

SOFTWARE REQUIREMENTS ENGINEERING THROUGH FORMAL METHODS

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ABSTRACT

The goal of this work is to examine formal methods, their analogies, trends, environments, verification requirements, and their applicability to software engineering. The term "Formal Methods" describes approaches and tools that are rigorously mathematically used in the specification, design, and verification of software. In order to hasten the creation of requirement-based test cases, it also suggests a framework for a solution that uses formal methods. In addition, this addresses potential applications for this technique in a typical software development life cycle (SDLC). Also given are a few recommendations for certain formal method techniques that can help with partial or full automation of the auto generation of requirement-based test procedures or test scripts.

KEYWORDS: *Formal Method, SDLC, Engineering, Software, Hardware*