Music, Computing, and Design I

256a

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week 1 lecture A

what is this all about?

what it’s not

building software for music

principles

practices

design paradigms

integration

data structures

system programming

algorithms

real-time
for audio.

programming is a creative effort.

two good answers to everything:
"I don’t know."

"it depends."

how software works

The Operating System

2nd system effect

• 1st system
  – terrified of failure
  – simplified to its bare bones
  – successful beyond its intended life-span
• 2nd system
  – hugely ambitious
  – usually conceived by academics
  – many good ideas
  – a little ahead its time
  – doomed to failure

2nd system effect (beyond)

• 3rd system
  – pick and choose essentials
  – usually made by good hackers
  – emphasize elegance over performance
  – become widely adopted
• 4th system
  – maturation

(adapted from Randy Wang's lecture on Multics)
abstraction

goto statement

corollary, optimization, and asymptotic superiority