

A.I.S. Class 6: Outline

- Questions from Chapter 2?
- Learning Objectives for Chapter 3
- Hardware
- Software
- Systems Configuration
- Group Work for Chapter 3

Questions from Chapter 2

?

Learning Objectives for Chapter 3

- After studying this chapter you should be able to:
 - ◆ describe various information technologies used for data input
 - ◆ explain in some technical detail the components of a computer system
 - ◆ explain the technologies used to process data
 - ◆ describe alternative computer output technologies
 - ◆ distinguish between systems software and applications software

Learning Objectives for Chapter 3

- After studying this chapter you should be able to:
 - ◆ describe the categories and functions of systems software
 - ◆ describe the categories and functions of applications software
 - ◆ briefly describe the issues surrounding systems configurations.

Hardware

- Input Technology
- Processor Technology
- Storage Technology
- Output Technology

Input Devices

- Keying devices (on-line or off-line)
- Mouse (trackball, trackpad, trackpoint)
- Light pens
- Touch screens
- Audio & video input
- Bar code scanners, OCR & MICR
- POS devices
- Scanners

Processor Technology

- CPU (registers, control unit, ALU)
- Clock
- Cache memory
- Data bus, address bus, control bus
- ISA, PCI, USB, FireWire
- Processors
 - ◆ 8088, 8086, 80186, 80286, 80386, 80486 DX & SX
 - ◆ Pentium, Pentium Pro, Pentium MMX, Pentium II, Pentium III, Xeon, Celeron, Pentium III
 - ◆ AMD (K6, K6-2, K-6 III, Athlon), Motorola PowerPC

Storage Technology

- ROM, RAM, SRAM, DRAM, SDRAM, ECC, RDRAM
- Magnetic tape
- Hard disks, floppy disks
- EIDE (Ultra ATA), SCSI
- ZIP, LS-120, JAZ
- CD-ROM, CD-R, CD-RW
- DVD

Output Technology

■ Printers

- ◆ Dot matrix
- ◆ Ink jet
- ◆ Laser

■ Video display

- ◆ PCI v AGP
- ◆ VGA
- ◆ SVGA
- ◆ XGA
- ◆ TFT

■ Sound cards, MIDI interfaces

Software

- Systems Software
- Programming Languages
- Application Software
 - * General Purpose
 - * Special Purpose

Systems Software

■ Operating systems

- * multitasking, multiprogramming, multiprocessing
- * DOS, WINDOWS 3.1, 95, 98, NT, 2000, OS/2, System 8.1, Unix, Linux
- * GUIs

■ Utilities (e.g., debuggers)

■ Language translators

- * assemblers, compilers, interpreters

Programming Languages

- First, second, third, fourth generation
- Object-oriented programming languages
 - * encapsulation
 - * polymorphism
 - * inheritance

Application Software

■ General purpose

- * word processing
- * spreadsheets
- * presentation graphics
- * databases
- * communication
- * organizers

Application Software

■ Special purpose

* low-end accounting packages

- ◆ Quicken, Quickbooks Pro, Microsoft Money, PEACHTREE

* mid-range packages

- ◆ Great Plains Dynamics, Macola, SBT

* high-end packages

- ◆ SAP, Oracle, PeopleSoft, BAAN, JD Edwards

Systems Configurations

- Supercomputers
- Mainframes
- Minicomputers
- Servers
- Workstations
- Desktops
- Laptops (notebooks)
- Palmtops (PDAs)

Group Work for Chapter 3

- Discussion Questions
- Problems and Exercises 3
- Appendix 1 - Automated Procedures for Sales and Collections