Chapter Objectives 1 of 2

- Explain the role of an operating system and list the main operating systems used on today’s computers
- Define and describe a user interface and a graphical user interface
- Identify the important features of widely used software applications
- Describe the advantages of software suites

Chapter Objectives 2 of 2

- Explain how to create documents
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- Explain how to work with different versions of software applications

The Operating System

- The Role of the Operating System
  - System Software – consists of programs that control the operations of the computer and its devices
  - Operating system – contains instructions that coordinate all of the activities of the hardware devices in a computer

The Operating System

- Microsoft Windows
  - Windows XP
  - Windows Vista
  - Windows 7
- Mac OS
  - Mac OS, version 9.1
  - Mac OS X
- Other Operating Systems
  - UNIX
  - Linux

Graphical User Interface (GUI) – combines text, graphics, and other visual cues to make software easier to use
Application Software

- Programs designed to perform specific tasks for users
  - As a productivity / business tool
  - Assisting with graphics and multimedia projects
  - Supporting school and professional activities
  - Helping with home and personal activities
  - Facilitating communications

### Five major categories of application software

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<th>Category of Application Software</th>
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<th>School</th>
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**Working with Software Applications**

- **Document** - Piece of work created with an application
  - Creating - input text, graphics, sound
  - Editing - insert, delete, cut, copy, paste
  - Formatting
    - Font - such as Arial and Times New Roman
    - Font size - point = 1/72 of an inch in height
    - Font style - add emphasis (bold, italic, underline, etc.)
  - Saving
  - Printing
  - Voice recognition software
  - Note taking software - Can convert handwriting to typed text

**Productivity Software**

- **Word Processing Software**
  - Used to create, edit, and format textual documents
    - Font and font size
    - Color
    - Borders
    - Clip art
    - Margins
    - Word wrap
    - Scrolling
    - Editing features
      - Find or search
      - Replace
      - Spell checker

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**Examples** next page
Productivity Software

- **Spreadsheet Software**
  - Allows you to organize numeric data in rows and columns, collectively called a spreadsheet or worksheet.

- **Spreadsheet organization**
  - Worksheet has columns and rows
  - Cell - Intersection of a row and a column
    - Labels
    - Values
    - Formulas

- **Calculations**
  - **Formula** - Performs calculations on data in the worksheet and displays the results in a cell.
  - **Function** - A predefined formula that performs common calculations.
  - **Charts**
    - Graphically illustrates the relationship of numeric data.

- **Database Software**
  - **Database** - A collection of data organized in a manner that allows access, retrieval, and use of that data.
  - Similar to a manual filing system of data.

- **Developing a database**
  - Determine data that you want to keep track of.
  - Define the fields.
  - Enter the data.
  - Use the database to produce information.

- **Database Organization**
  - Database file.
  - Records.
  - Fields.

- **Presentation Graphics Software**
  - Allows you to create documents called presentations which are used to communicate ideas, messages, and other information to a group.
  - **Predefined formats (templates)** - define colors and other elements for backgrounds, text, and other special effects.
  - Various slide layouts.
  - Clip art / image gallery.
  - Slide sorter.
Productivity Software

- Presentation Graphics Software
  - Integrating electronic presentations into the classroom
  - Nonlinear teaching and learning
  - Students and teachers create presentations
  - Can link to other slides, presentations, and to the Web

- Personal Information Managers (PIM)
  - Software application that includes an:
    - appointment calendar
    - address book
    - Notepad
    - other features
  - to help organize appointments, task lists, and more

Productivity Software

- PDA and Smartphone Software Uses
  - Create documents and worksheets
  - Manage databases and lists
  - Create slide shows
  - Take notes
  - Manage budgets and finances
  - View and edit photos
  - Read electronic books
  - Plan travel routes
  - Compose/read e-mail messages
  - Send instant messages
  - Send text/picture messages
  - Read the latest news articles
  - Browse the Web
  - Use education apps
  - Web applications

Productivity Software

- Software Suites
  - Collection of individual application software packages sold as a single package
  - Lower cost
  - Ease of use
  - Common interface

Graphics and Multimedia Software

- Desktop Publishing (DTP) Software
  - Allows you to design, produce, and deliver sophisticated documents that contain text, graphics, and brilliant colors
  - Page layout - arranging text and graphics in a document

Graphics and Multimedia Software

- Paint/Image-Editing Software
  - Allows you to draw pictures, shapes, and other graphical images using various tools on the screen
  - Paint software
    - Draw pictures, shapes, and other graphics
  - Image-editing software
    - Modify existing graphics
  - Photo editing software
    - Edit digital photographs
Graphics and Multimedia Software

- Clip Art/Image Gallery
  - Collection of clip art and photographs
  - Miscellaneous items
    - Fonts
    - Animations
    - Sounds
    - Video and audio files
  - Microsoft has MANY additional images in the “online” gallery

- Multimedia Authoring Software
  - Used to create electronic presentations, simulations, and software demonstrations that can contain:
    - Text
    - Graphics
    - Video
    - Audio
    - Animation
    - Screen captures
  - Often used in education
  - Delivered on the Web, CDs, DVDs, and portable media players
  - Camtasia Studio or Adobe Captivate

- Video and Audio Editing Software
  - Modify a segment of a video, known as a clip
  - Add and remove clips
  - Add special effects
  - Sounds
  - Banners
  - Credits
  - Windows Live Movie Maker is an easy to use FREE Video editing program

- Web Page Authoring
  - Allows you to create Web pages and maintain Web sites
  - Word processing programs allow creation of web pages
  - Popular packages
    - Microsoft Publisher
    - Microsoft Expression Web
    - WebBlender 2
    - Adobe Dreamweaver
  - We will use the Google “sites” free online web site creation software to create and publish a web page

Software for School Use

- School and Student Management Software
  - School management
    - Centralized program that allows district and school personnel to manage school district operations
  - Student management
    - Allows administrators, teachers, and other staff to track information on students

- Grade Book Software
  - Allows teachers to track and organize student tests, homework, lab work, and other scores
  - Often integrates with other software packages
Software for School Use

- Educational and Reference Software
  - Educational software
    - Software designed for the learning environment
      - Such as exam prep
  - Reference software
    - Provides valuable and thorough information for everyone in an educational setting and in the family

Software for School Use

- Special Needs Software
  - Software designed for students with physical impairments or learning disabilities
  - Examples
    - Speech synthesis software
    - Text enlargement programs
    - Talking calculators

Software for Home and Personal Use

- Personal Finance Software
  - Simplified accounting program
  - Track personal income and expenses
  - Track investments
  - Online banking and investing

Software for Home and Personal Use

- Tax Preparation Software
  - Guides individuals, families, or small businesses through the process of filing federal and state taxes
  - Offers money saving tax tips
  - Prints tax forms

Software for Home and Personal Use

- Legal Software
  - Assists in preparation of legal documents and provides legal advice to individuals, families, and small businesses

Software for Home and Personal Use

- Entertainment Software
  - Interactive games and videos
  - Hobbies
Learning Aids and Support Tools

- Help
- Web-based help
- Trade books
- Tutorials
- FAQs

Software Versions and Upgrades

- Software programs are designated a version number
- **Upgrade** is a new version designed to replace an older version

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Be sure to READ the “Special Feature” Section of this Chapter (Pages 184-200) and include that information at the END of your Outline