

Comp 150 Introduction to Computing

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Introduction to Computing

- How Computers Work
 - Computer parts – how it works
 - Storing and Processing Information
 - Solving Problems – do what you want
- How Computer Programs are Created
 - What is programming?
 - PYTHON programming language
- What's Behind some Key Applications
 - Networks, servers, web,...

Question ONE

What is a “Computer”?

Question TWO



What is a “Computer Program”?



Key Things – Buying a Computer



- What do you consider when buying a computer?
 - Some things with key numbers....



A little about me...



- Industry Background
 - Voice and data telecommunications, wireless systems and applications, packet switching, network applications, satellite systems
 - Research and Development
 - Leading large teams of software developers
 - Creating new systems (sometimes)
 - Global experience (Europe, Asia)
 - Hired hundreds of new college graduates
- Bell Laboratories, ITT, GTE, USWEST, Motorola



My Embedded Software Background



- Products (aka Applications)
 - Voice Data Switches (central office, PBX, open systems)
 - Packet Data Switches (X.25, network control, QOS)
 - Satellite Communication Networks (testing systems)
 - Mobile Phone Infrastructure (CDMA, services)
- Specialized Hardware (including processors)
 - Custom processors for reliability (and performance)
 - Continuously available systems
 - Commercial chip processors eventually
 - Home grown and OTS operating systems
 - Specialized Software Development Tools (languages, simulators)

My First Computer



– Instruction Speed: 1 instruction every 2 msec.

Programming Tools



– One punched card per line of program (72 characters)

My First Keyboard



Normal output: paper tape



How Many Programming Languages Are There?



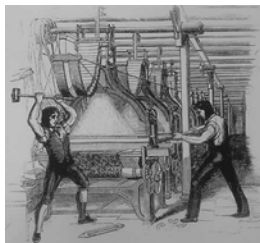
<http://www.ntecs.de/old-hp/uu9r/lang/html/lang.en.html>



Early Anti-Computer Movement



Ned Ludd, 1812



Luddites Destroying Loom



Luddites Today??

Early reaction to automated ("computer driven") manufacturing



Discussion Time



- 1. What are the GOOD / GREAT / COOL things about computers in my life today?
- 2. What are the BAD / things about computers in my life today? Why do computers suck?