

1 **Chapter 5**
Input

2 Chapter 5 Objectives

3 What Is Input?

1 **What is input?**

- 2 ❖ **Data**
- Unprocessed facts, figures, and symbols
- ❖ **Instructions**
- Programs
 - Commands
 - User responses

4 What are Input Devices?

1 **What is an input device?**

- 2 ❖ **Any hardware component used to enter data, programs, commands, and user responses into a computer**

5 The Keyboard

1 **How is the keyboard divided?**

- 2 ❖ **Typing area**
- ❖ **Numeric keypad**
- ❖ **Function keys**

6 The Keyboard

1 **What is a portable keyboard?**

- 2 ❖ **Full-sized keyboard you conveniently can attach and remove from a handheld computer**

7 The Keyboard

1 **What is an ergonomic keyboard?**

- 2 ❖ **Designed to minimize strain on hands and wrists**

8 The Keyboard

1 **What are alternative forms for commands?**

- 2 ❖ **Many programs allow you to use button, menu, or function key to obtain same result**

9 Mouse

1 **What is a mouse?**

- 2 ❖ **Pointing device that fits under palm of hand**
- ❖ **Controls movement of pointer, also called mouse pointer, on screen**
- ❖ **Pointer on screen takes several shapes**

10 Mouse

- 1 **How does a mechanical mouse work?**
- 2
 - ❖ Rubber or metal ball is on its underside
 - ❖ Movement of mouse translates into signals computer understands

11 Mouse

- 1 **How does an optical mouse work?**
- 2
 - ❖ Senses light to detect mouse's movement
 - ❖ More precise than mechanical mouse
 - ❖ Connect using a cable or wireless

12 Other Pointing Devices

- 1 **What are common mouse operations?**
- 2
 - ❖ Point
 - ❖ Click
 - ❖ Right-click
 - ❖ Double-click
 - ❖ Drag
 - ❖ Right-drag
 - ❖ Rotate wheel
 - ❖ Press wheel

13 Other Pointing Devices

- 1 **What is a trackball?**
- 2
 - ❖ Stationary pointing device with a ball on its top

- ❖ To move pointer, rotate ball with thumb, fingers, or palm of hand

14 Other Pointing Devices

What is a touchpad?

15 Other Pointing Devices

- 1 **What is a pointing stick?**
- 2
 - ❖ Pointing device shaped like pencil eraser positioned between keys on keyboard

16 Other Pointing Devices

- 1 **What are a joystick and a wheel?**
- 2
 - ❖ Joystick is vertical lever mounted on a base
 - ❖ Wheel is steering-wheel type input device
 - ❖ Pedal simulates car brakes and accelerator

17 Other Pointing Devices

- 1 **What is a light pen?**
- 2
 - ❖ Handheld input device that contains light source or can detect light

18 Other Pointing Devices

What is a touch screen?

- 19 Other Pointing Devices
What is a stylus?
- 20 Other Pointing Devices
1 **What is an electronic signature?**
2 ✦ Pen and graphics tablet used with special software for handwriting recognition
✦ Legal as ink signature
✦ Also called e-signature
- 21 Other Pointing Devices
1 **What is handwriting recognition software?**
2 ✦ Translates handwritten letters and symbols into characters that the computer can understand
- 22 Voice Input
How does voice recognition work?
- 23 Voice Input
1 **What is a MIDI?**
2 ✦ External device, such as electronic piano keyboard, to input music and sound effects
- 24 Input Devices for Handheld Computers
How is a data entered into a handheld device?
- 25 Digital Cameras
1 **What is a digital camera?**
2 ✦ Allows you to take digital pictures
✦ Images viewable immediately on camera
- 26 Digital Cameras
How does a digital camera work?
- 27 Digital Cameras
1 **What is resolution?**
2 ✦ Sharpness and clarity of image
✦ Higher the resolution, the better the image quality, but the more expensive the camera
✦ Pixel (*picture element*) is single point in electronic image
- 28 Video Input
1 **What is video input?**
2 ✦ Process of entering full-motion recording into computer
✦ Also called video capture
- 29 Video Input
1 **What is a PC video camera?**
2 ✦ Digital video camera that allows home user to record, edit, and capture video and still images, and to make video telephone calls on Internet
✦ Also called PC camera

- 30 Video Input
- 1 **What is a Web cam?**
 - 2 ❖ Video camera whose output displays on a Web page
❖ Also called a cam
- 31 Video Input
- 1 **What is videoconferencing?**
 - 2 ❖ Two or more geographically separated people who use network on the Internet to transmit audio and video data
- 32 Scanners and Reading Devices
- 1 **What is a scanner?**
 - 2 ❖ Device that captures data directly from source document
 - Source document is original form of data
- 33 Scanners and Reading Devices
- How does a flatbed scanner work?**
- 34 Scanners and Reading Devices
- What are various types of scanners?**
- 35 Scanners and Reading Devices
- 1 **What is image processing?**
 - 2 ❖ Capturing, storing, analyzing, displaying, printing, and manipulating images
❖ Converting paper documents into electronic form
❖ Also called imaging
- 36 Scanners and Reading Devices
- 1 **What is an optical reader?**
 - 2 ❖ Device that uses light source to read characters, marks, and codes and then converts them into digital data
- 37 Scanners and Reading Devices
- 1 **What is an OCR font?**
 - 2 ❖ OCR font, such as OCR-A, used with OCR devices
❖ OCR device determines characters' shapes by detecting patterns of light and dark
❖ OCR software converts shapes into characters the computer can understand
- 38 Scanners and Reading Devices
- 1 **What is a turnaround document?**
 - 2 ❖ You return it to company that sent it
- 39 Scanners and Reading Devices
- 1 **What is optical mark recognition (OMR)?**
 - 2 ❖ Reads hand-drawn pencil marks, such as small circles or rectangles
- 40 Scanners and Reading Devices

- 1 **What is a bar code scanner?**
- 2 ✦ **Uses laser beams to read bar codes**
- 41 **Scanners and Reading Devices**
- 1 **What is a bar code?**
- 2 ✦ **Identification code that consists of a set of vertical lines and spaces of different widths**
- ✦ **Universal Product Code (UPC)**
- 42 **Scanners and Reading Devices**
- 1 **What is a magnetic ink character recognition reader (MICR)?**
- 2 ✦ **Can read text printed with magnetized ink**
- ✦ **Banking industry almost exclusively uses MICR for check processing**
- 43 **Scanners and Reading Devices**
- 1 **What is wireless input?**
- 2 ✦ **Handheld computer or device used to collect data wirelessly at the location where transaction or event takes place**
- ✦ **Data transferred later to desktop computer through docking station**
- 44 **Input Devices for Physically Challenged Users**
- What input devices are available for those with physical limitations?**
- 45 **Input Devices for Physically Challenged Users**
- What are new developments in computing that will benefit physically challenged users?**
- 46 **PUTTING IT ALL TOGETHER**
- What type of input devices do home users require?**
- 47 **PUTTING IT ALL TOGETHER**
- What type of input devices do SOHO users require?**
- 48 **PUTTING IT ALL TOGETHER**
- What type of input devices do mobile users require?**
- 49 **PUTTING IT ALL TOGETHER**
- What type of input devices do power users require?**
- 50 **PUTTING IT ALL TOGETHER**
- What type of input devices do large business users require?**
- 51 **Summary of Input**
- ✦ **What is input?**
 - ✦ **What are input devices?**
 - ✦ **The keyboard**
 - ✦ **Mouse**
 - ✦ **Other pointing devices**
 - ✦ **Voice input**
 - ✦ **Input devices for handheld computers**
 - ✦ **Digital cameras**
 - ✦ **Video input**
 - ✦ **Scanners and reading devices**

❖ **Input devices for physically challenged users**