

Operating Systems

- Review Syllabus
 - read the warning about the size of the project
 - make sure you get the 6th edition (or later) of the book
- Program #0 Handout
 - its due in just under one week
 - purpose is to get familiar with the simulator
- Discussion Sections
 - will focus on the project and meet only once a week (W)
- Reading
 - Chapter 1
 - Chapter 2 (for Thursday)

What is an Operating System?

- **Resource Manager**

- Resources include: CPU, memory, disk, network
- OS allocates and de-allocates these resources

- **Virtual Machine**

- provides an abstraction of a larger (or just different machine)
- Examples:
 - Virtual memory - looks like more memory
 - Java - pseudo machine that looks like a stack machine
 - IBM VM - a complete virtual machine (can boot multiple copies of an OS on it)

- **Multiplexor**

- allows sharing of resources and protection
- motivation is cost: consider a \$40M supercomputer

What is an OS (cont)?

- **Provider of Services**
 - includes most of the things in the above definition
 - provide “common” subroutines for the programmer
 - windowing systems
 - memory management
- **The software that is always loaded/running**
 - generally refers to the *Os kernel*.
 - small protected piece of software
- **All of these definitions are correct**
 - **but** not all operating have all of these features