Advanced Game Engineering

Zhu Yucheng
13211149
Zhejiang Normal University
Advanced Game Engineering

Abstract

In software engineering, a software development methodology (also known as a system development methodology, software development life cycle, software development process, software process) is a splitting of software development work into distinct phases (or stages) containing activities with the intent of better planning and management. It is often considered a subset of the systems development life cycle. The methodology may include the pre-definition of specific deliverables and artifacts that are created and completed by a project team to develop or maintain an application.
Common methodologies include waterfall, prototyping, iterative and incremental development, spiral development, rapid application development, extreme programming and various types of agile methodology. Some people consider a life-cycle "model" a more general term for a category of methodologies and a software development "process" a more specific term to refer to a specific process chosen by a specific organization. For example, there are many specific software development processes that fit the spiral life-cycle model.

In practice

A variety of such frameworks have evolved over the years, each with its own recognized strengths and weaknesses. One software development methodology framework is not necessarily suitable for use by all projects. Each of the available methodology frameworks are best suited to specific kinds of projects, based on various technical, organizational, project and team considerations.
Software development organizations implement process methodologies to ease the process of development. Sometimes, contractors may require methodologies employed, an example is the U.S. defense industry, which requires a rating based on process models to obtain contracts. The international standard for describing the method of selecting, implementing and monitoring the life cycle for software is ISO/IEC 12207.

A decades-long goal has been to find repeatable, predictable processes that improve productivity and quality. Some try to systematize or formalize the seemingly unruly task of designing software. Others apply project management techniques to designing software. Without effective project management, software projects can easily be delivered late or over budget. With large numbers of software projects not meeting their expectations in terms of functionality, cost, or delivery schedule,[citation needed] it is effective project management that appears to be lacking.
Organizations may create a Software Engineering Process Group (SEPG), which is the focal point for process improvement. Composed of line practitioners who have varied skills, the group is at the center of the collaborative effort of everyone in the organization who is involved with software engineering process improvement.

A particular development team may also agree to programming environment details, such as which integrated development environment is used, and one or more dominant programming paradigms, programming style rules, or choice of specific software libraries or software frameworks. These details are generally not dictated by the choice of model or general methodology.

Resource List

The project plan should contain a list of all resources that will be used on the project.
A resource is a person, hardware, room or anything else that is necessary for the project
but limited in its availability
The resource list should give each resource a name, a brief one-line description, and list the
availability and cost (if applicable) of the resource

What is a Risk Plan?

A risk plan is a list of all risks that threaten
the project, along with a plan to mitigate some or all of those risks.
The project manager selects team members to participate in a risk planning session:
The team members brainstorm potential risks
The probability and impact of each risk is estimated
A risk plan is constructed