

## On the Influence of Different Programming Languages on the Development of Computer Application Software

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*Abstract: In the statistical table of employment situation of college students in my country released by the National Bureau of Statistics last year, college students majoring in computer science still had the highest employment rate. And in terms of salary, computer-related positions were also one of the jobs with the highest average salary. Especially the engineers who hold software development positions, the salary is far more than the average salary of college graduates. Therefore, under the employment-oriented transition, computer related majors are still popular majors for students to apply for. In software development, programming language is one of the most basic and important tasks. Only by choosing a suitable programming language can the next step of design work be carried out. On the contrary, it will greatly affect the subsequent work.*

*Keywords: different programming languages; computer; application software development*

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### 1. INTRODUCTION

With the arrival of the information age in the 21st century, a large number of high-tech equipment, mainly computers and mobile phones have become the carriers of people's daily life, work, and study, they have truly become an indispensable demand for young people today[1]. According to industry insiders, it is the development and utilization of software for the normal operation of computers and mobile terminals[2]. For those engaged in programming, programming languages have a great influence on software development. There are many programming languages on the market, and each programming language corresponds to a different field and has different functions. Therefore, we should be careful when choosing programming languages, read up on the nature and scope of each programming language. Senior programming practitioners will treat choosing a suitable programming language as a technical focus, a suitable programming language will be of great help to subsequent work. For example, the workload is reduced, the difficulty of the work is reduced and the work efficiency is improved [3].

### 2. PROGRAMMING LANGUAGE

#### 2.1 C language

C language is the most common and widely used computer programming language on the market today. It appeared in the middle and late 20th century, after decades of continuous development, and continuously upgraded by programmers. The current C language has many features that other

programming languages do not have. Most other programming languages are based on the C language as a basic template to extend a certain field. This also forms the strong compatibility of C language. If C language is applied in software development, the software can be applied not only to this computer, but also to other computers. Function C independent subroutine is the main component of C language, and it is relatively simple in language maintenance and language writing.

**2.2 C++**

C++ was born based on the problems in the promotion of C language, it can be said that the C++ programming language inherits all the functions of the C language. On the basis of C language, the defects in application are upgraded to form a new generation of programming language with complete and powerful system. As the C language continues to be known by people, C++ language as an upgraded version is also beginning to circulate in the market. With its strong performance in various fields of application, it has been widely recognized by people, it has become the most popular programming language for current programmers, it has also become one of the more difficult programming languages. However, under the condition of multi-function, its utilization rate is very high, and the convenient use step opens the convenient door for the work of using computer. There is still a saying among programmers that those who get C++ will win the world. This means that after learning C++, it will not be difficult to work or learn other programming languages.

**2.3 Java and C#**

The emergence of Java and C# are closely related to C++, just as the emergence of C++ is based on C. The birth of the Java language is also based on solving the problems of the C++ language in practical applications. Therefore, the Java language inherits all the advantages of the C++ language and discards its shortcomings. The birth of C# like the birth of C++ and Java is a new language developed based on the current programming language. C# mainly draws on the advantages of Java and has its own characteristics.

C# and Java are similar, both are better object-oriented languages. C# will perform special processing and introduction of ValueType, so it is more complicated than Java. VisualStudio will assist the use of C#, so it is easier and more convenient to use. Java and C groups each have their own advantages. Java is widely used in Symantec Visual Cafe, JFC, Java Dynamic Management Kit and other tools and software development.

**2.4 Pascal language**

Pascal language belongs to the category of computer high-level language. It has more powerful adaptive functions, stricter structured form, richer data, and faster running speed[4].

In short, the existence of things has the value and meaning of their existence, While C# is evolving under several other languages, the other languages have their own advantages and remain unique in their scope of use. Software development technicians should use a suitable programming language as the basis for software development, take the final use effect as the goal, and be familiar with multiple programming languages to reduce work pressure and improve work efficiency.

Name	Origin	Features
C Language	C language is the most common and widely used computer programming language on the market today, and it appeared in the mid to late 20th century.	It has strong compatibility
C++	The C++ language inherits all the functions of the C language, and upgrades the defects in its application on the basis of the C language.	High utilization rate, easy to use
Java	Therefore, the Java language inherits all the advantages of the C++ language and discards its shortcomings.	Better object-oriented language

C#	C# borrows mainly the advantages of Java while having its own characteristics.	C# will perform special processing and introduction of ValueType
Pascal	Pascal language belongs to the category of computer high-level language.	The structured form is stricter, the data is richer, and the operation speed is faster.

### 3. PRINCIPLES OF SOFTWARE DEVELOPMENT

The most important principle of software development is to ensure actual application. In the software development process, you first need to select the appropriate programming language, the technical staff must first have a clear understanding of the specific application direction of the software, according to the characteristics of the software to find the same programming language. Secondly, if part of the code cannot be understood when choosing a programming language, programmers should immediately rewrite it to ensure that the same industry has a general understanding of the code, so that users can get started as soon as possible.

#### 3.1 Overall structure

In the early stage of software development, technical personnel will do a lot of work, and have a preliminary grasp of the overall structure, the choice of programming language, and the composition of the entire system. After selecting a programming language, technical personnel do not necessarily need to write in exactly the same programming language. The programming language should also be reasonably arranged in combination with the specific functions of the software. For operations with high investment costs, such as cryptography, signal processing, video processing, and graphics rendering, technical personnel must go through multiple arguments and carefully consider.

#### 3.2 It is best to use a more familiar language

In software development, it is best for technicians to choose a programming language that they have a solid grasp of, on the one hand, the benefits of doing so can reduce working time and improve efficiency; on the other hand, you have an accurate grasp of the software development progress, so that you will not miss the agreed time. And in the programming language with a solid application mastery, it can also be adjusted for its inapplicability and creatively written. For example: when developing some software that processes files repeatedly, a simple and widely used programming language should be selected. If there is a language specifically for repetitive tasks, it should be used first.

#### 3.3 The basic condition for software development is to have a hardware environment

In the process of software development, familiarity with the hardware environment is also an important step. After the hardware equipment is upgraded, the original programming language may not be able to match the current version, causing the computer to malfunction and refer to the customer. Therefore, the programming language must be carefully selected before program development to maintain the long-term stable operation of the program. And this is the only way to ensure that any programming language can be implemented and adjusted quickly.

#### 3.4 When choosing a programming language

When choosing a programming language, it is important to check whether its operating environment is appropriate. This is because programming languages have their specific operating environment. If the operating environment is changed, some programming languages may not run. Therefore, if you want the program to run normally and stably, you must choose a suitable programming language. Especially in the information age nowadays, computers have already been popularized. Customers

will also come into contact with hardware during use, understand the performance of some hardware, and prefer computers with superior performance when they buy.

#### **4. CONCLUSION**

In a word, with the continuous development of high technology, more computer programming languages will appear on the market in the future. Each programming language corresponds to different software, show different roles in their respective fields, and the emergence of every programming language has its own value. Technicians should have a deep understanding of each programming language in their daily work, and they can choose the appropriate programming language according to the requirements of software, so as to improve work efficiency and shorten project time.

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