

Architecture Assembly Language Programming Edition

YEAH, REVIEWING A BOOKS ARCHITECTURE ASSEMBLY LANGUAGE PROGRAMMING EDITION COULD INCREASE YOUR CLOSE FRIENDS LISTINGS. THIS IS JUST ONE OF THE SOLUTIONS FOR YOU TO BE SUCCESSFUL. AS UNDERSTOOD, EXPLOIT DOES NOT RECOMMEND THAT YOU HAVE ASTOUNDING POINTS.

COMPREHENDING AS WITH EASE AS UNION EVEN MORE THAN SUPPLEMENTARY WILL HAVE ENOUGH MONEY EACH SUCCESS. BORDERING TO, THE PROCLAMATION AS WITH EASE AS PERCEPTION OF THIS ARCHITECTURE ASSEMBLY LANGUAGE PROGRAMMING EDITION CAN BE TAKEN AS CAPABLY AS PICKED TO ACT.

ASSEMBLY LANGUAGE FOR X86 PROCESSORS, GLOBAL EDITION - KIP R. IRVINE 2014-05-23

ASSEMBLY LANGUAGE FOR X86 PROCESSORS, 7E IS SUITABLE FOR UNDERGRADUATE COURSES IN ASSEMBLY LANGUAGE PROGRAMMING AND INTRODUCTORY COURSES IN COMPUTER SYSTEMS AND COMPUTER ARCHITECTURE. PROFICIENCY IN ONE OTHER PROGRAMMING LANGUAGE, PREFERABLY JAVA, C, OR C++, IS RECOMMENDED. WRITTEN SPECIFICALLY FOR 32- AND 64-BIT INTEL/WINDOWS PLATFORM, THIS COMPLETE AND FULLY UPDATED STUDY OF ASSEMBLY LANGUAGE TEACHES STUDENTS TO WRITE AND DEBUG PROGRAMS AT THE MACHINE LEVEL. THIS TEXT SIMPLIFIES AND DEMYSTIFIES CONCEPTS THAT

STUDENTS NEED TO GRASP BEFORE THEY CAN GO ON TO MORE ADVANCED COMPUTER ARCHITECTURE AND OPERATING SYSTEMS COURSES. STUDENTS PUT THEORY INTO PRACTICE THROUGH WRITING SOFTWARE AT THE MACHINE LEVEL, CREATING A MEMORABLE EXPERIENCE THAT GIVES THEM THE CONFIDENCE TO WORK IN ANY OS/MACHINE-ORIENTED ENVIRONMENT. TEACHING AND LEARNING EXPERIENCE THIS PROGRAM PRESENTS A BETTER TEACHING AND LEARNING EXPERIENCE FOR YOU AND YOUR STUDENTS. IT WILL HELP: *TEACH EFFECTIVE DESIGN TECHNIQUES: TOP-DOWN PROGRAM DESIGN DEMONSTRATION AND EXPLANATION ALLOWS STUDENTS TO APPLY TECHNIQUES TO MULTIPLE PROGRAMMING COURSES

Downloaded from
sixideasapps.pomona.edu

on by @guest

INTO PRACTICE: STUDENTS WILL WRITE SOFTWARE AT THE MACHINE LEVEL, PREPARING THEM TO WORK IN ANY OS/MACHINE-ORIENTED ENVIRONMENT.

*TAILOR THE TEXT TO FIT YOUR COURSE: INSTRUCTORS CAN COVER OPTIONAL CHAPTER TOPICS IN VARYING ORDER AND DEPTH. *SUPPORT

INSTRUCTORS AND STUDENTS: VISIT THE AUTHOR'S WEB SITE HTTP:

//ASMIRVINE.COM/ FOR CHAPTER OBJECTIVES, DEBUGGING TOOLS, SUPPLEMENTAL FILES, A GETTING STARTED WITH MASM AND VISUAL STUDIO 2012 TUTORIAL, AND MORE

COMPUTER SYSTEMS - ATA ELAHI
2017-11-08

THIS TEXTBOOK COVERS DIGITAL DESIGN, FUNDAMENTALS OF COMPUTER ARCHITECTURE, AND ASSEMBLY LANGUAGE. THE BOOK STARTS BY INTRODUCING BASIC NUMBER SYSTEMS, CHARACTER CODING, BASIC KNOWLEDGE IN DIGITAL DESIGN, AND COMPONENTS OF A COMPUTER. THE BOOK GOES ON TO DISCUSS INFORMATION REPRESENTATION IN COMPUTING; BOOLEAN ALGEBRA AND LOGIC GATES; SEQUENTIAL LOGIC; INPUT/OUTPUT; AND CPU PERFORMANCE. THE AUTHOR ALSO COVERS ARM ARCHITECTURE, ARM INSTRUCTIONS AND ARM ASSEMBLY LANGUAGE WHICH IS USED IN A VARIETY OF DEVICES SUCH AS CELL PHONES, DIGITAL TV, AUTOMOBILES, ROUTERS, AND SWITCHES. THE BOOK CONTAINS A SET OF LABORATORY EXPERIMENTS RELATED TO DIGITAL DESIGN USING LOGISIM SOFTWARE; IN ADDITION, EACH CHAPTER FEATURES OBJECTIVES,

SUMMARIES, KEY TERMS, REVIEW QUESTIONS AND PROBLEMS. THE BOOK IS TARGETED TO STUDENTS MAJORING COMPUTER SCIENCE, INFORMATION SYSTEM AND IT AND FOLLOWS THE ACM/IEEE 2013 GUIDELINES. •

COMPREHENSIVE TEXTBOOK COVERING DIGITAL DESIGN, COMPUTER ARCHITECTURE, AND ARM ARCHITECTURE AND ASSEMBLY • COVERS BASIC NUMBER SYSTEM AND CODING, BASIC KNOWLEDGE IN DIGITAL DESIGN, AND COMPONENTS OF A COMPUTER • FEATURES LABORATORY EXERCISES IN ADDITION TO OBJECTIVES, SUMMARIES, KEY TERMS, REVIEW QUESTIONS, AND PROBLEMS IN EACH CHAPTER

MODERN X86 ASSEMBLY LANGUAGE PROGRAMMING - DANIEL KUSSWURM
2017-07-13

ASSEMBLY LANGUAGE IS AS CLOSE TO WRITING MACHINE CODE AS YOU CAN GET WITHOUT WRITING IN PURE HEXADECIMAL. SINCE IT IS SUCH A LOW-LEVEL LANGUAGE, IT'S NOT PRACTICAL IN ALL CASES, BUT SHOULD DEFINITELY BE CONSIDERED WHEN YOU'RE LOOKING TO MAXIMIZE PERFORMANCE. WITH ASSEMBLY LANGUAGE BY CHRIS ROSE, YOU'LL LEARN HOW TO WRITE X64 ASSEMBLY FOR MODERN CPUs, FIRST BY WRITING INLINE ASSEMBLY FOR 32-BIT APPLICATIONS, AND THEN WRITING NATIVE ASSEMBLY FOR C++ PROJECTS. YOU'LL LEARN THE BASICS OF MEMORY SPACES, DATA SEGMENTS, CISC INSTRUCTIONS, SIMD INSTRUCTIONS, AND MUCH MORE.

WHETHER YOU'RE WORKING WITH

Downloaded from
sixideasapps.pomona.edu
on by @guest

INTEL, AMD, OR VIA CPUs, YOU'LL FIND THIS BOOK A VALUABLE STARTING POINT SINCE MANY OF THE INSTRUCTIONS ARE SHARED BETWEEN PROCESSORS. THIS UPDATED AND EXPANDED SECOND EDITION OF BOOK PROVIDES A USER-FRIENDLY INTRODUCTION TO THE SUBJECT, TAKING A CLEAR STRUCTURAL FRAMEWORK, IT GUIDES THE READER THROUGH THE SUBJECT'S CORE ELEMENTS. A FLOWING WRITING STYLE COMBINES WITH THE USE OF ILLUSTRATIONS AND DIAGRAMS THROUGHOUT THE TEXT TO ENSURE THE READER UNDERSTANDS EVEN THE MOST COMPLEX OF CONCEPTS. THIS SUCCINCT AND ENLIGHTENING OVERVIEW IS A REQUIRED READING FOR ALL THOSE INTERESTED IN THE SUBJECT. WE HOPE YOU FIND THIS BOOK USEFUL IN SHAPING YOUR FUTURE CAREER & BUSINESS.

LOW-LEVEL PROGRAMMING - IGOR ZHIRKOV 2017-06-27

LEARN INTEL 64 ASSEMBLY LANGUAGE AND ARCHITECTURE, BECOME PROFICIENT IN C, AND UNDERSTAND HOW THE PROGRAMS ARE COMPILED AND EXECUTED DOWN TO MACHINE INSTRUCTIONS, ENABLING YOU TO WRITE ROBUST, HIGH-PERFORMANCE CODE. LOW-LEVEL PROGRAMMING EXPLAINS INTEL 64 ARCHITECTURE AS THE RESULT OF VON NEUMANN ARCHITECTURE EVOLUTION. THE BOOK TEACHES THE LATEST VERSION OF THE C LANGUAGE (C11) AND ASSEMBLY LANGUAGE FROM SCRATCH. IT COVERS THE ENTIRE PATH FROM SOURCE CODE TO PROGRAM EXECUTION, INCLUDING

GENERATION OF ELF OBJECT FILES, AND STATIC AND DYNAMIC LINKING. CODE EXAMPLES AND EXERCISES ARE INCLUDED ALONG WITH THE BEST CODE PRACTICES. OPTIMIZATION CAPABILITIES AND LIMITS OF MODERN COMPILERS ARE EXAMINED, ENABLING YOU TO BALANCE BETWEEN PROGRAM READABILITY AND PERFORMANCE. THE USE OF VARIOUS PERFORMANCE-GAIN TECHNIQUES IS DEMONSTRATED, SUCH AS SSE INSTRUCTIONS AND PRE-FETCHING. RELEVANT COMPUTER SCIENCE TOPICS SUCH AS MODELS OF COMPUTATION AND FORMAL GRAMMARS ARE ADDRESSED, AND THEIR PRACTICAL VALUE EXPLAINED. WHAT YOU'LL LEARN LOW-LEVEL PROGRAMMING TEACHES PROGRAMMERS TO: FREELY WRITE IN ASSEMBLY LANGUAGE UNDERSTAND THE PROGRAMMING MODEL OF INTEL 64 WRITE MAINTAINABLE AND ROBUST CODE IN C11 FOLLOW THE COMPILATION PROCESS AND DECIPHER ASSEMBLY LISTINGS DEBUG ERRORS IN COMPILED ASSEMBLY CODE USE APPROPRIATE MODELS OF COMPUTATION TO GREATLY REDUCE PROGRAM COMPLEXITY WRITE PERFORMANCE-CRITICAL CODE COMPREHEND THE IMPACT OF A WEAK MEMORY MODEL IN MULTI-THREADED APPLICATIONS WHO THIS BOOK IS FOR INTERMEDIATE TO ADVANCED PROGRAMMERS AND PROGRAMMING STUDENTS

ASSEMBLY LANGUAGE STEP-BY-STEP - JEFF DUNTEMANN 2011-03-03

THE EAGERLY ANTICIPATED NEW EDITION OF THE BESTSELLING INTRODUCTION TO

Downloaded from
sixideasapps.pomona.edu
on by @guest

X86 ASSEMBLY LANGUAGE THE LONG-AWAITED THIRD EDITION OF THIS BESTSELLING INTRODUCTION TO ASSEMBLY LANGUAGE HAS BEEN COMPLETELY REWRITTEN TO FOCUS ON 32-BIT PROTECTED-MODE LINUX AND THE FREE NASM ASSEMBLER. ASSEMBLY IS THE FUNDAMENTAL LANGUAGE BRIDGING HUMAN IDEAS AND THE PURE SILICON HEARTS OF COMPUTERS, AND POPULAR AUTHOR JEFF DUNTEMAN RETAINS HIS DISTINCTIVE LIGHTEARTED STYLE AS HE PRESENTS A STEP-BY-STEP APPROACH TO THIS DIFFICULT TECHNICAL DISCIPLINE. HE STARTS AT THE VERY BEGINNING, EXPLAINING THE BASIC IDEAS OF PROGRAMMABLE COMPUTING, THE BINARY AND HEXADEcimal NUMBER SYSTEMS, THE INTEL X86 COMPUTER ARCHITECTURE, AND THE PROCESS OF SOFTWARE DEVELOPMENT UNDER LINUX. FROM THAT FOUNDATION HE SYSTEMATICALLY TREATS THE X86 INSTRUCTION SET, MEMORY ADDRESSING, PROCEDURES, MACROS, AND INTERFACE TO THE C-LANGUAGE CODE LIBRARIES UPON WHICH LINUX ITSELF IS BUILT. SERVES AS AN IDEAL INTRODUCTION TO X86 COMPUTING CONCEPTS, AS DEMONSTRATED BY THE ONLY LANGUAGE DIRECTLY UNDERSTOOD BY THE CPU ITSELF USES AN APPROACHABLE, CONVERSATIONAL STYLE THAT ASSUMES NO PRIOR EXPERIENCE IN PROGRAMMING OF ANY KIND PRESENTS X86 ARCHITECTURE AND ASSEMBLY CONCEPTS THROUGH A CUMULATIVE TUTORIAL APPROACH THAT IS IDEAL FOR SELF-PACED

INSTRUCTION FOCUSES ENTIRELY ON FREE, OPEN-SOURCE SOFTWARE, INCLUDING UBUNTU LINUX, THE NASM ASSEMBLER, THE KATE EDITOR, AND THE GDB/INSIGHT DEBUGGER INCLUDES AN X86 INSTRUCTION SET REFERENCE FOR THE MOST COMMON MACHINE INSTRUCTIONS, SPECIFICALLY TAILORED FOR USE BY PROGRAMMING BEGINNERS WOVEN INTO THE PRESENTATION ARE PLENTY OF ASSEMBLY CODE EXAMPLES, PLUS PRACTICAL TIPS ON SOFTWARE DESIGN, CODING, TESTING, AND DEBUGGING, ALL USING FREE, OPEN-SOURCE SOFTWARE THAT MAY BE DOWNLOADED WITHOUT CHARGE FROM THE INTERNET.

DESIGNING EMBEDDED HARDWARE - JOHN CATSOULIS 2002

INTELLIGENT READERS WHO WANT TO BUILD THEIR OWN EMBEDDED COMPUTER SYSTEMS-- INSTALLED IN EVERYTHING FROM CELL PHONES TO CARS TO HANDHELD ORGANIZERS TO REFRIGERATORS-- WILL FIND THIS BOOK TO BE THE MOST IN-DEPTH, PRACTICAL, AND UP-TO-DATE GUIDE ON THE MARKET. DESIGNING EMBEDDED HARDWARE CAREFULLY STEERS BETWEEN THE PRACTICAL AND PHILOSOPHICAL ASPECTS, SO DEVELOPERS CAN BOTH CREATE THEIR OWN DEVICES AND GADGETS AND CUSTOMIZE AND EXTEND OFF-THE-SHELF SYSTEMS. THERE ARE HUNDREDS OF BOOKS TO CHOOSE FROM IF YOU NEED TO LEARN PROGRAMMING, BUT ONLY A FEW ARE AVAILABLE IF YOU WANT TO LEARN TO CREATE HARDWARE.

DESIGNING EMBEDDED HARDWARE

Downloaded from
sixideasapps.pomona.edu

on by @guest

PROVIDES SOFTWARE AND HARDWARE ENGINEERS WITH NO PRIOR EXPERIENCE IN EMBEDDED SYSTEMS WITH THE NECESSARY CONCEPTUAL AND DESIGN BUILDING BLOCKS TO UNDERSTAND THE ARCHITECTURES OF EMBEDDED SYSTEMS. WRITTEN TO PROVIDE THE DEPTH OF COVERAGE AND REAL-WORLD EXAMPLES DEVELOPERS NEED, DESIGNING EMBEDDED HARDWARE ALSO PROVIDES A ROAD- MAP TO THE PITFALLS AND TRAPS TO AVOID IN DESIGNING EMBEDDED SYSTEMS. DESIGNING EMBEDDED HARDWARE COVERS SUCH ESSENTIAL TOPICS AS: THE PRINCIPLES OF DEVELOPING COMPUTER HARDWARE CORE HARDWARE DESIGNS ASSEMBLY LANGUAGE CONCEPTS PARALLEL I/O ANALOG- DIGITAL CONVERSION TIMERS (INTERNAL AND EXTERNAL) UART SERIAL PERIPHERAL INTERFACE INTER- INTEGRATED CIRCUIT BUS CONTROLLER AREA NETWORK (CAN) DATA CONVERTER INTERFACE (DCI) LOW- POWER OPERATION THIS INVALUABLE AND EMINENTLY USEFUL BOOK GIVES YOU THE PRACTICAL TOOLS AND SKILLS TO DEVELOP, BUILD, AND PROGRAM YOUR OWN APPLICATION-SPECIFIC COMPUTERS.

INTRODUCTION TO 80x86 ASSEMBLY LANGUAGE AND COMPUTER ARCHITECTURE, 2ND EDITION - RICHARD DETMER 2009

THOROUGHLY REVISED AND UPDATED THROUGHOUT, THE SECOND EDITION OF INTRODUCTION TO 80x86 ASSEMBLY LANGUAGE AND COMPUTER ARCHITECTURE PROVIDES STUDENTS WITH A CLEAR AND CONCISE

INTRODUCTION TO THE INNER WORKINGS OF THE COMPUTER, AND THEIR MANY LEVELS AND FUNCTIONS. THROUGH INTRODUCING REAL INSTRUCTION SETS AND WRITING REAL ASSEMBLY LANGUAGE PROGRAMS, STUDENTS WILL BECOME ACQUAINTED WITH THE BASICS OF COMPUTER ARCHITECTURE. THE SECOND EDITION NOW INCLUDES THE USE OF THE MICROSOFT VISUAL STUDIO ENVIRONMENT, WHICH IS WIDELY AVAILABLE TO STUDENTS AND PROFESSIONALS, AND PROVIDES A ROBUST ENVIRONMENT FOR EDITING, ASSEMBLING, DEBUGGING, AND EXECUTING PROBLEMS. THE TEXT CONTINUES TO EMPHASIZE BASIC ARCHITECTURE, NOT JUST THE 80x86 LINE, AND NOW INCLUDES 64-BIT OPERATIONS BUT IS STILL APPROPRIATE FOR THOSE WORKING WITH 32-BIT COMPUTERS. PROGRAMMERS ARE EXPECTED TO PROGRAM EFFECTIVELY AT ANY LEVEL. ENSURE STUDENTS ARE UP-TO-SPEED WITH INTRODUCTION TO 80x86 ASSEMBLY LANGUAGE AND COMPUTER ARCHITECTURE, SECOND EDITION.

ASSEMBLY LANGUAGE FOR X86 PROCESSORS - KIP R. IRVINE 2014
ASSEMBLY LANGUAGE FOR X86 PROCESSORS, 7E IS INTENDED FOR USE IN UNDERGRADUATE COURSES IN ASSEMBLY LANGUAGE PROGRAMMING AND INTRODUCTORY COURSES IN COMPUTER SYSTEMS AND COMPUTER ARCHITECTURE. THIS TITLE IS ALSO SUITABLE FOR EMBEDDED SYSTEMS PROGRAMMERS AND ENGINEERS, COMMUNICATION SPECIALISTS, GAME

Downloaded from
sixideasapps.pomona.edu

on by @guest

PROGRAMMERS, AND GRAPHICS PROGRAMMERS. PROFICIENCY IN ONE OTHER PROGRAMMING LANGUAGE, PREFERABLY JAVA, C, OR C++, IS RECOMMENDED. WRITTEN SPECIFICALLY FOR 32- AND 64-BIT INTEL/WINDOWS PLATFORM, THIS COMPLETE AND FULLYUPDATED STUDY OF ASSEMBLY LANGUAGE TEACHES STUDENTS TO WRITE AND DEBUG PROGRAMS AT THE MACHINE LEVEL. THIS TEXT SIMPLIFIES AND DEMYSTIFIES CONCEPTS THAT STUDENTS NEED TO GRASP BEFORE THEY CAN GO ON TO MORE ADVANCED COMPUTER ARCHITECTURE AND OPERATING SYSTEMS COURSES. STUDENTS PUT THEORY INTO PRACTICE THROUGH WRITING SOFTWARE AT THE MACHINE LEVEL, CREATING A MEMORABLE EXPERIENCE THAT GIVES THEM THE CONFIDENCE TO WORK IN ANY OS/MACHINE-ORIENTED ENVIRONMENT. ADDITIONAL LEARNING AND TEACHING TOOLS ARE AVAILABLE ON THE AUTHOR S WEB SITE ATHTTP://ASMIRVINE.COM/ WHERE BOTH INSTRUCTORS AND STUDENTS CAN ACCESSCHAPTER OBJECTIVES, DEBUGGING TOOLS, SUPPLEMENTAL FILES, A GETTING STARTED WITH MASM AND VISUAL STUDIO 2012 TUTORIAL, AND MORE. TEACHING AND LEARNING EXPERIENCE THIS PROGRAM PRESENTS A BETTER TEACHING AND LEARNING EXPERIENCE FOR YOU AND YOUR STUDENTS. IT WILL HELP: TEACH EFFECTIVE DESIGN TECHNIQUES: TOP-DOWN PROGRAM DESIGN DEMONSTRATION AND EXPLANATION ALLOWS STUDENTS TO APPLY

TECHNIQUES TO MULTIPLE PROGRAMMING COURSES. PUT THEORY INTO PRACTICE: STUDENTS WILL WRITE SOFTWARE AT THE MACHINE LEVEL, PREPARING THEM TO WORK IN ANY OS/MACHINE-ORIENTED ENVIRONMENT. TAILOR THE TEXT TO FIT YOUR COURSE: INSTRUCTORS CAN COVER OPTIONAL CHAPTER TOPICS IN VARYING ORDER AND DEPTH. SUPPORT INSTRUCTORS AND STUDENTS: VISIT THE AUTHOR'S WEB SITE HTTP://ASMIRVINE.COM/ FOR CHAPTER OBJECTIVES, DEBUGGING TOOLS, SUPPLEMENTAL FILES, A GETTING STARTED WITH MASM AND VISUAL STUDIO 2012 TUTORIAL, AND MORE. "*X86-64 ASSEMBLY LANGUAGE PROGRAMMING WITH UBUNTU* - ED JORGENSEN 2020-12-27 THE PURPOSE OF THIS TEXT IS TO PROVIDE A REFERENCE FOR UNIVERSITY LEVEL ASSEMBLY LANGUAGE AND SYSTEMS PROGRAMMING COURSES. SPECIFICALLY, THIS TEXT ADDRESSES THE X86-64 INSTRUCTION SET FOR THE POPULAR X86-64 CLASS OF PROCESSORS USING THE UBUNTU 64-BIT OPERATING SYSTEM (OS). WHILE THE PROVIDED CODE AND VARIOUS EXAMPLES SHOULD WORK UNDER ANY LINUX-BASED 64-BIT OS, THEY HAVE ONLY BEEN TESTED UNDER UBUNTU 14.04 LTS (64-BIT). THE X86-64 IS A COMPLEX INSTRUCTION SET COMPUTING (CISC) CPU DESIGN. THIS REFERS TO THE INTERNAL PROCESSOR DESIGN PHILOSOPHY. CISC PROCESSORS TYPICALLY INCLUDE A WIDE VARIETY OF INSTRUCTIONS

Downloaded from
sixideasapps.pomona.edu
on by @guest

(SOMETIMES OVERLAPPING), VARYING INSTRUCTIONS SIZES, AND A WIDE RANGE OF ADDRESSING MODES. THE TERM WAS RETROACTIVELY COINED IN CONTRAST TO REDUCED INSTRUCTION SET COMPUTER (RISC3).

32/64-BIT 80x86 ASSEMBLY LANGUAGE ARCHITECTURE - JAMES LEITERMAN 2005-08-10

THE INCREASING COMPLEXITY OF PROGRAMMING ENVIRONMENTS PROVIDES A NUMBER OF OPPORTUNITIES FOR ASSEMBLY LANGUAGE PROGRAMMERS.

32/64-BIT 80x86 ASSEMBLY LANGUAGE ARCHITECTURE ATTEMPTS TO BREAK THROUGH THAT COMPLEXITY BY PROVIDING A STEP-BY-STEP UNDERSTANDING OF PROGRAMMING INTEL AND AMD 80x86 PROCESSORS IN ASSEMBLY LANGUAGE. THIS BOOK EXPLAINS 32-BIT AND 64-BIT 80x86 ASSEMBLY LANGUAGE PROGRAMMING INCLUSIVE OF THE SIMD (SINGLE INSTRUCTION MULTIPLE DATA) INSTRUCTION SUPERSETS THAT BRING THE 80x86 PROCESSOR INTO THE REALM OF THE SUPERCOMPUTER, GIVES INSIGHT INTO THE FPU (FLOATING-POINT UNIT) CHIP IN EVERY PENTIUM PROCESSOR, AND OFFERS STRATEGIES FOR OPTIMIZING CODE.

GUIDE TO ASSEMBLY LANGUAGE PROGRAMMING IN LINUX - SIVARAMA P. DANDAMUDI 2005-07-15

INTRODUCES LINUX CONCEPTS TO PROGRAMMERS WHO ARE FAMILIAR WITH OTHER OPERATING SYSTEMS SUCH AS WINDOWS XP PROVIDES COMPREHENSIVE COVERAGE OF THE PENTIUM ASSEMBLY LANGUAGE

MODERN X86 ASSEMBLY LANGUAGE PROGRAMMING - DANIEL KUSSWURM 2014-11-29

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. PLEASE NOTE: BOOK APPENDIXES CAN BE DOWNLOADED HERE: [HTTP://WWW.APRESS.COM/9781484200650](http://www.apress.com/9781484200650) MAJOR TOPICS OF THE BOOK INCLUDE THE FOLLOWING: 32-BIT CORE ARCHITECTURE, DATA TYPES, INTERNAL REGISTERS, MEMORY ADDRESSING MODES, AND THE BASIC INSTRUCTION SET X87 CORE ARCHITECTURE, REGISTER STACK, SPECIAL PURPOSE REGISTERS, FLOATING-POINT ENCODINGS, AND INSTRUCTION SET MMX TECHNOLOGY AND INSTRUCTION SET STREAMING SIMD EXTENSIONS (SSE) AND ADVANCED VECTOR EXTENSIONS (AVX) INCLUDING INTERNAL REGISTERS, PACKED INTEGER ARITHMETIC, PACKED AND SCALAR FLOATING-POINT ARITHMETIC, AND ASSOCIATED INSTRUCTION SETS 64-BIT CORE ARCHITECTURE, DATA TYPES, INTERNAL REGISTERS, MEMORY ADDRESSING MODES, AND THE BASIC INSTRUCTION SET 64-BIT EXTENSIONS TO SSE AND AVX.

Downloaded from
sixideasapps.pomona.edu

on by @guest

TECHNOLOGIES X86 ASSEMBLY LANGUAGE OPTIMIZATION STRATEGIES AND TECHNIQUES

COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE PROGRAMMING - JAMES LYLE PETERSON 1978

INTRODUCTION TO RISC ASSEMBLY LANGUAGE PROGRAMMING - JOHN WALDRON 1999

THIS IS A STRAIGHTFORWARD TEXT ON RISC ASSEMBLY LANGUAGE PROGRAMMING FOR MIPS COMPUTERS - THE MICROPROCESSOR GAINING POPULARITY DUE TO ITS COMPACT AND ELEGANT INSTRUCTION SET. ENABLING STUDENTS TO UNDERSTAND THE INTERNAL WORKING OF A COMPUTER, COURSES IN RISC ARE AN INCREASINGLY POPULAR OPTION IN ASSEMBLY LANGUAGE PROGRAMMING.

ARM ASSEMBLY LANGUAGE PROGRAMMING WITH RASPBERRY PI USING GCC - SARMA NAIMI 2018-11-27

ABOUT THE RASPBERRY PI: RASPBERRY PI BOARDS ARE LOW COST YET POWERFUL BOARDS USING ARM PROCESSORS. THEY CAN BE USED FOR BOTH EDUCATIONAL AND INDUSTRIAL PURPOSES. ABOUT THIS BOOK: THIS BOOK COVERS ARM ASSEMBLY PROGRAMMING FOR RASPBERRY PI BOARDS. ALTHOUGH THE ARM INSTRUCTIONS ARE STANDARD, THE ASSEMBLER DIRECTIVES VARY IN GCC AND NON-GCC ASSEMBLERS. IN THIS BOOK, YOU LEARN HOW TO WRITE ARM ASSEMBLY PROGRAMS IN LINUX AND THE GCC BASED COMPILERS. THIS BOOK

ALSO GIVES YOU A GENERAL VIEW OF THE ARM AND RASPBERRY PI ARCHITECTURE. IF YOU ARE USING THIS BOOK FOR A UNIVERSITY COURSE, THE SOURCE CODE, TUTORIALS, POWER POINTS AND OTHER SUPPORT MATERIALS ARE AVAILABLE ON OUR WEBSITE: WWW.NICERLAND.COM HERE IS THE TABLE OF CONTENTS: CHAPTER 1: THE HISTORY OF ARM, RASPBERRY PI, AND MICROPROCESSORS CHAPTER 2: ARM ARCHITECTURE AND ASSEMBLY LANGUAGE PROGRAMMING CHAPTER 3: ARITHMETIC AND LOGIC INSTRUCTIONS AND PROGRAMS CHAPTER 4: BRANCH, CALL, AND LOOPING IN ARM CHAPTER 5: SIGNED INTEGER NUMBERS ARITHMETIC CHAPTER 6: ARM MEMORY MAP, MEMORY ACCESS, AND STACK CHAPTER 7: ARM PIPELINE AND CPU EVOLUTION CHAPTER 8: ARM AND THUMB INSTRUCTIONS CHAPTER 9: ARM FLOATING-POINT ARITHMETIC CHAPTER 10: INTERRUPTS AND EXCEPTIONS CHAPTER 11: CACHE IN ARM APPENDIX A: ARM CORTEX-A INSTRUCTION DESCRIPTION APPENDIX B: ARM ASSEMBLER DIRECTIVES APPENDIX C: MACROS APPENDIX D: FLOWCHARTS AND PSEUDOCODE APPENDIX E: PASSING ARGUMENTS INTO FUNCTIONS WE ALSO HAVE A BOOK ON WRITING ARM ASSEMBLY PROGRAMS FOR NON-GCC COMPILERS ENTITLED "ARM ASSEMBLY LANGUAGE PROGRAMMING & ARCHITECTURE" WHICH COVERS ARM ASSEMBLY LANGUAGE PROGRAMMING FOR KEIL AND OTHER NON-GNU IDES.

AN INTRODUCTION TO INTEL ASSEMBLY LANGUAGE - LINDA NUNN 2006-06

Downloaded from sixideasapps.pomona.edu

on by @guest

COMPUTER ARCHITECTURE/SOFTWARE
ENGINEERING

**MODERN ASSEMBLY LANGUAGE
PROGRAMMING WITH THE ARM
PROCESSOR** - LARRY D. PYEATT
2016-05-03

MODERN ASSEMBLY LANGUAGE PROGRAMMING WITH THE ARM PROCESSOR IS A TUTORIAL-BASED BOOK ON ASSEMBLY LANGUAGE PROGRAMMING USING THE ARM PROCESSOR. IT PRESENTS THE CONCEPTS OF ASSEMBLY LANGUAGE PROGRAMMING IN DIFFERENT WAYS, SLOWLY BUILDING FROM SIMPLE EXAMPLES TOWARDS COMPLEX PROGRAMMING ON BARE-METAL EMBEDDED SYSTEMS. THE ARM PROCESSOR WAS CHOSEN AS IT HAS FEWER INSTRUCTIONS AND IRREGULAR ADDRESSING RULES TO LEARN THAN MOST OTHER ARCHITECTURES, ALLOWING MORE TIME TO SPEND ON TEACHING ASSEMBLY LANGUAGE PROGRAMMING CONCEPTS AND GOOD PROGRAMMING PRACTICE. IN THIS TEXTBOOK, CAREFUL CONSIDERATION IS GIVEN TO TOPICS THAT STUDENTS STRUGGLE TO GRASP, SUCH AS REGISTERS VS. MEMORY AND THE RELATIONSHIP BETWEEN POINTERS AND ADDRESSES, RECURSION, AND NON-INTEGRAL BINARY MATHEMATICS. A WHOLE CHAPTER IS DEDICATED TO STRUCTURED PROGRAMMING PRINCIPLES. CONCEPTS ARE ILLUSTRATED AND REINFORCED WITH A LARGE NUMBER OF TESTED AND DEBUGGED ASSEMBLY AND C SOURCE LISTINGS. THE BOOK ALSO COVERS ADVANCED TOPICS SUCH AS

FIXED AND FLOATING POINT MATHEMATICS, OPTIMIZATION, AND THE ARM VFP AND NEON™ EXTENSIONS. POWERPOINT SLIDES AND A SOLUTIONS MANUAL ARE INCLUDED. THIS BOOK WILL APPEAL TO PROFESSIONAL EMBEDDED SYSTEMS ENGINEERS, AS WELL AS COMPUTER ENGINEERING STUDENTS TAKING A COURSE IN ASSEMBLY LANGUAGE USING THE ARM PROCESSOR. CONCEPTS ARE ILLUSTRATED AND REINFORCED WITH A LARGE NUMBER OF TESTED AND DEBUGGED ASSEMBLY AND C SOURCE LISTING INTENDED FOR USE ON VERY LOW-COST PLATFORMS, SUCH AS THE RASPBERRY PI OR PCDUINO, BUT WITH THE SUPPORT OF A FULL LINUX OPERATING SYSTEM AND DEVELOPMENT TOOLS INCLUDES DISCUSSIONS OF ADVANCED TOPICS, SUCH AS FIXED AND FLOATING POINT MATHEMATICS, OPTIMIZATION, AND THE ARM VFP AND NEON EXTENSIONS
EFFECTIVE C - ROBERT C. SEACORD
2020-08-11

A DETAILED INTRODUCTION TO THE C PROGRAMMING LANGUAGE FOR EXPERIENCED PROGRAMMERS. THE WORLD RUNS ON CODE WRITTEN IN THE C PROGRAMMING LANGUAGE, YET MOST SCHOOLS BEGIN THE CURRICULUM WITH PYTHON OR JAVA. EFFECTIVE C BRIDGES THIS GAP AND BRINGS C INTO THE MODERN ERA--COVERING THE MODERN C17 STANDARD AS WELL AS POTENTIAL C2X FEATURES. WITH THE AID OF THIS INSTANT CLASSIC, YOU'LL SOON BE WRITING PROFESSIONAL, PORTABLE, AND SECURE C PROGRAMS TO POWER ROBUST SYSTEMS AND

Downloaded from
sixideasapps.pomona.edu
on by @guest

SOLVE REAL-WORLD PROBLEMS. ROBERT C. SEACORD INTRODUCES C AND THE C STANDARD LIBRARY WHILE ADDRESSING BEST PRACTICES, COMMON ERRORS, AND OPEN DEBATES IN THE C COMMUNITY. DEVELOPED TOGETHER WITH OTHER C STANDARDS COMMITTEE EXPERTS, EFFECTIVE C WILL TEACH YOU HOW TO DEBUG, TEST, AND ANALYZE C PROGRAMS. YOU'LL BENEFIT FROM SEACORD'S CONCISE EXPLANATIONS OF C LANGUAGE CONSTRUCTS AND BEHAVIORS, AND FROM HIS 40 YEARS OF CODING EXPERIENCE. YOU'LL LEARN:

- HOW TO IDENTIFY AND HANDLE UNDEFINED BEHAVIOR IN A C PROGRAM
- THE RANGE AND REPRESENTATIONS OF INTEGERS AND FLOATING-POINT VALUES
- HOW DYNAMIC MEMORY ALLOCATION WORKS AND HOW TO USE NONSTANDARD FUNCTIONS
- HOW TO USE CHARACTER ENCODINGS AND TYPES
- HOW TO PERFORM I/O WITH TERMINALS AND FILESYSTEMS USING C STANDARD STREAMS AND POSIX FILE DESCRIPTORS
- HOW TO UNDERSTAND THE C COMPILER'S TRANSLATION PHASES AND THE ROLE OF THE PREPROCESSOR
- HOW TO TEST, DEBUG, AND ANALYZE C PROGRAMS

EFFECTIVE C WILL TEACH YOU HOW TO WRITE PROFESSIONAL, SECURE, AND PORTABLE C CODE THAT WILL STAND THE TEST OF TIME AND HELP STRENGTHEN THE FOUNDATION OF THE COMPUTING WORLD.

ASSEMBLY LANGUAGE AND COMPUTER ARCHITECTURE USING C++ AND JAVA - ANTHONY J DOS REIS 2020-06-05
THE OBJECTIVE OF THIS BOOK IS TO

MAKE IT POSSIBLE (AND EVEN EASY) FOR STUDENTS TO MASTER BOTH ASSEMBLY LANGUAGE AND THE FUNDAMENTALS OF COMPUTER ARCHITECTURE IN A SINGLE SEMESTER. INTEGRATING COVERAGE OF SOFTWARE AND HARDWARE THROUGHOUT, THE BOOK USES H1--A SIMPLE, HORIZONTALLY MICROPROGRAMMED COMPUTER--AS A UNIFYING THEME. LIKE ALL SIMPLE MODELS, H1 HAS FLAWS, BUT THIS BOOK PUTS THESE FLAWS TO GOOD USE. IN PARTICULAR, IN ADDITION TO SHOWING STUDENTS HOW H1 WORKS AND WHAT IS WRONG WITH IT, THE BOOK SHOWS STUDENTS HOW TO FIX IT (WHICH THEY THEN PROCEED TO DO). STUDENTS LEARN BEST BY DOING, AND THIS BOOK SUPPLIES MUCH TO DO WITH VARIOUS EXAMPLES AND PROJECTS TO FACILITATE LEARNING. FOR EXAMPLE, STUDENTS NOT ONLY USE ASSEMBLERS AND LINKERS, THEY ALSO WRITE THEIR OWN. STUDENTS NOT ONLY STUDY AND USE THE PROVIDED INSTRUCTION SET BUT IMPLEMENT NEW, IMPROVED ONES. THE RESULT IS A BOOK THAT IS EASY TO READ, ENGAGING, AND SUBSTANTIAL. THE SOFTWARE PACKAGE FOR THE BOOK SUPPORTS WINDOWS, MAC OS X, LINUX, AND RASPBAN. SPARC ARCHITECTURE, ASSEMBLY LANGUAGE PROGRAMMING, AND C - RICHARD P. PAUL 2000
FOR ASSEMBLY LANGUAGE AND ARCHITECTURE COURSES EMPHASIZING SPARC ARCHITECTURE FOUND IN COMPUTER SCIENCE, ENGINEERING AND BUSINESS DEPARTMENTS. WRITTEN FROM A PROGRAMMER'S PERSPECTIVE

Downloaded from
sixideasapps.pomona.edu
on by @guest

THIS LONG-AWAITED REVISION INTRODUCES THE SPARC ASSEMBLY LANGUAGE TO READERS EARLY ON. OTHER INTRODUCTORY MATERIAL ENCOMPASSES MAKING USE OF UNIX TOOLS (THE M4 MACRO PROCESSOR; THE ASSEMBLER; THE GNU EMACS EDITOR; AND THE GDB DEBUGGER). FURTHER COVERAGE INCLUDES A FORMAL DEFINITION OF THE VON NEUMANN MACHINE, ITS RELATIONSHIP TO PROGRAMMABLE CALCULATORS, AND TO THE JAVA BYTECODE AND JAVA VIRTUAL MACHINE. NOT ONLY IS THIS BOOK SUITABLE FOR INTRODUCTORY COMPUTER ARCHITECTURE COURSES, BUT FOR PROGRAMMERS WHO WILL BE PROGRAMMING SPARC ARCHITECTURE MACHINE IN LANGUAGES SUCH AS C AND C++.

THE ART OF 64-BIT ASSEMBLY, VOLUME 1 - RANDALL HYDE
2021-11-16

A NEW ASSEMBLY LANGUAGE PROGRAMMING BOOK FROM A WELL-LOVED MASTER. ART OF 64-BIT ASSEMBLY LANGUAGE CAPITALIZES ON THE LONG-LIVED SUCCESS OF HYDE'S SEMINAL THE ART OF ASSEMBLY LANGUAGE. RANDALL HYDE'S THE ART OF ASSEMBLY LANGUAGE HAS BEEN THE GO-TO BOOK FOR LEARNING ASSEMBLY LANGUAGE FOR DECADES. HYDE'S LATEST WORK, ART OF 64-BIT ASSEMBLY LANGUAGE IS THE 64-BIT VERSION OF THIS POPULAR TEXT. THIS BOOK GUIDES YOU THROUGH THE MAZE OF ASSEMBLY LANGUAGE PROGRAMMING BY SHOWING HOW TO WRITE ASSEMBLY

CODE THAT MIMICS OPERATIONS IN HIGH-LEVEL LANGUAGES. THIS LEVERAGES YOUR HLL KNOWLEDGE TO RAPIDLY UNDERSTAND X86-64 ASSEMBLY LANGUAGE. THIS NEW WORK USES THE MICROSOFT MACRO ASSEMBLER (MASM), THE MOST POPULAR X86-64 ASSEMBLER TODAY. HYDE COVERS THE STANDARD INTEGER SET, AS WELL AS THE X87 FPU, SIMD PARALLEL INSTRUCTIONS, SIMD SCALAR INSTRUCTIONS (INCLUDING HIGH-PERFORMANCE FLOATING-POINT INSTRUCTIONS), AND MASM'S VERY POWERFUL MACRO FACILITIES. YOU'LL LEARN IN DETAIL: HOW TO IMPLEMENT HIGH-LEVEL LANGUAGE DATA AND CONTROL STRUCTURES IN ASSEMBLY LANGUAGE; HOW TO WRITE PARALLEL ALGORITHMS USING THE SIMD (SINGLE-INSTRUCTION, MULTIPLE-DATA) INSTRUCTIONS ON THE X86-64; AND HOW TO WRITE STAND ALONE ASSEMBLY PROGRAMS AND ASSEMBLY CODE TO LINK WITH HLL CODE. YOU'LL ALSO LEARN HOW TO OPTIMIZE CERTAIN ALGORITHMS IN ASSEMBLY TO PRODUCE FASTER CODE.

INTRODUCTION TO 80x86 ASSEMBLY LANGUAGE AND COMPUTER ARCHITECTURE - RICHARD C. DETMER
2014-02-17

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

Downloaded from
sixideasapps.pomona.edu
on by @guest

BASICS THEY NEED TO UNDERSTAND THE MECHANICS AND FUNCTION OF THE COMPUTER'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: • UPDATED TO BE USED WITH VISUAL STUDIO 2012, WHILE REMAINING

COMPATIBLE WITH EARLIER VERSIONS • OVER 100 NEW EXERCISES AND PROGRAMMING EXERCISES • IMPROVED, CLEARER LAYOUT WITH EASY-TO-READ ILLUSTRATIONS • THE SAME CLEAR AND ACCESSIBLY WRITING STYLE AS PREVIOUS EDITIONS • FULL SUITE OF ANCILLARY MATERIALS, INCLUDING POWERPOINT LECTURE OUTLINES, TEST BANK, AND ANSWER KEYS • SUITABLE AS A STAND-ALONE TEXT IN AN ASSEMBLY LANGUAGE COURSE OR AS A SUPPLEMENT IN A COMPUTER ARCHITECTURE COURSE
ESSENTIALS OF 80x86 ASSEMBLY LANGUAGE - RICHARD C. DETMER 2012

"ESSENTIALS OF 80x86 ASSEMBLY LANGUAGE" IS DESIGNED AS A SUPPLEMENTAL TEXT FOR THE INSTRUCTOR WHO WANTS TO PROVIDE STUDENTS HANDS-ON EXPERIENCE WITH THE INTEL 80x86 ARCHITECTURE. IT CAN ALSO BE USED AS A STAND-ALONE TEXT FOR AN ASSEMBLY LANGUAGE COURSE.

THE ELEMENTS OF COMPUTING SYSTEMS, SECOND EDITION - NOAM NISAN 2021-06-15

A NEW AND EXTENSIVELY REVISED EDITION OF A POPULAR TEXTBOOK USED IN UNIVERSITIES, CODING BOOT CAMPS, HACKER CLUBS, AND ONLINE COURSES. THE BEST WAY TO UNDERSTAND HOW COMPUTERS WORK IS TO BUILD ONE FROM SCRATCH, AND THIS TEXTBOOK LEADS LEARNERS THROUGH TWELVE CHAPTERS AND PROJECTS THAT GRADUALLY BUILD THE HARDWARE PLATFORM AND SOFTWARE HIERARCHY

Downloaded from
sixideasapps.pomona.edu

on by @guest

FOR A SIMPLE BUT POWERFUL COMPUTER SYSTEM. IN THE PROCESS, LEARNERS GAIN HANDS-ON KNOWLEDGE OF HARDWARE, ARCHITECTURE, OPERATING SYSTEMS, PROGRAMMING LANGUAGES, COMPILERS, DATA STRUCTURES AND ALGORITHMS, AND SOFTWARE ENGINEERING. USING THIS CONSTRUCTIVE APPROACH, THE BOOK INTRODUCES LEARNERS TO A SIGNIFICANT BODY OF COMPUTER SCIENCE KNOWLEDGE AND DEMONSTRATES HOW THEORETICAL AND APPLIED TECHNIQUES TAUGHT IN OTHER COMPUTER SCIENCE COURSES FIT INTO THE OVERALL PICTURE. THE OUTCOME OF THESE EFFORTS IS KNOWN AS NAND TO TETRIS: A JOURNEY THAT STARTS WITH THE MOST ELEMENTARY LOGIC GATE, CALLED NAND, AND ENDS, TWELVE PROJECTS LATER, WITH A GENERAL-PURPOSE COMPUTER SYSTEM CAPABLE OF RUNNING TETRIS. THE FIRST EDITION OF THIS POPULAR TEXTBOOK INSPIRED NAND TO TETRIS CLASSES IN UNIVERSITIES, CODING BOOT CAMPS, HACKER CLUBS, AND ONLINE COURSE PLATFORMS. THIS SECOND EDITION HAS BEEN EXTENSIVELY REVISED. IT HAS BEEN RESTRUCTURED INTO TWO DISTINCT PARTS—PART I, HARDWARE, AND PART II, SOFTWARE—with six projects in each part. ALL CHAPTERS AND PROJECTS HAVE BEEN REWRITTEN, WITH AN EMPHASIS ON SEPARATING ABSTRACTION FROM IMPLEMENTATION, AND MANY NEW SECTIONS, FIGURES, AND EXAMPLES HAVE BEEN ADDED. SUBSTANTIAL NEW APPENDIXES OFFER FOCUSED PRESENTATION ON TECHNICAL

AND THEORETICAL TOPICS.
THE ART OF ASSEMBLY LANGUAGE,
2ND EDITION - RANDALL HYDE
2010-03-01

ASSEMBLY IS A LOW-LEVEL PROGRAMMING LANGUAGE THAT'S ONE STEP ABOVE A COMPUTER'S NATIVE MACHINE LANGUAGE. ALTHOUGH ASSEMBLY LANGUAGE IS COMMONLY USED FOR WRITING DEVICE DRIVERS, EMULATORS, AND VIDEO GAMES, MANY PROGRAMMERS FIND ITS SOMEWHAT UNFRIENDLY SYNTAX INTIMIDATING TO LEARN AND USE. SINCE 1996, RANDALL HYDE'S THE ART OF ASSEMBLY LANGUAGE HAS PROVIDED A COMPREHENSIVE, PLAIN-ENGLISH, AND PATIENT INTRODUCTION TO 32-BIT X86 ASSEMBLY FOR NON-ASSEMBLY PROGRAMMERS. HYDE'S PRIMARY TEACHING TOOL, HIGH LEVEL ASSEMBLER (OR HLA), INCORPORATES MANY OF THE FEATURES FOUND IN HIGH-LEVEL LANGUAGES (LIKE C, C++, AND JAVA) TO HELP YOU QUICKLY GRASP BASIC ASSEMBLY CONCEPTS. HLA LETS YOU WRITE TRUE LOW-LEVEL CODE WHILE ENJOYING THE BENEFITS OF HIGH-LEVEL LANGUAGE PROGRAMMING. AS YOU READ THE ART OF ASSEMBLY LANGUAGE, YOU'LL LEARN THE LOW-LEVEL THEORY FUNDAMENTAL TO COMPUTER SCIENCE AND TURN THAT UNDERSTANDING INTO REAL, FUNCTIONAL CODE. YOU'LL LEARN HOW TO: -EDIT, COMPILE, AND RUN HLA PROGRAMS -DECLARE AND USE CONSTANTS, SCALAR VARIABLES, POINTERS, ARRAYS, STRUCTURES, UNIONS, AND NAMESPACES -TRANSLATE FROM

Downloaded from
sixideasapps.pomona.edu

on by @guest

ARITHMETIC EXPRESSIONS (INTEGER AND FLOATING POINT) - CONVERT HIGH-LEVEL CONTROL STRUCTURES THIS MUCH ANTICIPATED SECOND EDITION OF THE ART OF ASSEMBLY LANGUAGE HAS BEEN UPDATED TO REFLECT RECENT CHANGES TO HLA AND TO SUPPORT LINUX, MAC OS X, AND FREEBSD. WHETHER YOU'RE NEW TO PROGRAMMING OR YOU HAVE EXPERIENCE WITH HIGH-LEVEL LANGUAGES, THE ART OF ASSEMBLY LANGUAGE, 2ND EDITION IS YOUR ESSENTIAL GUIDE TO LEARNING THIS COMPLEX, LOW-LEVEL LANGUAGE.

GUIDE TO ASSEMBLY LANGUAGE -
JAMES T. STREIB 2011-03-01

THIS BOOK WILL ENABLE THE READER TO VERY QUICKLY BEGIN PROGRAMMING IN ASSEMBLY LANGUAGE. THROUGH THIS HANDS-ON PROGRAMMING, READERS WILL ALSO LEARN MORE ABOUT THE COMPUTER ARCHITECTURE OF THE INTEL 32-BIT PROCESSOR, AS WELL AS THE RELATIONSHIP BETWEEN HIGH-LEVEL AND LOW-LEVEL LANGUAGES. TOPICS: PRESENTS AN OVERVIEW OF ASSEMBLY LANGUAGE, AND AN INTRODUCTION TO GENERAL PURPOSE REGISTERS; ILLUSTRATES THE KEY CONCEPTS OF EACH CHAPTER WITH COMPLETE PROGRAMS, CHAPTER SUMMARIES, AND EXERCISES; COVERS INPUT/OUTPUT, BASIC ARITHMETIC INSTRUCTIONS, SELECTION STRUCTURES, AND ITERATION STRUCTURES; INTRODUCES LOGIC, SHIFT, ARITHMETIC SHIFT, ROTATE, AND STACK INSTRUCTIONS; DISCUSSES PROCEDURES AND MACROS, AND EXAMINES ARRAYS AND STRINGS;

INVESTIGATES MACHINE LANGUAGE FROM A DISCOVERY PERSPECTIVE. THIS TEXTBOOK IS AN IDEAL INTRODUCTION TO PROGRAMMING IN ASSEMBLY LANGUAGE FOR UNDERGRADUATE STUDENTS, AND A CONCISE GUIDE FOR PROFESSIONALS WISHING TO LEARN HOW TO WRITE LOGICALLY CORRECT PROGRAMS IN A MINIMAL AMOUNT OF TIME.

THE ESSENTIALS OF COMPUTER ORGANIZATION AND ARCHITECTURE -
LINDA NULL 2014-02-14

UPDATED AND REVISED, THE ESSENTIALS OF COMPUTER ORGANIZATION AND ARCHITECTURE, THIRD EDITION IS A COMPREHENSIVE RESOURCE THAT ADDRESSES ALL OF THE NECESSARY ORGANIZATION AND ARCHITECTURE TOPICS, YET IS APPROPRIATE FOR THE ONE-TERM COURSE.

ARM ASSEMBLY LANGUAGE PROGRAMMING & ARCHITECTURE -

MUHAMMAD ALI MAZIDI 2016-08-12

WHO USES ARM? CURRENTLY ARM CPU IS LICENSED AND PRODUCED BY MORE THAN 200 COMPANIES AND IS THE DOMINANT CPU CHIP IN BOTH CELL PHONES AND TABLETS. GIVEN ITS RISC ARCHITECTURE AND POWERFUL 32-BIT INSTRUCTIONS SET, IT CAN BE USED FOR BOTH 8-BIT AND 32-BIT EMBEDDED PRODUCTS. THE ARM CORP. HAS ALREADY DEFINED THE 64-BIT INSTRUCTION EXTENSION AND FOR THAT REASON MANY LAPTOP AND SERVER MANUFACTURERS ARE INTRODUCING ARM-BASED LAPTOP AND SERVERS.

WHO WILL USE OUR TEXTBOOK? THIS

Downloaded from
sixideasapps.pomona.edu

on by @guest

BOOK IS INTENDED FOR BOTH ACADEMIC AND INDUSTRY READERS. IF YOU ARE USING THIS BOOK FOR A UNIVERSITY COURSE, THE SUPPORT MATERIALS AND TUTORIALS CAN BE FOUND ON www.MicroDigitalEd.com. THIS BOOK COVERS THE ASSEMBLY LANGUAGE PROGRAMMING OF THE ARM CHIP. THE ARM ASSEMBLY LANGUAGE IS STANDARD REGARDLESS OF WHO MAKES THE CHIP. THE ARM LICENSEES ARE FREE TO IMPLEMENT THE ON-CHIP PERIPHERAL (ADC, TIMERS, I/O, ETC.) AS THEY CHOOSE. SINCE THE ARM PERIPHERALS ARE NOT STANDARD AMONG THE VARIOUS VENDORS, WE HAVE DEDICATED A SEPARATE BOOK TO EACH VENDOR.

PROGRAMMING WITH 64-BIT ARM ASSEMBLY LANGUAGE - STEPHEN SMITH 2020-05-01

MASTERING ARM HARDWARE ARCHITECTURE OPENS A WORLD OF PROGRAMMING FOR NEARLY ALL PHONES AND TABLETS INCLUDING THE IPHONE/IPAD AND MOST ANDROID PHONES. IT'S ALSO THE HEART OF MANY SINGLE BOARD COMPUTERS LIKE THE RASPBERRY PI. GAIN THE SKILLS REQUIRED TO DIVE INTO THE FUNDAMENTALS OF THE ARM HARDWARE ARCHITECTURE WITH THIS BOOK AND START YOUR OWN PROJECTS WHILE YOU DEVELOP A WORKING KNOWLEDGE OF ASSEMBLY LANGUAGE FOR THE ARM 64-BIT PROCESSOR. YOU'LL REVIEW ASSEMBLY LANGUAGE PROGRAMMING FOR THE ARM PROCESSOR IN 64-BIT MODE AND WRITE PROGRAMS FOR A NUMBER OF SINGLE

BOARD COMPUTERS, INCLUDING THE NVIDIA JETSON NANO AND THE RASPBERRY PI (RUNNING 64-BIT LINUX). THE BOOK ALSO DISCUSSES HOW TO TARGET ASSEMBLY LANGUAGE PROGRAMS FOR APPLE IPHONES AND IPADS ALONG WITH 64-BIT ARM BASED ANDROID PHONES AND TABLETS. IT COVERS ALL THE TOOLS YOU REQUIRE, THE BASICS OF THE ARM HARDWARE ARCHITECTURE, ALL THE GROUPS OF ARM 64-BIT ASSEMBLY INSTRUCTIONS, AND HOW DATA IS STORED IN THE COMPUTER'S MEMORY. IN ADDITION, INTERFACE APPS TO HARDWARE SUCH AS THE RASPBERRY PI'S GPIO PORTS. THE BOOK COVERS CODE OPTIMIZATION, AS WELL AS HOW TO INTER-OPERATE WITH C AND PYTHON CODE. READERS WILL DEVELOP ENOUGH BACKGROUND TO USE THE OFFICIAL ARM REFERENCE DOCUMENTATION FOR THEIR OWN PROJECTS. WITH PROGRAMMING WITH 64-BIT ARM ASSEMBLY LANGUAGE AS YOUR GUIDE YOU'LL STUDY HOW TO READ, REVERSE ENGINEER AND HACK MACHINE CODE, THEN BE ABLE TO APPLY THESE NEW SKILLS TO STUDY CODE EXAMPLES AND TAKE CONTROL OF BOTH YOUR ARM DEVICES' HARDWARE AND SOFTWARE. WHAT YOU'LL LEARN MAKE OPERATING SYSTEM CALLS FROM ASSEMBLY LANGUAGE AND INCLUDE OTHER SOFTWARE LIBRARIES IN YOUR PROJECTS INTERFACE APPS TO HARDWARE DEVICES SUCH AS THE RASPBERRY PI GPIO PORTS REVERSE ENGINEER AND HACK CODE USE THE OFFICIAL ARM REFERENCE

Downloaded from
sixideasapps.pomona.edu
on by @guest

DOCUMENTATION FOR YOUR OWN PROJECTS WHO THIS BOOK IS FOR SOFTWARE DEVELOPERS WHO HAVE ALREADY LEARNED TO PROGRAM IN A HIGHER-LEVEL LANGUAGE LIKE PYTHON, JAVA, C#, OR EVEN C AND NOW WISH TO LEARN ASSEMBLY PROGRAMMING. *ASSEMBLY PROGRAMMING AND COMPUTER ARCHITECTURE* - BRIAN HALL 2020-10

AN ASSEMBLY LANGUAGE INTRODUCTION TO COMPUTER ARCHITECTURE - KAREN MILLER 1999 IDEAL FOR UNDERGRADUATE COURSES IN COMPUTER ORGANIZATION, ASSEMBLY LANGUAGE PROGRAMMING, AND COMPUTER ARCHITECTURE, AN ASSEMBLY LANGUAGE INTRODUCTION TO COMPUTER ARCHITECTURE: USING THE INTEL PENTIUM INTRODUCES STUDENTS TO THE FUNDAMENTALS OF COMPUTER ARCHITECTURE FROM A PROGRAMMER'S PERSPECTIVE BY TEACHING THEM ASSEMBLY LANGUAGE, THE INTERFACE BETWEEN HARDWARE AND SOFTWARE. DESIGNED FOR STUDENTS IN COMPUTER SCIENCE AND ENGINEERING WHO HAVE TAKEN ONE HIGH-LEVEL LANGUAGE PROGRAMMING COURSE, IT USES A TOP-DOWN APPROACH, INTRODUCING AN ABSTRACT (REGISTERLESS) ASSEMBLY LANGUAGE FIRST. THIS APPROACH ENABLES STUDENTS TO BUILD ON PREVIOUS KNOWLEDGE AND ALLOWS THEM TO WRITE PROGRAMS FROM THE BEGINNING OF THE COURSE. TOPICS COVERED INCLUDE BASIC COMPUTER ORGANIZATION, DATA REPRESENTATION,

DATA STRUCTURES, THE ASSEMBLY PROCESS, EXCEPTION HANDLING, AND MORE. EXAMPLES ARE DEVELOPED USING THE VERY POPULAR INTEL PENTIUM ARCHITECTURE; HOWEVER, THE CONCEPTS COVERED ARE VALID WITH ANY SYSTEM. THIS ACCESSIBLE TEXT IS SUPPLEMENTED WITH A HELPFUL WEBSITE ([HTTP://WWW.CS.WISC.EDU/SMOLER/X86TEXT.HTML](http://www.cs.wisc.edu/smoler/x86text.html)) THAT CONTAINS MACROS TO USE WITH PROGRAMMING TOOLS, LECTURE NOTES TO ACCOMPANY THE TEXT, SAMPLE PROGRAMS, AND OTHER USEFUL ITEMS. **MIPS ASSEMBLY LANGUAGE PROGRAMMING** - ROBERT L. BRITTON 2004

FOR FRESHMAN/SOPHOMORE-LEVEL COURSES IN ASSEMBLY LANGUAGE PROGRAMMING, INTRODUCTION TO COMPUTER ORGANIZATION, AND INTRODUCTION TO COMPUTER ARCHITECTURE. STUDENTS USING THIS TEXT WILL GAIN AN UNDERSTANDING OF HOW THE FUNCTIONAL COMPONENTS OF MODERN COMPUTERS ARE PUT TOGETHER AND HOW A COMPUTER WORKS AT THE MACHINE LANGUAGE LEVEL. MIPS ARCHITECTURE EMBODIES THE FUNDAMENTAL DESIGN PRINCIPLES OF ALL CONTEMPORARY RISC ARCHITECTURES. BY INCORPORATING THIS TEXT INTO THEIR COURSES, INSTRUCTORS WILL BE ABLE TO PREPARE THEIR UNDERGRADUATE STUDENTS TO GO ON TO UPPER-DIVISION COMPUTER ORGANIZATION COURSES.

COMPUTER ORGANIZATION AND DESIGN RISC-V EDITION - DAVID A

Downloaded from
sixideasapps.pomona.edu

on by @guest

PATTERSON 2017-05-12
THE NEW RISC-V EDITION OF
COMPUTER ORGANIZATION AND DESIGN
FEATURES THE RISC-V OPEN SOURCE
INSTRUCTION SET ARCHITECTURE, THE
FIRST OPEN SOURCE ARCHITECTURE
DESIGNED TO BE USED IN MODERN
COMPUTING ENVIRONMENTS SUCH AS
CLOUD COMPUTING, MOBILE DEVICES,
AND OTHER EMBEDDED SYSTEMS. WITH
THE POST-PC ERA NOW UPON US,
COMPUTER ORGANIZATION AND DESIGN
MOVES FORWARD TO EXPLORE THIS
GENERATIONAL CHANGE WITH
EXAMPLES, EXERCISES, AND MATERIAL
HIGHLIGHTING THE EMERGENCE OF MOBILE
COMPUTING AND THE CLOUD. UPDATED
CONTENT FEATURING TABLET
COMPUTERS, CLOUD INFRASTRUCTURE,
AND THE X86 (CLOUD COMPUTING)
AND ARM (MOBILE COMPUTING
DEVICES) ARCHITECTURES IS INCLUDED.
AN ONLINE COMPANION WEB SITE
PROVIDES ADVANCED CONTENT FOR
FURTHER STUDY, APPENDICES,
GLOSSARY, REFERENCES, AND
RECOMMENDED READING. FEATURES
RISC-V, THE FIRST SUCH
ARCHITECTURE DESIGNED TO BE USED IN
MODERN COMPUTING ENVIRONMENTS,
SUCH AS CLOUD COMPUTING, MOBILE
DEVICES, AND OTHER EMBEDDED
SYSTEMS INCLUDES RELEVANT
EXAMPLES, EXERCISES, AND MATERIAL
HIGHLIGHTING THE EMERGENCE OF MOBILE
COMPUTING AND THE CLOUD

**MODERN X86 ASSEMBLY LANGUAGE
PROGRAMMING** - DANIEL KUSSWURM
2018-12-06

GAIN THE FUNDAMENTALS OF X86 64-

BIT ASSEMBLY LANGUAGE PROGRAMMING
AND FOCUS ON THE UPDATED ASPECTS
OF THE X86 INSTRUCTION SET THAT
ARE MOST RELEVANT TO APPLICATION
SOFTWARE DEVELOPMENT. THIS BOOK
COVERS TOPICS INCLUDING X86 64-
BIT PROGRAMMING AND ADVANCED
VECTOR EXTENSIONS (AVX)
PROGRAMMING. THE FOCUS IN THIS
SECOND EDITION IS EXCLUSIVELY ON
64-BIT BASE PROGRAMMING
ARCHITECTURE AND AVX
PROGRAMMING. MODERN X86
ASSEMBLY LANGUAGE PROGRAMMING'S
STRUCTURE AND SAMPLE CODE ARE
DESIGNED TO HELP YOU QUICKLY
UNDERSTAND X86 ASSEMBLY
LANGUAGE PROGRAMMING AND THE
COMPUTATIONAL CAPABILITIES OF THE
X86 PLATFORM. AFTER READING AND
USING THIS BOOK, YOU'LL BE ABLE TO
CODE PERFORMANCE-ENHANCING
FUNCTIONS AND ALGORITHMS USING
X86 64-BIT ASSEMBLY LANGUAGE AND
THE AVX, AVX2 AND AVX-512
INSTRUCTION SET EXTENSIONS. WHAT
YOU WILL LEARN DISCOVER DETAILS
OF THE X86 64-BIT PLATFORM
INCLUDING ITS CORE ARCHITECTURE,
DATA TYPES, REGISTERS, MEMORY
ADDRESSING MODES, AND THE BASIC
INSTRUCTION SET USE THE X86 64-
BIT INSTRUCTION SET TO CREATE
PERFORMANCE-ENHANCING FUNCTIONS
THAT ARE CALLABLE FROM A HIGH-
LEVEL LANGUAGE (C++) EMPLOY X86
64-BIT ASSEMBLY LANGUAGE TO
EFFICIENTLY MANIPULATE COMMON
DATA TYPES AND PROGRAMMING
CONSTRUCTS INCLUDING INTEGERS

Downloaded from
sixideasapps.pomona.edu
on by @guest

TEXT STRINGS, ARRAYS, AND STRUCTURES USE THE AVX INSTRUCTION SET TO PERFORM SCALAR FLOATING-POINT ARITHMETIC EXPLOIT THE AVX, AVX2, AND AVX-512 INSTRUCTION SETS TO SIGNIFICANTLY ACCELERATE THE PERFORMANCE OF COMPUTATIONALLY-INTENSE ALGORITHMS IN PROBLEM DOMAINS SUCH AS IMAGE PROCESSING, COMPUTER GRAPHICS, MATHEMATICS, AND STATISTICS APPLY VARIOUS CODING STRATEGIES AND TECHNIQUES TO OPTIMALLY EXPLOIT THE x86 64-BIT, AVX, AVX2, AND AVX-512 INSTRUCTION SETS FOR MAXIMUM POSSIBLE PERFORMANCE WHO THIS BOOK IS FOR SOFTWARE DEVELOPERS WHO WANT TO LEARN HOW TO WRITE CODE USING x86 64-BIT ASSEMBLY LANGUAGE. IT'S ALSO IDEAL FOR SOFTWARE DEVELOPERS WHO ALREADY HAVE A BASIC UNDERSTANDING OF x86 32-BIT OR 64-BIT ASSEMBLY LANGUAGE PROGRAMMING AND ARE INTERESTED IN LEARNING HOW TO EXPLOIT THE SIMD CAPABILITIES OF AVX, AVX2 AND AVX-512.

AN INTRODUCTION TO ASSEMBLY LANGUAGE PROGRAMMING AND COMPUTER ARCHITECTURE - JOE CARTHY 1996

THIS BOOK IS ABOUT TWO SEPARATE BUT RELATED TOPICS: ASSEMBLY LANGUAGE PROGRAMMING AND COMPUTER ARCHITECTURE. THIS IS BASED ON THE NOTION THAT IT IS NOT POSSIBLE TO STUDY COMPUTER ARCHITECTURE IN ANY DEPTH WITHOUT SOME KNOWLEDGE OF ASSEMBLY

LANGUAGE PROGRAMMING AND SIMILARLY, ONE OF THE REASONS FOR STUDYING ASSEMBLY LANGUAGE PROGRAMMING IS TO GAIN AN INSIGHT INTO HOW COMPUTERS WORK - WHICH NATURALLY LEADS TO THEIR ARCHITECTURE. INTRODUCING ASSEMBLY LANGUAGE PROGRAMMING AND COMPUTER ARCHITECTURE IS IDEAL FOR FIRST YEAR COMPUTER SCIENCE OR ENGINEERING STUDENTS TAKING DEGREE AND DIPLOMA LEVEL COURSES. IT WILL ALSO BE A USEFUL REFERENCE FOR COMPUTER ENTHUSIASTS WISHING TO ADVANCE THEIR KNOWLEDGE AND PROGRAMMING SKILLS.

ARM ASSEMBLY LANGUAGE - WILLIAM HOHL 2014-10-20

DELIVERING A SOLID INTRODUCTION TO ASSEMBLY LANGUAGE AND EMBEDDED SYSTEMS, ARM ASSEMBLY LANGUAGE: FUNDAMENTALS AND TECHNIQUES, SECOND EDITION CONTINUES TO SUPPORT THE POPULAR ARM7TDMI, BUT ALSO ADDRESSES THE LATEST ARCHITECTURES FROM ARM, INCLUDING CORTEX™-A, CORTEX-R, AND CORTEX-M PROCESSORS—ALL OF WHICH HAVE SLIGHTLY DIFFERENT INSTRUCTION SETS, PROGRAMMER'S MODELS, AND EXCEPTION HANDLING. FEATURING THREE BRAND-NEW CHAPTERS, A NEW APPENDIX, AND EXPANDED COVERAGE OF THE ARM7™, THIS EDITION: DISCUSSES IEEE 754 FLOATING-POINT ARITHMETIC AND EXPLAINS HOW TO PROGRAM WITH THE IEEE STANDARD NOTATION CONTAINS STEP-BY-STEP DIRECTIONS FOR THE USE OF KEIL™ MDK-ARM

Downloaded from
sixideasapps.pomona.edu
on by @guest

AND TEXAS INSTRUMENTS (TI) CODE COMPOSER STUDIO™ PROVIDES A RESOURCE TO BE USED ALONGSIDE A VARIETY OF HARDWARE EVALUATION MODULES, SUCH AS TI'S TIVA LAUNCHPAD, STMICROELECTRONICS' INEMO AND DISCOVERY, AND NXP SEMICONDUCTORS' XPLORER BOARDS WRITTEN BY EXPERIENCED ARM PROCESSOR DESIGNERS, ARM ASSEMBLY LANGUAGE: FUNDAMENTALS AND TECHNIQUES, SECOND EDITION COVERS THE TOPICS ESSENTIAL TO WRITING MEANINGFUL ASSEMBLY PROGRAMS, MAKING IT AN IDEAL TEXTBOOK AND PROFESSIONAL REFERENCE.

GUIDE TO ASSEMBLY LANGUAGE -
JAMES T. STREIB 2020-01-24

THIS CONCISE GUIDE IS DESIGNED TO ENABLE THE READER TO LEARN HOW TO PROGRAM IN ASSEMBLY LANGUAGE AS QUICKLY AS POSSIBLE. THROUGH A HANDS-ON PROGRAMMING APPROACH, READERS WILL ALSO LEARN ABOUT THE ARCHITECTURE OF THE INTEL PROCESSOR, AND THE RELATIONSHIP BETWEEN HIGH-LEVEL AND LOW-LEVEL LANGUAGES. THIS UPDATED SECOND EDITION HAS BEEN EXPANDED WITH ADDITIONAL EXERCISES, AND ENHANCED WITH NEW MATERIAL ON FLOATING-POINT NUMBERS AND 64-BIT PROCESSING. TOPICS AND FEATURES: PROVIDES GUIDANCE ON SIMPLIFIED REGISTER USAGE, SIMPLIFIED INPUT/OUTPUT USING C-LIKE STATEMENTS, AND THE USE OF HIGH-LEVEL CONTROL STRUCTURES; DESCRIBES THE IMPLEMENTATION OF

CONTROL STRUCTURES, WITHOUT THE USE OF HIGH-LEVEL STRUCTURES, AND OFTEN WITH RELATED C PROGRAM CODE; ILLUSTRATES CONCEPTS WITH ONE OR MORE COMPLETE PROGRAM; PRESENTS REVIEW SUMMARIES IN EACH CHAPTER, TOGETHER WITH A VARIETY OF EXERCISES, FROM SHORT-ANSWER QUESTIONS TO PROGRAMMING ASSIGNMENTS; COVERS SELECTION AND ITERATION STRUCTURES, LOGIC, SHIFT, ARITHMETIC SHIFT, ROTATE, AND STACK INSTRUCTIONS, PROCEDURES AND MACROS, ARRAYS, AND STRINGS; INCLUDES AN INTRODUCTION TO FLOATING-POINT INSTRUCTIONS AND 64-BIT PROCESSING; EXAMINES MACHINE LANGUAGE FROM A DISCOVERY PERSPECTIVE, INTRODUCING THE PRINCIPLES OF COMPUTER ORGANIZATION. A MUST-HAVE RESOURCE FOR UNDERGRADUATE STUDENTS SEEKING TO LEARN THE FUNDAMENTALS NECESSARY TO BEGIN WRITING LOGICALLY CORRECT PROGRAMS IN A MINIMAL AMOUNT OF TIME, THIS WORK WILL SERVE AS AN IDEAL TEXTBOOK FOR AN ASSEMBLY LANGUAGE COURSE, OR AS A SUPPLEMENTARY TEXT FOR COURSES ON COMPUTER ORGANIZATION AND ARCHITECTURE. THE PRESENTATION ASSUMES PRIOR KNOWLEDGE OF THE BASICS OF PROGRAMMING IN A HIGH-LEVEL LANGUAGE SUCH AS C, C++, OR JAVA.

INTRODUCTION TO ASSEMBLY
LANGUAGE PROGRAMMING - SIVARAMA
P. DANDAMUDI 2006-03-30

THIS UPDATED TEXTBOOK INTRODUCES
Downloaded from
sixideasapps.pomona.edu
on by @guest

READERS TO ASSEMBLY AND ITS EVOLVING ROLE IN COMPUTER PROGRAMMING AND DESIGN. THE AUTHOR CONCENTRATES THE REVISED EDITION ON PROTECTED-MODE PENTIUM PROGRAMMING, MIPS ASSEMBLY LANGUAGE PROGRAMMING, AND USE OF THE NASM AND SPIM ASSEMBLERS FOR A LINUX ORIENTATION. THE FOCUS IS ON PROVIDING STUDENTS WITH A FIRM GRASP OF THE MAIN FEATURES OF ASSEMBLY PROGRAMMING, AND HOW IT CAN BE USED TO IMPROVE A COMPUTER'S PERFORMANCE. ALL OF THE MAIN FEATURES ARE COVERED IN DEPTH, AND THE BOOK IS EQUALLY VIABLE FOR DOS OR LINUX, MIPS (RISC) OR CISC (PENTIUM). THE BOOK IS BASED ON A SUCCESSFUL COURSE GIVEN BY THE AUTHOR AND INCLUDES NUMEROUS HANDS-ON EXERCISES.

A PROGRAMMER'S VIEW OF COMPUTER ARCHITECTURE - JAMES GOODMAN
1993

THIS INTRODUCTORY TEXT OFFERS A CONTEMPORARY TREATMENT OF COMPUTER ARCHITECTURE USING ASSEMBLY AND MACHINE LANGUAGE WITH A FOCUS ON SOFTWARE. STUDENTS LEARN HOW COMPUTERS WORK THROUGH A CLEAR, GENERIC PRESENTATION OF A COMPUTER ARCHITECTURE; A DEPARTURE FROM THE TRADITIONAL FOCUS ON A SPECIFIC ARCHITECTURE. A COMPUTER'S CAPABILITIES ARE INTRODUCED WITHIN THE CONTEXT OF SOFTWARE, REINFORCING THE SOFTWARE FOCUS OF THE TEXT. DESIGNED FOR COMPUTER SCIENCE MAJORS IN AN ASSEMBLY

LANGUAGE COURSE, THIS TEXT USES A TOP-DOWN APPROACH TO THE MATERIAL THAT ENABLE STUDENTS TO BEGIN PROGRAMMING IMMEDIATELY AND TO UNDERSTAND THE ASSEMBLY LANGUAGE, THE INTERFACE BETWEEN HARDWARE AND SOFTWARE. THE TEXT INCLUDES EXAMPLES FROM THE MIPS RISC (REDUCED INSTRUCTION SET COMPUTER) ARCHITECTURE AND AN ACCOMPANYING SOFTWARE SIMULATOR PACKAGE SIMULATES A MIPS RISC PROCESSOR (THE SOFTWARE DOES NOT REQUIRE A MIPS PROCESSOR TO RUN).
A PROGRAMMER'S VIEW OF COMPUTER ARCHITECTURE - JAMES GOODMAN
1993

THIS INTRODUCTORY TEXT OFFERS A CONTEMPORARY TREATMENT OF COMPUTER ARCHITECTURE USING ASSEMBLY AND MACHINE LANGUAGE WITH A FOCUS ON SOFTWARE. STUDENTS LEARN HOW COMPUTERS WORK THROUGH A CLEAR, GENERIC PRESENTATION OF A COMPUTER ARCHITECTURE, A DEPARTURE FROM THE TRADITIONAL FOCUS ON A SPECIFIC ARCHITECTURE. A COMPUTER'S CAPABILITIES ARE INTRODUCED WITHIN THE CONTEXT OF SOFTWARE, REINFORCING THE SOFTWARE FOCUS OF THE TEXT. DESIGNED FOR COMPUTER SCIENCE MAJORS IN AN ASSEMBLY LANGUAGE COURSE, THIS TEXT USES A TOP-DOWN APPROACH TO THE MATERIAL THAT ENABES STUDENTS TO BEGIN PROGRAMMING IMMEDIATELY AND TO UNDERSTAND THE ASSEMBLY LANGUAGE, THE INTERFACE BETWEEN HARDWARE AND SOFTWARE. THE TEXT

Downloaded from
sixideasapps.pomona.edu

on by @guest

INCLUDES EXAMPLES FROM THE MIPS RISC (REDUCED INSTRUCTION SET COMPUTER) ARCHITECTURE, AND AN

ACCOMPANYING SOFTWARE SIMULATOR PACKAGE SIMULATES A MIPS RISC PROCESSOR (THE SOFTWARE DOES NOT REQUIRE A MIPS PROCESSOR TO RUN).