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SOFTWARE DEVELOPMENT FOR ANDROID

The world gets smarter day by day, and in this fast growing world, smartphones are playing an important role. So building mobile applications for smartphones especially for Android is popular direction of modern IT-technologies.

Android OS is installed on millions of devices: smartphones, communicators, tablets, netbooks and others. Its peculiarity is that it is an open and free platform on which anyone can install a variety of applications. The choice is almost unlimited. Also, the creators offer a set of handy tools for development and well-documented SDK (Software Development Kit).

Android is a mobile operating system (OS) based on the Linux kernel and currently developed by Google. Over 80% of all smartphones in the world are controlled by OS.

The purpose of this study is to examine the basic concepts of software development for Android OS, analysis and study of programming languages which are used to create applications for Android OS.

A programming language is a computer language engineered to create a standard form of commands. These commands can be interpreted into a code understood by a machine. Each language has a unique set of keywords (words that it understands) and a special syntax for organizing program instructions.

One of the oldest programming languages, the FORTRAN was developed by a team of programmers at IBM led by John Backus, and was first published in 1957. The name FORTRAN is an acronym for FORMula TRANslation, because it was designed to allow easy translation of math formulas into code. [3]

The majority of the applications for the Android OS are written on Java.

Java is one of the most important and most popular computer languages in the world. In addition, it maintains its leadership over the years. Some other languages' influence has decreased over time, but Java became only stronger. [1, p.29]

Thanks to Java, the modern smartphone revolution was possible, because it is used to write applications for Android. The main reason for the success of this language is its rapid variability. Since the first release of 1.0, it continuously adapts to changes in the programming environment and approaches to programming. [1, p.29]

C ++ is the second most popular programming language for building applications for Android OS. This language was created by Bjarne Stroustrup in the Bell Laboratories company in 1979. Stroustrup built C ++ on the foundation of C, including all its tools, attributes and its main advantages. [2, p.25]

C ++ is designed to develop high-performance software and is extremely popular among programmers. Thus it provides a conceptual foundation on which other programming languages are based. [2, p.25]

Market of mobile application development for Android OS is extremely wide. Analysts of Canalys (it's the leading global company) calculated that in 2016 the volume of world market of mobile gadgets will exceed 1.2 billion devices. Therefore the theme of developing such software is very relevant to the study.

Studies shows that both of these programming languages have their advantages and disadvantages, but Java is the best for full mobile application development on Android OS.

LITERATURE

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