PETER NORTON'S

Introduction to Computers

- Web integrated activities
- Self-assessments to reinforce main concepts
- Online Resource: www.mhhe.com/peternorton

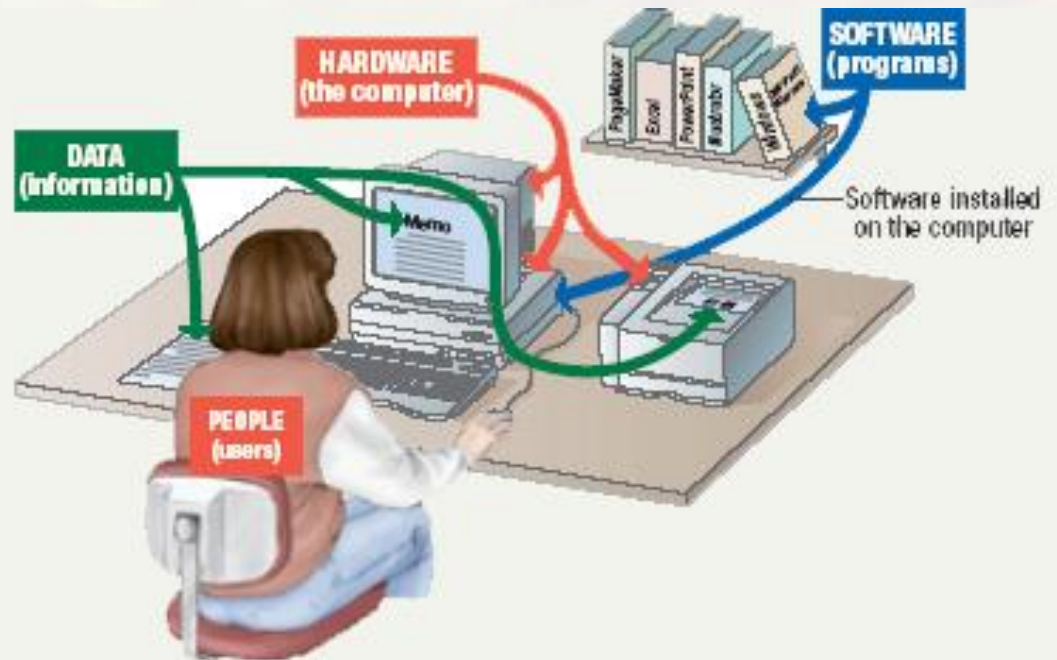**McGraw-Hill Technology Education**

Chapter 1B

Looking Inside the Computer System

Parts of the Computer System

- Computer systems have four parts
  - Hardware
  - Software
  - Data
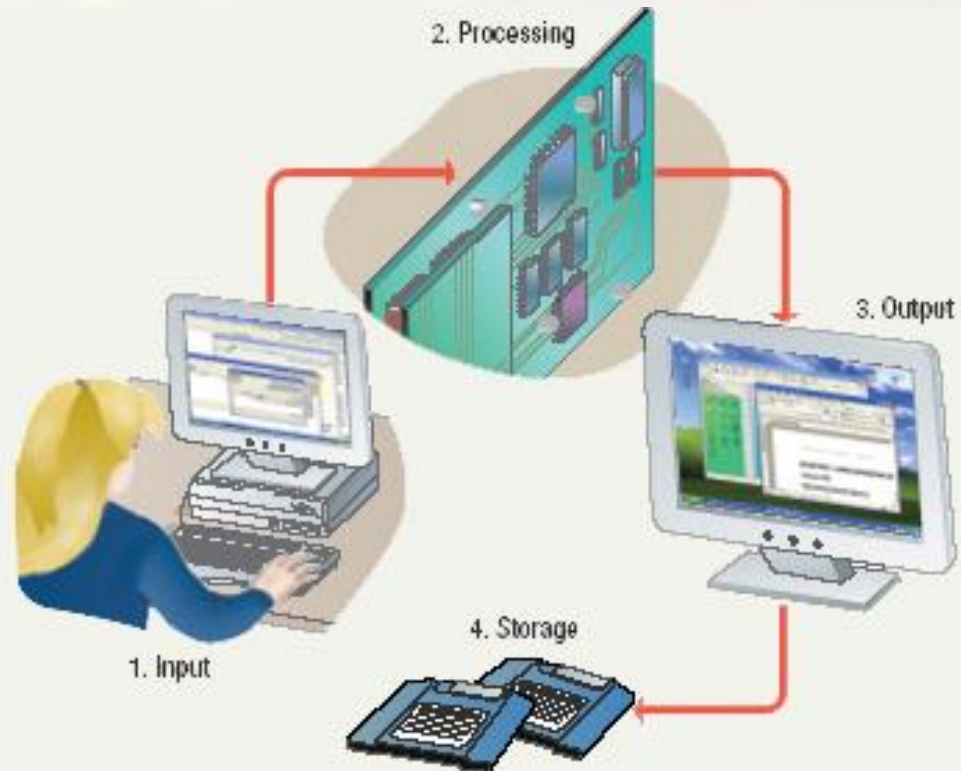 - User

Parts of the Computer System

- Hardware
  - Mechanical devices in the computer
  - Anything that can be touched
- Software
  - Tell the computer what to do
  - Also called a program
  - Thousands of programs exist

Parts of the Computer System

- Data
  - Pieces of information
  - Computer organize and present data
- Users
  - People operating the computer
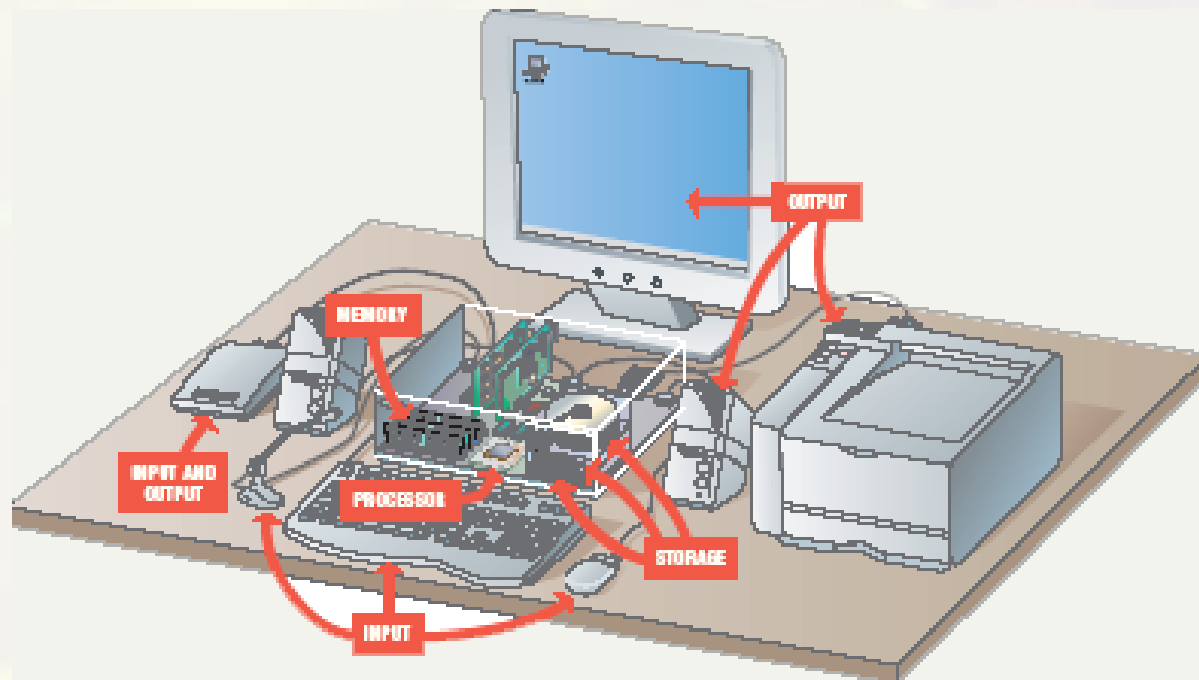 - Most important part
  - Tell the computer what to do

Information Processing Cycle

- Steps followed to process data
- Input
- Processing
- Output
- Storage

Essential Computer Hardware

- Computers use the same basic hardware

- Hardware categorized into four types

Essential Computer Hardware

- Processing devices
  - Brains of the computer
  - Carries out instructions from the program
  - Manipulate the data
  - Most computers have several processors
  - Central Processing Unit (CPU)
  - Secondary processors
  - Processors made of silicon and copper

Essential Computer Hardware

- Memory devices
  - Stores data or programs
  - Random Access Memory (RAM)
    - Volatile
    - Stores current data and programs
    - More RAM results in a faster system
  - Read Only Memory (ROM)
    - Permanent storage of programs
    - Holds the computer boot directions

Essential Computer Hardware

- Input and output devices
  - Allows the user to interact
  - Input devices accept data
    - Keyboard, mouse
  - Output devices deliver data
    - Monitor, printer, speaker
  - Some devices are input and output
    - Touch screens

Essential Computer Hardware

- Storage devices
  - Hold data and programs permanently
  - Different from RAM
  - Magnetic storage
    - Floppy and hard drive
    - Uses a magnet to access data
  - Optical storage
    - CD and DVD drives
    - Uses a laser to access data

Software Runs The Machine

- Tells the computer what to do
- Reason people purchase computers
- Two types
  - System software
  - Application software

Software Runs The Machine

- System software
  - Most important software
  - Operating system
    - Windows XP
  - Network operating system (OS)
    - Windows Server 2003
  - Utility
    - Symantec AntiVirus

Software Runs The Machine

- Application software
  - Accomplishes a specific task
  - Most common type of software
    - MS Word
  - Covers most common uses of computers

Computer data

- Fact with no meaning on its own
- Stored using the binary number system
- Data can be organized into files

Computer users

- Role depends on ability
  - Setup the system
  - Install software
  - Mange files
  - Maintain the system
- "Userless" computers
  - Run with no user input
  - Automated systems

Chapter 1B

End of Chapter