



Information Technology, the Internet, and You

Chapter 1

Computing
Essentials 2014

Competencies (Page 1 of 3)

- Explain the parts of an information system: people, procedures, software, hardware, data, and connectivity.
- Distinguish between system software and application software.
- Discuss the three kinds of system software programs.
- Define and compare general purpose, specialized, and mobile applications.

Competencies (Page 2 of 3)

- Identify the four types of computers and the four types of microcomputers.
- Describe the different types of computer hardware, including the system unit, input, output, storage, and communication devices.
- Define data and describe document, worksheet, database, and presentation files.

Competencies (Page 3 of 3)

- Explain computer connectivity, the wireless revolution, the Internet, and cloud computing.



Introduction

- **Computer competency refers to acquiring computer-related skills.**
- **Information systems are involved in many of the things we encounter each day.**
- **Microcomputers are common in all areas of life.**
- **New forms of learning have developed providing numerous alternatives for people to become educated without physically attending classes**
- **The Web provides new avenues of communication for people to purchase goods, communication and share similar interests.**

Parts of an Information System

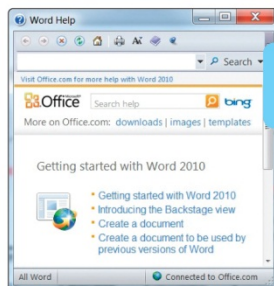
- People
- Procedures
- Software
- Hardware
- Data
- Connectivity



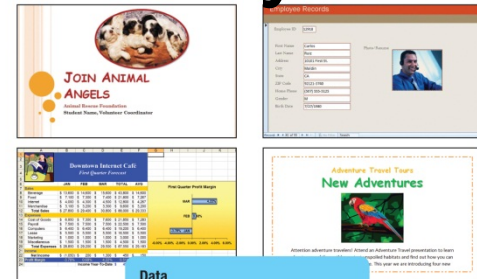
People
are end users who use computers to make themselves more productive



Software
provides step-by-step instructions for computer hardware



Procedures
specify rules or guidelines for computer operations



Data
consists of unprocessed facts including text, numbers, images, and sounds

Hardware
includes keyboard, mouse, monitor, system unit, and other devices



Connectivity
allows computers to share information and to connect to the Internet



People

- Most important part of any system
- Contact is
 - Direct
 - Indirect
- Computer uses
 - Entertainment
 - Business
 - Medicine
 - Education



System Software

- Enables application software to interact with the computer hardware
- Background software helps manage resources
- Collection of programs
 - Operating Systems
 - Utilities
 - Device Drivers
- Operating System
 - Coordinates computer resources
 - Provides the user interface
 - Runs applications



Hardware – Types of Computers

- Supercomputers
- Mainframe computers
- Midrange computers
- Microcomputers



Microcomputer Types

- Desktop
- Notebook or laptop
- Tablet PC
- Handheld

Desktop



Notebook



Tablet PC



Handheld

Connectivity, the Wireless Revolution, the Internet, and Cloud Computing

- **Connectivity**
 - Sharing of information
 - Wireless communication has widespread use
- **Computer networks**
 - Connected communication system of computers
 - Largest network is the Internet
- **Cloud Computing**
 - Uses the Internet and the Web to shift many computer activities from a user's computer to computers on the Internet

Careers in IT

- For a complete listing of careers, visit <http://www.computing2014.com/> keyword: careers

Career	Description
Webmaster	Develops and maintains websites and web resources. See page 51
Software Engineer	Analyzes users' needs and creates application software. See page 82
Computer Support Specialist	Provides technical support to customers and other users. See page 112
Computer Technician	Repairs and install computer components and systems. See page 141
Technical Writer	Prepares instruction manuals, technical reports, and other scientific or technical documents. See page 174
Network Administrator	Creates and maintains computer networks. See page 229

A Look to the Future

- The Internet and the Web
- Powerful Software
- Powerful Hardware
- Security and Privacy
- Organizations
- Changing Times



Open-Ended Questions (Page 1 of 2)

- Explain the five parts of an information system. What part do people play in this system?
- What is system software? What kinds of programs are included in system software?
- Define and compare general-purpose, specialized, and mobile application software. Describe some different types of general-purpose applications. Describe some types of specialized applications.

Open-Ended Questions (Page 2 of 2)

- Describe the different types of computers. What is the most common type? What are the types of microcomputers?
- What is connectivity? What are wireless devices and the wireless revolution? What is a computer network? What are the Internet and the Web? What is cloud computing?