

Using the UNIX Terminal

MakeOpenSource and CSE 220

This presentation is inspired in part by MIT's
[The Missing Semester of Your CS Education.](#)

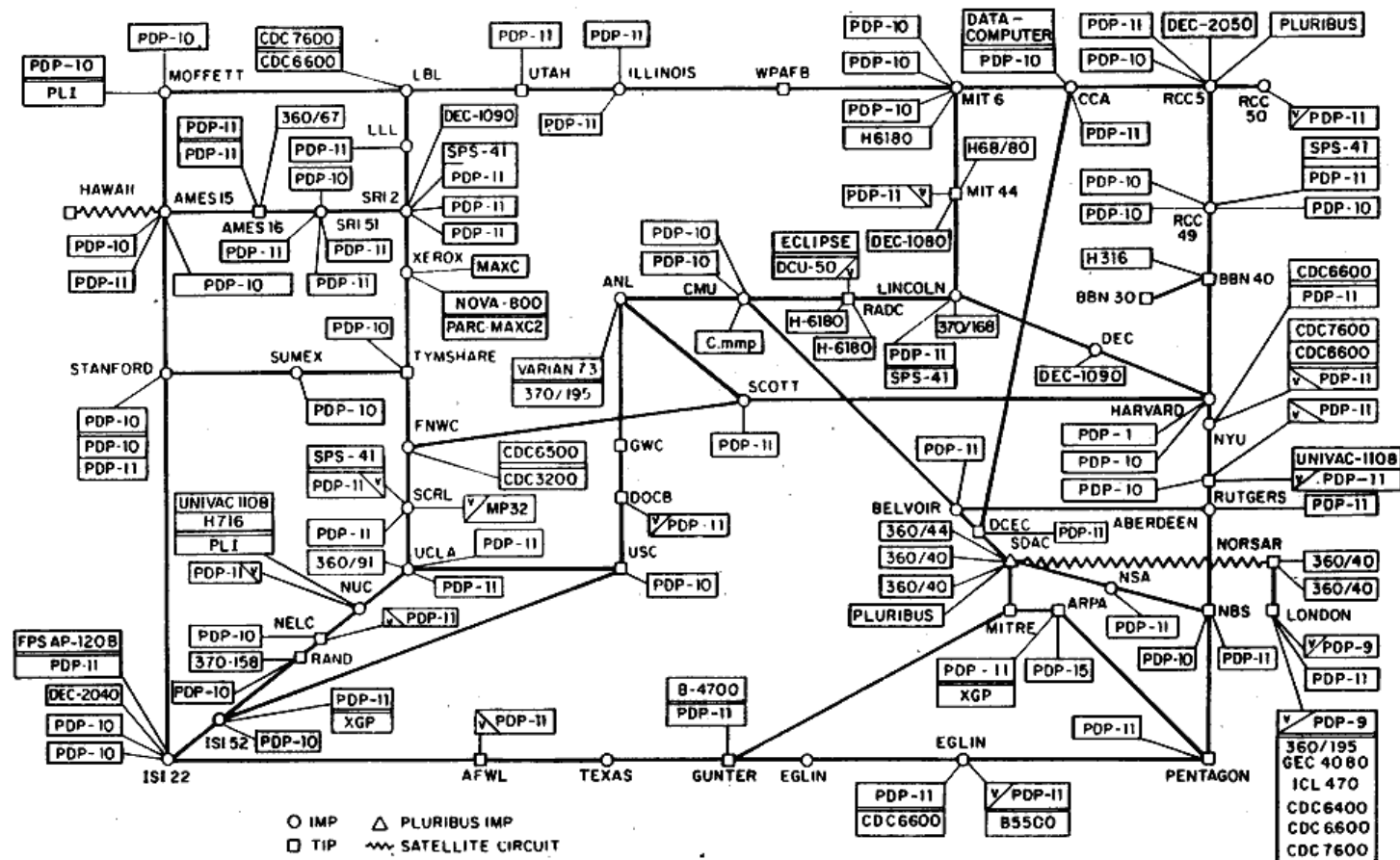
Agenda

1. Introduction (5m)
2. Components of the Terminal (10m)
3. Command-Line Demo (15m)
4. Workshop (15m)



1. Introduction

ARPANET LOGICAL MAP, MARCH 1977



(PLEASE NOTE THAT WHILE THIS MAP SHOWS THE HOST POPULATION OF THE NETWORK ACCORDING TO THE BEST INFORMATION OBTAINABLE, NO CLAIM CAN BE MADE FOR ITS ACCURACY)


NAMES SHOWN ARE IMP NAMES, NOT (NECESSARILY) HOST NAMES

A photograph of an IBM PC AT computer. The monitor is black with the IBM logo at the top center. On the left side of the monitor bezel, there are three red indicator lights labeled 1, 2, and 3. On the right side, there are several control buttons and lights, including a 'Monitor' button, a 'Text' button, and a 'Aa' button. The keyboard is white with black keys and is positioned in front of the monitor. A large blue rectangular overlay is centered over the keyboard and the lower part of the monitor, containing the text 'Quick Demo' in white. The computer is sitting on a wooden surface.




Quick Demo




DEVICES

 File System

PLACES

 emil Desktop Trash Documents Music Pictures Videos Downloads

NETWORK

 Browse Network

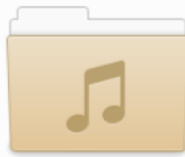
Desktop



Documents



Downloads



Music



pa1



Pictures



Public



Templates



Videos

- DEVICES
- File System
- PLACES
- emil
 - Desktop
 - Trash
 - Documents
 - Music
 - Pictures
 - Videos
 - Downloads
- NETWORK
- Browse Network

Desktop

Templates

Terminal - emil@emil-virtual-machine: ~

File Edit View Terminal Tabs Help

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

emil@emil-virtual-machine:~\$



Terminal: The command-line "interface"

Shell: The language a terminal uses

Command-Line: The line where you enter a command

Directory: A "Folder"

2. Components of the Terminal

What is a Terminal?

- A **text-based interface** that a computer would boot up.
- Nowadays, computers use Graphical User Interfaces (GUIs), so actual terminals are rarer.
- Your "Terminal" application is most likely a **terminal emulator**
- A terminal emulator is an app that allows you to execute terminal commands from within a graphical interface.



What is the Shell?

- The language of the terminal
- The commands/syntax you enter to make the computer do stuff
- There are many, many shells, but the most popular ones are:
 - **Bash**
 - Zsh
 - Tcsh



What is the Command Line?

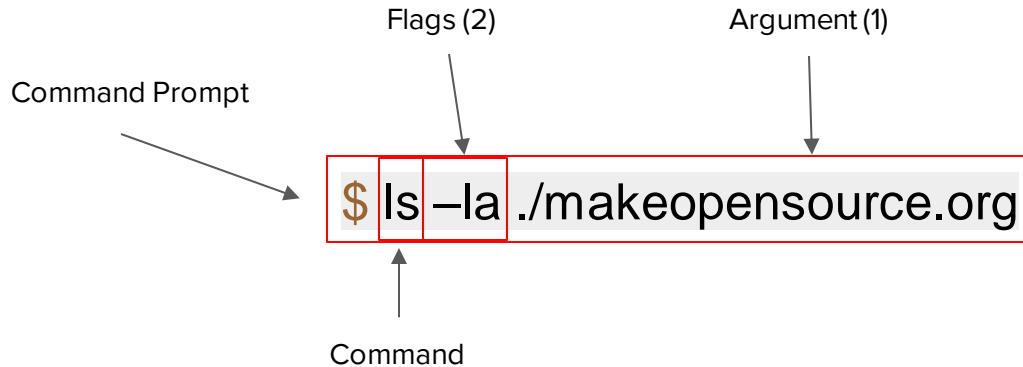
- The prompt where you enter a command!
- In the bash shell, the command line usually starts with "\$"



**A lot of this terminology is
often muddled in conversation**

3. Command Line Demo

Bash Command Structure



4. Workshop

Workshop Task

Go to <http://workshop.makeopensource.org/>

Part 1

1. List your current directory
2. Print the location of your working directory
3. Create a new directory called 'hello'
4. Enter the 'hello' directory

Part 2

1. Create a file 'about-me.txt'
2. Add your name to 'about-me.txt'
3. Append a fun fact about you (on a newline) in 'about-me.txt'
4. Print the contents of 'about-me.txt'
5. Type the command

```
curl -F data="@about-me.txt" http://workshop.makeopensource.org
```

Terminal Install:
<https://hyper.is>

about-me.txt

Emil Kovacev
I like crocheting on my spare
time!

References

- <https://missing.csail.mit.edu/2020/course-shell/>
- <https://www.linusakesson.net/programming/tty/>
- <https://www.gnu.org/software/bash/manual/bash.pdf>
- [https://en.wikipedia.org/wiki/Shell_\(computing\)](https://en.wikipedia.org/wiki/Shell_(computing))
- https://en.wikipedia.org/wiki/Unix_shell
- <https://unix.stackexchange.com/questions/254359/terminal-vs-terminal-emulator>



Questions?

Thank you for coming!