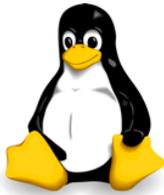




## CSCI 2310 OPERATING SYSTEMS

Sean Barker  
Bowdoin College



Department of Computer Science

## Logistics and Organizational Info

- Instructor: Sean Barker  
[sbarker@bowdoin.edu](mailto:sbarker@bowdoin.edu)

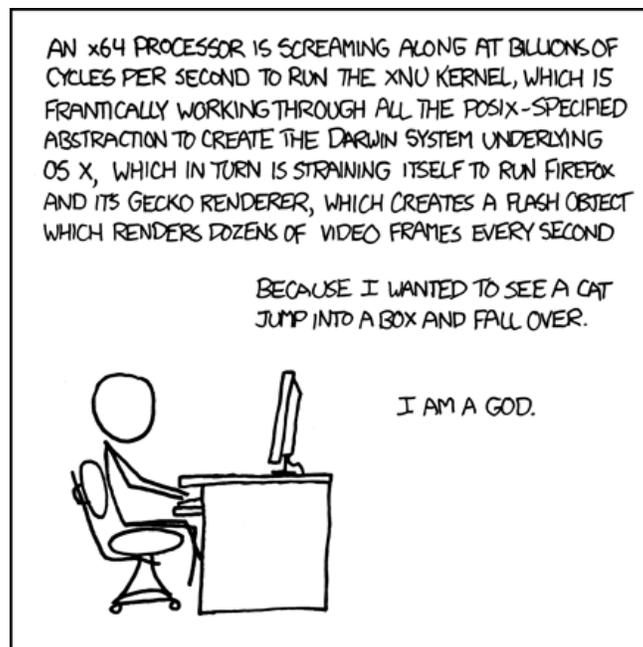
- TA: Caroline Pierce  
[cpierce@bowdoin.edu](mailto:cpierce@bowdoin.edu)

- Course web page:  
<http://www.bowdoin.edu/~sbarker/2310>

# Assignment 0

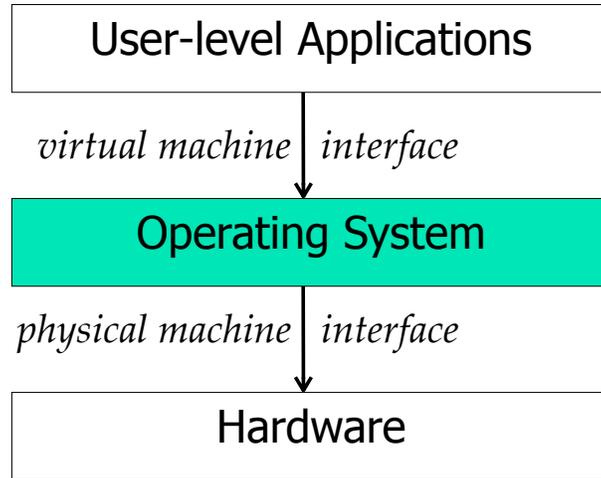
- Come by and say hello during office hours!
  - (or make an appointment)
  - Help me learn your name
  - Answer any questions you have about the course
  
- Due by end of next week!
  - (note: no office hours today)

# “Abstraction”



(source: xkcd.com)

# Top-Level View of an OS

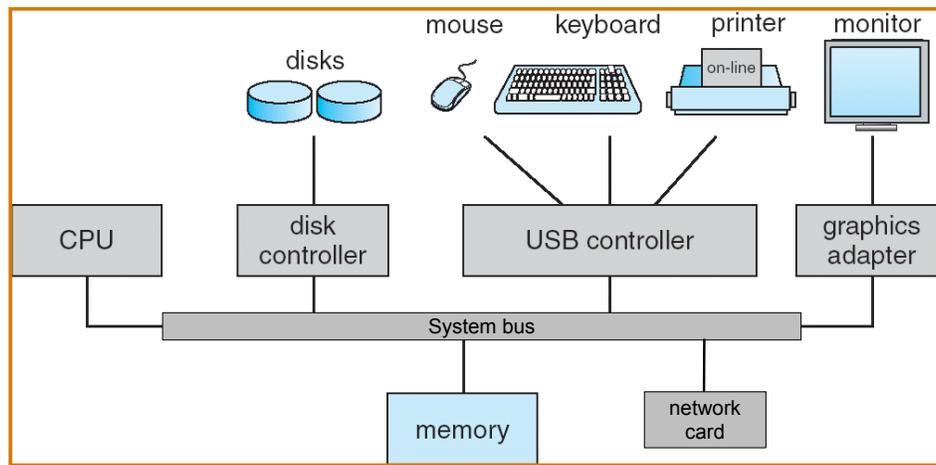


# What's an OS? Bill Gates says...

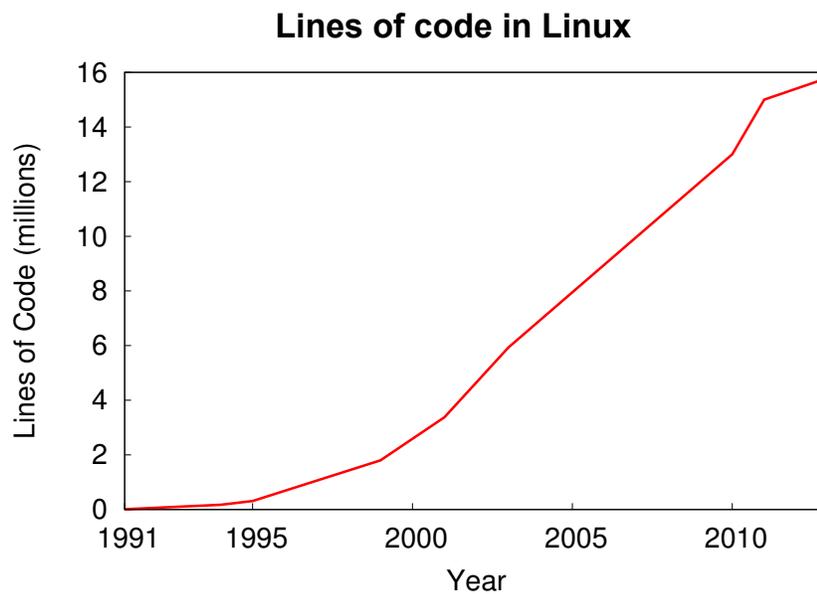


“even a ham sandwich”  
(Steve B.)

# Generic Computer Architecture

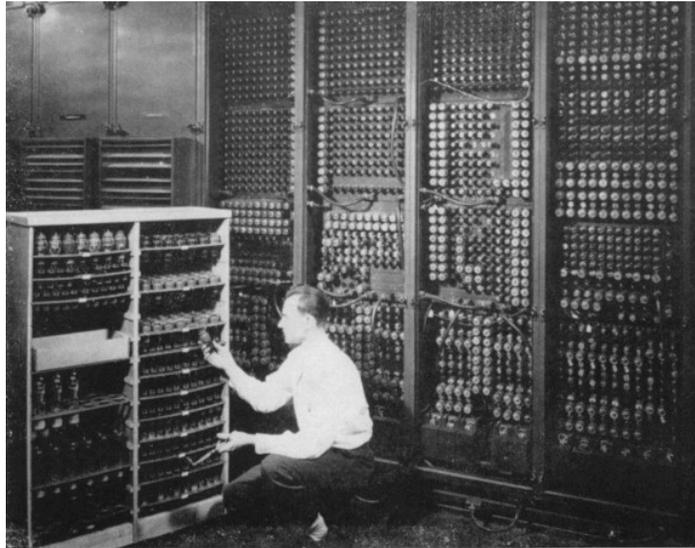


# Now for some history...



# 1. Single-User Computers (1945-55)

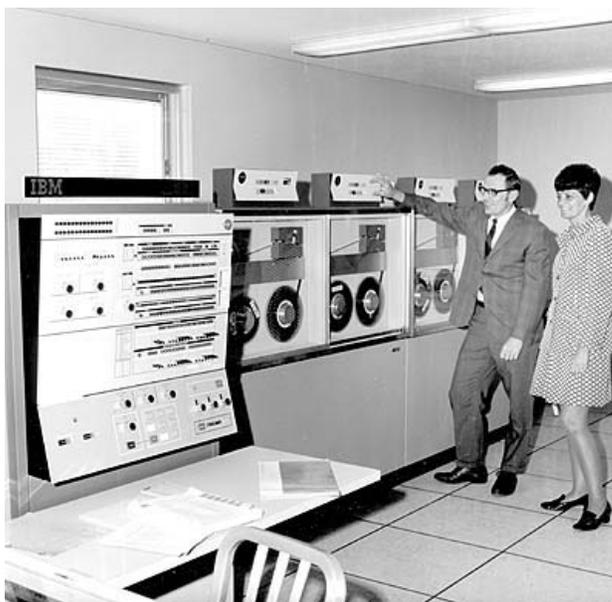
**Vacuum tubes!**



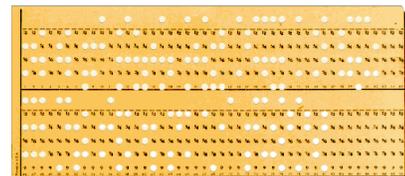
Replacing a bad tube meant checking among ENIAC's 19,000 possibilities.

# 2. Batch Processing (1955-65)

**Mainframes!**



**Punch cards!**



### 3. Multiprogramming (1965-80)



Transistors!



Multiple programs concurrently

Simultaneous I/O and computation

### 4. Personal Computers (1980-present)



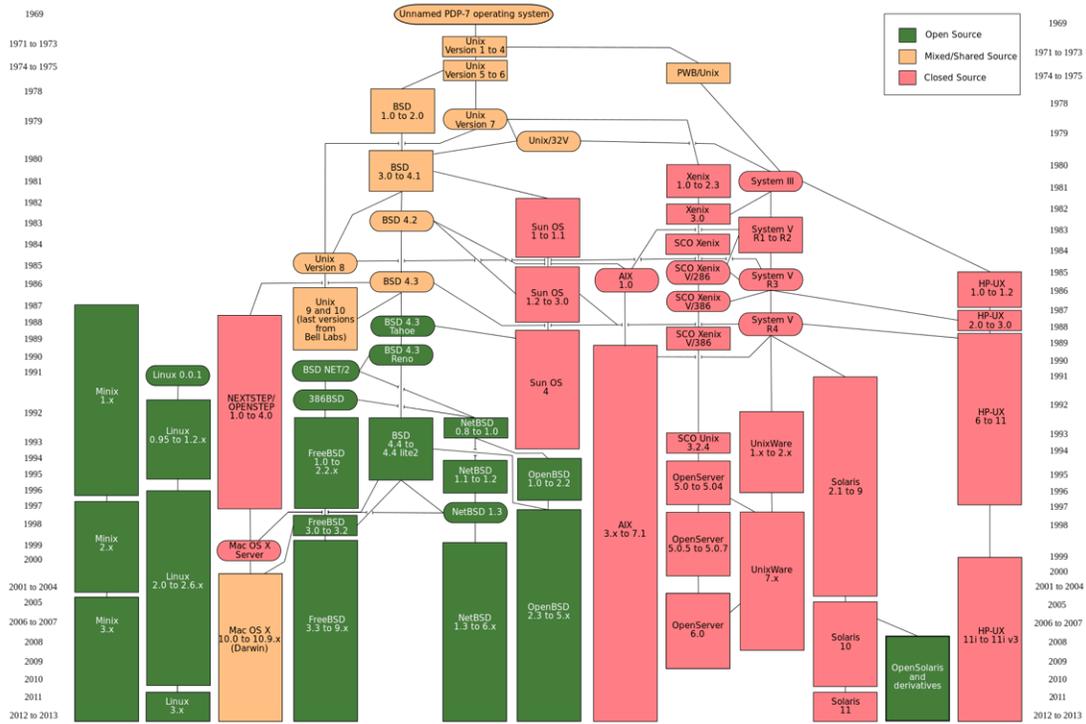
## 5. Mobile & Distributed (present-???)



## UNIX (1971)



# Unix and Unix-like OSes



# MS-DOS (1981)

```

Welcome to MS-DOS 2011
For a list of simple commands, please type HELP
>HELP

LOC - Displays the location of the currently operating program
OPEN <directory> - Opens and displays contents of the directory entered
EXECUTE <directory/filename> - Executes a file within that directory
REBOOT - Reboots current session <Confirmation will be required to prevent
accidental reboots>
SYS - Displays system properties
>RUN: person .EXE

What was that? I can't understand you.
>realityconfig

Attempting to configure your reality...
Enter password:
>^C to abort.

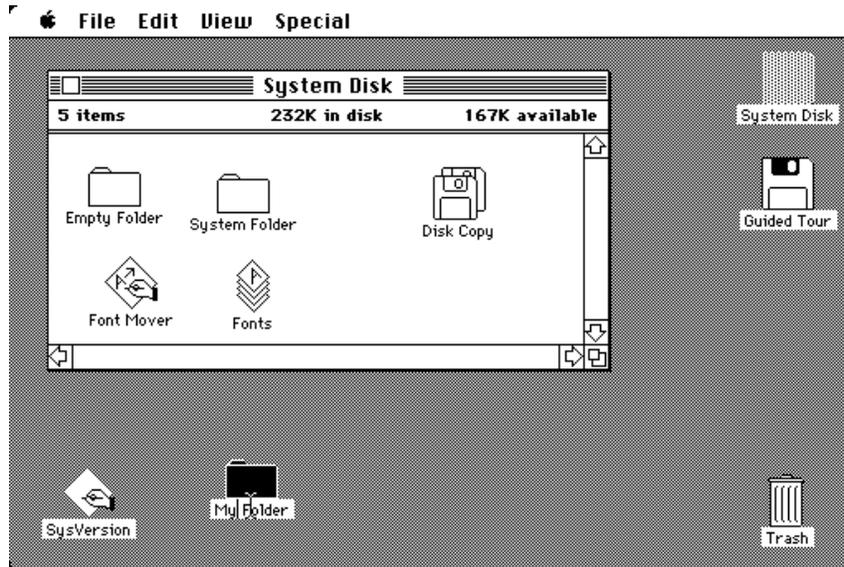
Incorrect password. Exiting function.
>SYS

Main Harddrive: Q:/
Space Used: 105246/6152374 KB
Processing Power: 10 GH
RAM: 3000000 KB
>OPEN GAMES

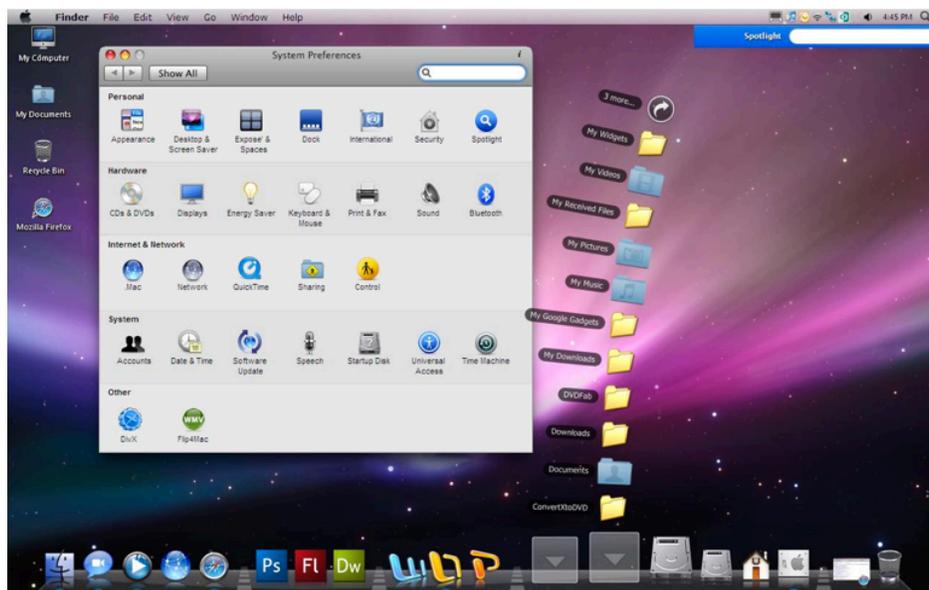
What are you, stupid? GAMES isn't a directory! Try Q:/!
>EXECUTE adventure.EXE

Try adding a directory to that, before you seem any less intelligent.
>_
    
```

# Mac OS (1984)



# Mac OS X (2014)



# Where are we going?

