Computer Architecture

(course intro)

heeyoul choi
hchoi@handong.edu

School of Computer Science and Electrical Engineering
Handong Global University

computer architecture (ITP30003)

- ITP30003
  - Mon/Thu 5 (section 1) (Room: OH401)
  - Mon/Thu 6 (section 2) (Room: OH401)

- instructor: heeyoul “henry” choi
  - email: hchoi@handong.edu
  - office: OH312
  - office hours: Wed. 11:00 ~ 12:00

- TA:
  - Hee Seok Jeong, dldydldy@naver.com
  - Hyunsub Lee, tales47@naver.com

grading policy

- Homework: 20%
- Quizzes: 20%
- Midterm: 30%
- Final: 30%

One day delay: 20% penalty (More than one day: rejection)
Otherwise, a reasonable excuse should be submitted within 3 days from the deadline

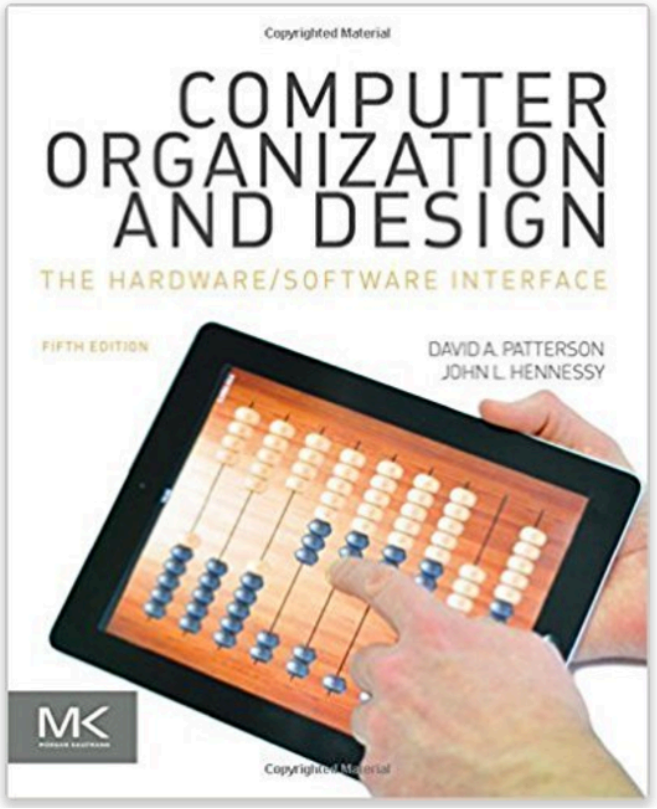
- Participation is very encouraged.

Cheating → “F”

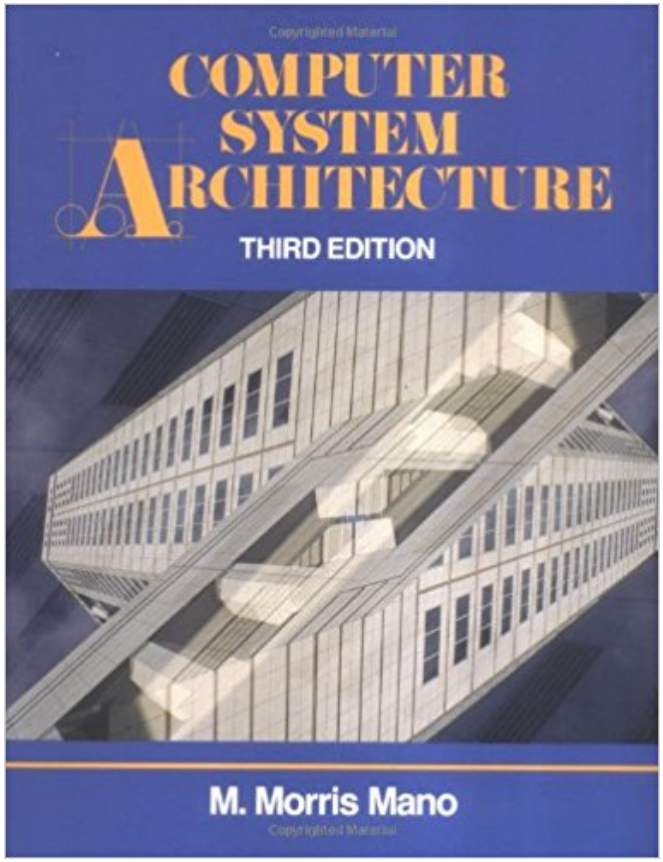
textbook

Computer Organization and Design: The Hardware/Software Interface, 5th Edition Paperback – 2016

by David A. Patterson (Author)



reference


Copyrighted Material
COMPUTER
SYSTEM
ARCHITECTURE
THIRD EDITION
M. Morris Mano
Copyrighted Material

trying to cover

- relationship between HW and SW
- concepts that are the basis for current computers

1. Introduction
   - Big picture and basic ideas
2. Instructions: language of the computer
   - Compiler, MIPS and assembly language
3. Arithmetic for computers
   - math operations: +, -, x, /
   - floating point
4. The processor
   - pipelining
5. Large and fast: exploiting memory hierarchy
   - caches and virtual memory
6. Parallel processors from client to cloud
   - multicore, multithread and GPU