

# Software Development Processes

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## Abstract

This short report gives a brief and concise explanation to know about the method of software development processes. The report has been formatted, so whether or not you are currently a software project manager, actively working on a project team, or completely in the dark about this mysterious field, this report has something for you. The report can help you understand the process of software development. It can help you develop software better.

Keywords: project, software engineering, project management, planning.

## Instruction

Software Process is the set of activities, methods, and practices that are used in the production and evolution of software. Software Process Model is one specific embodiment of a software process architecture. The sequence of events for the model are analysis, design, coding, testing and maintenance.

### analysis:

1. The system analyst knows the requirement of the user, and then use the relevant tools to list the system's function modules to be developed.
2. Systems analysts understand and analyze requirements deeply, according to their own experience and demand with related tools to make a document system functional requirements document.
3. System analyst confirms the requirement of users again.

### design:

Design is divided into outline design and detailed design. In outline design, developer need to consider the design of the software system,

Including the basic processing flow, system structure, function modules, interface design, operation design, data structure design and so on. In detailed design, developer need to describe the main algorithm, data structure, class hierarchy and call relationship of the implementation of specific modules. Detailed design should be sufficient in detail, according to the detailed design report for encoding.

### coding:

Developer starts a specific programming work according to **Software System Detailed Design Report** to achieve the function, performance, interface, interface and other aspects of the target system.

### Testing:

Testing is to test writing system. After using, the user confirms each function one by one. There are many kinds of software testing such as external testing, internal testing, module test, overall alignment and so on.

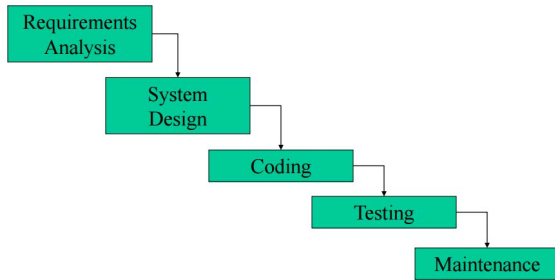
### maintenance:

Developer need to make all or part of the changes about the application according to environment change or the change of user requirement.

## Module

Software Process Model is one specific embodiment of a software process architecture. Module can provide a common understanding, locate any inconsistencies, redundancies and omissions, reflect the development goals and provide early evaluation, assist the development team to understand any special situation. Software Process Models have Waterfall Model, V Model, Spiral Model and so on.

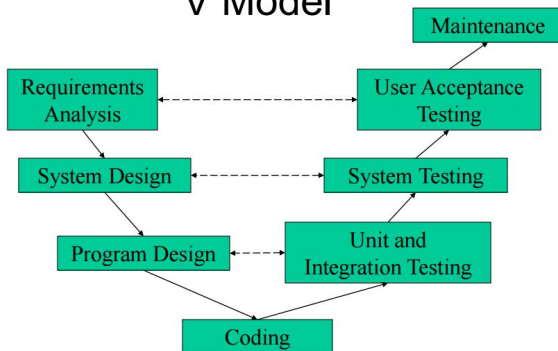
## Waterfall Model



Waterfall Model (cont' d):

- 1.classical
- 2.one-shot approach
- 3.effective control
- 4.limited scope of iteration
- 5.long cycle time
- 6.not suitable for system of high uncertainty

## V Model



V Model (cont' d):

- 1.Additional validation process introduced
- 2.Relate testing to analysis and design
- 3.Loop back in case of discrepancy

## Method

The software development method is a method that uses the technology set and the symbol to express the habit to organize the software production process. The method mainly have the structural method, Jackson method, Vienna development method and the object oriented development method.

### the structural method:

The structural method is a traditional software development method. It is composed of three parts, which are structured analysis, structured design and structured programming. basic thought: The process of solving a complex problem in stages, and this decomposition is top-down, layer decomposition, so that each stage of processing problems under the control of range of the people easy to understand .

### Jackson method:

M.A.Jackson has put forward a kind of software development method that is still widely used in 1975. This method is especially effective for input and output data structure clearing in small systems, such as processing form documents for business applications. Jackson structure diagram is used to describe the data structure in the order, select and repeat.

### the object oriented development method :

It is a systematic method to apply the idea of object-oriented to the process of software development. object-oriented is based on the concept of object to To understand, understand, describe the objective world and design, build the corresponding software system.

## Conclusion

The article can tell the reader about software development process. It can help understand the Software development process.

## Acknowledgements

I would like to think about the software development process. And I would enjoy the course trying my best to finish the report.

## References

1. ^ Jump up to: a b Producing Open Source Software: How to Run a Successful Free Software Project (e-book, freely downloadable), by Karl Fogel