

- 1 Chapter 8
Operating Systems and Utility Programs
- 2 Chapter 8 Objectives
- 3 Operating Systems
 - 1 **What is an operating system (OS)?**
 - 2 ❖ **Set of programs that coordinates all activities among computer hardware resources**
- 4 Operating Systems
What are the functions of an operating system?
- 5 Operating Systems
Where is the operating system located?
- 6 Operating Systems
 - 1 **What is a cross-platform application?**
 - 2 ❖ **One that runs identically on multiple operating systems**
- 7 Operating System Functions
 - 1 **What is booting?**
 - 2 ❖ **Process of starting or restarting a computer**
- 8 Operating System Functions
What messages display on the screen when you boot the computer?
- 9 Operating System Functions
How does a personal computer boot up?
- 10 Operating System Functions
- 11 Operating System Functions
- 12 Operating System Functions
- 13 Operating System Functions
- 14 Operating System Functions
- 15 Operating System Functions
 - 1 **What is an emergency recovery disk?**
 - 2 ❖ **Floppy disk that contains system files that will start computer when hard disk becomes damaged and computer cannot boot**
❖ **Also called repair disk, boot disk, or rescue disk**
- 16 Operating System Functions

- 1 **What is a user interface?**
 2 ✦ Controls how you enter data and instructions and how information displays on screen
- 17 Operating System Functions
 1 **What is multitasking?**
 2 ✦ Allows single user to work on two or more applications that reside in memory at same time
- 18 Operating System Functions
What are other program management features of operating systems?
- 19 Operating System Functions
 1 **What is memory management?**
 2 ✦ Optimizes the use of random access memory (RAM)
- 20 Operating System Functions
 1 **What is virtual memory (VM) management?**
 2 ✦ Operating system allocates portion of hard disk to function like RAM
✦ Paging
✦ Thrashing
- 21 Operating System Functions
 1 **How does an operating system schedule jobs?**
 2 ✦ Adjusts schedule based on job's priority
- 22 Operating System Functions
 1 **What is spooling?**
 2 ✦ Print jobs sent to buffer instead of directly to printer, where print jobs wait their turn
- 23 Operating System Functions
 1 **What is a device driver?**
 2 ✦ Small program that tells operating system how to communicate with a device
✦ Each device requires its own specific driver
- 24 Operating System Functions
How do you install a device driver?
- 25 Operating System Functions
 1 **How does an operating system monitor performance?**
 2 ✦ Provides a program, called performance monitor, that assesses and reports information about various system resources and devices
- 26 Operating System Functions
 1 **How does an operating system manage files?**
 2 ✦ Includes a program called file manager, such as Windows Explorer

- 27 Operating System Functions
- 1 **What is a file allocation table (FAT)?**
 - 2 ❖ **A table of information that operating system uses to locate files on a disk**
❖ **Reformatting disk usually erases only file allocation table and leaves actual files on disk**
- 28 Operating System Functions
- 1 **What are features of a network operating system?**
 - 2 ❖ **Server is computer that controls access to network and provides centralized storage area**
❖ **Other computers on network are called clients**
- 29 Operating System Functions
- 1 **How do operating systems administer security?**
 - 2 ❖ **Most multiuser operating systems allow each user to log on**
- 30 Operating System Functions
- What is Active Directory (AD)?**
- 31 Types of Operating Systems
- What are some characteristics of operating systems?**
- 32 Types of Operating Systems
- What are three categories of operating systems?**
- 33 Stand-Alone Operating Systems
- 1 **What is DOS (Disk Operating System)?**
 - 2 ❖ **Refers to several single user operating systems developed in the early 1980s for personal computers**
- 34 Stand-Alone Operating Systems
- What are features of most Windows operating systems?**
- 35 Stand-Alone Operating Systems
- 1 **What is Mac OS?**
 - 2 ❖ **Multitasking operating system available only for computers manufactured by Apple**
- 36 Network Operating Systems
- 1 **What is UNIX?**
 - 2 ❖ **Command-line multitasking operating system**
- 37 Network Operating Systems
- 1 **What is Linux?**
 - 2 ❖ **Popular, free, open-source multitasking UNIX-type operating system**
- 38 Network Operating Systems
- 1 **What is Solaris?**
 - 2 ❖ **UNIX-type operating system designed specifically for**

e-commerce applications

- ❖ **Can manage high-traffic accounts**
- ❖ **Incorporates security necessary for Web transactions**
- ❖ **Developed by Sun Microsystems**

39 **Embedded Operating Systems**

1 What is an embedded operating system?

- 2**
- ❖ **Operating system found on most handheld computers and small devices**
 - ❖ **Resides on a ROM chip**

40 **Utility Programs**

1 What is a utility program?

- 2**
- ❖ **System software that performs a specific task**
 - ❖ **Examples include:**
 - **File viewer**
 - **File compression**
 - **Diagnostic utility**
 - **Uninstaller**
 - **Disk scanner**
 - **Disk defragmenter**
 - **Backup utility**
 - **Screen saver**

41 **Utility Programs**

1 What is a screen saver?

- 2**
- ❖ **Causes monitor's screen to display a moving image or blank screen if there is no activity for a specified time period**
 - ❖ **Prevents ghosting**
 - ❖ **Popular for security, business, or entertainment purposes**

42 **Summary of Operating Systems and Utility Programs**

- ❖ **System software**
- ❖ **Operating systems**
- ❖ **Operating system functions**
- ❖ **Types of operating systems**
- ❖ **Stand-alone operating systems**
- ❖ **Network operating systems**
- ❖ **Embedded operating systems**
- ❖ **Utility programs**