Lab 0 Objectives

- Intro to Labs
- Intro to Operating Systems
- Start Lab #0
  - UNIX/Linux intro
  - Use jEdit (Text Editor)
  - Register for Interactive Textbook
  - Canvas (Forum for "Broader Issues")

1

Intro to Labs

- Student Assistants
  - Ana Estrada Hamm '22
  - Rinn Joireman '21
- Tech Support Tom Marcais
  - Linux/CS account issues
  - tmarcais@wlu.edu

2

Intro to Labs

- 3 hours and 5 minutes to get started on labs
  - Help from me and the student assistants
- Often will need to finish lab after lab period
  - Lab assignments are the majority of your homework
- Use this lab (P405), preferably, or P413
  - Or, work remotely

What Today Is and Is Not

- Not ready for programming
- Set up for the rest of semester
- Develop skills
  - Communicating with computer
    - When we talk to computer, we need to be *precise*
  - **Identifying problems** and **solving those problems**
- Start to learn Linux

Basic Computer Architecture
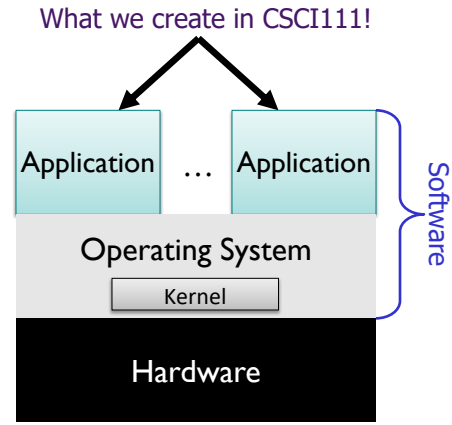
What we create in CSCI111!

Solve problems
MSOffice Applications (Excel, Word),
Solitaire, Firefox, Internet Explorer

Manages hardware resources
Windows, OSX, UNIX, Android, **Linux**

The machine, made up of CPU,
memory, hard drive, keyboard, etc.
Dell, **Apple**, IBM, HP, Toshiba, …

| Application | … | Application |

Operating System
Kernel

Software

Hardware

5

Parmly 405 Machines

- Run both Linux and OSX
  - If need to switch, restart the machine
  - By default → Mac
    - When restarting, hold down the alt key
- Computer should be in Linux
  - If not, let us know
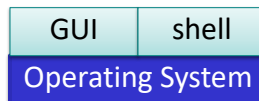- Parmly 413: Linux-only

6

Operating Systems

- Manage hardware resources
- Three popular desktop operating system variations:

Mac	Windows	UNIX

- Learn Linux (a UNIX variation) in this class

  - Macs are built on UNIX → can use UNIX commands

7

Intro to UNIX

GUI	shell
Operating System	

- Execute operations by typing commands in shell or using GUIs (Graphical User Interfaces)
- Command-line tools
  - Pros and cons
    - Faster to use keyboard than mouse
    - Easier to automate
    - Can be intimidating
- We will use both GUIs and command-line tools
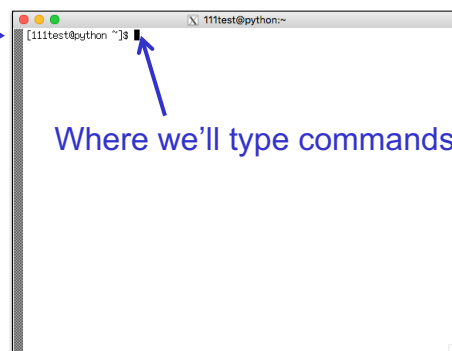
8

OVERVIEW OF LAB

9

Terminal

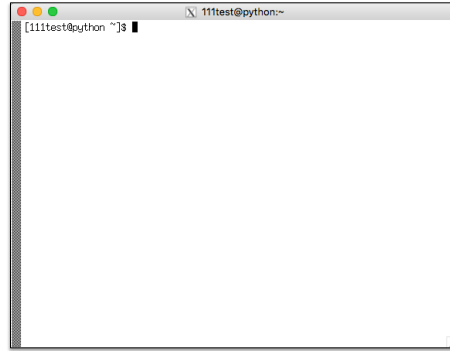- Command-line interface to operating system
- Open a terminal

Prompt: ⟶

Where we'll type commands

10

Terminal

- Command-line interface to operating system
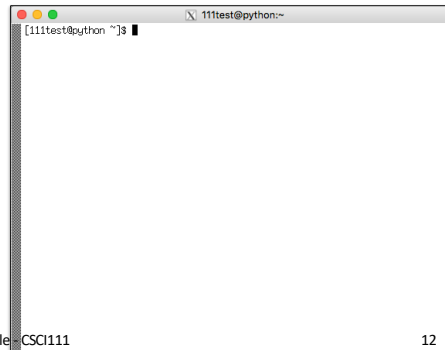- Open a terminal

Prompt: [username@machinename directoryIAmIn]$

11

UNIX Shortcuts: ~

- ~ represents your home directory
  - *Not *the* home directory*
  - Always with respect to the user
- When you open a new terminal, you're in your home directory

12

Opening a Text Editor

- Text editor: an application to write/edit text files
  - Text files: program source code, HTML code
  - Like NotePad++ or TextEdit
- To run one text editor:
  - `jedit &`
  - `&` means "run in the background" so you can keep using the terminal

13

GUI to Get Help

- At the prompt, run the command
  - `runHelpClient`

14

Challenge: UNIX is a Bad Parent

- Doesn't tell you when you've done something right
- Only tells you when you've done something wrong

sprenkle@spartacus Desktop$ mv lab00.pptx.pdf lab00.pdf
sprenkle@spartacus Desktop$

Renames file from
`lab00.pptx.pdf` to `lab00.pdf`

Since you didn't get an error message,
it did something!
(May not be what you wanted/expected.)

15

Changing Your Password

- Don't think you'll be able to remember that password?
- Let's reset it!
  - ➢ passwd

- Password characters don't show up when you type—why?

16

Ready… Set…

- Go to course web site
  - ➢ Bookmark it
- Navigate to Lab 0, from course's "Schedule" page
  - ➢ We're starting on the objective "Remotely Accessing the Lab Machines"

GO!

17