Outline

Pre-modern computer

Notes
gears, pins, and electricity

digital and analog before tubes

data stored in punched cards
manipulated by pins and
electricity last for decades

analog computers model world
using smoothly-varying quantities
such as water
programmable or electronic...

...but not both?

“programmable” (cards) but not electronic (relays)

the Zuse Z1

electronic but not programmable

dedicated to one calculation

the Atanosoff-Berry
when computers were women for a while

Eniac’s first programmers were women known for clear-thinking, manual dexterity, and speed

...human labour was cheaper than computer cycles dozens of cubic metres, programmed by connecting pins
stored programs, faster switches
getting modern

the same memory for data
and programs is now
the typical design

tubes were big, hot, slow
compared to transistors
...which just keep shrinking
your (grand)parent’s computer
smaller, faster, ...

perhaps thanks to sputnik
the computing power of eniac
fits in your hand by 1970

mass-produced desktops
landed with a clunk
by 1980s