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?


Early Anti-Computer Movement

Ned Ludd, 1812

Luddites Destroying Loom

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?