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SDLC Models Summary

The process of SDLC, also known as Software Development Life Cycle, is a framework that defines what needs to be done at each step of developing a software. This methodology can be utilized in several different models, all of which use the same six phases: Requirement gathering and analysis, design, implementation or coding, testing, deployment, and maintenance. The models, however, all differ in implementation of each phase.

The waterfall model is the first SDLC model to be used widely and is designed so that each phase would “flow” into the next, employing a stair-like design for its implementation. This model is employed usually through short-term projects due to its simplicity, with the main drawbacks of this model being that it does not suit complex projects very well, and it does not create a working software until very late in the cycle. To combat these drawbacks, the Iterative model was designed, which converts the phases into three different builds, all rooted from the Requirements stage. This allows for easy monitoring of progress and live feedback for each build but requires more management and is highly dependent on several phases to make progress. Finally, the spiral model was created, which uses four phases as quadrants and a central spiral of tasks to do. This allows for easy changing of requirements, and lets the user see the system more clearly at the cost of complex management and more documentation.

The SDLC models all greatly benefit those that are building software projects and require careful analysis from the developers towards which model best suits their project, where it will maintain the quality of software and increase the probability of finishing a software project in a designated timeframe.