software development processes

Yicheng Zhang
Student num:13211245

Abstract

Software development mode is divided into waterfall, prototype, incremental, RUP .Different development modes have different characteristics.

1 Introduction

Waterfall model:

The core idea of the waterfall model is to simplify the problem according to the working procedure, to separate the function and the design, to facilitate the division of labor and cooperation, to separate the logic implementation and physical realization by using the structured analysis and design method. Will divide the lifecycle of software for planning, requirement analysis, software design, programming, software testing, operation and maintenance of six basic activities, and provides them from top to bottom, and mutual convergence of fixed order, like a waterfall, step by step the whereabouts.

Prototype model:

The prototype model provides a prototype to the user access to the user feedback, so that the software can truly reflect the needs of users. At the same time, prototype model by stepwise refinement method improve the prototype, the prototype is able to "rapid development", to avoid like the waterfall model as in the lengthy development process is on the user's feedback to make quick response. Relative to the waterfall model, the prototype model is more in line with the habit of developing software, and it is a kind of practical software survival model.

Incremental model:

The characteristics of the incremental model is the introduction of the concept of incremental package, do not have to wait until all the requirements are out, as long as the incremental demand a package out can be developed. Although an incremental packet may need further adapt to customer needs and change, but as long as the incremental packet is small enough, the impact is acceptable for the entire project.

RUP model:

According to Rational, as an online guide, it can provide guidelines, templates and examples for all aspects and levels of program development. RUP and similar products such as oriented object software process, and open process is understanding of software engineering tools, the development oriented aspects of the process and the development of other components are integrated in a unified Framework.

....