect electronic devices. The Modbus Master (for example a computer) requests information from the Modbus Slaves (for example electronic thermometers). Up to 247 Slaves can transmit their information to one Master.

67)	*Netiquette*	The term "netiquette" derives from a mixture of "internet" and "etiquette". It refers to the behaviour guidelines evolved by users of the Internet. The rules of the netiquette include: no messages typed in upper case (considered to be the equivalent of shouting); new users should read the frequently asked questions (FAQ) file before asking a question...
68)	*Network*	A method of connecting computers so that they can share data and peripheral devices, such as printers. The main types of networks are classified by the pattern and the size of the connection: network can be local (LAN), metropolitan (MAN) or wide (WAN).
69)	*NFC (Near Field Communication)*	A set of wireless technologies which allows for simple and contactless exchange of data within very close distance.
70)	*Not found (404 error)*	This written indicates that the client is able to communicate with the server, but that the server has not found what has been requested or is composed in such a way that it can't complete the request. The 404 error should not be confused with "server not found" or similar errors, where the connection to the server cannot be established at all.
71)	*Open Source*	Pervasive computing (also called ubiquitous computing) is the growing trend towards embedding microprocessors in everyday objects so they can communicate information. Such computing devices are completely connected and constantly available.
72)	*Open Systems Interconnection (OSI)*	It is an international standard organization, defining seven layers of communication protocols. Although OSI is an international standard, other protocols such as IBM are more commonly used in commercial systems.
73)	*Optical Character Recognition (OCR)*	It is a technique for putting text to a computer by means of a document reader. First, a scanner produces a digital image of the text; then character-recognition software makes a digital image of the text; third step is to convert the digital image to a set of internal codes that can be stored and processed by computer.
74)	*OTA (over the air) updates*	OTA updates are a mechanism for remotely updating internet-connected hardware with new settings, software, and/or firmware. At this point in the evolution of IoT, it is well established that a robust OTA update mechanism is an essential component for any successful IoT system design.
75)	*Packet switching*	A method of transmitting data between computers connected in a network. A complete packet consists of the data being transmitted and of information about the computer to receive the data. The packet travels around the network until it reaches the correct destination.

76)	***Personal Area Network (PAN)***	The interconnection of information technology devices within the range of an individual person, typically within a range of 10 meters. For example, a person traveling with a laptop, a personal digital assistant (PDA), and a portable printer could interconnect them without having to plug anything in, using some form of wireless technology. Typically, this kind of personal area network could also be interconnected without wires to the Internet or other networks.
77)	***Platform As A Service (PAAS)***	Cloud service platform which provides webdevelopers with all the infrastructure they need to develop and run an application.
78)	***Redundancy***	Adding backups to a system as a failsafe with the intention of increasing the reliability of it.
79)	***Remote monitoring and control (M&C)***	Systems designed to supervise and govern objects or facilities over a large distance with some degree of automation. For example, monitoring power grids over a wide area from a point outside of that area.
80)	***ROI (return on investment)***	The formula to calculate the amount of money saved or earned based on the cost of initial investment. This is a measure of performance to evaluate the efficiency of an investment.
81)	***Run-time error***	Execution error.
82)	***Sensors***	A sensor is a device that measures a physical quantity and converts it into a 'signal' which can be read by an observer or by an instrument. For example, a mercury thermometer converts the measured temperature into the expansion and contraction of a liquid which can be read on a calibrated glass tube. Video cameras and digital cameras have an image sensor. There are many different types of sensors. Some are used in everyday objects, and some are separate.
83)	***Smart buildings***	The use of automation to optimize all or some of the processes that occur inside a building: heating and cooling, security, lighting, ventilation, water usage, and more.
84)	***Smart Buildings***	Buildings designed and equipped to try to minimize costs and environmental impact. This is achieved by connected systems and efficient use of energy through new, automated technology that intelligently responds to certain circumstances (available solar energy, temperature inside the building, etc.)

85)	***Smart Cities***	A concept that tries to create a more intelligent city infrastructure by using modern information and communication technologies. The aim is to improve quality of life, efficiency of operations and services, and economic prosperity for citizens. This will be achieved through networking and integrated information exchange between humans and things.
86)	***Smart Grids***	Grids which coordinate energy use and distribution. This enhances efficiency and becomes more and more important because of renewable energies which are not always as reliable as other forms of energy.
87)	***Smart Home***	Refers to the networking of household devices and systems through information and communication technology. This way, processes within a household can be monitored and controlled automatically to optimize quality of life, costs and security in houses.
88)	***Smart Meters***	Electronic devices which measure and display resource consumption (of water, gas, electricity, etc.) and communicate this information to third parties (mainly control systems). This allows for a more efficient distribution, usage and control of these resources.
89)	***Synchronous***	Synchronous means regular: most communication within a computer system is synchronous, controlled by the computer's own internal clock.
90)	***Upskilling***	The process of teaching employees new skills to fill vacancies from the organization's current workforce. It is especially relevant in the context of emerging technologies.
91)	***Wearables***	Electronic devices that are designed to be worn by people. It can refer to fitness trackers, pacemakers, smart glasses, and more.
92)	***Wide Area Network (WAN)***	A wide area networking is an internet connection that connects computers over a wide geographical area.
93)	***WWW world wide web***	The world wide web is a hypertext system for publishing information over the internet. WWW documents are text files coded using aHTML so that they can include text, graphics, sound, videos, together with hyperlinks to other Web documents.
94)	***ZigBee***	A low-power radio protocol for small amounts of data, based on the IEEE 802.15.4 standard. It has low power consumption, a range of about 100 meters and a bandwidth of 250 kbps. IoT staples like the Nest thermostat and Hue light bulb both use Zigbee chips.