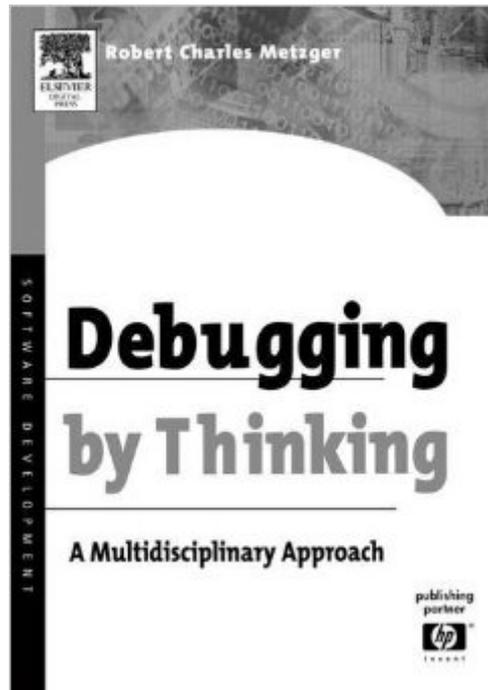# Debugging By Thinking: A Multidisciplinary Approach (HP Technologies)

Synopsis

Debugging by Thinking: A Multi-Disciplinary Approach is the first book to apply the wisdom of six disciplinesâ •logic, mathematics, psychology, safety analysis, computer science, and engineeringâ •to the problem of debugging. It uses the methods of literary detectives such as Sherlock Holmes, the techniques of mathematical problem solving, the results of research into the cognitive psychology of human error, the root cause analyses of safety experts, the compiler analyses of computer science, and the processes of modern engineering to define a systematic approach to identifying and correcting software errors. * Language Independent Methods: Examples are given in Java and C++* Complete source code shows actual bugs, rather than contrived examples* Examples are accessible with no more knowledge than a course in Data Structures and Algorithms requires * A "thought process diary" shows how the author actually resolved the problems as they occurred

Book Information

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Customer Reviews

Often many programmers learn debugging by the sink or swim approach. Rarely in a computer science university education will much time be devoted to this crucial topic. But for the professional programmer, Metzger offers a systematic, disciplined approach. Examples are given in Java and C++. Actually, if you program elsewhere, you should still be able to easily follow the logic. He also shows how to effectively use a debugger to install breakpoints and step through code.Experienced

programmers should not need this text. There will be little new for you. But it is well suited for newcomers. An easier way to learn than purely through experience.

The book lays out debugging strategies, heuristics, tactics, and approaches from the perspectives of detective, safety expert, psychologist, engineer, and computer scientist respectively. This is new! first! The text is an interesting read, and it helps the reader in his practice.However, the case studies are a weak spot. The C++ code is not top notch, if pitted against the real, modern C++ according to Andrew Koenig ("Accelerated C++,") Scott Meyer ("Effective C++," "More Effective C++," "Effective STL,") Herb Sutter ("Exceptional C++," "More Exceptional C++," "C++ Coding Standards,") and Martin Fowler ("Refactoring.") In other words, the presented C++ code is rather like code written in 1993 than in 2003, when the book was published.

Thanks for pointing out the sample chapter. I bought this book and found it very interesting. I was particularly impressed by Appendix B - Books about debugging. Also I have to add that one of the popular static analysis tools for C/C++/Java in EMEA is PRQA C/C++/J (Programming Research Ltd.)

I keep buying copies of this for members of my team - a must read for a senior software engineer IMO.

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