



Course Information and Policy

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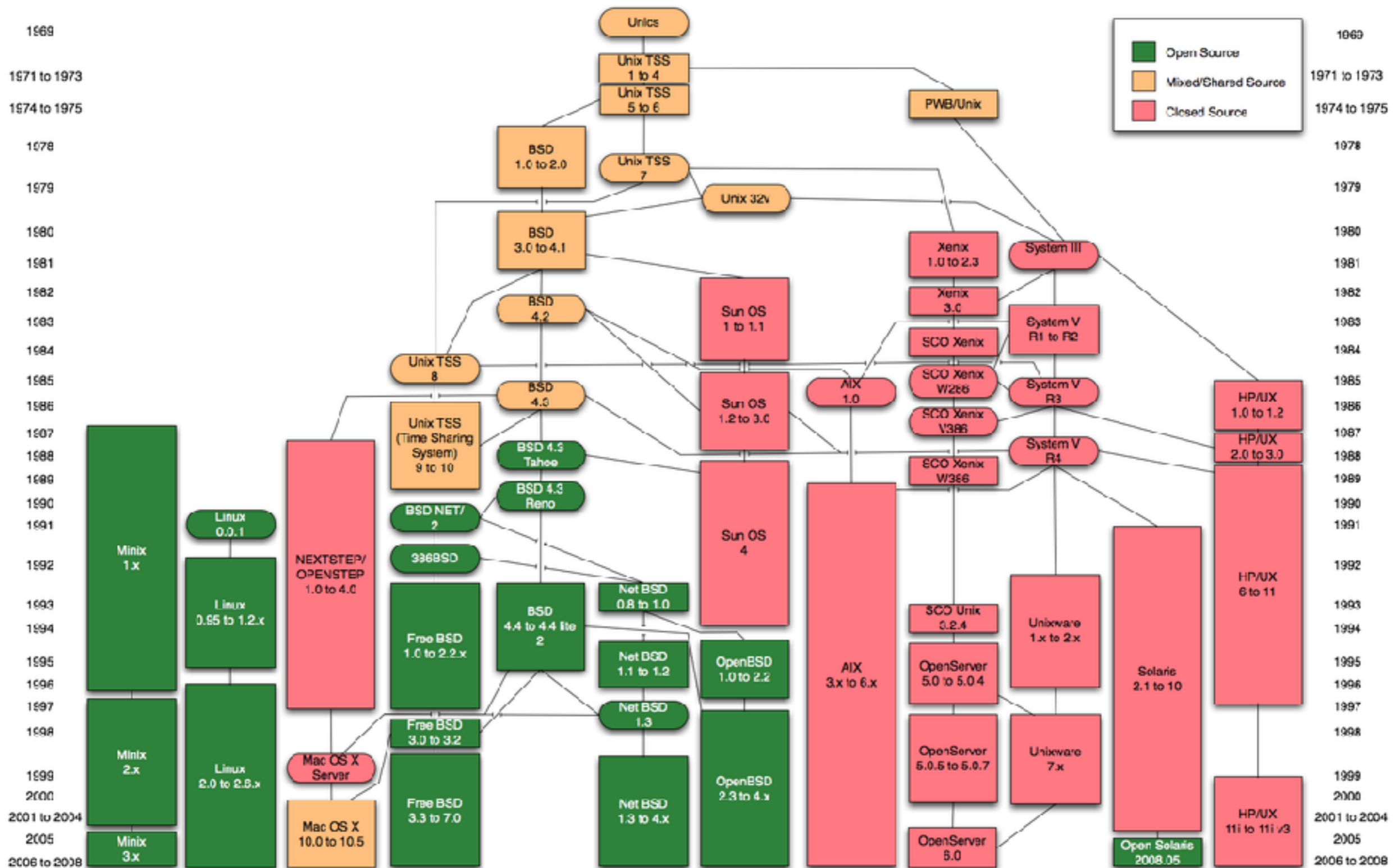


Popular Operating Systems





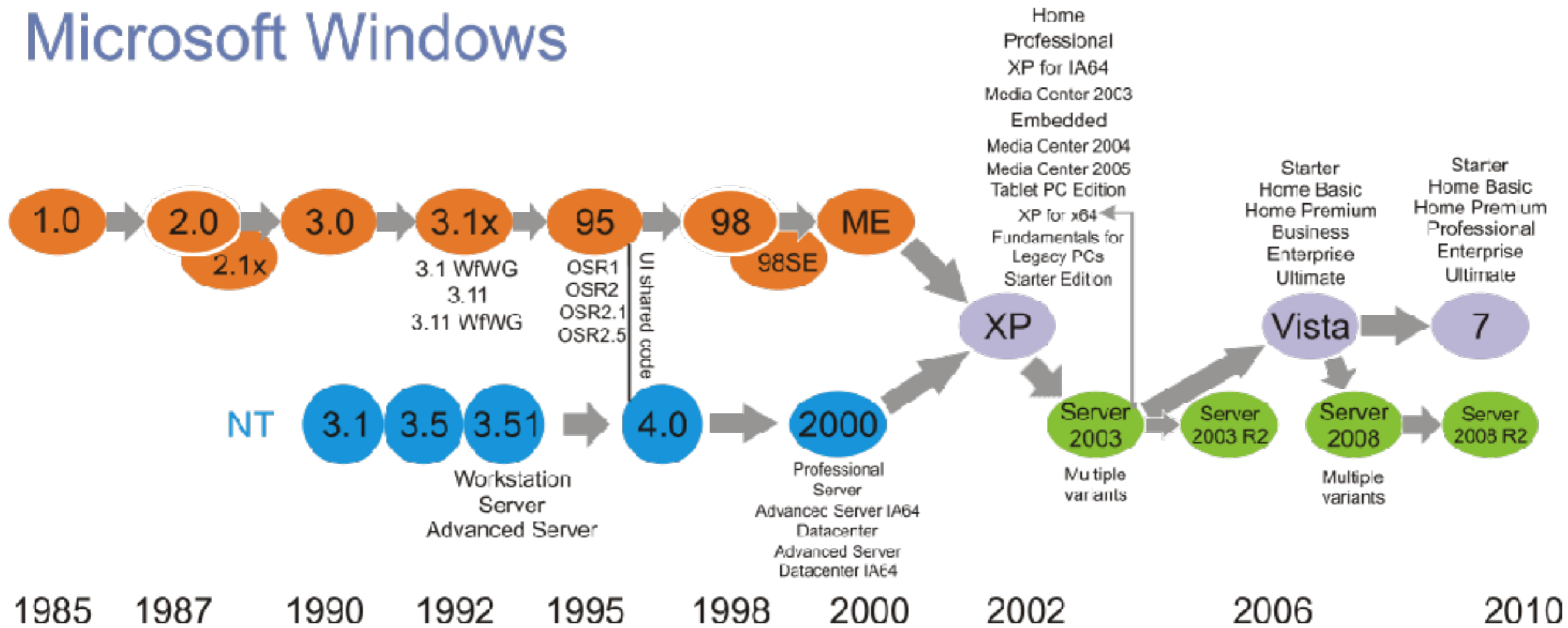
UNIX Family Tree





Windows Family Tree

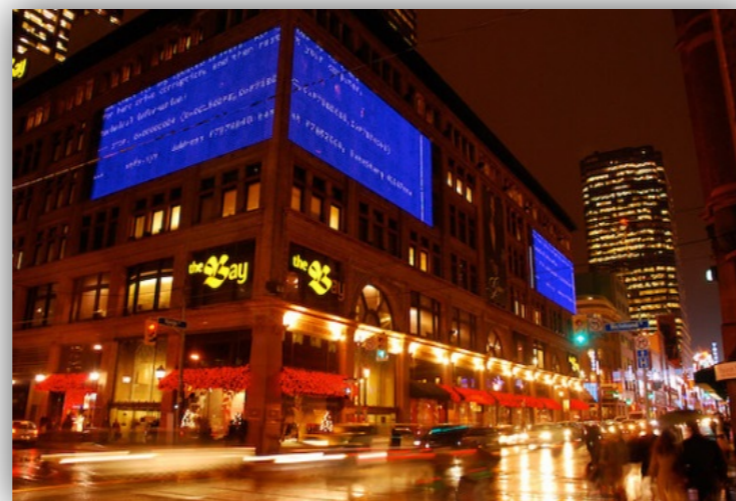
Microsoft Windows





Why Study Operating Systems

- OS is highly complicated software running on most machines
 - Windows: 50M lines of source code
 - Linux: 15M lines of source code
- It contains many important system concepts
 - complexity hiding, performance tuning, resource allocation...
- Studying OS internals makes you a more **capable** programmer
 - know how it works, and how it works better



You need to restart your computer. Hold down the Power button until it turns off, then press the Power button again.

Redémarrez l'ordinateur. Enfoncez le bouton de démarrage jusqu'à l'extinction, puis appuyez dessus une nouvelle fois.

Debe reiniciar el ordenador. Mantenga pulsado el botón de arranque hasta que se apague y luego vuelva a pulsarlo.

Sie müssen den Computer neu starten. Halten Sie den Ein-/Ausmacher gedrückt bis das Gerät ausgeschaltet ist und drücken Sie ihn dann erneut.

コンピュータの再起動が必要です。電源が切れるまでパワーボタンを押し続けてから、もう一度パワーボタンを押します。



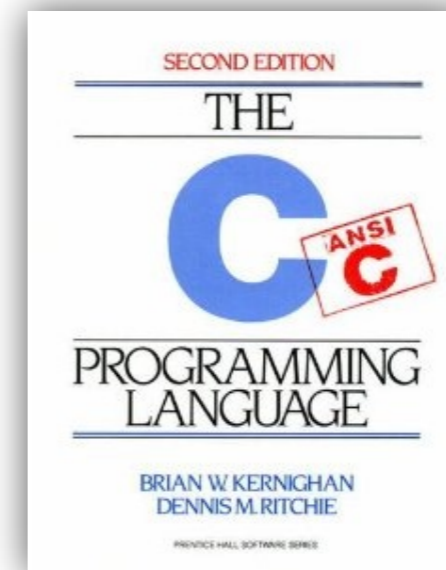
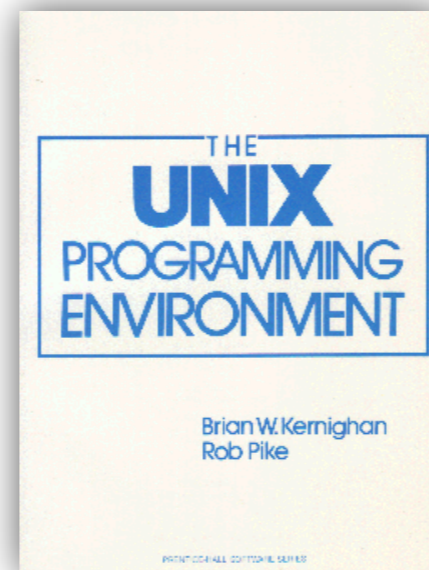
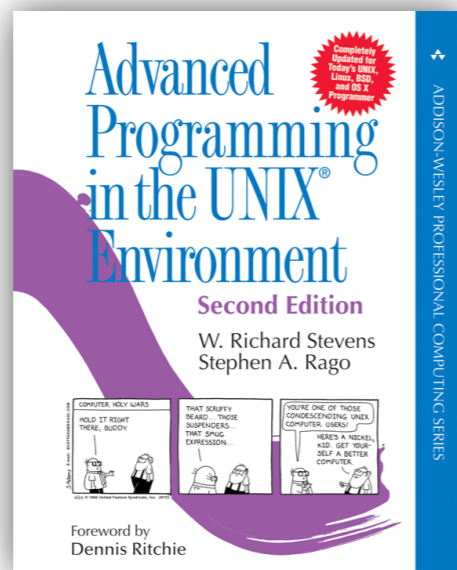
Learning Objectives

- Understand operating system concepts
 - process management, CPU scheduling, synchronization, file systems...
- Comprehend OS concepts through programming
 - multi-threading and synchronization, system call, kernel modules...
- Get an overall understanding of how the real-world operating systems work



Prerequisites

- Data Structures
- Programming skills:
 - proficiency in UNIX(Linux) programming and debugging
 - proficiency in the C programming language





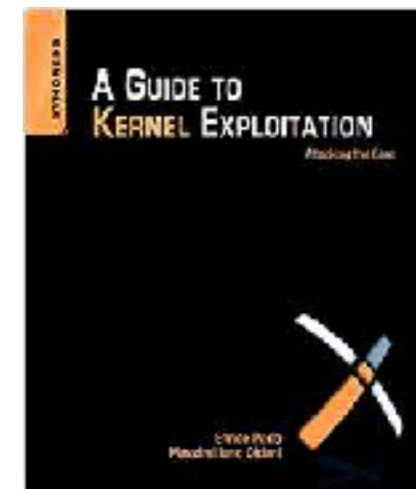
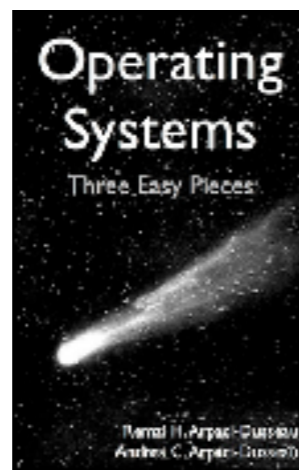
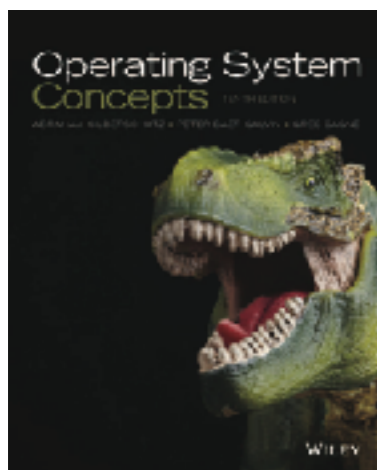
Instructor

- Yajin Zhou (yajin_zhou@zju.edu.cn)
- Office: 曹楼 412
- Office hour: by appointments
- Class website: <https://yajin.org/os2018fall/>
- TA: Jiaqi Li (教9 211), Runhuai Li (科工楼2楼)



Course Material

- Lecture notes (posted at the class website)
- Textbook:
 - Operating System Concepts
 - Operating Systems: Three Easy Pieces, v1.0





Grading

- Final Exam – 50%
- Homework – 10%
- Survey/Presentation – 12%
- Class Quiz – 7%
- Project – 21%



Homework and Projects

- Three projects + one **bonus** project
- Project and homework assignments are **individual** efforts
- Submission **MUST** be typed, no hand-written submission
- Late submissions are accepted **after the deadline**
 - a **10%** penalty will be applied for **each day** of late submission
- Disputes of grade **MUST** be resolved within **one week** of receiving it



Exams

- No midterm exam
- One final exam, close-booked
- Final exam is comprehensive/cumulative



Your Responsibilities

- Understand lecture & reading materials
- Ask for extra help, if needed
 - if the class is too hard or you do not have necessary backgrounds
- Uphold academic integrity
- Turn in your assignments on time
- Check class web page regularly



Dos and Don'ts

- Do share debugging experiences, knowledge of tools
- Do acknowledge help from others
- Do acknowledge sources of information from books and web pages

- Don't cheat or help others cheat
- Don't paraphrase code from others
 - e.g., changing variable names or indentation
- Don't post code to the discussion board