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Programming languages, Why is it important to learn multiple programming languages? Which paradigms are relevant nowadays?

Since the beginning of the computing programming languages have been very important due to they allow us to communicate set of instructions to the computer; however, computers only understand machine code and is there where programming languages are important in the software industry because they are the intermediary between the computer and the developer. Nowadays with the increase necessity of software developers, it has become important to skill various programming language. There are many markets in which software developer can aim and use different languages which are : web development, mobile development , and IoT , each of these languages requires different paradigms and hardware requirement. Depending on the project, developers must choose wisely which language they will use and also they have to choose the environment in which they will work.

With the increase popularity of web development according to an article in business insider JavaScript is the preferred choice for web developers “Despite having similar names, JavaScript isn't actually related to Java. It allows developers to build interactive elements on websites, making it one of the most ubiquitous languages on the web, and the most popular in the world” (Business Insider). JavaScript is an object oriented language, is also well known as a scripting language on the web. An object oriented language helps the developer think in object oriented way which can be very useful ;nevertheless, this language can be “extreme permissiveness and error tolerance this can make application development and debugging quite challenging”. In addition, to develop correctly with this technology is important to use an environment because it is hard to check for bugs.

Another trend in the computer industry is IoT, to develop good IoT hardware is necessary software and for the development we use another paradigm called imperative programming “which In computer science, imperative programming is a programming paradigm that uses statements that change a program's state” and basically we use C a very well known programming language which has always been useful for dealing with hardware sometimes this technology can be challenging for some developers and for that reason Python has also become popular for developing IoT ; what's more, Python is a object oriented language but developers can also code in an imperative way.

In addition, another market which is constantly growing is the mobile app development and to develop here we can use C++ for Android or Swift for iOS. C++ is a language which supports a multiparadigm what this paradigm means is that it combines multiple paradigms in this case object oriented and imperative programming.

To conclude, there are many languages in these days, developers should adapt to a huge variety of paradigms and syntax of each language. Something else to consider is which language should the developer choose for a project, basically the developer needs to consider multiple things such as efficiency, portability, and library availability; in addition, it is important to consider the maintenance of the software for that reason choosing a language that enforces programming discipline may help in this case. Once the developer has considered all of these things the developer should choose an IDE of its preference with features such as compiling and debugging that will be helpful. Learning multiple languages will help developers find better job opportunities and they must be anxious to learn and boost their income potential, particularly as technology continues to evolve developers need to be ready to globalize a world which is always changing.

Bibliografía

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