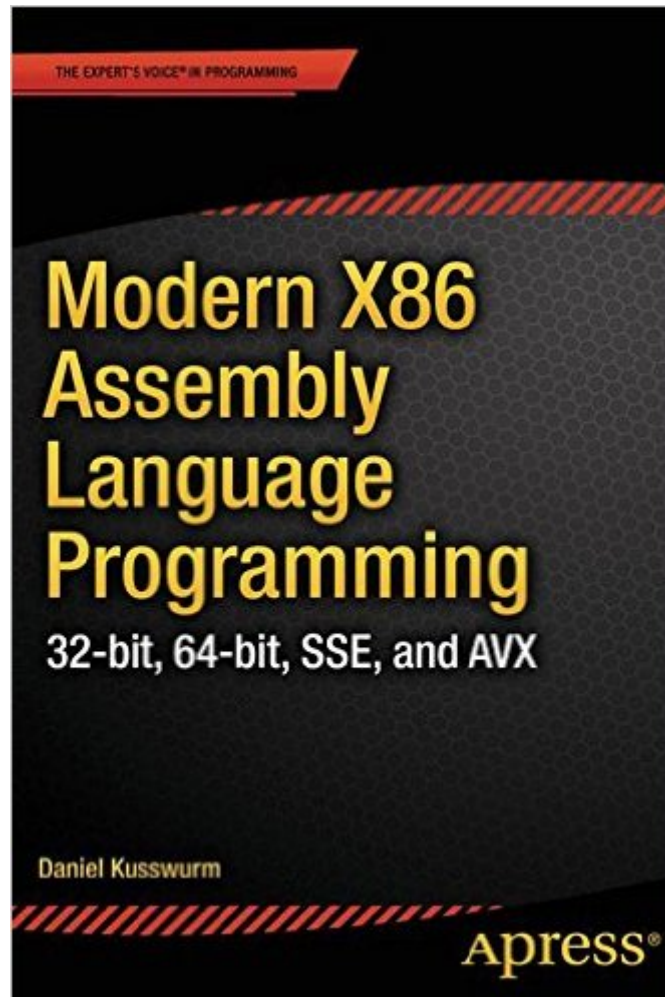# Modern X86 Assembly Language Programming: 32-bit, 64-bit, SSE, And AVX

Synopsis

Modern X86 Assembly Language Programming shows the fundamentals of x86 assembly language programming. It focuses on the aspects of the x86 instruction set that are most relevant to application software development. The book's structure and sample code are designed to help the reader quickly understand x86 assembly language programming and the computational capabilities of the x86 platform. Book appendixes can be downloaded here: http://www.apress.com/9781484200650?gtmf=sMajor topics of the book include the following:32-bit core architecture, data types, internal registers, memory addressing modes, and the basic instruction setX87 core architecture, register stack, special purpose registers, floating-point encodings, and instruction setMMX technology and instruction setStreaming SIMD extensions (SSE) and Advanced Vector Extensions (AVX) including internal registers, packed integer arithmetic, packed and scalar floating-point arithmetic, and associated instruction sets64-bit core architecture, data types, internal registers, memory addressing modes, and the basic instruction set64-bit extensions to SSE and AVX technologiesX86 assembly language optimization strategies and techniques

Book Information

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Customer Reviews

This book on Assembly covers a lot of the common uses of the language to date. Having had several years off of Assembly and returning, it was a good primer with a good level of detail. The

source code is freely available and so far always compiles. The examples are well thought out and have a good progression of topics.I would have given the book 4 stars save for the fact that there isnt a single exercise in the book left for the reader. And Assembly is certainly something that you shouldnt plan to develop ANY level of proficiency without sitting down and putting in the effort of failing until it just clicks. While this isnt meant to really be a text book, I would be much more excited about this book if, at the end of each chapter, there was even a minimal amount of directed programming exercises for the reader. Im learning a lot from this book, but Im now left to create my own worthwhile programming exercises, or search for them on the net--which is what I was doing before I bought the book.

I was looking for a publication that provided the right amount of preliminary background on modern Intel 80x86 microprocessors. The first two chapters struck the right balance. Moreover, I needed some good examples of how to set up data for and properly create SIMD (SSE) and AVX routines. Again, the author struck the right balance. I found this book provided a good mix of sample programs that demonstrated how to call inline assembly routines from C/C++ functions. Especially on target were the numerous, well laid out tables throughout the entire book. The price was right and all the 32- and 64-bit topics were right on the mark for me. Missing of course were sections on AVX2 (512-bit). Also, all the Appendices were missing in my book. I don't know if this was a misprint or what. The author referred to Appendix C several times in various chapters, but there were no Appendixes. Overall, I recommend this book for both novice and experienced assembly programmers. It contains good reference material.

Integrates C with assembly in the examples. Really good coverage and explanations compared with many other assembly languages texts I've read. I was able to run them in early and more recent versions of MS Studio without a problem.

Modern is the first word in the title and I'd have to agree. This is a modern text on a venerable architecture. I've was looking for a good X86 text and this covers core, X87, MMX, SSE + AVX well. I supplement it with the Intel and Agner Fog optimization manuals. I look things up in the Intel Architecture manual. But I read this. He's a good writer.

Modern X86 Assembly Language Programming: 32-bit, 64-bit, SSE, and AVX Assembly Language for x86 Processors (7th Edition) Programming #8:C Programming Success in a Day & Android

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