Chapter 1

Introduction to the World of Computers
Learning Objectives

• Explain why it is essential to learn about computers today and discuss several ways computers are integrated into our business and personal lives.

• Define a computer and describe its primary operations.

• List some important milestones in computer evolution.

• Identify the major parts of a personal computer, including input, processing, output, storage, and communications hardware.

• Define software and understand how it is used to instruct the computer what to do.
Learning Objectives

• List the five basic types of computers, giving at least one example of each type of computer and stating what that computer might be used for.
• Explain what a network, the Internet, and the World Wide Web are, as well as how computers, people, and Web pages are identified on the Internet.
• Describe how to access a Web page.
• Discuss the societal impact of computers, including some benefits and risks related to their prominence in our society.
Overview

• This chapter covers:
  – What computers do and how they are used
  – Computer terminology
  – An overview of the history of computers
  – The basic types of computers in use today
  – An overview of networks and the Internet
  – Societal impacts of computers
Computers in Your Life

• Why learn about computers?
  – Pervasive computing
    • Also known as ubiquitous computing
    • Computers have become an integral part of our lives
  – Basic computer literacy
    • Knowing about and understanding computers and their uses is an essential skill today for everyone
Computers in Your Life

• Before 1980
  – Computers were large, expensive
  – Very few people had access to them
  – Computers were mostly used for high-volume processing tasks

• Microcomputers in the early 80s
  – Inexpensive personal computers
  – Computer use increased dramatically

• Today
  – More than 60% of US households include a computer, and most use computers at work
  – Electronic devices are converging into single units with multiple capabilities
Computers in the Home

• Computers used for a variety of tasks:
  – Looking up information and news
  – Exchange e-mail
  – Shopping and paying bills
  – Downloading music and movies
  – Organizing digital photographs
  – Playing games
  – Telecommuting

• Convergence
  – The computer has become the central part of home entertainment
  – Dual-mode mobile phones
Computers in the Home

- **Wireless networking**
  - Computers can be used in nearly any location
- **Smart appliances**
  - Traditional appliances with built-in computer or communication technology
- **Smart homes**
  - Household tasks are monitored and controlled by a main computer in the house
Computers in the Home

ONLINE SHOPPING AND BANCING
Computers and the Internet have made online shopping and banking the norm for many individuals.

ENTERTAINMENT
Computers and gaming consoles are becoming a central hub for entertainment and digital media (photos, music, recorded TV, etc.) delivery.

SMART APPLIANCES
Smart appliances (such as the smart oven shown here) are regular appliances with some type of built-in computer technology.

VOICE OVER IP (VoIP)
Making phone calls over the Internet, such as with the dual-mode phone shown here, is becoming common.

FIGURE 1-2
Computer use at home.

Many individuals today have access to the Internet at home, retrieving information, obtaining news, managing digital photos, and exchanging e-mail are popular home computer activities.
Computers in Education

• K-12 schools now use the computer as an overall student-based learning tool
• Colleges and universities are even more integrated
  – Classrooms, computer labs, dorms, libraries
  – Wireless hotspots and Internet assignments
• Teachers
  – Prepare handouts, exams, and class presentations
  – Maintain course Web pages
• Distance learning
  – Students participate from locations other than the traditional classroom setting using computers and Internet access
Computers in Education

**FIGURE 1-3**
Computer use in education.

**COMPUTER LABS AND CLASSROOMS**
Many schools today have computers available in a lab or the library, as well as computers or Internet connections in classrooms for student use.

**PRESENTATIONS**
Using computers and projection equipment, instructors can incorporate electronic slide shows, online videos, and other interesting content into their classroom presentations.

**CAMPUS WIRELESS HOTSPOTS**
Many college students can access the Internet from anywhere on campus to do research, check e-mail, and more, via the campus hotspot.

**DISTANCE LEARNING**
With distance learning, students—such as these U.S. Navy sailors—can take classes from home or wherever they happen to be at the moment.
Computers in the Workplace

- Computers have become a universal on-the-job tool for decision-making, productivity, and communication
  - Used by all types of employees
  - Used for access control and other security measures
  - Use by service professionals is growing
  - Used extensively by the military
  - Employees in all lines of work need to continually refresh their computer skills
Computers in the Workplace

**DECISION-MAKING**
Many individuals today use a computer to help them make on-the-job decisions.

**PRODUCTIVITY**
Many individuals today use a computer to perform on-the-job tasks efficiently and accurately.

**COLLABORATION**
Computers and the Internet enable individuals located in different places to hold meetings, collaborate on documents, and other important tasks.

**OFFSITE COMMUNICATIONS**
Handheld or wearable computers are often used by employees who need to record data or access remote data when they are out of the office.

**CUSTOMER SERVICE**
Service professionals frequently use computers to process orders and store customer signature authorizations.

**WORK AUTHENTICATION SYSTEMS**
Allow workers to punch in and out of work, access facilities, or other tasks that require authentication.
Computers on the Go

• Computers are encountered in nearly every aspect of daily life
  – Portable PCs and handheld computers
  – Wi-Fi hotspots and Internet cafes
  – ATM machines and retail stores
  – Self-checkout systems and consumer kiosks
  – M-commerce systems
  – GPS systems
Computers on the Go

PORTABLE COMPUTERS
Many people today carry a portable PC with them at all times or when they travel in order to remain in touch with others and Internet resources.

CONSUMER KIOSKS
Electronic kiosks are widely available to view conference or gift registry information, print photographs, order products or services, and more.

SELF-CHECKOUT SYSTEMS
Allow individuals in retail stores to pay for purchases without assistance from an employee.

M-COMMERCE SYSTEMS
Allow individuals to pay for purchases using a mobile phone or other device.

CONSUMER AUTHENTICATION SYSTEMS
Allow access to facilities for authorized members only, such as for theme park annual pass holders, as shown here.

GPS APPLICATIONS
Computers and handheld devices with built-in GPS capabilities can be used for navigational purposes, such as to show users their exact geographical location or to plan the most efficient route to a destination.

FIGURE 1-5
Computer use while on the go.
What Is a Computer and What Does It Do?

• Computer: A programmable, electronic device that accepts data, performs operations on that data, and stores the data or results as needed
  – Computers follow instructions, called programs, which determine the tasks the computer will perform

• Basic operations
  – Input: Entering data into the computer
  – Processing: Performing operations on the data
  – Output: Presenting the results
  – Storage: Saving data, programs, or output for future use
  – Communications: Sending or receiving data
What Is a Computer and What Does It Do?

**INPUT**
User types in the numbers 2 and 5.

**PROCESSING**
Computer adds 2 and 5.

**OUTPUT**
Computer displays the results (output).

**STORAGE**
Computer saves data (in this case, the output) for future use.

\[ 2 + 5 = 7 \]

**FIGURE 1-6**
The information processing cycle.
Data vs. Information

- **Data**
  - Raw, unorganized facts
  - Can be in the form of text, graphics, audio, or video
- **Information**
  - Data that has been processed into a meaningful form
- **Information processing**
  - Converting data into information
Computers Then and Now

• The computer as we know it is a fairly recent invention
• The history of computers is often referred to in terms of generations
• Each new generation is characterized by a major technological development

• Precomputers and early computers (before 1945)
  – Abacus, slide rule, mechanical calculator
  – Punch Card Tabulating Machine and Sorter
Computers Then and Now

• First-generation computers (1946-1957)
  – Enormous and powered by vacuum tubes
  – Used a great deal of electricity, and generated a lot of heat
  – ENIAC and UNIVAC

• Second-generation computers (1958-1963)
  – Used transistors
  – Computers were smaller, more powerful, cheaper, more efficient, and more reliable
  – Punch cards and magnetic tape were used to input and store data
Computers Then and Now

- Third-generation computers (1964-1970)
  - Used integrated circuits (ICs)
  - Keyboards and monitors introduced

- Fourth-generation computers (1971-present)
  - Use microprocessors
  - IBM PC, Apple Macintosh
  - Use keyboards, mice, monitors, and printers
  - Use magnetic disks, flash memory, and optical disks for storage
  - Computer networks, wireless technologies, Internet introduced
Computers Then and Now

• Fifth-generation (now and the future)
  – Infancy stage
  – No precise classification
  – May be based on artificial intelligence (AI)
  – Likely use voice input
  – May be based on optical computers and utilize nanotechnology
Computers Then and Now

PRECOMPUTERS AND EARLY COMPUTERS
Dr. Herman Hollerith’s Punch Card Tabulating Machine and Sorter is an example of an early computing device. It was used to process the 1890 U.S. Census in about one-quarter of the time usually required to tally the results by hand.

FIRST-GENERATION COMPUTERS
First-generation computers, such as ENIAC shown here, were large and bulky, used vacuum tubes, and had to be physically wired and reset to run programs.

SECOND-GENERATION COMPUTERS
Second-generation computers, such as the IBM 1401 mainframe shown here, used transistors instead of vacuum tubes so they were physically smaller, faster, and more reliable than earlier first-generation computers.

THIRD-GENERATION COMPUTERS
The integrated circuit marked the beginning of the third generation of computers. These chips allowed the introduction of smaller computers, such as the DEC PDP-8 shown here, which was the first commercially successful minicomputer.

FOURTH-GENERATION COMPUTERS
Fourth-generation computers, such as the original IBM PC shown here, are based on microprocessors. Most of today’s computers fall into this category.
Hardware

- Hardware: The physical parts of a computer
  - Internal hardware
    - Located inside the main box (system unit) of the computer
  - External hardware
    - Located outside the system unit and plug into ports located on the exterior of the system unit
  - Hardware associated with all five computer operations
Hardware

**FIGURE 1-8**
Typical computer hardware.

- **DVD DRIVES**: Read and write CD and DVD discs.
- **HARD DRIVE**: Located inside the system unit; stores programs and most data.
- **SYSTEM UNIT**: Case that contains the CPU, memory, power supply, disk drives, modem, and all other internal hardware.
- **MONITOR**: Lets you see your work as you go; a primary output device.
- **PRINTER**: Produces printed copies of computer output.
- **USB PORT**: Connects external devices that use the USB interface.
- **MICROPHONE**: Captures spoken input.
- **SPEAKERS**: Produce audio output.
- **KEYBOARD**: Used to type instructions into the computer; the principal input device.
- **CD AND DVD DISCS**: Deliver programs and store large multimedia files.
- **MOUSE**: Used to make on-screen selections; a primary pointing device.
- **FLASH MEMORY CARDS**: Store digital photos, music files, and other content.
- **FLASH MEMORY CARD READER**: Reads and writes flash memory cards.
- **USB FLASH DRIVE**: Used to store documents, digital photos, music files, and other content to be moved from one PC to another.
- **FIREWIRE PORTS**: Connect external devices that use the FireWire interface.
Hardware

• Input devices
  – Used to input data into the computer
  – Keyboards, mice, scanners, cameras, microphones, joysticks, etc.

• Processing devices
  – Perform calculations and control computer’s operation
  – Central processing unit (CPU) and memory

• Output devices
  – Present results to the user
  – Monitors, printers, speakers, projectors, etc.
Hardware

- **Storage devices**
  - Used to store data on or access data from storage media
  - Hard drives, DVD disks and drives, USB flash drives, etc.

- **Communications devices**
  - Allow users to communicate with others and to electronically access information
  - Modems, network adapters, etc.
## Hardware

### Input
- Keyboard
- Mouse
- Microphone
- Scanner
- Digital camera
- Electronic pen
- Touch pad
- Joystick
- Fingerprint reader

### Output
- Monitor
- Printer
- Speakers
- Headphones and headsets
- Data projector

### Storage
- Hard drive
- Floppy disk
- Floppy disk drive
- CD/DVD disc
- CD/DVD drive
- Flash memory card
- USB flash drive
- Flash memory card reader

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**FIGURE 1-9**
Common hardware listed by operation.
Software

- Software: The programs or instructions used to tell the computer hardware what to do
  - System software: Operating system allows a computer to operate
    - Boots the computer and launches programs at the user’s direction
    - Most use a GUI to interact with the user via windows, icons, menus, buttons, etc.
    - Windows, Mac OS, Linux, etc.
Software

FIGURE 1-10
The Windows desktop.

ICONS
Represent folders, documents, or other items that can be opened.

MENU BAR
Opens menus.

TOOLBAR
Contains buttons or icons that can be used to issue commands.

TOOLBAR BUTTON
Issues a command.

MENU
Contains commands.

START BUTTON
Opens the Start menu.

WINDOW
Rectangular areas containing programs, documents, or other data.

DIALOG BOX
Displayed when needed to request information from the user.

WINDOWS DESKTOP
Provides the backdrop for icons, windows, and other objects, such as the Windows Sidebar shown here.

SIZING BUTTONS
Minimize, maximize, or close a window.

RIBBON
Replaces menus and toolbars in some programs.

HYPERLINK
Issues a command to the computer when clicked.

TASKBAR
Usually located at the bottom of the desktop.

TASKBAR TOOLBAR
Contains icons that can start programs.

TASKBAR BUTTONS
Correspond to open windows; can be used to change the active window.

SYSTEM TRAY
Shows the clock and other indicators.
Software

**Figure 1-11**
The Windows Vista Start menu.
Application Software

- Application software: Performs specific tasks or applications
  - Creating letters, budgets, etc.
  - Managing inventory and customer databases
  - Editing photographs
  - Scheduling appointments
  - Viewing Web pages
  - Sending and receiving e-mail
  - Recording / playing CDs
  - Designing homes
  - Playing games
Application Software

**WEB BROWSERS**
Allow users to view Web pages and other information located on the Internet.

**WORD PROCESSING PROGRAMS**
Allow users to create written documents, such as reports, letters, and memos.

**SPREADSHEET PROGRAMS**
Allow users to create documents containing numbers and computations, such as budgets, expense reports, and financial statements.

**GAMES**
Allow both children and adults to perform educational and/or entertainment activities.

**MULTIMEDIA PROGRAMS**
Allow users to perform tasks, such as playing music or video clips stored on a computer, CD or Web page; creating audio CDs; and transferring home movies to DVD discs.

**E-MAIL PROGRAMS**
Allow users to compose, send, receive, and manage electronic messages sent over the Internet or a private network.

**FIGURE 1-12** Examples of application software.
Computer Users and Professionals

• Computer users (end users)
  – People who use a computer to obtain information

• Computer professionals include:
  – Programmers
  – Systems analysts
  – Computer operations personnel
Computers to Fit Every Need

- Six basic categories of computers
  - Embedded computers
  - Mobile devices
  - Personal computers
  - Midrange servers
  - Mainframe computers
  - Supercomputers
Embedded Computers

- Embedded computer: Embedded into a product and designed to perform specific tasks or functions for that product
- Cannot be used as general-purpose computers
- Often embedded into:
  - Household appliances
  - Thermostats
  - Sewing machines
  - A/V equipment
  - Cars
Mobile Devices

• Mobile device: A very small device with some type of built-in computing or Internet capability
• Typically based on cellular phones
• Examples:
  – Smart phones
  – Smart watches
  – Handheld gaming devices
  – Portable digital media players
Personal Computers/Desktop PCs

- Personal computer: a computer system designed to be used by one person at a time
  - Also called a microcomputer
  - Can be desktop or portable computers

- Desktop PCs: fit on or next to a desk
  - Can use tower case, desktop case, or all-in-one
  - Can be PC-compatible or Macintosh
  - Not designed to be portable
Portable PCs

• Notebook (laptop) computers
  – Typically use clamshell design

• Tablet PCs
  – Can be slate tablets or convertible
Portable PCs

- Handheld computers
  - Size of a paperback book or pocket calculator
  - Some include phone capabilities
  - Ultra Mobile Personal Computer (UMPC): Fully-functioning handheld
Portable PCs

- Most include wireless networking capabilities
- Can synch (share information) with a desktop computer as needed
- Can use a docking station or notebook stand as needed
Thin Clients and Internet Appliances

- Thin client or network computer (NC): PC designed to access a network for processing and data storage
  - Lower cost and easier maintenance
  - Limited or no local storage
  - Not able to function as a computer if network is down
- Internet appliance: Specialized network computer designed for Internet access and/or e-mail exchange
  - Often set-top boxes
  - Can include Internet-enabled gaming consoles
Thin Clients and Internet Appliances

Thin clients and Internet appliances.
Midrange Servers

• Midrange server: A medium-sized computer used to host programs and data for a small network
  – Users connect via a network with a computer, thin client, or dumb terminal
  – May consist of a collection of individual circuit boards called blades (blade servers)
Mainframe Computers

- Mainframe computer: Powerful computer used by several large organizations to manage large amounts of centralized data
  - Standard choice for large organizations, hospitals, universities, large businesses, banks, government offices
  - Located in climate-controlled data centers and connected to the rest of the company computers via a network
  - Larger, more expensive, and more powerful than midrange servers
  - Usually operate 24 hours a day
  - Also called high-end servers or enterprise-class servers
Mainframe Computers

FIGURE 1-21
Mainframe computers.
Supercomputers

- Supercomputer: Fastest, most expensive, most powerful type of computer
  - Generally run one program at a time, as fast as possible
  - Commonly built by connecting hundreds of smaller computers, supercomputing cluster
  - Used for space exploration, missile guidance, satellites, weather forecast, oil exploration, scientific research, complex Web sites, decision support systems, 3D applications, etc.

- Grid computing: Using the unused processing power of a large number of computers to work together on a single task
Supercomputers

**FIGURE 1-22**
The Blue Gene/L supercomputer.
Supercomputers are used for specialized situations in which immense processing speed is required.

**BLUE GENE/L SUPERCOMPUTER**
This supercomputer is installed at Lawrence Livermore National Laboratory.

**BLUE GENE/L CIRCUIT BOARDS**
Each rack holds several circuit boards; each circuit board contains four processors.
Computer Networks and the Internet

• Computer network: A collection of hardware and other devices that are connected together.
  – Users can share hardware, software, and data
  – Users can communicate with each other
• Network servers: Manage resources on a network
• Clients: Access resources through the network server
• Computer networks exist in many sizes and types
  – Home networks
  – School and small business networks
  – Large corporate
  – Public wireless networks
  – The Internet
Computer Networks and the Internet

FIGURE 1-23
Example of a computer network.
What Are the Internet and the World Wide Web?

- Internet: The largest and most well-known computer network in the world
- Individuals connect to the Internet using an Internet service provider (ISP)
- World Wide Web: One resource (a vast collection of Web pages) available through the Internet
  - Web sites contain Web pages stored on Web servers
  - Web pages viewed using a Web browser (Internet Explorer, Safari, Firefox, Opera, etc.)
- A wide variety of information is available through the Web
What Are the Internet and the World Wide Web?

ACCESSING PRODUCT INFORMATION

LOOKING UP MAPS AND PHONE NUMBERS

LISTENING TO MUSIC AND WATCHING VIDEOS

SHOPPING AND PAYING BILLS ONLINE

READING NEWS

SENDING AND RECEIVING E-MAIL

FIGURE 1-24
Some common Web activities
Accessing a Network or the Internet

- Need a modem or network adapter
- Some networks require a username and password
- Internet connections can be:
  - Direct (always-on) connections
  - Dial-up connections
- Internet addresses are used to access resources on the Internet
  - IP address: Numeric address that identifies computers (207.46.138.20)
  - Domain name: Text-based address that identifies computers (microsoft.com)
  - Uniform resource locator (URL): Identifies Web pages (http://www.pbskids.org)
  - E-mail address: Identifies people for e-mail exchange (jsmith@cengage.com)
IP Addresses and Domain Names

- IP addresses are numeric and unique
- Domain Names: Correspond to IP addresses
  - Top-level domains (TLDs) identifies type of organization or its location

**TABLE 1-26**

<table>
<thead>
<tr>
<th>DOMAIN NAME</th>
<th>ORGANIZATION</th>
<th>TYPE/LOCATION OF ORGANIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>microsoft.com</td>
<td>Microsoft Corporation</td>
<td>Commercial business</td>
</tr>
<tr>
<td>stanford.edu</td>
<td>Stanford University</td>
<td>Educational institution</td>
</tr>
<tr>
<td>fbi.gov</td>
<td>Federal Bureau of Investigation</td>
<td>Government organization</td>
</tr>
<tr>
<td>navy.mil</td>
<td>United States Navy</td>
<td>Military organization</td>
</tr>
<tr>
<td>royal.gov.uk</td>
<td>The British Monarchy</td>
<td>Government organization in the United Kingdom</td>
</tr>
</tbody>
</table>

**NEW TLDs**

<table>
<thead>
<tr>
<th>INTENDED USE</th>
<th>INTENDED USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>.aero</td>
<td>Aviation industry</td>
</tr>
<tr>
<td>.biz</td>
<td>Businesses</td>
</tr>
<tr>
<td>.coop</td>
<td>Coop organizations</td>
</tr>
<tr>
<td>.info</td>
<td>Resource sites</td>
</tr>
<tr>
<td>.jobs</td>
<td>Employment sites</td>
</tr>
<tr>
<td>.mobi</td>
<td>Sites optimized for mobile users</td>
</tr>
<tr>
<td>.museum</td>
<td>Museums</td>
</tr>
<tr>
<td>.name</td>
<td>Individuals</td>
</tr>
<tr>
<td>.pro</td>
<td>Licensed professionals</td>
</tr>
<tr>
<td>.travel</td>
<td>Travel-oriented sites</td>
</tr>
</tbody>
</table>
Uniform Resource Locators (URLs)

- URL: Uniquely identifies a Web page
- Consists of:
  - Information identifying the Web server
  - Names of folders in which the Web page files are stored
  - Web page’s filename
- Protocols:
  - Hypertext Transfer Protocol (http) is typically used to display Web pages (https is used for secure Web pages)
  - File Transfer Protocol (ftp) is often used for file exchange
Uniform Resource Locators (URLs)

**Figure 1-27**
A Web page URL.

Web page URLs usually begin with the standard protocol identifier http://.

This part of the URL identifies the Web server hosting the Web page.

Next comes the folder(s) in which the Web page is stored, if necessary.

This is the Web page document that is to be retrieved and displayed.

```
http://pbskids.org/arthur/index.html
```
E-Mail Addresses

• E-mail addresses consist of:
  – Username: A person’s identifying name for a particular domain
  – The @ symbol
  – Domain name for the computer that will be handling the person’s e-mail (mail server)

• Pronouncing Internet addresses

<table>
<thead>
<tr>
<th>TYPE OF ADDRESS</th>
<th>SAMPLE ADDRESS</th>
<th>PRONUNCIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain name</td>
<td>berkeley.edu</td>
<td>berkeley dot e d u</td>
</tr>
<tr>
<td>URL</td>
<td>microsoft.com/windows/ie/default.asp</td>
<td>microsoft dot com slash windows slash i e slash default dot a s p</td>
</tr>
<tr>
<td>E-mail address</td>
<td><a href="mailto:president@whitehouse.gov">president@whitehouse.gov</a></td>
<td>president at whitehouse dot gov</td>
</tr>
</tbody>
</table>
Surfing the Web

- Web browser: Used to display Web pages
- Browser home page: The first page displayed when the browser is opened
- To load a Web page, you can:
  - Type a URL in the Address bar
  - Click a hyperlink on a displayed Web page
  - Select a Favorite/Bookmark or page from the History list
Surfing the Web

**TOOLBARS**
- Include Back, Favorites, Home, and Print buttons.

**USING URLS**
- Type a URL in the Address bar and press Enter to display the corresponding Web page.

**USING HYPERLINKS**
- Point to a hyperlink to see the corresponding URL on the status bar; click the hyperlink to display that page.

**STATUS BAR**
- Includes zoom options and security indicators.

**TABS**
- Click to open a new tab within this IE window.

**USING FAVORITES**
- Click a name in the Favorites list to display the corresponding Web page.

**FIGURE 1-29**
Surfing the Web with IE7. URLs, hyperlinks, and favorites can be used to display Web pages.
Searching the Web

• Search site: Web page that helps you find Web pages containing the information you are seeking
  – Typically search using keywords

• Reference sites: Look up addresses, telephone numbers, ZIP codes, maps, etc.

**Figure 1-30**
The Google search site.

**VIDEO**
Click to search for videos related to a particular topic.

**IMAGES**
Click to search for images related to a particular topic.

**KEYWORD SEARCH**
Since the Web option is selected, type keywords here and press Enter to see a list of Web pages matching your search criteria.

**NEWS**
Click to search for news related to a particular topic.

**MAPS**
Click to display a map of the specified location.

**GMAIL**
Click to log in to a Gmail Web-based mail account.

**MORE SERVICES**
Click to select directory categories, search catalogs, and more.

**ADVANCED SEARCH**
Click to display a fill-in form to perform a more specific search.
E-Mail

- Electronic mail (e-mail): electronic messages exchanged via a private network or the Internet
  - Can be conventional or Web-based
  - Can contain photos, attached files, etc.
Computers and Society

• The vast improvements in technology over the past decade have had a distinct impact on daily life, both at home and at work
• Many benefits of a computer-oriented society
• Also risks
  – Computer viruses
  – Identity theft and phishing
  – Privacy issues
• Differences in online communications
• The anonymity factor
• Information integrity (not all information on the Internet is accurate)
Summary

- Computers in Your Life
- What Is a Computer and What Does It Do
- Computers to Fit Every Need
- Computer Networks and the Internet
- Computers and Society