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Selection of Programming Language in the Development of Computer Application Software

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Abstract: Research showed that the popularization of the Internet among people can be attributed to recent years' continuous development of science and technology, making it an important part of people's daily life. Researcher showed that, for the better development of software application, the related staff should throw themselves actively into the appropriate selection and application of programming language. The variety of the programming languages in network system have imposed a restriction on the optimization of programmers' level, as a result, developers often find it difficult to effectively implement the application of relevant programming languages. The appropriate management of this problem requires active analysis of the various programming languages, and it also has becoming an important issue in the development of China's Internet industry. Aiming at promote the level of computer software development. This article explored the programming language selection under the process of computer application software development.

Keywords: Computer Software; Internet; Programming Languages; Optimization Suggestions

Recent years have seen, with the popularization and development of the network, the gradually penetration of computer application software into every aspects of people's daily life and which benefits them a lot, winning computer application software highly recognition of the broad masses of people. The developer signified that as a result, the further master of the advantages of the various programming languages with active analysis of the various programming languages can assure and support the reasonable realization of the development of relevant computer application software and optimize the performance of computer software. At present, with the continuous development of the network, China's computer application software industry has been greatly developed. However, on the specific software development issues, some of the staff still have some shortcomings in the choice of programming language waiting to be improved. Therefore, it is of positive significance and value for the healthy development of China's software industry to do a good job in programming language research.

1. The main languages of the development of computer software development

1.1 C programming language

Between the quality of assembly language and high-level language, C language is characterized by clear structure, high code writing quality and high efficiency. Among all of this, with its structural advantage, C language can effectively realize the reasonable guarantee of module program process, which is of great value to the development of the software systems' maintenance and

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adjustment. At the same time, its strong portability makes it possible for programmers to make reasonable application on all kinds of devices. Besides, the relative higher programme quality of code is helpful for the promotion of the executive efficiency of software system[1].

1.2 C++programming language

As an extension of C language, C++ language effectively inherits the advantages of C language. The effective introduction of the newly programming thinking has met the appropriate needs of the application of different programming projects[2]. At the same time, it helps to ensure the reasonable operation of the software system with the highly development power and high execution efficiency.

1.3 JAVA programming language

All in all, the strong simplicity, portability and security of JAVA programming language can effectively ensure the stable working of the computer system, which have made it widely acceptable among developer. Besides, its automatic masking function can ensures the operators effectively avoid the illegal memory operation problems in the process of the use of JAVA language. Based on this language, relevant personnel can effectively realize the efficient reference to the initial problems of software development, which is of great significance and value to the guarantee of the comprehensive performance of software[3].

2. Different programming languages with different applications

2.1 C programming language

C language is mainly applied to the development of hardware drivers, intermediate devices, underlying embedded systems, industrial control, compiler, etc.

2.2 C++programming language

With its relative strong compatibility, C++ language is both applicable as the senior language and basic language. At present, the C++ language is widely used in the developing of all walks of life including simulation, E-mail, communication systems, and user interface. At the same time, relevant data show that the programming language also has a strong application in the field of scientific computing[4].

2.3 JAVA programming language

JAVA language is widely used in C/S architecture, WEB application, system programming and embedded system development. At present, the language is widely favored by enterprises in the development of applications. Relevant studies show that this programming language has been highly recognized and applied by a large number of practitioners.

3. Key principles for programming language selection

3.1 Selection based on the fields of software application

In terms of the domain of software applications, the object-oriented software development should base on the C++ and JAVA languages. If the software is primarily oriented towards engineering calculation or artificial intelligence, then the FPRTRAN and PROLOG language should be chosen respectively.

3.2 Selection based on the needs of software application

From the aspects of software, if the content involved in the follow-up maintenance and debugging of relevant software is relatively complex, in order to ensure the stability of the software, programmers should actively develop and apply high-level languages[5]. At the same time, if the relevant software has higher requirements for operation practice and storage space, the basic language should be chosen for software development.

3.3 The processed software industry as the standard for selection

Analysis according to the walks of life the computer application software belongs to, the bottom layer or hardware needs C language as its development language. As for the communication field, C++ language should be the best choice, while when it comes to enterprise project development, JAVA language should be selected for software development.

3.4 Selection based on the advantages of the programming language itself

Choices based on the advantages of the various

programming language in the process of software development are to the benefit of the optimization about the software performance. About this problem, the related analysis asserted that C language and C++ language can effectively meet the requirements of the underlying program operation, which is of great significance and value for the reasonable optimization of system performance. Compared with it, the JAVA language is superior in terms of compatibility and porting performance. Therefore, the appropriate application of the JAVA language can assure the relevant researchers significantly improve its software operation level to realize the reasonable operation of the platform system[6].

3.5 Selection based on the actual needs of software developers

In the process of editing programs, all kinds of languages are compatible. In this case, programmers can make reasonable choice of programming languages according to their own preferences to effectively ensure the fluency of programming process.

4. Suggestions on programming language selection

4.1 Make reasonable consideration of the internal and external environment of the software

As the main environment of computer software operation, hardware environment has an important influence on the reasonable operation of software. Therefore, in the process of software development, relevant programmers should effectively analyze and explore the internal environment of the computer, so as to reasonably ensure a good matching degree between software performance and hardware environment. At the same time, the operating environment of hardware environment should effectively ensure the adaptability of software writing and external system environment, and make timely and reasonable adjustment of the software in the process of writing.

4.2 Make effective analysis of the applicable scope of programming language

In general, based on the differences of different programming languages in design, the corresponding design content in the application process also has some problems. Therefore, in order to further realize the scientific selection of programming languages, the researchers suggest that programmers should properly analyze the applicability of different languages in the process of writing relevant programs, so as to further enhance the application value of programming languages in the process of application[7].

4.3 Respect the programming language usage habits of programmers

From the above programming language selection principle, it can be seen that in the process of language editing, different languages have different contents in the application process, but they also have common applicable fields. Practice shows that, in the field of common applicable effective respect programmers personal language used in the preparation of the related software, is advantageous to the reasonable drive to promote the efficiency of software programming and perfect, thus further promote reasonable writing software quality improvement and optimization, for programming effect significantly increased with the improvement is of great importance and value. At the same time, from the perspective of software development cost, the rational application of relevant languages is conducive to the improvement of programmers' work efficiency and plays a positive role in the control of software development cost.

5. Conclusion

Overall, as a project with strong complexity, the development of computer application software involves a lot of content. Therefore, in order to reasonably realize the expected effect of the software, relevant staff should actively develop and design relevant software so as to reasonably select the programming language to write the software in a reasonable manner. In the specific work, in order to further realize the reasonable satisfaction of this purpose, the staff should make reasonable analysis of the characteristics of different programming languages and their applicable fields, so as to further realize the optimization and improvement of software performance. In terms of the selection of programming language, the researchers said that the staff should follow the selection principle of programming language to analyze relevant contents, so as to actively promote the improvement and optimization of computer application software in China.

References

1. Geng C. On the influence of different programming languages on the development of computer application software (in Chinese). Software (Educational Modernization) (Electronic Edition) 2019; (2): 28.
2. Li X. On the influence of different programming languages on computer application software development (in Chinese). Journal of Yan'an Vocational & Technical College 2018; 32(2): 72–74, 79.
3. Gojian. The influence of different programming languages in the development of computer application software. Modern Industrial Economy and Information Technology 2019; 9(2): 94–95.
4. Zhang W. Exploring the influence of different programming languages in the process of computer application software development (in Chinese). Information Recording Materials 2018; 19(1): 89–90.
5. Guan H. Brief discussion on the influence of different programming languages in the development of computer application software (in Chinese). Peak Data Science 2019; (8): 26–27.
6. Li R. Practice analysis of Java programming language in computer application software development (in Chinese). Digital Communication World 2018; (8): 187.
7. Xiong W, Zhang L. Influence of different programming languages on computer application software development (in Chinese). Science and Technology Communication 2008; 10(18): 76–77.