Computer Organisation and Architecture

This textbook provides a perfect amalgam of the basics of computer architecture, intricacies of modern assembly languages and advanced concepts such as multiprocessor memory systems and I/O technologies. It shows the design of a processor from first principles including its instruction set, assembly-language specification, functional units, microprogrammed implementation and 5-stage pipeline. *Computer Organisation and Architecture* can serve as a textbook in both basic as well as advanced courses on computer architecture, systems programming, and microprocessor design. Additionally, it can also serve as a reference book for courses on digital electronics and communication.

Features

- Balanced presentation of theoretical, qualitative and quantitative aspects of computer architecture
- Extensive coverage of the ARM and x86 assembly languages
- Design of a complete processor and its ISA from first principles
- Highly illustrative text with figures placed at relevant points for better understanding of concepts
- Extensive software support: Instruction set emulators, assembler, Logisim and VHDL design of the *SimpleRisc* processor
- Pedagogy
  - ✓ *Solved Examples: 180*
  - ✓ *Exercises: 250*
  - ✓ *Illustrations: 400*

Please scan the adjacent QR code, or visit
http://www.mhhe.com/sarangi/coa
to access supplementary materials available with this book.

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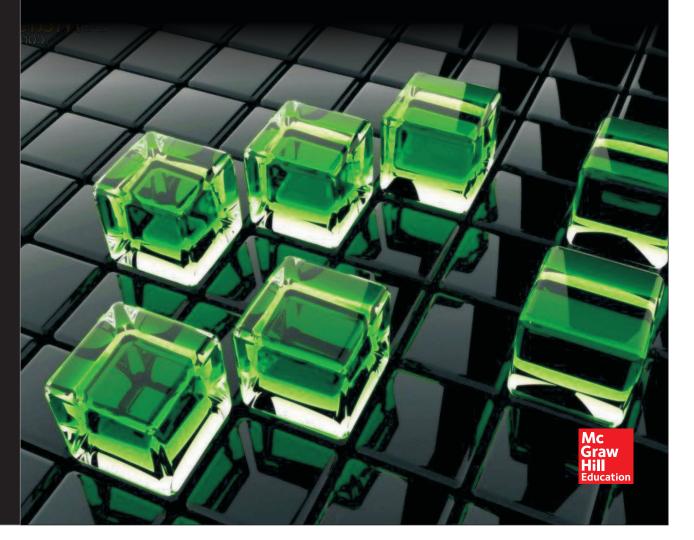*info.india@mheducation.com*

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Smruti Ranjan Sarangi

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Sarangi

McGraw Hill Education