Computers Are Your Future
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Chapter 1
Lecture 1
Week 1

Computers and You
What You Will Learn . . .

• Define the word computer and name the four basic operations
• Describe the main components of a computer
  – Hardware
  – Software
• Provide examples of hardware devices
• Explore the information-processing cycle
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Computers & You

- Workers with computer and Internet skills tend to make more money and have more satisfying careers than workers without such skills.
Understanding the Computer: Basic Definitions

- **Computer** – A machine that performs the four basic operations of the information-processing cycle:
  - input
  - processing
  - output
  - storage
• **Computer system** – A collection of related components that are designed to work together
  – A system includes hardware and software
• **Program** – A list of instructions that tell the computer how to perform the four basic operations to accomplish a task
Understanding the Computer: Basic Definitions

• **Software** – All the programs that give the computer its instructions
  – Two categories of software:
    - System software
    - Application software
1-Input: Getting Data into the Computer

- **Data** – Unorganized raw materials made up of words, numbers, images, or sounds
- The first operation: input
  - Input devices enable the user to enter data into the computer
  - The computer accepts data
Input Devices

- **Keyboard**
- **Mouse** – pointing device
- **Microphone** – speech-recognition
- **Digital Cameras**
2- Processing: Transforming Data into Information

- The second operation: processing
  - Computers transform data into information
  - Processing circuitry:
    - Central processing unit (CPU)
    - Random access memory (RAM)
Motherboard

Expansion Card

Central Processing Unit – CPU

Random Access Memory – RAM
The third operation: output

- The computer shows the results of the processing operation in a way people can understand
- Output devices show the results of processing operations
Output Devices

Monitor

Printer

Speakers
4-Storage: Holding Programs and Data for Future Use

• The fourth operation: storage
  – The computer saves the data or output so that it can be used again later
  – Storage devices hold all programs and data that the computer uses
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Storage Devices

- CD/DVD Drive
- Hard Drive
- Floppy Disk Drive
- Zip Drive
- Micro Drive
- Jaz Drive
- Tape Drive
- Micro Drive
Chapter 1 Summary

- A computer is a machine that performs the operations of input, processing, output, and storage.
- A computer system is a collection of related components.
- The information processing cycle consists of the input (keyboard, mouse), processing (microprocessor), output (printer, monitor), and storage operations (hard disk, floppy disk).