Construction of Guiyang Tobacco Commercial Computer Software Configuration Standard System

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Abstract: This paper combines the situation of computer software configuration, maintenance and scrapping of Guiyang Tobacco Commercial Company to discuss the improvement of software reliability, maintainability and portability, so as to improve the quality of software products. Improve software productivity, that is, by standardizing the process and requirements of software development and system operation, reduce the development and production costs, so as to improve efficiency. It is beneficial to reduce the cost of software products and operation and maintenance costs, and shorten the software development cycle. Promoting innovation and competition, the standard system provides support for innovation and competition in the field of computer applications, which can reduce development and production costs and improve efficiency, thus encouraging innovation and competition.

Keywords: Computer software; Standard system; Configuration

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1. Significance of the Software Configuration

From a macro point of view, the computer software configuration is the foundation of a computer. From the micro level, the computer configuration is the basic function of the computer. In the hardware design of the computer software, whether the configuration is reasonable directly affects the overall performance of the computer, and whether the configuration of the computer software in the hardware equipment is reasonable also directly affects the overall performance of the computer software. Therefore, further research on the configuration of computer software and hardware equipment is needed. Based on analyzing the basic configuration of computer software, this paper designs the standard system of computer software equipment configuration. By studying the rational configuration of computer software management tools, a reasonable configuration of computer hardware and software equipment can be made.

Computer software configuration is a crucial part in the use process of computer system. In the process of computer operation, it is of great significance to the operation of computer system, and also plays an irreplaceable role in the normal operation of computer software system. The rationality of computer configuration will affect the use effect of computer software. When the computer fails, due to some reasons, the computer can not operate normally, then the computer hardware and software system will fail. Therefore, the rational configuration of computer software is of great significance to improve the efficiency of computer operators and ensure the safe operation of the computer.

2. Computer Software

Computer software is a collection of programs, data, and instructions that exist in digital form and perform a variety of tasks and functions through the hardware resources of the computer. The software acts as the brain of a computer system, enabling it to process data, execute instructions, run applications and provide a user interface.

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3. Type of Computer Software

Computer software can be divided into the following several main types.

Operating system software: The operating system is the core software of the computer system, responsible for managing and controlling the hardware resources of the computer, and providing the interface for users to interact with the computer, such as Windows, macOS, and Linux.[1]

Application software: Application software is a program developed for a specific task or function, used to meet the various needs of users. This includes word processing software (e. g. MicrosoftWord), spreadsheet software (e. g. MicrosoftExcel), graphics design tools, multimedia players, games, etc.[2]

Middleware: Middleware is the software layers that connect different applications and systems, enabling them to communicate and collaborate with each other. This includes database management systems (e. g. Oracle, MySQL), messaging middleware, Web servers, etc.[3]

System Tools and Utility: These software are used to perform various computer maintenance tasks such as antivirus software, file compression tools, backup and recovery tools, system performance monitoring tools, etc.

Embedded software: This type of software is embedded in devices and machines, used to control and manage various electronic devices, such as smartphones, home appliances, car control systems, etc.

Computer software plays a key role in all fields, from the daily lives of individual users to enterprise and scientific research. They enable us to automate tasks, process large amounts of data, increase work productivity, and create innovative solutions. Therefore, software development and management are crucial to modern society and require careful planning, development, maintenance, and management.

4. Computer Software Purchase

Purchasing the computer software can be done through the following ways Official website purchase: Most software has an official website, which provides software download and purchase services. You can buy the required software through the search engine or the official website of the software.

Third-party platform purchase: in some e-commerce platforms or software stores, there are computer software purchase options. These platforms have a large number of software for users to choose from, and the price is relatively transparent and more selective.

Agency purchase: in some cities or specific areas, there are computer software agencies. These companies sell specific software and can provide more professional service and after-sales support.

Second-hand market purchase: in some second-hand platforms or forums, you can find second-hand computer software. These software may have some discounts, but pay attention to the source and quality of the software.

5. Market Price of Computer Software

The market price of computer software varies according to the software type, function, supplier, region and many other factors. Here are the market prices for some common computer software:

Microsoft Office2019 (Standard edition and professional edition): the price is 245 yuan and 310 yuan respectively.

Microsoft Windows10 (Home edition and professional edition): the price is 88 yuan and 175 yuan respectively.

Adobe Photoshop (CC version and CS6 version): the price is 588 yuan and 350 yuan respectively.

AutoCAD2019 (32 bit and 64 bit versions): 140 yuan and 160 yuan respectively.

Solid Works2019 (Standard version and enterprise version): the price is 1200 yuan and 3600 yuan respectively.

MATLAB (Basic edition and professional edition): the price is 620 yuan and 1795 yuan respectively.

Spatial Dynamic Modelling Package (SDMP version 4.4 and SDMPStarter): the price is 3,165 yuan and 635 yuan, respectively.

IBM SPSS Statistics (Basic edition and advanced edition): the price is 780 yuan and 2675 yuan respectively.

6. Computer Software Development

To develop computer software according to the requirements requires software development, and the general steps of software development include analysis by requirements, design, coding, testing and maintenance stages. Here are some of the basic steps to create the computer software:

(1) Requirements analysis: determine the function and performance requirements of the software, and clarify the usage scenarios and user requirements of the software.

(2) Design: According to the requirements analysis results, carry out software design, including system architecture, module design, database design, interface design, etc.

(3) Coding: According to the design scheme, use the programming language for encoding implementation.

(4) Test: Test the coded software, including some unit test, integrated road test, software system test, etc., to ensure the quality and performance of the software.

(5) Maintenance: Maintain and upgrade the published software, fix the vulnerabilities and errors in the software, and improve the usability and stability of the software.

7. Computer Software Development Budget Price

The computer software development budget price can be determined according to the complexity of the software development work and the chosen development method.

If you choose the third-party platform template self-service development, the price is about 500 to 2,000 yuan.

If you choose the software outsourcing company fixed template and secondary development, the price is about 1,000 to 20,000 yuan.

If you choose a software outsourcing company to fully customized development, the price is about 30,000 to 300,000 yuan.

If the choice is self-built development team independent development, the price is about 200,000 to 600,000 yuan.

The specific price should be determined according to the specific development needs and the quotation of the development company.

8. Use License Period

Use license refers to the agreement concluded between the right holder and the user to establish the rights and obligations of both parties. According to this agreement, the user does not enjoy the ownership of the software, but can exercise the right to use the software in the agreed way at the time and place agreed in the agreement.

This kind of use license is different from the transfer of rights, without the transfer of ownership or the change of the owner. The vast majority of software transactions are now using licensing forms, such as distribution licenses, copying production licenses, etc. Usually, when buying a set of software in a software store, or the system software randomly attached to a computer, the buyer enjoys not the ownership or copyright of the software, but only the right to use it. The contract for the software generated in this transaction is the software use license contract.

9. The Significance of Computer Software Life-cycle Management

The significance of computer software life cycle management is that it can guide the practice of software development and reflect the essence of software development. Specifically, software lifecycle management covers the entire software development lifecycle, from requirements analysis, design, coding, testing, publishing, to maintenance. By implementing the appropriate tasks and methods at each stage, software lifecycle management ensures that the quality, efficiency, cost, and risk of the software are effectively controlled. Here are some specific meanings.

Improve software quality and efficiency: By implementing quality control and optimization at all stages of the software life cycle, you can reduce errors, improve code quality and software operation efficiency.

Reduce software cost and risk: Through effective demand analysis and design, redundant and unnecessary development work can be avoided, thus reducing the cost and risk of software development.

Management Software Projects: Software lifecycle management can help project managers better plan and manage software projects. By clarifying the tasks, schedules, and resource requirements for each phase, resources are better allocated to monitor project progress, and ensure timely delivery.

Improve the professionalism and competence of software engineers: By following all stages of the software life cycle, software engineers can better understand user needs, design reasonable software architectures, write high-quality code, conduct effective testing and maintenance, and discard obsolete software in a timely manner. This plays a positive role in improving the professional level and ability of software engineers.

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