Software Development Processes

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1.Introduction

The general process of software development process that software design ideas and methods, including the function of software design and implementation of algorithms and methods, software, the overall structure design and module design, programming and debugging, program debugging and testing and prepared and submitted to the procedures and so on a series of operations. [Geoffrey 2004]

requirement analysis

1. The related system analyst to the user a preliminary understanding of the demand, and then use tools list the major functional modules of system development, and each function module has what function module, for some demand is clearly related to the interface, in this step can be preliminary defined small amount of interface.

2 systems analysts have a thorough understanding and analysis of requirements, according to their own experience and needs with WORD or related tools and then make a document system functional requirements document. This document will be clearly listed in the system function modules of general function modules, which has a small function module, and also lists the related interface and interface function.

3 to confirm the user demand system analyst.

Software development process outline design

First, the developer needs to design the software system, that is, the system design. Outline design of the system software design are considered, the basic process includes the system, the system organizational structure, module division, function distribution, interface design, operation design, data structure design and the design of the error, for the detailed design of the software provides the basis.

Software development process detail design

On the basis of the summary design, the developer needs to carry on the detailed design of the software system. In the detailed design, describe implementation of the key algorithms involved in specific modules, data structure, class hierarchy and call, to illustrate various levels of a software system of every (each module or subroutine) program design considerations, in order to code and test. Should ensure that the requirements of the software are distributed to the entire software. Detailed design should be sufficient in detail, according to the detailed design report for encoding. [Markus 2007]

Encoding software development process

In the coding stage, developers according to the requirements of the report on the detailed design of the software system design of data structure and algorithm analysis and module realization, began to specific written procedures, respectively, to achieve the function of each module, to achieve the goal of system functionality, performance, interface, interface. In the standardization of the development process, coding in the whole project process does not exceed a maximum of 1 / 2, usually in 1 / 3 of the time, so-called brothers do not misuse wood work, complete the design process of good, coding efficiency will be greatly improved, coding schedule coordination between different modules and is the need to be careful, perhaps a small module may affect the overall progress, let many programmers therefore forced to stop working and waiting, this kind of problem in many research and development process. Code of mutual communication and emergency solution is very important, for the programmer, bug exists forever, you must always face the problem, famous Microsoft, had not for three months, patch? Never!

Software development process test

Test writing system. To the user to use, after the user to use one of the confirmation of each function.

Software testing has a lot of kinds: in accordance with the test execution can be divided into internal and external testing, in accordance with the scope of the test can be sub module test and overall debugging; according to the test conditions, test for normal operation and abnormal testing can be divided into; in accordance with the test input range can be divided into full coverage testing and sampling tests. The above are well understood, no explanation. In short, the test is also a very important step in the research project, for a large software, 3 months to 1 years of external test is normal, because there are always exist unforeseen problems. After the completion of the test, and acceptance is completed and finally some of the help documentation, the whole project had ended, of course, the future less upgrade, repair and so on, as long as they do not want to through the sale of a hammer scam, tracking software is necessary to stop the operation status and continue to repair upgrade, until the software was completely eliminated so far.

2.Overview

For example, a company would like to find someone to build a set of personnel management software, from a certain channel that a software development company to provide such services, so the contact. [Richard and Barry 1986]

Software development company will send a specialized software engineer to them to understand we want to design a what things to the user to use, and then come back to do a plan for them, of which the contents of the program include: developed software or interface is how? To facilitate the use of what people? What function can be used by any person? To what extent? What about the hardware requirements, and so on?

After the user to see the program, it is determined that they want to do a set of such software, developers began to develop the software.

Development of the developed software to users, which in the use of the process where the use is not convenient or where up to the requirements, party development will first time to modify these functions,

until the user requirements of all function can perfectly solve off.

Users if the company needs to grow and grow, the need to upgrade the software developers will do the functional development.

3.Conclusion

In summary, the software development process is generally divided into the following six steps:

1 system analysts and users a preliminary understanding of the demand, then use word list the major functional modules of system development, and each function module has what function module, for some demand is clearly related to the interface, in this step can be preliminarily defined amount of interface.

2 systems analysts have a thorough understanding and analysis of requirements, according to their own experience and needs with WORD or related tools and then make a document system functional requirements document. This document will be clear in the case of the general function of the system module, function module which is a small module, and also an example of the relevant interface and interface functions.

3 systems analysts and users need to confirm the demand again.

4 the system analyst according to the requirements of the document to confirm the requirements of the interface and functional requirements, using an iterative method for each interface or function to do the system design summary.

5 system analyst to write a summary of the design of the document to the programmer, the programmer based on the case of one of the functions of the preparation.

6 test prepared system. To the user to use, after the user to use one of the confirmation of each function, and then acceptance.[Barry 2000]

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