

Four Phase Methodology for Developing Secure Software

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Abstract : A simple and robust approach for developing secure software. A Four Phase methodology consists in developing the non-secure software in phase one, and for the next three phases, one phase for each of the secure developing types (i.e. self-protected software, secure code transformation, and the secure shield). Our methodology requires first the determination and understanding of the type of security level needed for the software. The methodology proposes the use of several teams to accomplish this task. One Software Engineering Developing Team, a Compiler Team, a Specification and Requirements Testing Team, and for each of the secure software developing types: three teams of Secure Software Developing, three teams of Code Breakers, and three teams of Intrusion Analysis. These teams will interact among each other and make decisions to provide a secure software code protected against a required level of intruder.

Keywords : secure software, four phases methodology, software engineering, code breakers, intrusion analysis

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