Bowdoin

CSCI 2310
OPERATING SYSTEMS

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Logistics and Organizational Info

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

- Questions about dates, times, policies, etc...
  - Check the website first!

Assignment 0

- Come by and chat during office hours (or make an appointment)
  - CS background
  - Why you're taking this class
  - Something interesting about yourself

- Due Friday!

- Also email me group members as soon as possible.

"Abstraction"

(source: xkcd.com)

Top-Level View of an OS

User-level Applications

virtual machine interface

↓

Operating System

physical machine interface

↓

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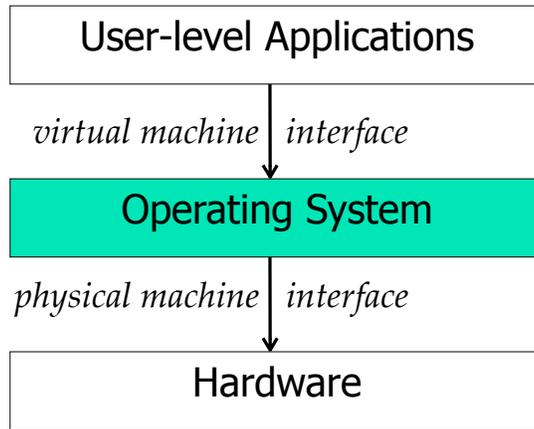
What's an OS? Bill Gates says...

"even a ham sandwich"
(Steve B.)

Generic Computer Architecture
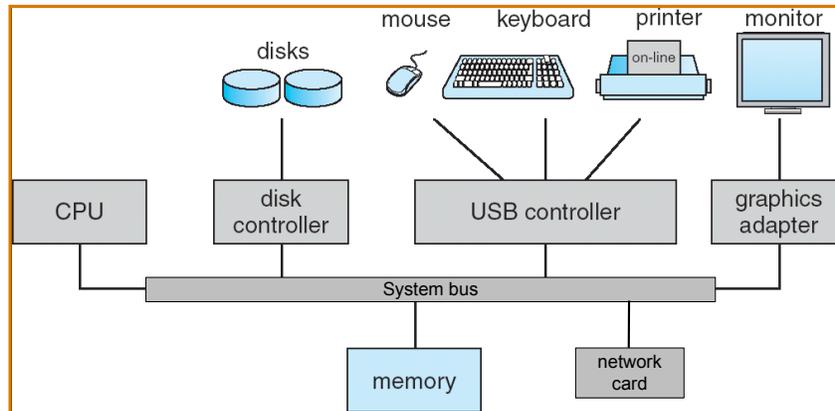
Now for some history...

Lines of code in Linux
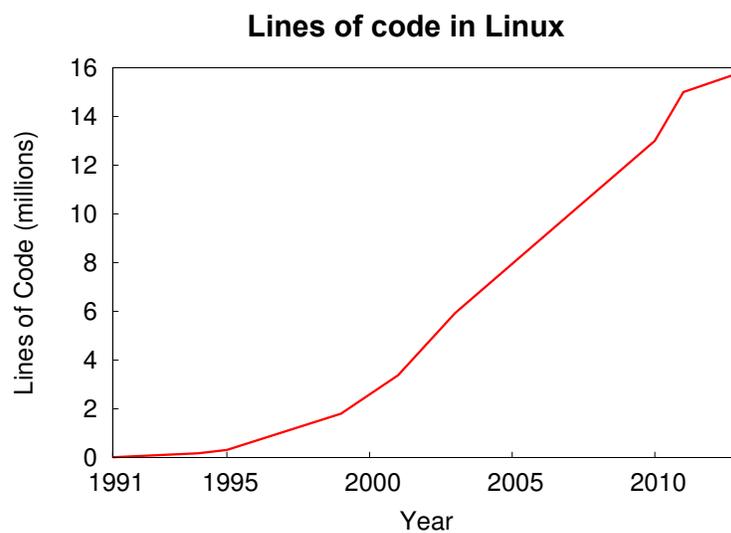
1. Single-User Computers (1945-55)

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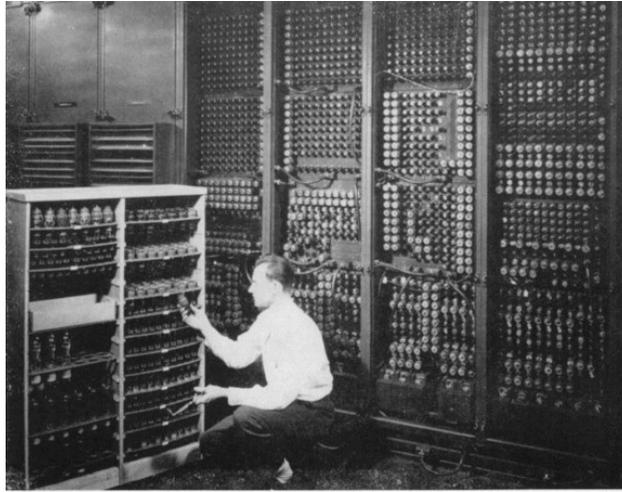
Replacing a bad tube meant checking among ENIAC's 19,000 possibilities.

2. Batch Processing (1955-65)

Mainframes!
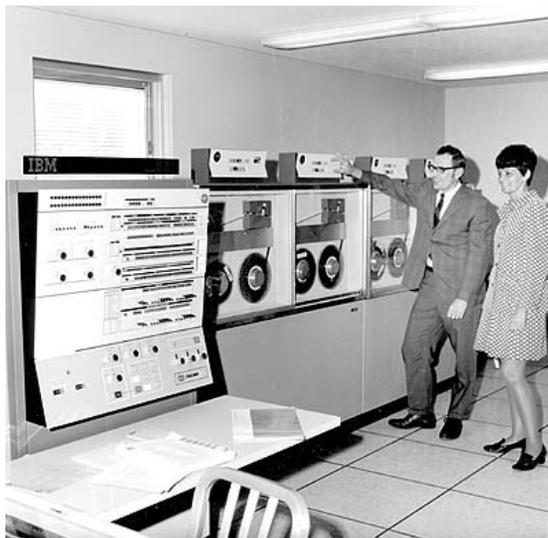
Punch cards!
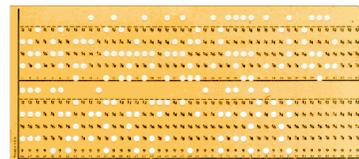
3. Multiprogramming (1965-80)

Transistors!

Multiple programs concurrently

Simultaneous I/O and computation

4. Personal Computers (1980-present)

UNIX (1971)

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MS-DOS (1981)

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Mac OS (1984)

Mac OS X (2014)

Architectural Changes

Orders of magnitude!

examples	1983	1999
MIPS	0.5	500
cost/MIP	$100,000	$500
memory	1 MB	1 GB
network	10 Mbit/s	1 Gb/s
disk	1 GB	1 Tbyte

Where are we going?