

Test-Driven Design Methodology

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Abstract: In this presentation, we introduce a new software design methodology called Test Driven Design (TDD). It is based on TDD (Test Driven Development) in which the design is constantly addressed by writing test code first and then the production code. We assess the Traditional Software Methodology and its flows. We then propose a new evolutionary iterative and incremental approach for software development where the design is evolved to meet the requirements.

The new strategy of development is easy and cheap to apply, detect problems early, and easily adapts to changing requirements. Each iteration presents a small part of the total functionality which is acceptance tested. Continuous Integration is introduced earlier to find and remove bugs leading to reduced risk. We also look at the test frameworks, cost of change, ROI, benefits and limitations of the new Test Driven Design and provide evidence from industry that TDD leads to higher programmer productivity with higher code quality.