GATSBY

Gatsby is an open source framework used to build high-performance web applications and websites.

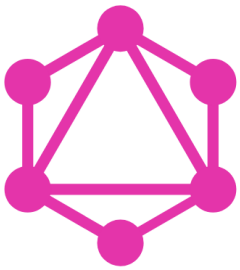
Gatsby is widely used to develop high-performance websites and web applications in a variety of domains, and its focus on speed and performance makes it a popular choice for modern web projects.

GITHUB

GitHub is a platform that allows developers to host online Git repositories, facilitating global collaboration. In addition, it offers features such as issue tracking, code review, continuous integration, and GitHub Pages for hosting static websites.

In short, GitHub is an online platform that leverages Git to provide a collaborative and feature-rich environment for software development, facilitating project collaboration, issue tracking and code review. It is widely used in the software development community and is an essential tool for open source and enterprise development projects.

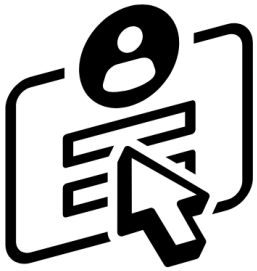
GRAPHQL



GraphQL is a query language and technology for interacting with APIs, and is often used as an alternative to REST APIs.

It is used in a variety of applications and services, from web and mobile applications to database access and cloud services. It provides an efficient and customizable way to interact with data and is especially suited for modern applications that require flexibility in data fetching and delivery.

GUI (GRAPHICAL USER INTERFACE)



Graphical User Interface (GUI) refers to the visual part of a software or system that allows users to interact with it. Rather than relying solely on text commands, a GUI uses visual elements such as windows, buttons, drop-down menus, icons and other graphical controls to facilitate user interaction with the application.

GUIs are common in operating systems, software applications and electronic devices. They provide a more intuitive and user-friendly experience by presenting information and options in a visual and organized manner. Users can perform actions such as clicking buttons, dragging and dropping items, or selecting menu options with ease, rather than remembering specific commands or typing code.

HARD CODE

The term hard code refers to the practice of including specific values or data directly and fixedly in the source code of a program rather than parameterizing them or making them configurable. This means that the values are "hard" or "hard-coded" in the code and cannot be changed without modifying the source code.

For example, if a sales tax value is needed in a program, hard coding would involve writing the tax value (e.g., 0.08) directly into the code rather than making it configurable, which would allow the tax value to be changed without modifying the code.

Hard coding is often considered a bad programming practice, as it makes the code less flexible and more difficult to maintain.

HTTPS

HTTP (Hypertext Transfer Protocol) is the transfer protocol used on the World Wide Web. It is designed to enable communication between web browsers and web servers. When you access a website through a browser, your request is sent to the web server via the HTTP protocol.

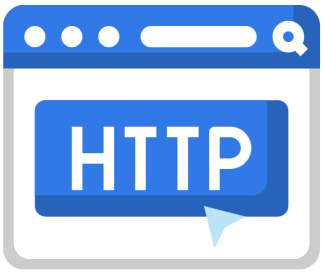
Access via HTTPS, on the other hand, is the secure version of HTTP and is used to protect communication and data between the browser and server through encryption. URLs beginning with "https://" indicate that the connection is secure, which is especially important when sending sensitive data online, such as credit card information or passwords.

HAML

HAML, which stands for "HTML Abstraction Markup Language", is a simplified markup language used to create HTML structures in a more concise and readable manner. Instead of using traditional HTML tags, HAML uses a simpler syntax based on indentation and nested elements.

HAML is commonly used in web development, especially in Ruby on Rails environments, where it is easily integrated. Although HAML is more concise and readable, its adoption may depend on developer preferences and project needs.

HTTP REQUEST



An HTTP (Hypertext Transfer Protocol) request is a request that a client (e.g. a web browser) sends to a web server to obtain resources, such as web pages, images or data.

Example of an HTTP GET request:

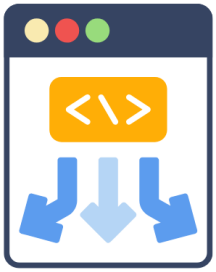
```
GET /page.html HTTP/1.1
Host: www.example.com
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64;
x64)
Accept:
text/html,application/xhtml+xml,application/xml;q=0
.9,*/*;q=0.8
```

HTMX

HTMX is a JavaScript library that facilitates the creation of highly interactive and dynamic web applications with traditional web technologies such as HTML, JavaScript and CSS. Its main goal is to improve the user experience by allowing specific parts of a web page to be updated without the need to reload it completely.

In short, HTMX is a library that enhances the creation of highly interactive web applications by allowing dynamic updating of content without reloading entire pages. It is especially useful in situations where you want to enhance the user experience without performing a complete rewrite of an existing web application.

HIGH LEVEL LANGUAGE



A high-level language is a programming language designed to be more understandable and easier for programmers to write and read.

High level languages stand out for their:

- **Abstraction:** They simplify the expression of ideas.
- **Portability:** They work on different platforms.
- **Readability:** Easier to understand code.
- **Productivity:** Allows writing code quickly thanks to its simplified syntax and libraries.

Examples of high-level languages include Python, Java, JavaScript, Ruby and C#. These languages are used in a wide range of applications, from web and mobile development to data analysis and systems programming.

HTML

HTML (HyperText Markup Language) is the markup language used to create and structure web pages.

A simple example of HTML would be:

```
<!DOCTYPE html>
<html>
<head>
    <title>My Website</title>
</head>
<body>
    <h1>Welcome to my website</h1>
    <p>
    This is an example of a basic web page.
    </p>
</body>
</html>
```

INTERNET OF THINGS (IOT)

The Internet of Things (IoT) refers to the interconnection of physical devices, objects and systems over the Internet. These devices, which may include sensors, cameras, appliances, vehicles and others, collect data and communicate with each other and with central systems. This enables real-time information gathering, remote control and task automation.

IoT example: a moisture sensor in an agricultural crop that collects data on soil conditions and sends it to a cloud application. Farmers can access this data in real time and make informed decisions about irrigating their crops.

IoT is revolutionizing the way we interact with the physical world and is driving automation and efficiency across a wide range of industries and applications.

INPUT

Input in programming refers to the information or data that a program receives from the outside world. This information can come from a variety of sources, such as the user, files, sensors, other programs or the network. Input is essential for a program to perform calculations, make decisions and produce results.

Example of input in a Python program:

```
name = input("Please enter your name: ")
print("Hello, " + name + "!")
```

In this example, input allows the program to receive the user's name from the keyboard. The user's input is stored in the variable name, and the program uses it to greet the user.

INFINITE LOOP

An infinite loop is a control structure that executes continuously without an end point. This means that instructions within the loop will repeat over and over again without stopping, which can lead to poor program performance or, in the worst case, to the program becoming non-functional. Infinite loops are usually created by mistake and should be avoided in programming.

Here is a Python example of an infinite loop:

```
while True:
    print("This is an infinite loop.")
```

This loop will run continuously and will never stop on its own, since the True condition is always true.

IP ADDRESS

An IP address is a numerical label assigned to devices on a network using the Internet Protocol. They can identify devices and assist in routing data. There are two main versions: IPv4 with 32-bit addresses and IPv6 with 128-bit addresses. IP addresses are essential for communication on the Internet.

Example IPv4 IP address is: 192.168.0.1.

Example IPv6 IP address is:
2001:0db8:85a3:0000:0000:8a2e:0370:7334.

These addresses are used to identify and route data in computer networks.

INHERITANCE

Inheritance in programming refers to a concept in which a class (or type) can inherit attributes and behaviors from another class. In an inheritance system, there is a base class (or parent class) and a derived class (or child class).

Inheritance in programming:

- **Base (Parent) Class:** Template from which attributes and behaviors are inherited.
- **Derived Class (Daughter):** Inherits and can modify attributes and behaviors.
- **Code Reuse:** Avoids duplication of code when inheriting members of the base class.
- **Class Hierarchy:** You can form a hierarchy where derived classes in turn can be base classes.

IDE



An IDE (Integrated Development Environment) is a software tool that provides a set of features and tools to help programmers write, test and debug code more efficiently. An IDE generally includes a code editor, compiler or interpreter, debugging tools, project management and more, all integrated into a single development environment.

Examples of popular IDEs include Visual Studio (for Windows development), Eclipse (for Java development), PyCharm (for Python) and Visual Studio Code (a highly customizable code editor with extensions for various languages).

INTERPRETER

An interpreter is a computer program that executes source code written in a high-level programming language line by line. Unlike compilers, which translate all source code into machine language before execution, an interpreter translates and executes the code in real time, instruction by instruction.

Example of using a Python interpreter:

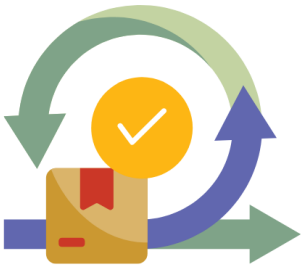
```
>>> print("Hello, world!")
Hello, world!
```

INTELLIJ

IntelliJ IDEA is a popular integrated development environment (IDE) developed by JetBrains. It is designed primarily for software developers and offers a wide range of features and tools to improve productivity in code writing and application development.

IntelliJ IDEA is widely used by developers around the world, especially in Java and Kotlin projects, thanks to its robust feature set and focus on improving productivity in software development.

ITERATION



Iteration refers to the repetition of a set of instructions or actions in a computer program. It is used to execute a series of operations repeatedly until a specific condition is met. This is essential for performing tasks that require repetitive processing, such as stepping through items in a list or performing calculations in loops.

Example: In a software program, you can use a "for" or "while" loop to iterate through a list of numbers and perform an action on each of them, such as adding them together. The iteration continues until every number in the list has been processed.

JAVA

Java is a high-level programming language widely used in the development of software applications. It was created by Sun Microsystems (now owned by Oracle) and is noted for its portability, which means that code written in Java can run on different platforms without major modifications. Java is used in a variety of applications, from web development to mobile applications and embedded systems.

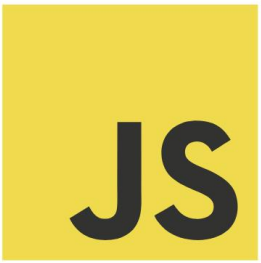
Example: Here is a brief example of a Java program that prints "Hello, world!" to the console:

```
public class HelloWorld {
    public static void main(String[] args) {
        System.out.println("Hello, world!");
    }
}
```

JUNIOR DEVELOPER

A junior developer is a software developer in the early stages of their career, with a limited level of experience. Their responsibilities include writing code, collaborating on projects and learning new technologies. They are often mentored by more experienced developers and may advance into senior roles with experience.

JAVASCRIPT

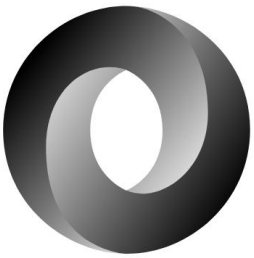


JavaScript is a high-level programming language widely used in web development to create interactivity in pages. It is an interpreted language that runs in users' web browsers and allows manipulation of page content, response to user events and communication with web servers.

Example: This is a simple JavaScript example that displays an alert in the browser when a button is pressed on a web page:

```
function showMessage() {
    alert("Hello, world!");
}
```

JSON

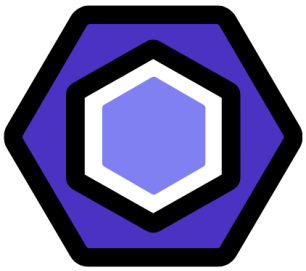


JSON (JavaScript Object Notation) is a data interchange format used to store and transmit data in a structured manner. It is both human- and machine-readable and is based on a syntax that uses key-value pairs. JSON is widely used in web applications and APIs for data exchange.

Example: Here is an example of a JSON object representing information from a user:

```
{
  "name": "Juan Pérez",
  "age": 30,
  "email": "juan@example.com",
  "city": "Example City"
}
```

LINTER

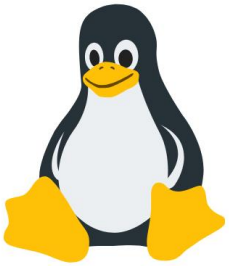


A linter is a programming tool used to analyze the source code of a program or project for potential bugs, style problems, and unsafe or undesirable programming practices. The term "linter" comes from the combination of the words "lint" and "checker".

A linter is a tool that:

- Detects syntax errors.
- Checks the coding style.
- Evaluates code quality and suggests improvements.
- Warns about unsafe practices.
- Can be customized and integrated into development environments.

LINUX



Linux is an open source operating system based on the Linux kernel. Although it is commonly referred to as "Linux", the entire operating system is called "GNU/Linux" to acknowledge the additional software contribution of the GNU project.

Linux is widely used and appreciated for its stability, security and customizability. It is a free and open source alternative to commercial operating systems such as Windows and macOS.

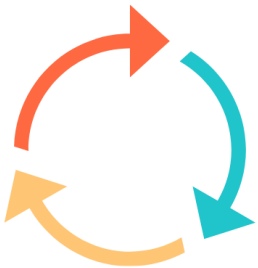
LAMP STACK

LAMP is an acronym that refers to an open source software suite widely used to build dynamic web applications. Each letter in "LAMP" represents a key component of the suite.

Here's what each letter stands for:

- **Linux:** This is the operating system on which the LAMP stack runs.
- **Apache:** Refers to the Apache web server, which is one of the most widely used web servers in the world.
- **MySQL:** Is a relational database management system (RDBMS) that stores and retrieves data for web applications.
- **PHP:** It is a server-side programming language used to create dynamic web applications.

LOOP



A programming loop is a structure that allows a block of code to be repeated several times until a specific condition is met. There are several types of loops, the most common are:

While Loop: Repeats as long as a condition is true.

For Loop: Used when you know in advance how many times you want the code to repeat.

For Each loop: Used in many languages to iterate through elements of a collection, such as a list.

Loops are essential for automating tasks and processing large data sets.

LARAVEL

Laravel is a popular open source web development framework used to create high-performance and maintainable web applications. Laravel is a popular open source web development framework used to create high-performance and maintainable web applications.

Laravel is an excellent choice for developing modern web applications, from simple websites to complex enterprise applications. Its focus on productivity and ease of use make it a popular choice among developers worldwide.

LIBRARY

A "library" in the context of programming refers to a set of predefined functions, classes and routines that programmers can use to perform common tasks without having to write all the code from scratch.

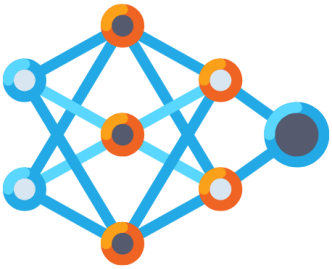
An example of a library is the "C++ standard library" which provides a wide range of predefined functions and classes for common tasks in programming, such as input/output, string manipulation, containers, algorithms and more. C++ programmers can use this standard library in their projects to perform tasks without having to implement everything from scratch.

LOW-LEVEL LANGUAGE

A low-level language is a programming language that is closer to machine language and is less understandable to humans compared to high-level languages. These low-level languages are more hardware-oriented and are used to program systems and applications that require precise control over computer hardware.

Examples of low-level languages include assembly language and machine language. These languages are essential for programming embedded systems, hardware drivers and operating systems, where direct control over the hardware is crucial.

MACHINE LEARNING



Machine Learning is a subfield of artificial intelligence that focuses on the development of algorithms and models that enable computers to learn and improve their performance on specific tasks through experience and data, rather than relying on explicit programming. In other words, machines can identify patterns in data and make decisions or predictions based on those patterns.

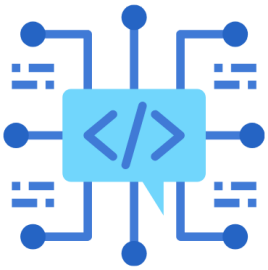
Example: a recommendation system on a streaming platform that learns your movie and series preferences as you interact with the platform, and then suggests content based on your previous tastes. The system improves its accuracy as you consume more content and provide feedback on the recommendations.

MYSQL

MySQL is a widely used open-source database management system (DBMS).

MySQL is a popular open source database that is used in a wide range of applications, from websites to enterprise applications, due to its performance, scalability and security. Its open source nature and large community make it an attractive choice for many organizations and developers.

MARKUP LANGUAGE



A "markup language" is a set of tags and codes used to define the structure and formatting of a document, usually a text document. These tags and codes are used to mark up specific elements within the document and describe how they should be presented or processed. Markup languages are common in the creation and presentation of content on the web. An example of a markup language is HTML (HyperText Markup Language), which is used to create web pages by defining the structure and presentation of content.

MACHINE LANGUAGE

Machine language is a set of binary instructions and codes that a computer can understand and execute directly. These instructions consist of a series of binary numbers that represent simple operations, such as adding two numbers or moving data from one place to another in memory. Machine language is essential for the CPU (Central Processing Unit) to perform tasks and execute programs on a computer.

MICROSERVICES

Microservices are a software development architecture in which an application is built as a set of small independent services, each focused on performing a specific task. Each microservice operates autonomously and communicates with other microservices through well-defined interfaces.

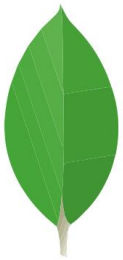
This architecture allows for greater flexibility, scalability and ease of maintenance compared to larger monolithic applications. Each microservice can be developed, deployed and scaled independently, facilitating team collaboration and continuous software delivery.

METEOR

Meteor, also known as MeteorJS, is an open source web application development environment that provides a complete stack for creating modern, responsive web applications. It was developed to simplify the web development process, especially for real-time applications, and offers a wide range of features and functionality.

In short, Meteor is a full-stack web development environment that excels in its ability to develop real-time web applications quickly and effectively. It is particularly suitable for applications that require reactivity and real-time updating of data.

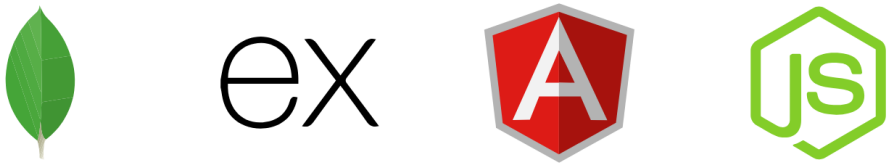
MONGODB



MongoDB is a NoSQL (Not Only SQL) database management system used to store and manage data in document format.

MongoDB is used in a variety of applications, from websites and mobile applications to big data analytics and content management systems. Its flexibility and scalability make it a popular choice for many modern applications.

MEAN STACK

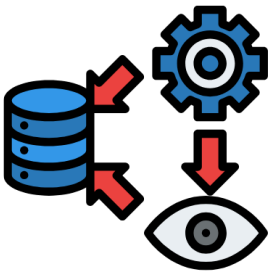


The MEAN stack is a set of open source technologies used to develop web and mobile applications. Each letter in "MEAN" represents a key component of the stack.

Here's what each letter stands for:

- **MongoDB:** A NoSQL database that stores data in JSON (BSON) format.
- **Express.js:** It is a web application development framework for Node.js. Express.js simplifies the creation of web applications and offers a wide variety of features for handling routes, requests, responses and sessions.
- **Angular:** It is an open source development framework maintained by Google.
- **Node.js:** It is a server-side JavaScript runtime environment.

MVC



Model-View-Controller (MVC) is an architectural design pattern widely used in software application development.

It is divided into three main components:

- **Model:** manages application data and logic, including interaction with databases.
- **View:** User interface that displays information and collects data, transmitting actions to the Controller.
- **Controller:** Acts as an intermediary between Model and View, coordinating the application flow and responding to user actions.

NUXT.JS

Nuxt.js is an open source web application development framework based on Vue.js. It is designed to facilitate the creation of modern, high-performance web applications with Vue.js by providing a framework and additional features that speed up development.

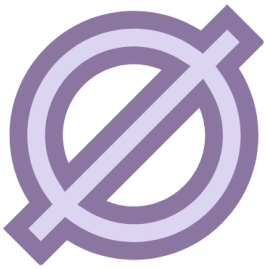
Overall, Nuxt.js is an excellent choice for web application development with Vue.js, especially if you are interested in server-side rendering, static content generation and simple routing.

NEXT.JS

Next.js is an open source web development framework for React.

Next.js is a popular choice for developers who want to create high-performance web applications using React. It offers features such as SSR, static page generation and a simple routing system, making it a powerful tool for building modern and efficient web applications.

NULL



null is a special value used to represent the absence of a value or the failure to assign a value to a variable. In many programming languages, "null" is used to indicate that a variable does not have a defined value or that a reference to an object does not point to any particular object.

It is important to note that the meaning and behavior of "null" may vary by programming language. Some languages may treat "null" as a null or empty value, while others may generate errors if an attempt is made to access a null variable. In general, "null" is used to handle situations where there is no valid value available, which can be useful in programming logic and error handling.

NPM

NPM (Node Package Manager) is the default package management system for JavaScript and Node.js. It is a tool that allows developers to install, manage and share reusable code packages efficiently. NPM packages are JavaScript modules and libraries that can be used in Node.js applications and web development projects.

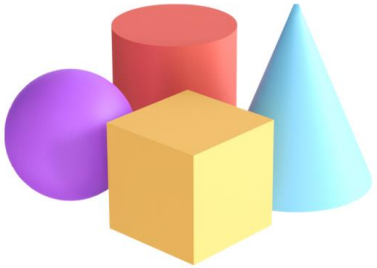
NPM is widely used in web application development and Node.js applications to simplify dependency management and improve efficiency in building projects. It is an essential tool in the JavaScript development ecosystem.

NEURAL NETWORK

A neural network is a type of artificial intelligence model inspired by the structure and functioning of the human brain. It is composed of units called "artificial neurons" or "nodes" that work together to perform specific tasks, such as pattern recognition, data classification and decision making.

Neural networks are used in a variety of applications, including computer vision, natural language processing, machine translation, gaming, robotics and more. They can learn and improve their performance as they are provided with more information and training data.

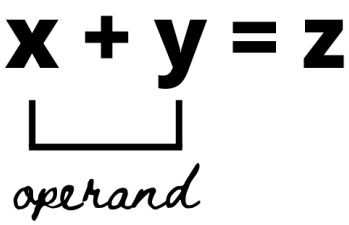
OBJECTS



Objects are instances of classes in object-oriented programming. Each object is a single entity that contains attributes (data) and can perform actions (methods) according to its class definition. Objects are the basis of OOP and are used to model real-world elements in software.

For example, in a library management program, an object might represent a book with attributes such as title and author, and methods to borrow and return.

OPERAND



An operand is a value or entity that is used in a mathematical or logical operation. Operators are symbols or reserved words that take one or more operands and perform a specific action, such as addition, subtraction, multiplication, comparison, and so on. Operators and operands combine to form expressions that are evaluated to produce a result.

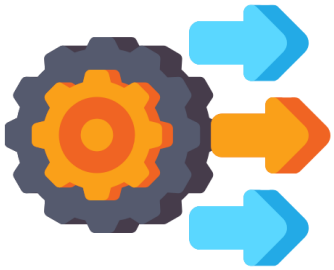
For example, in the mathematical expression "5 + 3", the numbers "5" and "3" are operands, and the symbol "+" is the operator that performs the addition operation.

OSI MODEL

The OSI Model, or Open Systems Interconnection Model, is a conceptual framework used to understand and standardize network communication. It is divided into seven layers, each of which serves a specific function in the communication process.

The OSI Model serves as a conceptual guide for understanding how information is communicated in a network. Although not all details of the communication process are present in all layers in every situation, this model provides a useful structure for understanding the complexities of networks and data communication. Each layer has its specific purpose and functions, and network implementations may vary according to specific needs and technologies.

OUTPUT

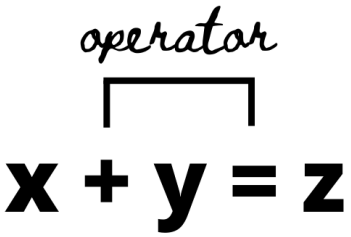


Output in computing refers to the data, information or results that a program or system produces and displays to the user or another program. This information can come in a variety of forms, such as on-screen text, graphics, sounds, printouts on paper, or even physical actions controlled by devices, such as turning on a light.

Examples of output may include:

- Displaying the result of a mathematical operation on screen.
- Printing a document from a computer to a printer.
- Playing music or sound effects on speakers.
- Turning physical devices, such as lights or motors, on or off in automation systems.

OPERATOR



An operator is a symbol or reserved word used to perform mathematical, logical or other operations on one or more operands. The operands are the values or variables to which the operator is applied. For example, in the mathematical expression "5 + 3", the symbol "+" is the operator that performs the addition operation, and "5" and "3" are the operands. Operators are used to perform a variety of tasks, such as arithmetic calculations, comparisons, assignments and more, and are fundamental in the construction of expressions and statements in a program.

ONLINE

Online refers to being connected to or available through the Internet. Something or someone that is "online" means that they are online and can access the web or interact in real time over the Internet. It can refer to services, applications, devices or people that are currently connected to the network and available to interact or perform activities online.