

Session: Introduction  
Topic: Operating Systems and UNIX

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## Computer Science Department UNIX Account

### Machines

- Diablo ("diablo.cs.fsu.edu") - Faculty only (do not hack)
- Quake ("quake.cs.fsu.edu") - Deprecated
- Shell ("shell.cs.fsu.edu") - Use this one generally
- Linprog ("linprog.cs.fsu.edu") - Use for programming (actually a stack of "linprog1" - "linprog4")

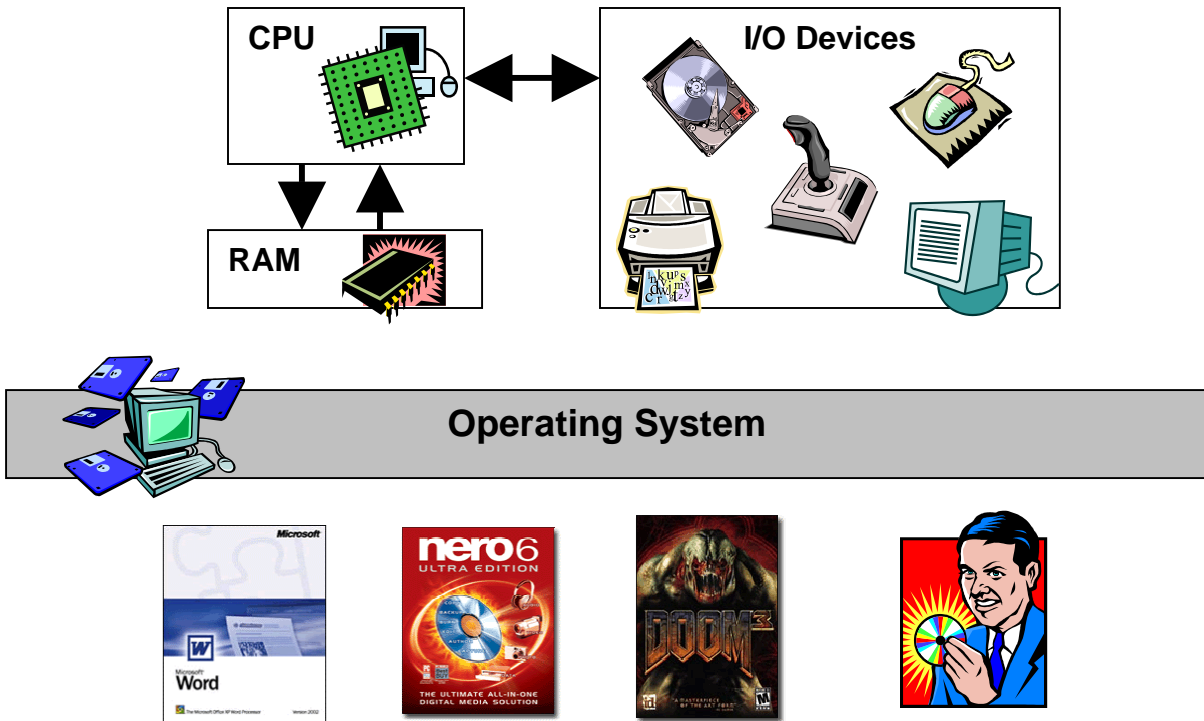
### SSH (Secure Shell)

- Use an SSH client program to connect to CS machines
- Download from: <http://sl.us.fsu.edu/ssh.html> (You must be connected to the FSU network to obtain)
- Also available on Blackboard website

### New Account Application

- <http://system.cs.fsu.edu/info/newuser/index.html>
- Use SSH Client to connect to "shell.cs.fsu.edu"
- username: newacct
- password: newacct
- Carefully follow **rules** for creating your password.
- Be sure to get your assigned **username** at end.

# Basic Components



## CPU (Central Processing Unit, "Processor")

- Brain

## Main Memory (RAM)

- Temporary Workspace
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## I/O (Input/Output)

- Keyboard, Mouse
  - Monitor
  - Mass Storage (Hard Drives, CD-ROM)
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## Operating System

- Oversees interaction of hardware components
- Provides interface between software and hardware
- Provides interface to user
  
- Most common use is running programs and managing "files"

## UNIX Components

### Kernel

- Manages Main Memory, CPU
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### File System

- Handles Mass Storage
- Stores information in files
- Organizes files into directories

### Shell

- Handles I/O between User and OS
  - Interprets User Commands
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### Utilities

- Specialized Programs included with standard UNIX
- Run from Shell

# Shell

## Many Flavors

- Bourne (sh) - S.R. Bourne (Good scripting, poor interactivity)
- Bourne Again (bash) - Rework Bourne
- C-Shell (csh) - UC Berkeley (Scripting language buggy)
- Korn Shell (ksh) - David Korn at AT&T (sh with interactivity and fee)

## T C-Shell (tcsh)

- Similar to C-Shell
- Default on Linux / Intel installations
- **Default for Department of Computer Science accounts**

## Shell Operation Cycle

- Waits for command (you see "prompt")
- You type in a command name (that is, you "run a program")
- **You press <Enter>**
- Shell completes command
- Maybe you see something, maybe you do not
- [Go check for result]
- Repeat

