

Software Development Processes

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Software Project Management

Abstract

Because of the specificity of the software development, people need to understand some software process models before drawing up a plan. In addition, according to the model, people will make sure the stages of the software project and the task of each stage. This article will describe four software process models, which are Waterfall Model, V Model, Spiral Model and Prototyping Model.

1 Introduction

1.1 Software Process

the set of activities, methods, and practices that are used in the production and evolution of software.

1.2 Software Process Model

one specific embodiment of a software process architecture.

1.3 Functions of the model

- provide a common understanding
- locate any inconsistencies, redundancies and omissions
- reflect the development goals
- provide early evaluation
- assist the development team to understand any special situation.

1.4 Four software process models:

- Waterfall Model

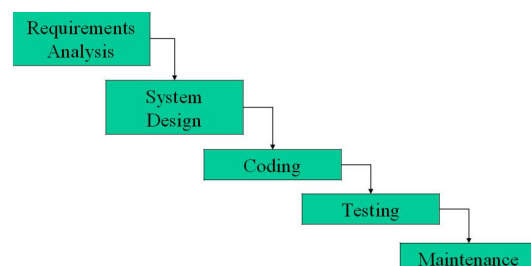


Figure1: The waterfall model is a sequential design processes, in which progress is seen as flowing steadily downwards like a waterfall. It is a classical one-shot approach. Besides it has limited scope of iteration and long cycle time.

- V Model

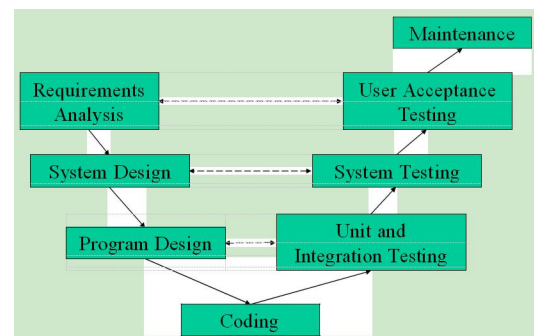


Figure2: V Model has additional validation process introduced. This model relates testing to analysis and design, and loop back in case of discrepancy.

- Spiral Model

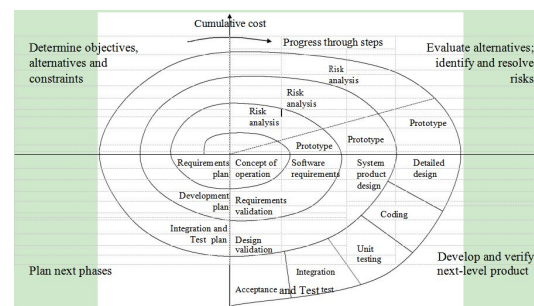


Figure3: Spiral Model needs to discriminate, analysis and control risk before every stage. If the next stage wants to work, every risk should be solved.

- Prototyping Model

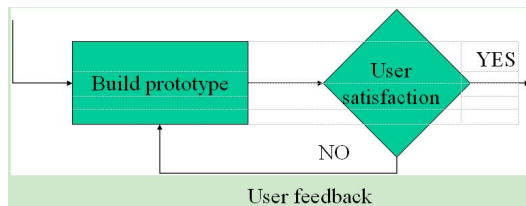


Figure4:Prototyping Model is a systems development method in which a prototype is built, tested, and then reworked as necessary until an acceptable prototype is finally achieved from which the complete system or product can now be developed.

2 Overview

Brief overview of the core principles, those models are easy to understand. And different model has its own characteristic. If we need to do a software project, we should choose a suitable model.

3 Summery

This article just gives a brief information of software development process and software process models. In addition, different model will give software project different effect.

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