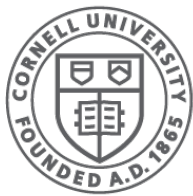


CS4411 Overview

Yu-Ju Huang



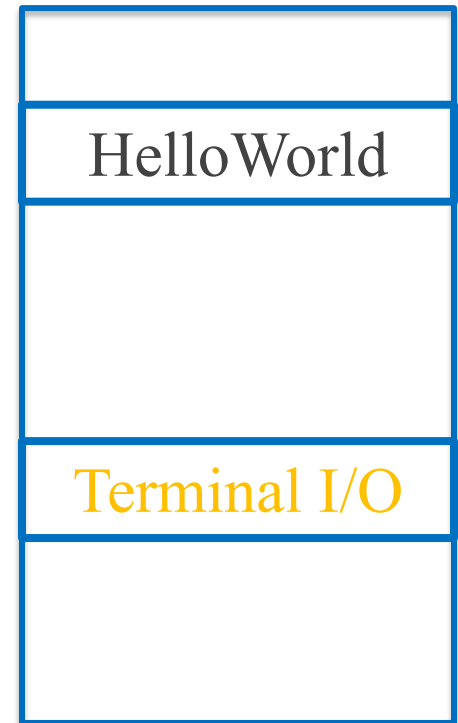
Cornell CIS
COMPUTING AND INFORMATION SCIENCE

Operating Systems

- Manage hardware resources
 - CPU
 - Processes, threads, privileged modes
 - Memory
 - Memory protection, address translation
 - Storage
 - File systems, disk schedulers, disk cache
 - Network
 - Send/receive data to/from remote nodes
 - I/O
 - ...

Let's start with HelloWorld!

- HelloWorld program prints “Hello World” to the terminal.
- Many things are involved to achieve it
- Initialize memory
- Let the program to “run”
- Write “HelloWorld” terminal I/O



Memory

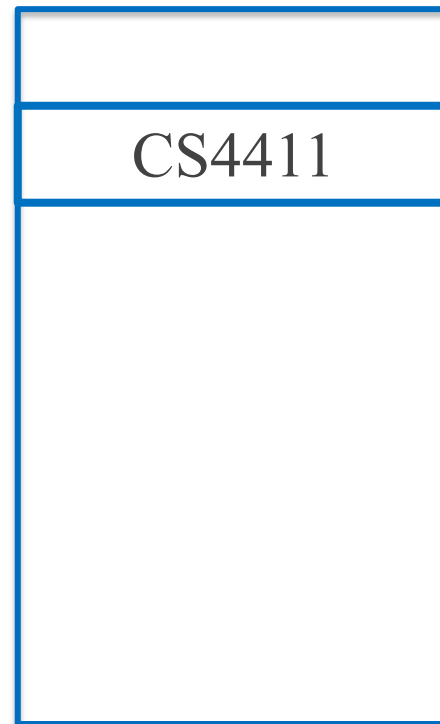
How about multi-tasking?

- Preemptive scheduling
- Multi-processing
- Multi-threading

There is also memory translation/protection



Process A



Process B

And read/write files?

- Given a file name, why my computer know where to read from the disk the file name?
- File system

Project overview

P0	Queue
P1	Hello World
P2	Cooperative threads
P3	Preemptive threads
P4	Memory protection
P5	Disk cache
P6	File system