software development process

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Abstract

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 operation

Overview

So, I provide some of the software development process, I give an example:

You are the boss of a software development, I is a software development staff, make a determined effort to atone for your company and engaged in many other business personnel, a day's work began

A customers to our company, first by the receptionist reception and ask asked him to develop what software (type), and put his questions submitted to the program planners, this is not enough, the next day, planning personnel to interview with clients, the content is the software need what kind of function, and give reasonable suggestions, and evaluated against a certain function, whether to meet, because the customer requirements are sometimes impossible to complete the. After all, he is a layman). After his understanding of customer requirements, and the software detailed decomposition, and finally decide whether to accept the development of the software, the decomposition process is like this:1 list the function of the software table: for every problem, there is a detailed description

2 according to the function table, several modules of the software are developed.

And cut according to the complexity of the module, decide whether to continue to divide more detailed module

3 detailed decomposition of the relationship between the modules, and draw the relationship between the drawings. I called him "the flow chart of the program"

Do a good job in the above, you can distribute all the modules to ordinary program designers, designers according to the requirements of the module, the design of their own program module, the specific work is:

1 decomposition of the module problem, and specify a feasible algorithm.

2 according to the algorithm, draw the flow chart,

3 according to the flow chart and algorithm, write the program code

4 on the machine running.

5 find the error of the program.

6 to return to the third step, modify the code, to continue the fourth step, the 5 step

Until there is no error in the program,

Every programmer has done his job,

And the module code, flow chart and other secure submitted to the program planners, planning officials took the code after the preparation of the (main program) function of the main purpose is each main module and together, forming a complete program. In this process, there may be the possibility of rework and modification of the error. Until the procedure is complete.The following work has been completed by the test staff

Black box test, white box test.

Black box testing: by non designers, to put forward a number of extreme, demanding,

and the wrong requirements, see if the program can run normally. If not, repair the program.
White box testing: there are program designers to provide a reasonable, comprehensive requirements, see the program can be run, if not, modify.
After testing, the program has been designed. The reception personnel of the program submitted to the customer, and the customer satisfaction, debugging, running, pay.

About model

The software process is a framework for a series of tasks to be completed in order to obtain high quality software, which provides the steps to complete the task. A life cycle model is usually used to describe the software process concisely. The life cycle model provides that the life cycle is divided into stages and each stage of the implementation of the order, therefore, also known as the process model. The common process models include waterfall model, rapid prototype model, incremental model, spiral model, fountain model, etc..

waterfall model

This feature has a double meaning:
1 after the completion of the previous phase of the work, in order to begin the next phase of the work;
2 the previous stage of the output of the document is the first phase of the input document, therefore, only the output of the previous stage of the document is correct, the latter stage of the work to get the correct results.

Spiral model

The basic idea of the spiral model is to minimize the risk by using the prototype and other methods. A simple way to understand this model is to take it as a rapid prototype model of the risk analysis process before each phase.
The large-scale software project spiral model is mainly applicable to the internal development. If the risk analysis costs nearly the entire project budget, the risk analysis is not feasible. The fact that the project is greater, the greater the risk, so the necessity of risk analysis is also larger. In addition, only the internal development of the project, in order to abort the project when the risk is too easy.
The main advantage of spiral model, it is a risk driven, but it may also be a weakness of it. Unless the software developers have rich experience in risk assessment and the specialized knowledge, otherwise there will be real wind: when the project actually is heading for disaster, developers may also believe that everything is normal.

About project Schedule

The project schedule is in determining based on the completion of the required time, according to the corresponding workload, on the working process of the complete sequence, stop time, mutual connection and required to complete the project labor and labor supply of specific planning and CO ordinating arrangements are needed.

Summary

I have a certain understanding of the software development process, I know that software development is a need to work together to complete the work of many people. In the process of development, each person must make clear their own part of the time to set a certain time to complete, try not to drag time, because it will affect the entire development time.

My references are from a book called <Agile Software Development>