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

A World of Computers

What is computer literacy?
- Knowledge and understanding of computers and their uses
- Computers are everywhere

What is a Computer?

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

The Components of a Computer

What is an input device?
- Hardware used to enter data and instructions
The Components of a Computer

What is an output device?
- Hardware that conveys information to one or more people

What is the system unit?
- Case containing electronic components used to process data

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

What is storage?
- Holds data, instructions, and information for future use

What is storage media?
- Physical material on which data, instructions, and information are stored
- Portable, thin memory cards used in:
  - Digital cameras
  - Handheld computers

What is a floppy disk?
- Thin, circular, flexible disk enclosed in rigid plastic shell
**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

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

What is a compact disc?
- Flat, round, portable metal disc
  - CD-ROM
  - DVD-ROM

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

**Advantages and Disadvantages of Using Computers**

What are the advantages of using computers?
- Speed
- Reliability
- Consistency
- Storage
- Communications

What are the disadvantages of using computers?
- Violation of Privacy
- Impact on Labor Force
- Health Risks
- Impact on Environment
**Networks and the Internet**

**What is a network?**
- Collection of computers and devices connected together

**Transmission Media**
- Cables
- Telephone lines
- Cellular radio
- Satellites

**Communications Device**
- Enables a connection between computers
  - One type is a modem

**Why do users access the Internet?**
1. Communications
2. Information
3. Shopping
4. Banking and Investing
5. Classes
6. Entertainment

**What is a server?**
- A server manages the resources on a network
- Clients access the resources on the server

**What are the reasons to network?**
- To share
- Resources
- Hardware devices
- Software programs
- Data
- Information
- To save time and money

**What is the Internet?**
- Worldwide collection of networks that connects millions of businesses, government agencies, educational institutions, and individuals

**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.
What is software?
Consists of a series of instructions that tells the computer what to do
Also called a program

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

What is application software?
- Programs that perform specific tasks for users
  - Word Processing
  - Spreadsheet
  - Database
  - Presentation Graphics

How do you install and run programs?

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

What is a programmer?
- Someone who develops application or system software
  - Programmer writes instructions to direct computer to process data into information

Resulting Internet application
Categories of Computers

What are the categories of computers?
- Personal Computers (desktop)
- Mobile Computers and Mobile Devices
- Midrange Servers
- Mainframes
- Supercomputers
- Embedded Computers

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)

Personal Computers

What is a desktop computer?
- Designed so all of the components fit entirely on or under a desk or table

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

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

Mobile Computers and Mobile Devices

What are mobile devices?
- Small enough to carry in a pocket
- Internet-enabled telephone is a “smart phone”
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

What is a personal digital assistant (PDA)?
- Provides personal organizer functions
  - Calendar
  - Appointment book
  - Address book
  - Calculator
  - Notepad

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

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

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

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

Embedded Computers

What is an embedded computer?
- A special-purpose computer that functions as a component in a larger product

Elements of an Information System

What are information system elements?
- Hardware
- Software
- Data
- People
- Procedures
Examples of Computer Usage

What software is available for a home user?

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

Examples of Computer Usage

What is available for a mobile user?

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

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

Examples of Computer Usage

What are the needs of the large business user?

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

Computer Applications in Society

What are some examples of computer applications in society?

- Education
- Finance
- Government
- Healthcare
- Science
- Publishing
- Travel
- Industry
Summary of Introduction to Computers

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