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What is Computer Programming Language?

A programming language is a formal language comprising a set of instructions that produce various kinds of output. Programming languages are used in computer programming to implement algorithms.

Most programming languages consist of instructions for computers. There are programmable machines that use a set of specific instructions, rather than general programming languages. Early ones preceded the invention of the digital computer, the first probably being the automatic flute player described in the 9th century by the brothers Musa in Baghdad

The description of a programming language is usually split into the two components of syntax (form) and semantics (meaning). Some languages are defined by a specification document for example, Java , JavaScript, Python the C and C++ and MATLAB programming language is specified by an ISO Standard while other languages (such as Perl) have a dominant implementation that is treated as a reference. Some languages have both, with the basic language defined by a standard and extensions taken from the dominant implementation being common.

***SUMMARY:***

Digitalization is new normal and visionaries have already declared that the oncoming world will become even more increasingly digital. With everything going virtual - education, businesses, shopping and retail and more - no industry and no department today is functioning all paper; instead, they all have a digital footprint in some way or the other. Plus, with plenty of online tools and resources available for businesses today such as social media, SEO and more, digitalization has simply revolutionized the way in which the world functions.

If there is one skill that you can learn to level up your skill set to match the demands of the digital world, it is learning programming languages and coding. With the knowledge of programming languages at hand, you can get an upper edge in the digital world and use it to build mobile apps, create unique websites, develop your very own games and so much more. By doing so, you can create your own sources of passive income and also improve your prospects in job search. Statistics show that in the times to come, more and more organizations would hire for roles requiring the knowledge of programming languages and there can be no better testament to why you should learn programming and coding starting today. Below are the top demanded and best programming languages to learn this year. So go ahead and upskill yourself in advance, before these programming languages become basic skills which everyone has.

1) JavaScript and Java

These are the most popular programming languages that you must learn this year as they form a significant part of software and web development. The top social media and ecommerce sites such as Facebook, Twitter, Gmail, YouTube and Amazon, make use of JavaScript or Java to create interactive web pages and display dynamic content to the users. Plus, if you are a beginner, JavaScript can be the friendliest of all programming languages in terms of flexibility of syntax and functionality on a variety of web browsers. Like JavaScript, Java is another standard programming language that you cannot afford to miss because of its popular demand and the classic features that it offers. Its object oriented scripting is the most commonplace structure behind applications that we use today.

2) Python

Python is a free, highly readable and open source programming language that comes with extensive support modules, besides being easy integratable with web services, and supporting user friendly data structures, and GUI based desktop applications. This programming language is popular for Machine Learning and Deep Learning applications. By learning Python, you will be able to experiment with 2-dimensional or 3-dimensional animation applications, design video games, create scientific and computational applications like Free CAD and Abacus and much more. Renowned sites such as Instagram, Pinterest, Quora etc.. use Python, for it is naturally and intuitively very readable with classic integrations. Today, this language is gaining immense popularity in designing education systems and also used extensively in businesses.

3) Swift

Developed by Apple in 2000+ for Linux and MAC applications, this is one of the most popular and in-demand programming languages that you can learn today. If you are interested in Apple products and mobile app development, Swift is the perfect place for you to start programming. An open source programming language that is also easy to learn, Swift has been optimized for maximized performance. It is built from scratch-up to match the realities of contemporary iOS development, which is the software not only for iPhone and iPad, but also for other operating systems such as watch OS in Apple Watches and tvOS in Apple TVs.

4) C and C+

When it comes to the best programming languages to learn, undoubtedly C and C++ top the list, for it is like beginner's luck. Almost all low level systems such as operating systems, file systems, etc are written in either C or C++. If you wish to be a system level programmer, C and C++ are the programming languages you must learn. C++ is also widely used by competitive programmers because of the fact that it has extremely fast speed and is stable. One of the unique features of C++ is the STL, which stands for Standard Template Library. It is basically a house full of ready to use templates for various data structures, arithmetic operations, and algorithms.

5) MATLAB

If you are interested in data science, then this is the language you should dig into immediately. It is a statistical analysis tool that is used in various industries for data analysis but is also used widely in the Computer Vision and Image processing industry. MATLAB is a mathematics oriented and performance driven programming solution for modern day IT problems and projects. It is all about calculating, visualizing, computing and modeling programs from a mathematical perspective. Anything which comes down to creating a piece of new application or website and has something to do with statements, variables, and expressions - MATLAB is the ready solution for it. It comes with high coding efficiency and productivity as it does not require a compiler for execution like other programming languages. It is highly suitable for developing scientific research applications.