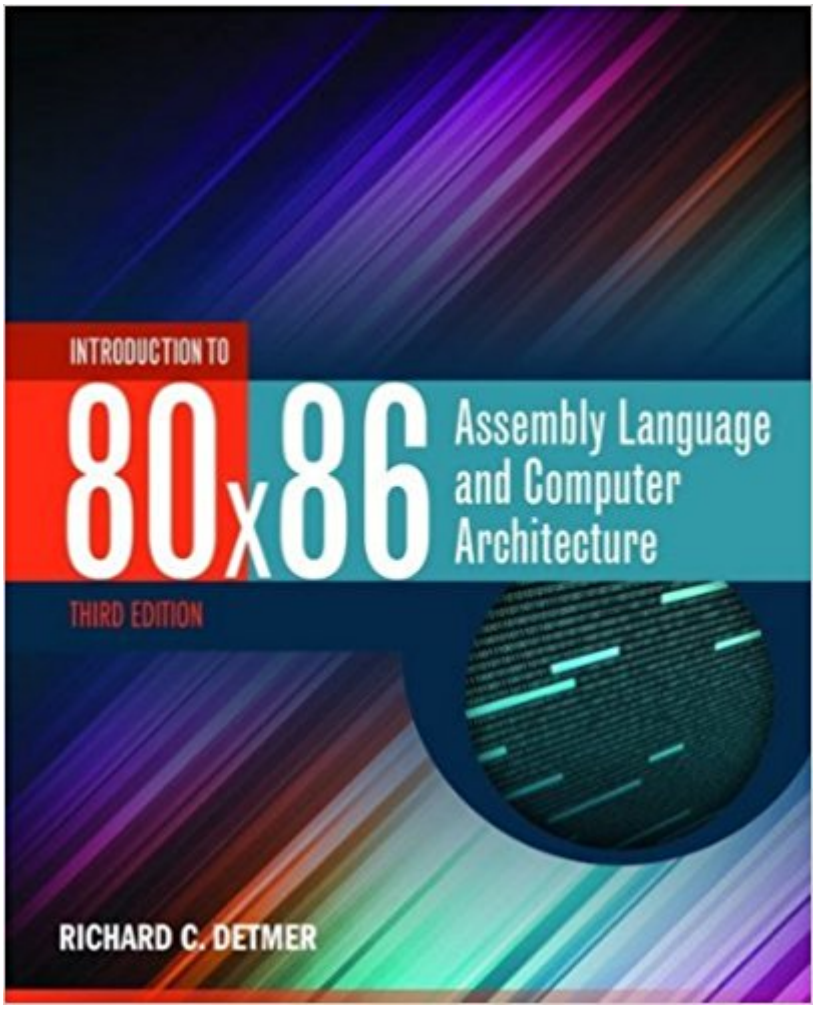
Introduction To 80X86 Assembly Language And Computer Architecture



Synopsis

A Revised and Updated Edition of the Authoritative Text This revised and updated Third Edition of the classic text guides students through assembly language using a hands-on approach, supporting future computing professionals with the basics they need to understand the mechanics and function of the computerÃ¢â ¬â„¢s inner workings. Through using real instruction sets to write real assembly language programs, students will become acquainted with the basics of computer architecture. 80x86 Assembly Language and Computer Architecture covers the Intel 80x86 using the powerful tools provided by Microsoft Visual Studio, including its 32- and 64-bit assemblers, its versatile debugger, and its ability to link assembly language and C/C++ program segments. The text also includes multiple examples of how individual 80x86 instructions execute, as well as complete programs using these instructions. Hands-on exercises reinforce key concepts and problem-solving skills. Updated to be compatible with Visual Studio 2012, and incorporating over a hundred new exercises, 80x86 Assembly Language and Computer Architecture: Third Edition is accessible and clear enough for beginning students while providing coverage of a rich set of 80x86 instructions and their use in simple assembly language programs. The text will prepare students to program effectively at any level. Key features of the fully revised and updated Third Edition include: Ã¢â ¬Â¢ Updated to be used with Visual Studio 2012, while remaining compatible with earlier versions Ã¢â ¬Â¢ Over 100 new exercises and programming exercises Ã¢â ¬Â¢ Improved, clearer layout with easy-to-read illustrations Ã¢â ¬Â¢ The same clear and accessibly writing style as previous editions Ã¢â ¬Â¢ Full suite of ancillary materials, including PowerPoint lecture outlines, Test Bank, and answer keys Ã¢â ¬Â¢ Suitable as a stand-alone text in an assembly language course or as a supplement in a computer architecture course

Book Information

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Customer Reviews

If all you’re looking for is a no fuss book on how to code in x86 Assembly, then this book’s for you. I have looked through other x86 books that spend too much time focusing on hardware, assembly translations and mathematics instead of focusing on how to code. Most chapters are concise and stay on-topic without adding excess fluff.In this edition, Detmer primarily uses Visual Studio with his own custom plug-ins (downloadable from the publisher’s website) to walk you through the chapters. Visual Studio’s provides excellent debugger tools to monitor register values, memory, and to analyze code line by line. Detmer also provides good walkthroughs on what the code is doing behind the scenes. Unlike guides from other books, I have had no problems setting up my computer to code and analyze x86 assembly.In order to make the most out of this book, you will need proficient knowledge of C or C++, and some basic knowledge of data structures - particularly stacks. You will also need a good understanding of binary and hexadecimal arithmetic. Thankfully, Detmer does a fine job of providing a refresher on the arithmetic in the first chapter.The programming problems are also excellent and help reinforce the material you just learned. Some problems are very basic while others encourage you to experiment and try writing basic search/sorting algorithms. In cases, where a problem might be challenging, Detmer provides a basic algorithm in pseudocode for you to try and translate into assembly language.Two cons: Although Detmer does cover 64-bit programming in special chapters, most of this book covers 32-bit. Detmer does not dive in too deep on 64-bit programming as much as I would have liked. However, as a I said before, this book is an excellent primer and will help you get the ball rolling in further studies of x86 Assembly language. If you want to focus time on 64-bit programming, then this book will certainly help you with that but it by no means a one-stop shop. The other complaint is in the price of the book. The book is a paperback with approximately 350 pages - many of which consist of code listings and diagrams. Paying over $100 for this book seems outrageous.

Great starting point for learning 32 bits assembly language withDOS and Windows. The only defect of this book is its unbelievable price... surely due to the fact that is used a college textbook so the poor students have no choice but squander their savings on it. Luckily the content is very good,the teaching style is excellent (the author uses macros initially to do input and output so you won’t be

overwhelmed by lots of material just to write and read from the keyboard, and after you have played a bit a learned the basics he goes on explaining them). You can certainly read this book with no prior exposure to assembly and computer inner workings.You 'better have at least some exp with a high level language,and if you don't, why on earth do you want to start programming with assembly? Masochisms?The one word that comes to mind about this book and author is CLARITY. It is certainly not a funread, but it is so clear that it is not boring.Compliments to Richard and one star less than the max because of the rip-off price. (Get it used!)

Great book! Shipping was fast as well.

good book, same as describe

Very good book!

I bought this book as a refresher and as a reference to keep on my shelf at work, where I need to write (or at least read and understand) some Intel x86 assembly from time to time. I was looking for something that wasn't as outdated as my college textbook, "80X86 IBM PC and Compatible Computers: Assembly Language, Design, and Interfacing, Vols. 1 and 2" by Mazidi et al (mine is the second edition). That is the problem with a lot of assembly books, is that they pre-date the 32-bit instruction set (the 80386 and higher CPUs) and hence they give a lot of bad and just wrong advice. This book does not have that problem, which is good. It also does a great job of helping the high-level language programmer understand how their programming language constructs translate into assembly instructions and actually take place. I have never seen a good explanation of that outside of articles by disassemblers and reverse engineers, but every programmer ought to know these concepts because it may come in handy when debugging some day.But although it serves as an excellent introduction to the material, it is on the thin side (500 pages) for the hefty textbook price it wields. It's just not comprehensive, nor does it have any practical programming lessons for the reader. Unlike my college textbook above, which was used for a two semester senior-level course, this textbook just doesn't cover what I want (a practical guide to using assembly in the field, as opposed to just in the classroom). I don't think it's thorough enough for a comprehensive college course in the subject. When you finish the book, you may understand assembly, but you won't know what to do with it (or what you can do with it). Nor is it thorough enough to be used as a reference material for work. It omits quite a few processor instructions that I feel are important to know for

reference.My advice is to pass on this book, unless you are completely new to the material, because it seems like a good learning text. Even still, you will eventually need a more authoritative reference guide for when you encounter the things this book doesn't cover (such as interfacing the PC hardware).Intel's "Software Developers Manuals" are freely available at their site in PDF, and I would suggest downloading all of those as your reference and purchasing Mazidi's book (now in fourth edition and NOT outdated anymore) for a few bucks more than this one.

Book came with a few scratches but its is what I wanted overall

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