

CS3503

Computer Organization and Architecture



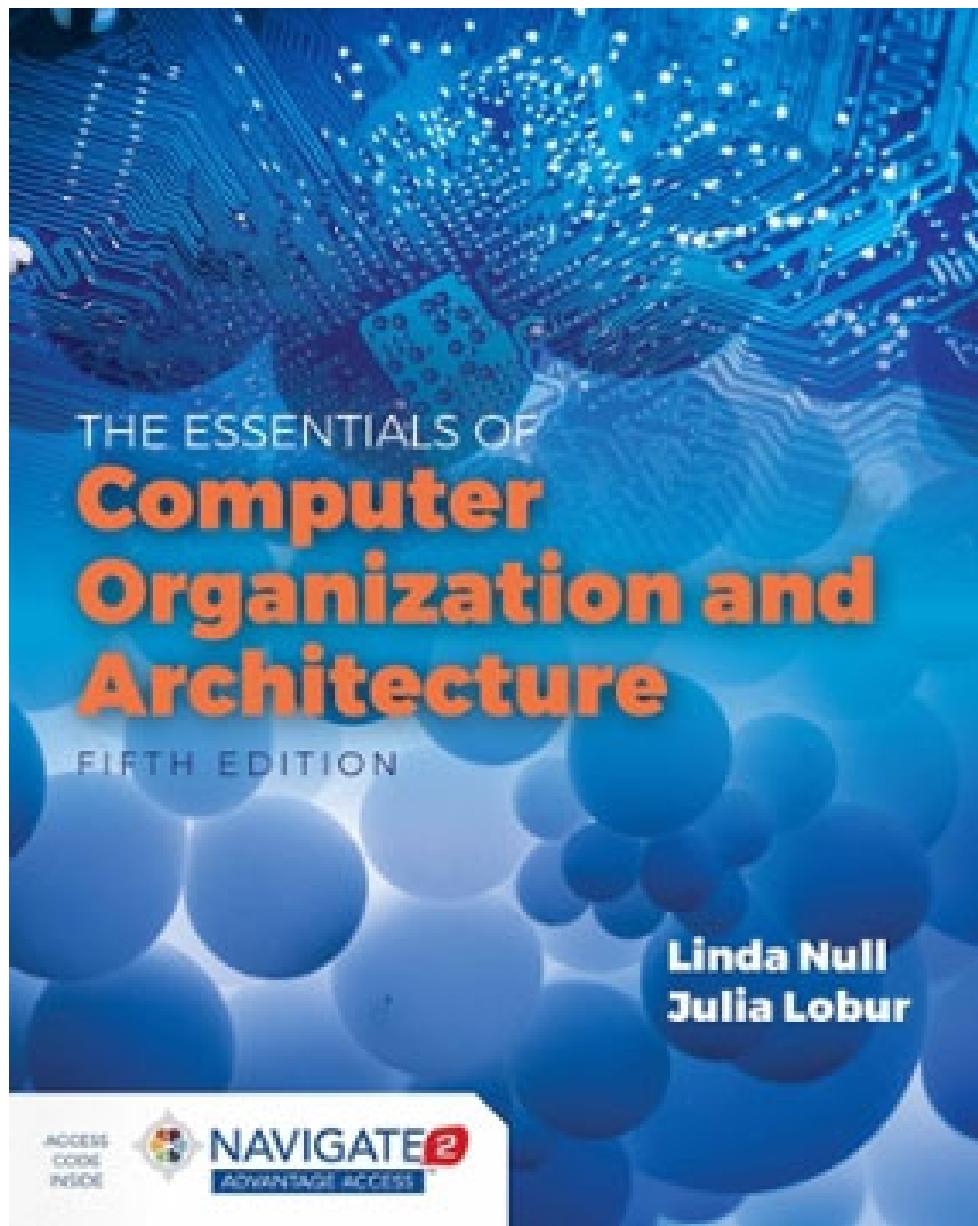
Why we are here?

- **Understand** the working mechanism and some fundamental principles of computers
 - Because most of them are universally applied in computer science
- **Design** better programs, including system software such as compilers, operating systems, and device drivers.
 - Even **optimize** program behavior.
 - **Evaluate** computer system performance.

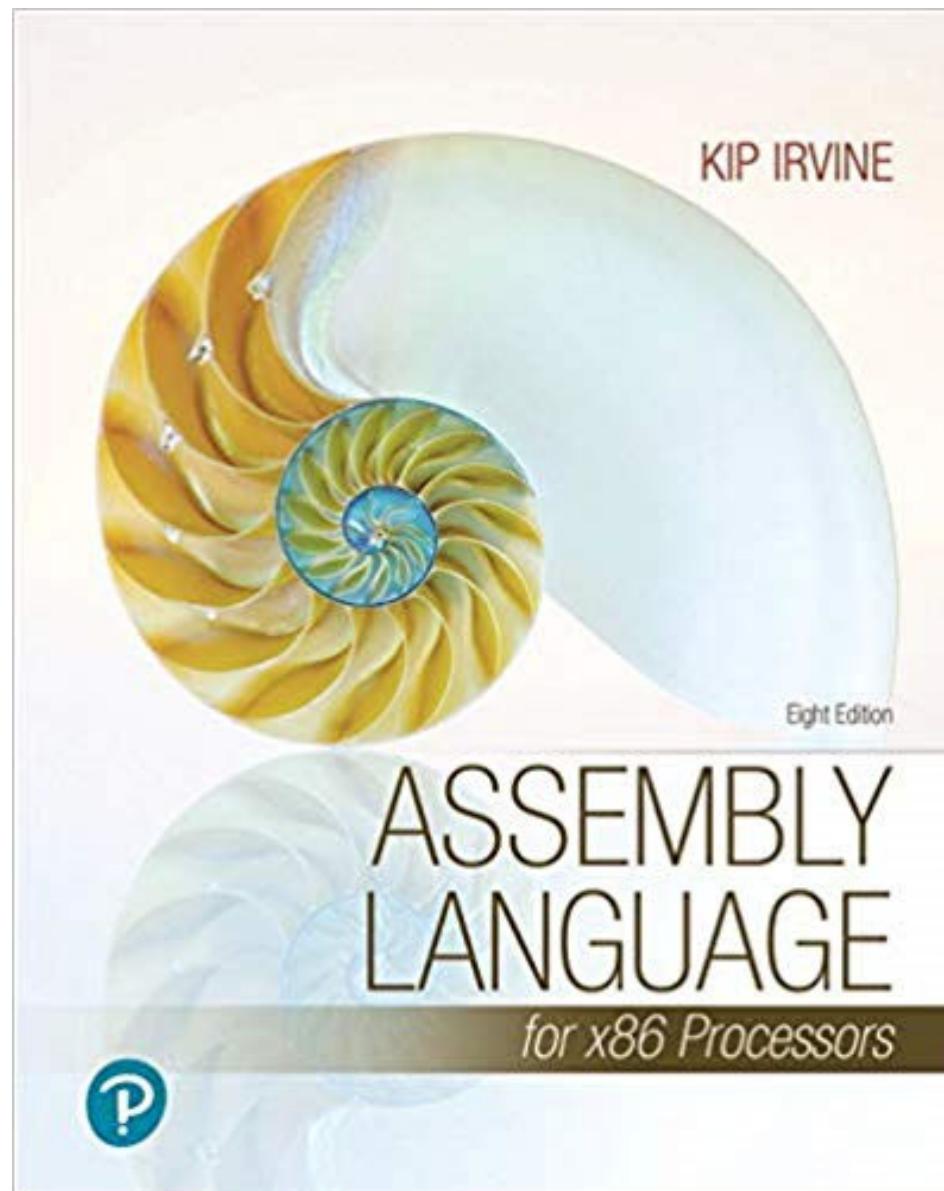
Course Goal

- Give an **introduction** to computer architecture
 - Data representation: integer, floating-point etc.
 - Boolean algebra and digital logic
 - Hardware organization: CPU, memory, disk etc.
 - Assembly language
- Give a **preparation** for more advanced courses
 - Operating systems
 - Compiler, Programming Languages
 - Parallel & Distributed Computing

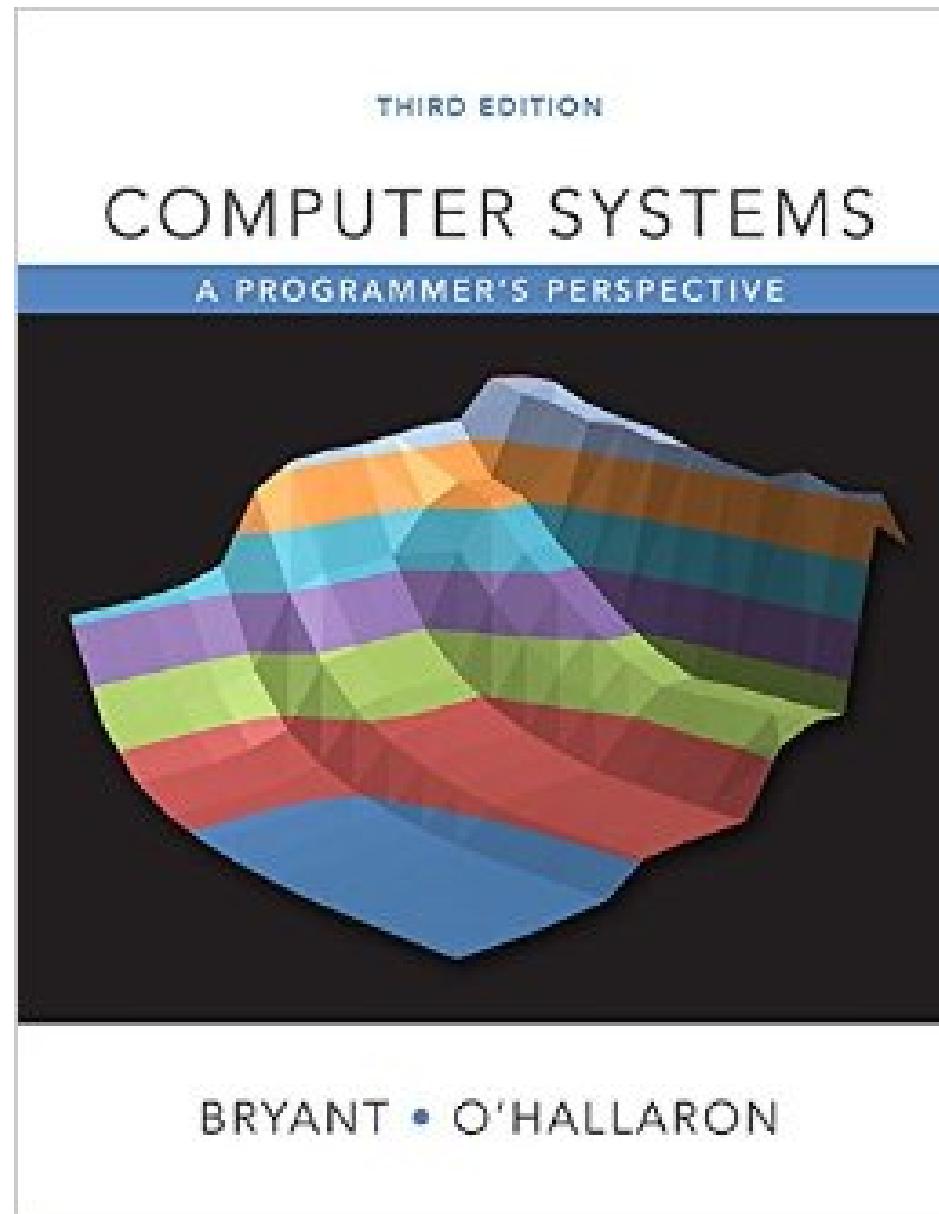
Textbook



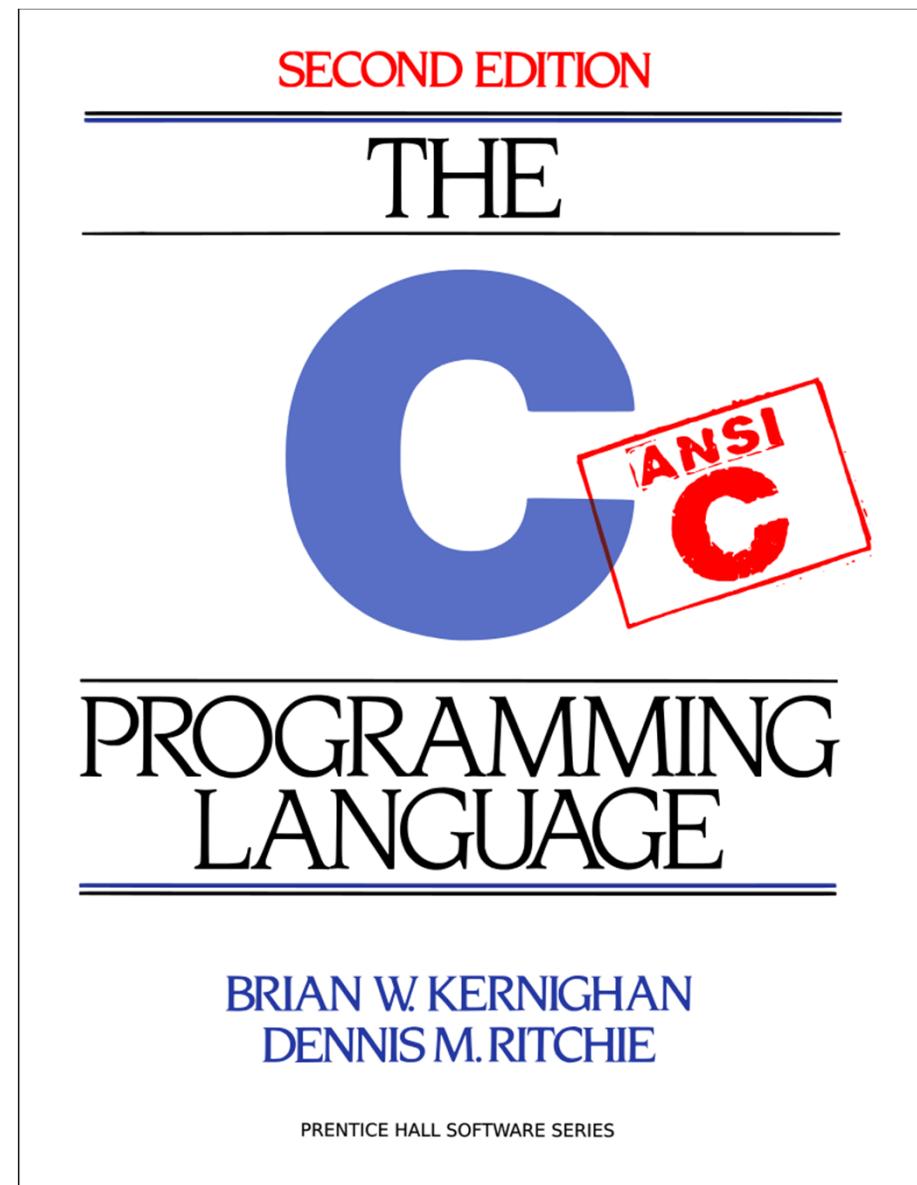
Textbook (not required but recommended
for the best learning)



Reference Books



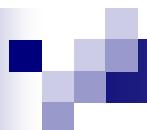
Reference Books



Learning Methodology

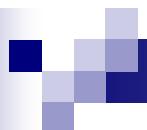
- Review course materials in time
- Understand course materials and homework
- Work on homework problems
- Practice! Practice! Practice!
- **Don't** wait until the last minute!

This course takes time!!!



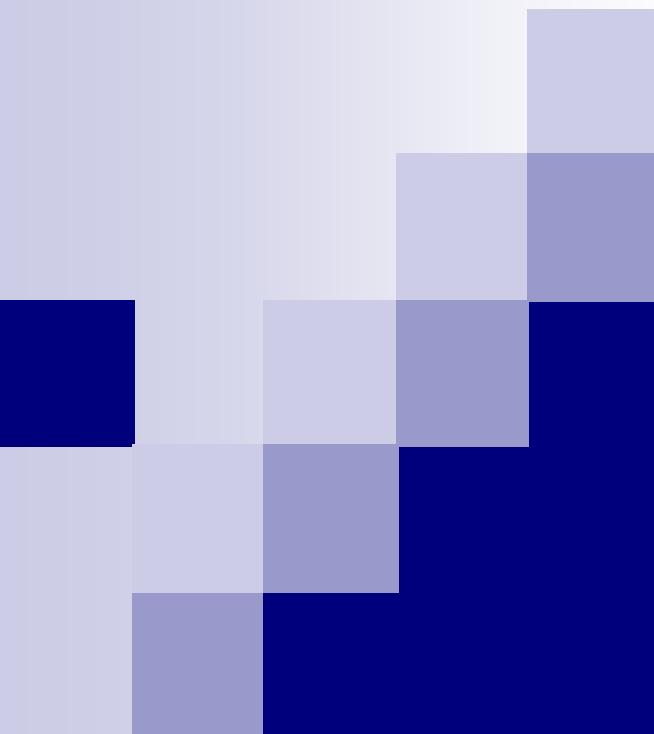
I am here to help!

- I see students struggle each semester
- Most of them **never** ask questions or come to office hours
- I want to help you learn, but I cannot force you to learn
- Better ask for help than linger on and retake the course!



Different Methods

- Google (or Bing or other search tools)
- Books
- People



Questions?

Thank you and have fun!!!