DESCRIPTION

A self-contained introduction to microprocessor theory and applications

This book presents the fundamental concepts of assembly language programming and system design associated with typical microprocessors, such as the Motorola MC68000/68020 and Intel? Pentium?. It begins with an overview of microprocessors--including an explanation of terms, the evolution of the microprocessor, and typical applications--and goes on to systematically cover:

- Microcomputer architecture
- Microprocessor memory organization
- Microprocessor Input/Output (I/O)
- Microprocessor programming concepts
- Assembly language programming with the 68000
- 68000 hardware and interfacing
- Assembly language programming with the 68020
- 68020 hardware and interfacing
- Assembly language programming with Pentium
• Pentium hardware and interfacing

The author assumes a background in basic digital logic, and all chapters conclude with a Questions and Problems section, with selected answers provided at the back of the book. *Microprocessor Theory and Applications with 68000/68020 and Pentium* is an ideal textbook for undergraduate- and graduate-level courses in electrical engineering, computer engineering, and computer science. (An instructor's manual is available upon request.) It is also appropriate for practitioners in microprocessor system design who are looking for simplified explanations and clear examples on the subject. Additionally, the accompanying CD-ROM, which contains step-by-step procedures for installing and using Ide 68k21 (68000/68020) and MASM32 / Olly Debugger (Pentium) software, provides valuable simulation results via screen shots.

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**ABOUT THE AUTHOR**

M. Rafiquzzaman, PhD, has been a Professor of Electrical and Computer Engineering at California State Polytechnic University, Pomona, since March 1978. He is the founder and President of Rafi Systems, Inc., a manufacturer of biomedical devices (Intraocular lenses) and a computer systems consulting firm in California. He is recognized for his numerous books on microprocessors, which have been translated into Russian, Chinese, and Spanish. Additionally, he was computer advisor to the president of Bangladesh. He was also an advisor to the U.S. House Policy Committee's Technology Board, assisting members of the U.S. Congress in the development and promotion of technology in both the public and private sectors. Dr. Rafiquzzaman is presently a member of the U.S. Olympic committee.

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**FEATURES**

• This will be the only book covering basic microcomputer interfacing and I/O techniques with simple I/O devices such as LEDs, switches and A/D converters, hexadecimal keyboard and seven-segment displays.

• Inclusion of both Intel and Motorola microprocessors in a very simplified manner along with lots of examples make this book highly suitable for adoption

• This book is comprehensive and covers all major areas of assembly language programming with microprocessors.

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