Software Testing and Analysis. Process, Principles and Techniques

Description:

The first comprehensive book on software test and analysis

You can't "test quality into" a software product, but neither can you build a quality software product without test and analysis. Software test and analysis is increasingly recognized, in research and in industrial practice, as a core challenge in software engineering and computer science. Software Testing and Analysis: Process, Principles, and Techniques is the first book to present a range of complementary software test and analysis techniques in an integrated, coherent fashion. It covers a full spectrum of topics from basic principles and underlying theory to organizational and process issues in real-world application. The emphasis throughout is on selecting a complementary set of practical techniques to achieve an acceptable level of quality at an acceptable cost.

Highlights of the book include

- Interplay among technical and non-technical issues in crafting an approach to software quality, with chapters devoted to planning and monitoring the software quality process.
- A selection of practical techniques ranging from inspection to automated program and design analyses to unit, integration, system, and regression testing, with technical material set in the context of real-world problems and constraints in software development.
- A coherent view of the state of the art and practice, with technical and organizational approaches to push the state of practice toward the state of the art.

Throughout, the text covers techniques that are suitable for near-term application, with sufficient technical background to help you know how and when to apply them. Exercises reinforce the instruction and ensure that you master each topic before proceeding.

By incorporating software testing and analysis techniques into modern practice, Software Testing and Analysis: Process, Principles, and Techniques provides both students and professionals with realistic strategies for reliable and cost-effective software development.

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