

## Chapter 1 Objectives

- Recognize the importance of computer literacy
- Define the term, computer
- Identify the components of a computer
- Discuss the advantages and disadvantages of using computers
- Recognize the purpose of a network
- Discuss the uses of the Internet and World Wide Web
- Distinguish between system software and application software
- Describe the categories of computers
- Identify the elements of an information system
- Describe the various types of computer users
- Discuss various computer applications in society

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## A World of Computers

### What is computer literacy?

- > Knowledge and understanding of computers and their uses
- > Computers are everywhere

p. 56 Fig. 1-1

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## What Is a Computer?

### How is a computer defined?

- > Electronic device operating under the control of instructions stored in its own memory

Accepts **data**

Raw facts, figures, and symbols

Processes data into **information**

Data that is organized, meaningful, and useful

Produces and stores results

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## What Is a Computer?

What is the information processing cycle?

- Input
- Process
- Output
- Storage
- Communication



p. 6 Fig. 1-2

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## The Components of a Computer

What is an input device?

- Hardware used to enter data and instructions



Click to view Web Link, click Chapter 1, Click Web Link from left navigation, then click Input Devices below Chapter 1

p. 7 Fig. 1-3

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## The Components of a Computer

What is an output device?

- Hardware that conveys information to one or more people



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p. 8 Fig. 1-3

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## The Components of a Computer

What is the system unit?

- Case containing electronic components used to process data



p. 8 Fig. 1-3

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## The Components of a Computer

What are two main components on the motherboard?

### Central Processing Unit (CPU)

Also called a **processor**

The electronic component that interprets and carries out the basic instructions that operate the computer

### Memory

Consists of electronic components that store instructions waiting to be executed and data needed by those instructions

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## The Components of a Computer

What is storage?

- Holds data, instructions, and information for future use

### Storage media

Physical material on which data, instructions, and information are stored

### Storage device

Records and retrieves items to and from a storage medium

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## The Components of a Computer

What is storage media?

Portable, thin memory cards used in:

Digital cameras

Handheld computers

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## The Components of a Computer

What is a floppy disk?

- Thin, circular, flexible disk enclosed in rigid plastic shell



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## The Components of a Computer

### What is a USB flash drive?

- Provides much greater storage capacity than a floppy disk or Zip® disk
- Small and lightweight enough to be transported on a keychain or in a pocket



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## The Components of a Computer

### What is a hard disk?

- Provides greater storage capacity than a floppy disk, Zip disk, or USB flash drive
- Most are housed inside of the system unit



p. 8 Fig. 1-4

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## The Components of a Computer

### What is a compact disc?

- Flat, round, portable metal disc
  - CD-ROM
  - DVD-ROM



p. 9 Fig. 1-5

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## The Components of a Computer

### What is a communications device?

Hardware component that enables a computer to send and receive data, instructions, and information

Occurs over cables, telephone lines, cellular radio networks, satellites, and other transmission media



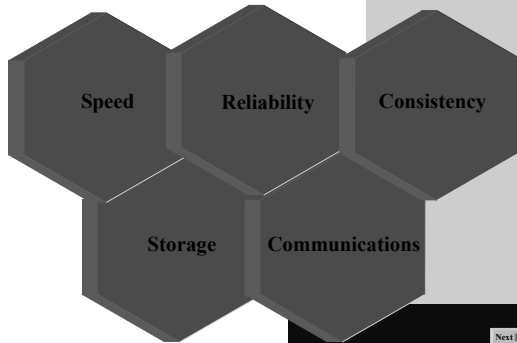
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## Advantages and Disadvantages of Using Computers

What are the advantages of using computers?

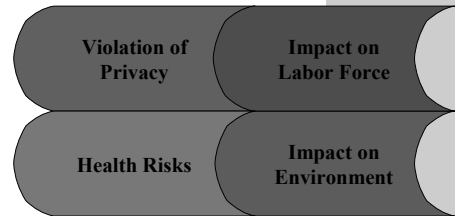


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## Advantages and Disadvantages of Using Computers

What are the disadvantages of using computers?



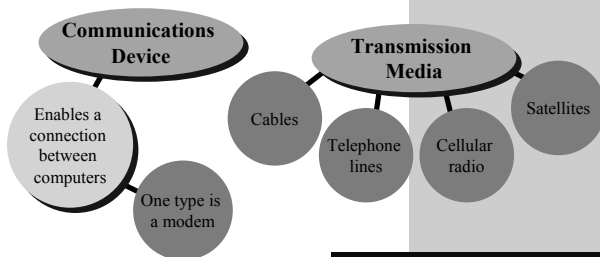
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## Networks and the Internet

What is a network?

- > Collection of computers and devices connected together

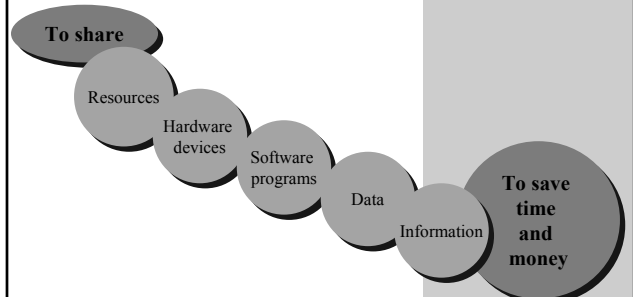


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## Networks and the Internet

What are the reasons to network?



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## Networks and the Internet

### What is a server?

- A server manages the resources on a network
- Clients access the resources on the server



p. 11 Fig. 1-6

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## Networks and the Internet

### What is the Internet?

- Worldwide collection of networks that connects millions of businesses, government agencies, educational institutions, and individuals



Click to view Web Link.  
click Chapter 1, Click Web Link  
from left navigation,  
then click Internet  
below Chapter 1

p. 12 Fig. 1-7

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## Networks and the Internet

### Why do users access the Internet?

1. Communications
2. Information
3. Shopping
4. Banking and Investing
5. Classes
6. Entertainment



p. 12-13 Fig. 1-8

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## Networks and the Internet

### What is the Web?

- Billions of documents, called Web pages, available to anyone connected to the Internet

A Web site is a collection of related Web pages

A Web page contains text, graphics, sound, video, and links to other Web pages

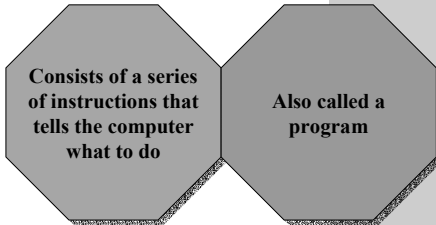
You can share information by creating Web pages or posting photos on a photo sharing community

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## Computer Software

### What is software?



Click to view Web Link, click Chapter 1, Click Web Link from left navigation, then click Computer Programs below Chapter 1

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## Computer Software

### What is a graphical user interface (GUI)?

- Allows you to interact with the software using graphics and icons
- Controls how you enter data and how the screen displays information



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## Computer Software

### What is system software?

- Programs that control or maintain the operations of the computer and its devices

#### Operating System (OS)

is a set of programs that coordinates all activities among computer hardware devices and allows users to run application software

Utility Programs allow the user to perform maintenance-type tasks usually related to managing a computer, its devices or its programs

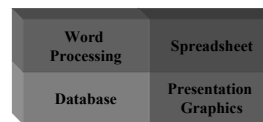
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## Computer Software

### What is application software?

- Programs that perform specific tasks for users



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## Computer Software

### How do you install and run programs?



p. 17 Fig. 1-12

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## Computer Software

### What is a programmer?

- > **Someone who develops application or system software**
  - Programmer writes instructions to direct computer to process data into information



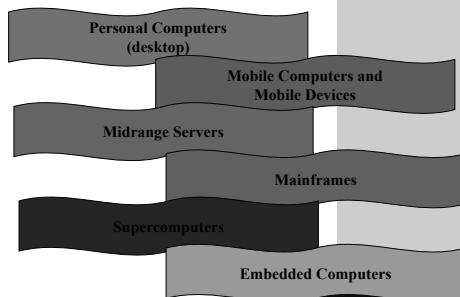
p. 18 Fig. 1-13

Resulting Internet application

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## Categories of Computers

### What are the categories of computers?



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## Personal Computers

### What are the two most popular series of personal computers?

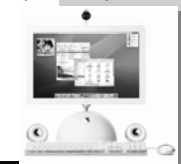
- > **PC and compatibles use the Windows operating system**
- > **Apple Macintosh uses the Macintosh operating system (Mac OS)**



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p. 19 Figs. 1-15-1-16



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## Personal Computers

### What is a desktop computer?

- Designed so all of the components fit entirely on or under a desk or table



p. 19-20 Fig. 1-15

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## Mobile Computers and Mobile Devices

### What is a notebook computer?

- Portable, small enough to fit on your lap
- Also called a laptop computer
- Generally more expensive than a desktop computer



Click to view Web Link, click Chapter 1, Click Web Link from left navigation, then click Notebook Computers below Chapter 1

p. 20 Fig. 1-17

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## Mobile Computers and Mobile Devices

### What is a Tablet PC?

- Resembles a letter-sized slate
- Allows you to write on the screen using a digital pen
- Especially useful for taking notes



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## Mobile Computers and Mobile Devices

### What are mobile devices?

- Small enough to carry in a pocket
- Internet-enabled telephone is a “smart phone”



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## Mobile Computers and Mobile Devices

### What is a handheld computer?

Small  
enough to fit  
in one  
hand

Used  
by mobile  
employees such as  
meter readers and  
delivery people

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## Mobile Computers and Mobile Devices

### What is a personal digital assistant (PDA)?

#### > Provides personal organizer functions

- Calendar
- Appointment book
- Address book
- Calculator
- Notepad



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## Mobile Computers and Mobile Devices

### What are smart phones and smart watches?

A smart phone is  
an Internet-enabled  
telephone that usually  
provides PDA capabilities



A smart watch is  
an Internet-enabled  
watch that automatically  
adjusts to time zone changes  
and stores personal  
information



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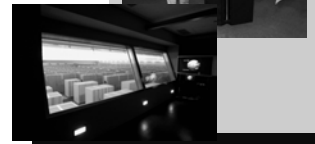
## Servers

### What types of servers are there?

**Midrange server** Powerful, large  
computer that supports up to a few  
thousand computers

**Mainframe** Very powerful,  
expensive computer that supports  
thousands of computers

**Supercomputer** The fastest, most  
powerful, most expensive  
computer. Used for applications  
requiring complex mathematical  
calculations



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## Embedded Computers

### What is an embedded computer?

- A special-purpose computer that functions as a component in a larger product



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## Elements of an Information System

### What are information system elements?

- Hardware
- Software
- Data
- People
- Procedures



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## Examples of Computer Usage

### What software is available for a home user?



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## Examples of Computer Usage

### What software is available for a small office/home office (SOHO) user?

- Productivity software
- Specialty software
- Web usage
- E-mail



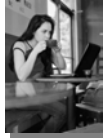
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## Examples of Computer Usage

### What is available for a mobile user?

- **Hardware**
  - Notebook computers
  - PDAs
  - Smart phones
  
- **Software**
  - Word processing
  - Spreadsheet
  - Presentation graphics software



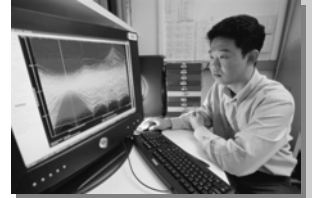
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## Examples of Computer Usage

### What are the needs of a power user?

- Speed and large amounts of storage
- Types of power users
  - Engineers
  - Scientists
  - Architects
  - Desktop publishers
  - Graphic artists



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## Examples of Computer Usage

### What are the needs of the large business user?



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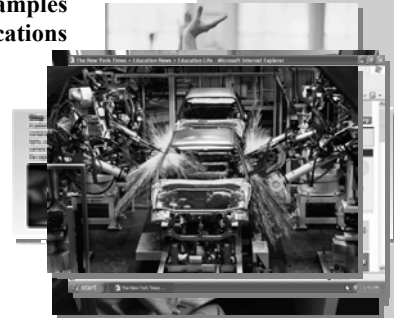
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## Computer Applications in Society

### What are some examples of computer applications in society?

- Education
- Finance
- Government
- Healthcare
- Science
- Publishing
- Travel
- Industry



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## Summary of Introduction to Computers

The importance of computer literacy

The term, computer

The components of a computer

The advantages and disadvantages of using computers

The purpose of a network

The uses of the Internet and World Wide Web

System software and application software

Categories of computers

Elements of an information system

Types of computer users

Computer applications in society

Chapter 1 Complete