

Def:

The Systems development life cycle (SDLC), or Software development process in systems engineering, information systems and software engineering, is a process of creating or altering information systems, and the models and methodologies that people use to develop these systems. In software engineering, the SDLC concept underpins many kinds of software development methodologies. These methodologies form the framework for planning and controlling the creation of an information system:[1] the software development process.

Overview

The SDLC is a process used by a systems analyst to develop an information system, training, and user (stakeholder) ownership. The SDLC aims to produce a high quality system that meets or exceeds customer expectations, reaches completion within time and cost estimates, works effectively and efficiently in the current and planned Information Technology infrastructure, and is inexpensive to maintain and cost-effective to enhance. Computer systems are complex and often (especially with the recent rise of service-oriented architecture) link multiple traditional systems potentially supplied by different software vendors. To manage this level of complexity, a number of SDLC models or methodologies have been created, such as "waterfall"; "spiral"; "Agile software development"; "rapid prototyping"; "incremental"; and "synchronize and stabilize".

SDLC models can be described along spectrum of agile to iterative to sequential. Agile methodologies, such as XP and Scrum, focus on lightweight processes which allow for rapid changes along the development cycle. Iterative methodologies, such as Rational Unified Process and dynamic systems development method, focus on limited project scope and expanding or improving products by multiple iterations. Sequential or big-design-up-front (BDUF) models, such as Waterfall, focus on complete and correct planning to guide large projects and risks to successful and predictable results[citation needed]. Other models, such as Anamorphic Development, tend to focus on a form of development that is guided by project scope and adaptive iterations of feature development.

In project management a project can be defined both with a project life cycle (PLC) and an SDLC, during which slightly different activities occur. According to Taylor (2004) "the project life cycle encompasses all the activities of the project, while the systems development life cycle focuses on realizing the product requirements". SDLC (systems development life cycle) is used during the development of an IT project, it describes the different stages involved in the project from the drawing board, through the completion of the project.