

Discovering Computers

Technology in a World of Computers,
Mobile Devices, and the Internet

Chapter 1 Digital Literacy



Objectives Overview

Differentiate among
laptops, tablets, and servers

Describe the purpose and
uses of smartphones, digital
cameras, portable media
players, e-book readers, and
game devices

Describe the relationship
between data and
information

Briefly explain various input
options

Differentiate the Internet
from the web, and describe
the relationship among the
web, webpages, websites,
and web servers

Explain the purpose of a
browser, a search engine,
and an online social
network

See Page 2
for Detailed Objectives

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Objectives Overview

Briefly describe digital security risks associated with viruses and other malware, privacy, your health, and the environment

Differentiate between an operating system and applications

Differentiate between wired and wireless technologies, and identify reasons individuals and businesses use networks

Discuss how society uses technology in education, retail, finance, entertainment, health care, travel, government, science, publishing, and manufacturing

Identify technology used by home users, small office/home office users, mobile users, power users, and enterprise users

See Page 2
for Detailed Objectives

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A World of Technology

- Because technology changes, you must keep up with the changes to remain digitally literate
- **Digital literacy** involves having a current knowledge and understanding of computers, mobile devices, the Internet, and related technologies

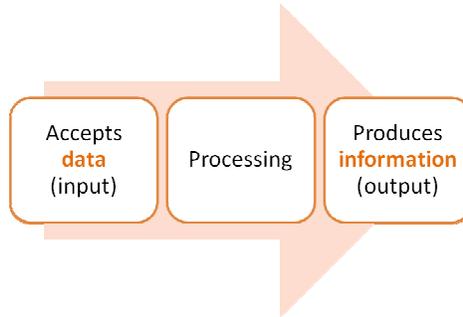


Pages 2 - 3
Figure 1-1

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Computers

- A **computer** is an electronic device, operating under the control of instructions stored in its own memory



Computers

- **Laptop**
- **Tablet**
- **Desktop**
- **Server**



Mobile and Game Devices



Smartphone



Digital camera



Portable media player



E-book reader



Game console

Pages 7 - 9
Figures 1-6 – 1-10

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Data and Information

DATA (input)

2 Medium Sodas	\$1.49 each
1 Small Turkey Sub	\$3.49 each
1 Caesar Salad	\$4.49 each
1 Bag of Chips	\$0.99 each
3 Cookies	\$0.39 each
Amount Received	\$20.00



STORAGE and PROCESSES

- Stores entered data.
- Computes each item's total price by multiplying the quantity ordered by the item price (i.e., $2 * 1.49 = 2.98$).
- Organizes data.
- Sums all item total prices to determine order total due from customer (13.12).
- Calculates change due to customer by subtracting the order total from amount received ($20.00 - 13.12 = 6.88$).
- Stores resulting information.

Arrow Deli
10 Park Street
Maple River, DE 20393
(734) 555-2939

QTY	ITEM	TOTAL
2	Medium Sodas	2.98
1	Small Turkey Sub	3.49
1	Caesar Salad	4.49
1	Bag of Chips	0.99
3	Cookies	1.17
Total Due		13.12
Amount Received		20.00
Change		6.88

Thank You!

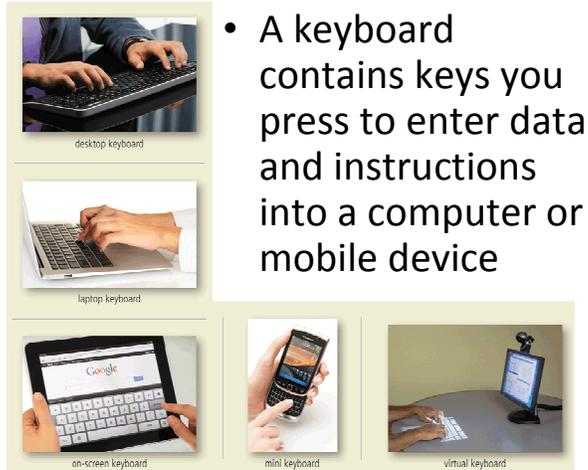
INFORMATION (output)

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Figure 1-11

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Data and Information

- A keyboard contains keys you press to enter data and instructions into a computer or mobile device



desktop keyboard

laptop keyboard

on-screen keyboard

mini keyboard

virtual keyboard

Data and Information

- A pointing device is an input device that allows a user to control a small symbol on the screen called a pointer
- Some mobile devices and computers enable you to speak data instructions using voice input and to capture live full-motion images using video input



mouse

touchpad

microphone built into phone

wireless headset

webcam

Data and Information

- A scanner is a light-sensing input device that converts printed text and images into a form the computer can process



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Figure 1-15

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Data and Information

- An **output device** is any hardware component that conveys information from a computer or mobile device to one or more people
- A **printer** is an output device that produces text and graphics on a physical medium such as paper



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Figure 1-16

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Data and Information

- A display is an output device that visually conveys text, graphics, and video information



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Figure 1-17

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Data and Information

- Speakers allow you to hear audio such as music, voice, and other sounds
 - Earbuds
 - Headphones



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Figure 1-18

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Data and Information

Memory consists of electronic components that store instructions waiting to be executed and the data needed by those instructions

A computer keeps data, instructions, and information on a **storage media**

A **storage device** records (writes) and/or retrieves (reads) items to and from storage media

Data and Information



Hard Disk



Solid-State Drive



USB Flash Drive



Memory Card



Optical Disc



Cloud Storage

The Internet

- The **Internet** is a worldwide collection of networks that connects millions of businesses, government agencies, educational institutions, and individuals



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Figure 1-25

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The Internet

The World Wide Web (or web, for short) is a global library of information available to anyone connected to the Internet

The **web** consists of a worldwide collection of electronic documents, each of which is called a **webpage**

A **website** is a collection of related webpages

A **web server** is a computer that delivers requested webpages to your computer

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The Internet

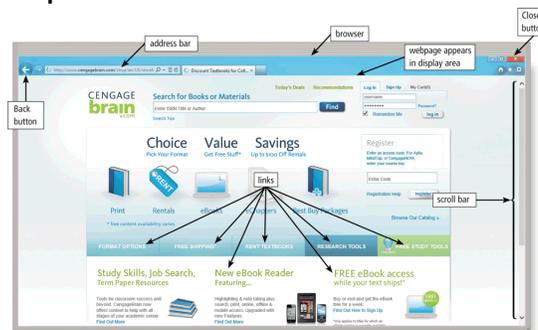


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Figure 1-26

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The Internet

- A **browser** is software that enables users with an Internet connection to access and view webpages on a computer or mobile device

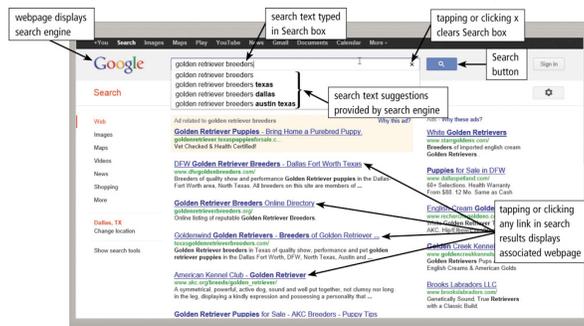


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The Internet

- A **search engine** is software that finds websites, webpages, images, videos, news, maps, and other information related to a specific topic



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The Internet

- An **online social network** encourages members to share their interests, ideas, stories, photos, music, and videos with other registered users



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Figure 1-27

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Digital Safety and Security

- It is important that users protect their computers and mobile devices

Viruses and
Other
Malware

Privacy

Health
Concerns

Environmental
Issues

Digital Safety and Security

- **Green computing** involves reducing the electricity consumed and environmental waste generated when using a computer
- Strategies include:
 - Recycling
 - Using energy efficient hardware and energy saving features
 - Regulating manufacturing processes
 - Extending the life of computers
 - Immediately donating or properly disposing of replaced computers

Programs and Apps

- **Software**, also called a **program**, tells the computer what tasks to perform and how to perform them

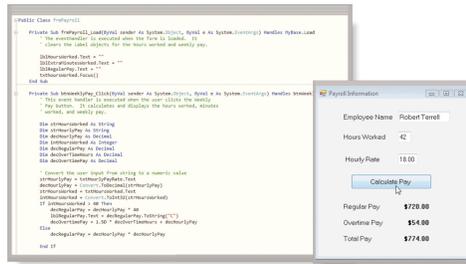


Programs and Apps

- Installing is the process of setting up software to work with the computer, printer, and other hardware
- Once installed, you can run an application so that you can interact with it
- You interact with a program or application through its user interface

Programs and Apps

- A software developer, sometimes called an application developer or computer programmer, is someone who develops programs and apps or writes the instructions that direct the computer or mobile device to process data into information

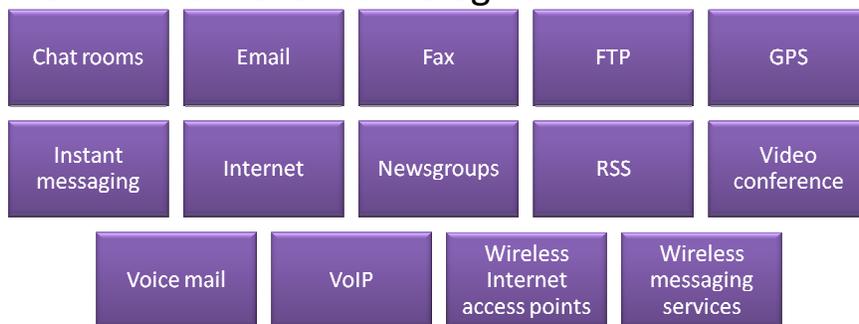


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Figure 1-29

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Communications and Networks

- In the course of a day, it is likely you use, or use information generated by, one or more of these communications technologies



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Communications and Networks

- A **communications device** is hardware capable of transferring items from computers and devices to transmission media and vice versa



Communications and Networks

- Examples of wireless communications technologies include:

Wi-Fi

Bluetooth

Cellular radio

Communications and Networks

- A **network** is a collection of computers and devices connected together via communications devices and transmission media



Pages 30 – 31
Figure 1-31

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Communications and Networks

Home Networks

- Connect to the Internet
- Share a single high-speed Internet connection
- Access photos, music, videos, and other content
- Share devices
- Play multiplayer games
- Connect game consoles to the Internet
- Subscribe to and use VoIP

Business Networks

- Facilitate communications
- Share hardware
- Share data, information, and software

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Uses of Technology in Society



Technology Users



Chapter Summary

Basic computer concepts

Various methods for input, output, memory, and storage

The Internet

Digital security and safety risks and precautions

Uses of technology applications in society

Discovering Computers

Technology in a World of Computers,
Mobile Devices, and the Internet

Chapter 1 Digital Literacy

Chapter 1 Complete

