Learning Objectives (1)

• Describe what application software is, the different types of ownership rights, and the difference between installed and cloud software.

• Detail some concepts and commands that many software programs have in common.

• Discuss word processing and explain what kinds of documents are created using this type of program.

• Explain the purpose of spreadsheet software and the kinds of documents created using this type of program.
Learning Objectives (2)

• Identify some of the vocabulary used with database software and discuss the benefits of using this type of program.

• Describe what presentation graphics and electronic slide shows are and when they might be used.

• List some types of graphics and multimedia software that consumers use frequently.

• Name several other types of application software programs and discuss what functions they perform.
Overview

• This chapter covers:
  – General characteristics of application software
  – The most widely used types of application software:
    • Word processing
    • Spreadsheet
    • Database
    • Presentation graphics
    • Graphics and multimedia
  – Overview of other types of application software
The Basics of Application Software

• Software ownership rights of **application software (apps)**
  – Specify the allowable use of the program
  – A **software license** gives you the right to use a software program
    • Specifies the conditions under which the software can be used
    • Also called an end user license agreement (EULA)
    • Often terms of use instead for mobile apps
  – **Open source software** are programs with source code made available to the general public
Inside the Industry

Open Source Software

- Linux was the first widely used open source software
- There are many other open source apps (GIMP, LibreOffice, etc.)
- Cheaper than other software
- Increased stability and security
- Ability to modify application’s source code

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# Examples of Software Types

<table>
<thead>
<tr>
<th>TYPE OF SOFTWARE</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial software</td>
<td>Microsoft Office (office suite)</td>
</tr>
<tr>
<td></td>
<td>Norton AntiVirus (antivirus program)</td>
</tr>
<tr>
<td></td>
<td>Adobe Photoshop CC (image editing program)</td>
</tr>
<tr>
<td></td>
<td>Minecraft - Pocket Edition (game)</td>
</tr>
<tr>
<td>Shareware</td>
<td>WinZip (file compression program)</td>
</tr>
<tr>
<td></td>
<td>Video Edit Magic (video editing program)</td>
</tr>
<tr>
<td></td>
<td>Image Shrinker (image optimizer)</td>
</tr>
<tr>
<td></td>
<td>Deluxe Ski Jump 3 (game)</td>
</tr>
<tr>
<td>Freeware</td>
<td>Chrome (Web browser)</td>
</tr>
<tr>
<td></td>
<td>LibreOffice (office suite)</td>
</tr>
<tr>
<td></td>
<td>VLC Media Player (media player)</td>
</tr>
<tr>
<td></td>
<td>Evernote Basic (notetaking/archiving software)</td>
</tr>
<tr>
<td>Public domain software</td>
<td>Lynx (text-based Web browser)</td>
</tr>
<tr>
<td></td>
<td>Quake 3 (game)</td>
</tr>
</tbody>
</table>
Commercial Software

- **Commercial software** is developed and sold for profit
  - Typically comes with a single-user license
    - Sometimes can be installed on one desktop and one personal computer (see license to know)
    - Site licenses or network licenses are available for some software
  - Some software is available in a demo or trial version to test out the program before buying
  - Licenses may be per running instance or use license tokens to better fit some business uses
Shareware, Freeware, and Public Domain Software

- **Shareware** consists of copyrighted software distributed on the honor system
  - Consumers should either pay for it or uninstall it after the trial period

- **Freeware** consists of copyrighted software programs that are given away by the author for others to use free of charge
  - Many apps available at the app stores used with mobile devices are freeware

- **Public domain software** is not copyrighted
  - Ownership rights have been donated to the public domain
Desktop vs. Mobile Software

- Personal computers use desktop software
- Smartphones and other mobile devices typically require mobile apps
  - Designed for a specific type of device
  - Wide range of software available via app stores (Google Play, Apple App Store, etc.)
Mobile Ticketing

• Using your smartphone or tablet as your admission ticket
• Typically use a mobile app; show the ticket barcode when the ticket is needed
• Examples:
  – Tickets for movies, sporting events, concerts, etc.
  – Boarding passes
  – Custom tickets
Installed vs. Cloud Software: Installed Software

- **Installed software** must be installed on the computer before it can be run
  - Can be purchased in physical form (DVD, etc.) and then installed
  - Can be downloaded from the Internet and then installed
  - Can be free or fee-based software
Cloud Software

- **Cloud software** is delivered on-demand via the Web
  - Also called Software as a Service (SaaS), Web-based software, and cloudware
  - Includes free software and fee-based software
  - Advantages of cloud software
    - Files can be accessed from any computer or device with an Internet connection
    - Ease of implementation
    - Improved collaboration and interface capabilities
    - Always working with the most current version of software
Cloud Software (cont’d)

• Potential disadvantages of cloud software
  – Online applications tend to run more slowly
  – Cannot use during a server outage or without Internet access
    • Some programs like Google Docs allow some offline access
  – Some cloud software may have file size limits
  – Cost may eventually exceed the cost of purchasing a similar installed version of the software
Examples of Cloud Software

**BUSINESS SaaS APPLICATIONS**
This program allows you to share documents and collaborate on projects online.

**WEB DATABASE APPLICATIONS**
This application allows you to retrieve property information, such as home values and homes for sale.

**CLOUD PRODUCTIVITY APPLICATIONS**
These programs allow you to create documents online.

**FIGURE 6-7**
Cloud software is commonly used with both computers and mobile devices.
Trend

Dealing with Crapware

• Many manufacturers preinstall third-party software on new PCs
  – Can also be bundled with a software program you download

• Download software from the manufacturer’s site whenever possible

• Read each installation screen carefully

• Security software can detect PUPs (potentially unwanted programs)

Pay close attention to the options listed on installation screens to avoid installing crapware.
Software Suites

- A **software suite** is a collection of software programs bundled together and sold as a single software package
  - Office suites are used by most businesses/individuals to produce documents and typically include:
    - Word processing software
    - Spreadsheet software
    - Database software
    - Presentation graphics-software
  - **Microsoft Office** 2016 and Office 365
  - Provide a common interface among programs in the suite
  - Typically less expensive than buying the programs individually
Microsoft Office

FIGURE 6-8
Office suites. Many suites, such as Microsoft Office shown here, are available for a variety of devices.
Common Software Commands

• Commands are similar from program to program
• Usually commands are issued via menus, keyboard shortcuts, or command buttons located on a toolbar or Ribbon
• **Keyboard shortcut** key combinations are faster ways of issuing commands

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>COMMAND BUTTON</th>
<th>KEYBOARD SHORTCUT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>![File Icon]</td>
<td>[Ctrl]+[O]</td>
<td>Opens a dialog box so you can choose a saved document to open from a storage medium so it can be edited or printed.</td>
</tr>
<tr>
<td>Save</td>
<td>![Save Icon]</td>
<td>[Ctrl]+[S]</td>
<td>Saves the current version of the document to a storage medium.</td>
</tr>
<tr>
<td>Print</td>
<td>![Print Icon]</td>
<td>[Ctrl]+[P]</td>
<td>Prints the current version of the document onto paper.</td>
</tr>
<tr>
<td>Cut</td>
<td>![Cut Icon]</td>
<td>[Ctrl]+[X]</td>
<td>Moves the selected item to the Clipboard.</td>
</tr>
<tr>
<td>Copy</td>
<td>![Copy Icon]</td>
<td>[Ctrl]+[C]</td>
<td>Copies the selected item to the Clipboard.</td>
</tr>
<tr>
<td>Paste</td>
<td>![Paste Icon]</td>
<td>[Ctrl]+[V]</td>
<td>Pastes the last item copied or cut to the Clipboard to the current location.</td>
</tr>
<tr>
<td>Undo</td>
<td>![Undo Icon]</td>
<td>[Ctrl]+[Z]</td>
<td>Undoes the last change to the document.</td>
</tr>
<tr>
<td>Close</td>
<td>![Close Icon]</td>
<td>[Alt]+[F4]</td>
<td>Closes the document. Any changes made to the document are lost if the document wasn’t saved first.</td>
</tr>
</tbody>
</table>

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The Microsoft Office Ribbon

- The **Ribbon** arrived with Microsoft Office 2007
  - Commands are organized into groups located on tabs
  - Contextual tabs appear on the Ribbon as needed and contain special commands
Editing a Document

- **Editing** a document refers to change the content of the document, such as inserting or deleting words.
- **Insertion point** indicates the current location in a document, which is where the changes will be made.
- Typing text inserts the text at the insertion point location.
- Insertion point can be moved with the arrow keys or by selecting the new location with a pen, mouse, or finger.
- Delete and Backspace keys delete text.
- Text and objects can typically be selected and moved, copied, deleted, or formatted.
Formatting a Document

- **Formatting** changes the appearance of the document
  - Font face, font size, font style, and/or font color
  - Line spacing or margins
  - Page numbers
  - Shading or borders to a paragraph, image or other item

---

**FIGURE 6-11**
**Fonts.** The font face, size, style, and color used with text can be specified in many application programs.
Getting Help

- Help is often built into the program and may use:
  - Table of contents
  - Browsing
  - Search
- Online help (via manufacturer’s Web site and independent sites)
- Offline help (periodicals, books, tutorial videos, classes)

![Image of Help Features]

1. Type search terms here.
2. Matching help content is then displayed.
3. Click a topic to display the corresponding Help screen.

**FIGURE 6-12**
Getting help. Most application programs have built-in help systems.
Quick Quiz (1)

1. Software programs that are distributed on the honor system and can be legally and ethically shared with others to try out the software are referred to as __________.
   a. shareware programs
   b. commercial software
   c. public domain software

2. True or False: Software purchased via the Internet is always provided as a download rather than as a package.

3. A group of related software programs sold together as one unit is called a(n) __________.

Answers:
1) a; 2) False; 3) software suite
• **Word processing** uses a computer and **word processing software** to create, edit, save, and print written documents
  – Letters, contracts, manuscripts, etc.

• Common word processing software programs
  • Microsoft Word
  • Corel WordPerfect
  • Google Docs
  • Apple Pages
### How It Works

#### Gesture Input with Microsoft Office

<table>
<thead>
<tr>
<th>GESTURE</th>
<th>HOW TO PERFORM</th>
<th>USE IN OFFICE</th>
</tr>
</thead>
</table>
| Tap       | Using one finger, tap the screen in the appropriate location (tap twice for a double-tap). | Similar to clicking with the mouse. Examples:  
- Move the insertion point (to the location where you tap).  
- Select/open what you tap (such as a Ribbon tab or button, or the Show Keyboard button).  
- Select text (tap in the desired text and then drag a selection handle).  
- Select multiple objects (tap and hold the first object, then tap other objects).  
- Resize/rotate an object (tap and then drag the resize/rotate handle). |
| Press and hold | Press one finger down on the screen and leave it there for a few seconds. | Similar to right-clicking with the mouse. Examples:  
- Show information about the selected item.  
- Open a menu specific to the item and what you are doing. |
| Slide     | Using one finger, touch the appropriate location on the screen and move your finger across the screen. | Similar to scrolling or dragging with the mouse. Examples:  
- Scroll the contents of the screen.  
- Move an object (tap and hold on an object and then drag it to the appropriate new location). |
| Swipe     | Using one finger, touch the appropriate location on the screen and move your finger across the screen a short distance; also called a flick. | Show more options/items (such as when swiping a Gallery). |
| Pinch     | Using two or more fingers, touch the appropriate location on the screen and move your fingers closer together. | Zoom in on your document. |
| Stretch   | Using two or more fingers, touch the appropriate location on the screen and move your fingers farther apart. | Zoom out on your document. |
Creating a Word Processing Document

- **Word wrap** automatically returns the insertion point to the next line when the end of the screen line is reached.
- Character formatting (font face, size, style, or color)
- Paragraph formatting (line spacing, indentation, alignment, and styles)
- Page formatting (margins, paper size, orientation, headers, footers, etc.)
- Document formatting (footnotes, end notes, table of contents, index, background, theme)
Microsoft Word 2016

FIGURE 6-13
Some features in a typical word processing program.
Examples of Ribbon Tabs

**INSERT TAB**
Used to insert a table, picture, shape, or other object into the document.

**TABLE TOOLS CONTEXTUAL TABS**
Used to change the design or layout of a table; available only when a table is selected.

**PICTURE TOOLS CONTEXTUAL TAB**
Used to format a picture object, such as to crop it or change its size, color, or border; available only when an image is selected.
Tables, Graphics, and Templates

• Tables
  – Allow content to be organized in a table consisting of rows and columns
    • Table Tools tab

• Graphics or drawing features
  – Allow images to be inserted into a document (clip art, photographs, drawn images, scanned image, etc.) and then modified
    • Picture Tools tab

• Templates
  – Help users create new documents quickly
Word Processing and the Web

• Most word processing programs today include Web-related features allowing you to:
  – Send a document as an e-mail message
  – Include Web page hyperlinks in documents
  – Create or modify Web pages
  – Create and publish blogs
  – Collaborate with others online
  – Stream documents from and store documents in the cloud
A **spreadsheet** contains a group of numbers and other data organized into rows and columns

- **Spreadsheet software** is used to create computerized spreadsheets
- Most widely used spreadsheet programs:
  - Microsoft Excel
  - Corel Quattro Pro
  - Google Sheets
  - Apple Numbers
Creating a Spreadsheet

- A **worksheet** is a single spreadsheet divided into rows and columns.
- A **workbook** is a collection of worksheets saved in a single file.
- A **cell** is the intersection of a row and a column:
  - Each cell is identified by a cell address, such as A1.
  - Cell pointer is used to select a cell.
  - Cell pointer can be used to select more than one cell (range or block).
Microsoft Excel 2016

**Figure 6-15**
Some features in a typical spreadsheet program.

- **Name Box**
  Identifies the active cell, which is the location of the cell pointer.

- **Columns**
  Run vertically and are identified by letters.

- **Formula Bar**
  Lists the contents of the active cell, in this case the formula entered into cell E8.

- **Ribbon**
  Contains tabs of commands grouped by function; the Home tab is selected.

- **Number Formats**
  Used to specify the appearance of the numbers on a worksheet.

- **Active Cell/Range**
  Identifies the active cell or range; in this case the active cell is E8, and the range D8:E9 is selected.

- **Worksheet Area**
  Contains the worksheet itself.

- **Graphs**
  Are typically based on worksheet data and can be inserted into the worksheet area.

- **Worksheets Tabs**
  Identify the different worksheets saved in a single spreadsheet (workbook) file.

- **Cell Formatting**
  Can be applied to cells (this cell is shaded blue with a double bottom border) and to cell content (such as currency with two decimal places).

- **Quick Analysis Tool**
  Allows you to quickly and easily analyze data using tools such as color-coding and graphs.
Entering Data into a Spreadsheet Cell

• Data is entered into the appropriate spreadsheet cell

• **Labels** are text-based entries that identify data on the worksheet

• **Constant values** are numerical entries

• **Formulas** perform mathematical operations on the content of other cells
  
  – Usually reference the cell address, not the current data in a cell
  
  – Use mathematical operators; begin with an = sign

---

### FIGURE 6-16
Universal mathematical operators.

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>Addition</td>
</tr>
<tr>
<td>-</td>
<td>Subtraction</td>
</tr>
<tr>
<td>*</td>
<td>Multiplication</td>
</tr>
<tr>
<td>/</td>
<td>Division</td>
</tr>
<tr>
<td>^</td>
<td>Exponentiation</td>
</tr>
</tbody>
</table>
A function is a named, pre-programmed formula—Hundreds of functions that can be used in spreadsheets.

**EXAMPLES OF FUNCTIONS**

- **SUM(range)**: Calculates the sum of all values in a range.
- **MAX(range)**: Finds the highest value in a range.
- **MIN(range)**: Finds the lowest value in a range.
- **AVERAGE(range)**: Calculates the average of values in a range.
- **PMT(rate, number of payments, loan amount)**: Calculates the periodic payment for a loan.
- **IF(conditional expression, value if true, value if false)**: Supplies the values to be displayed if the conditional expression is true or if it is false.
- **NOW()**: Inserts the current date and time.
Absolute vs. Relative Cell Referencing in Formulas

• Relative cell references
  – Cell addresses are adjusted as the formula is copied to reflect the new location of the formula

• Absolute cell references
  – Formulas are copied exactly as they are written
  – Appropriate when you want to use a specific cell address in all copies of the formula
  – Use $ to make cell references absolute: $B$6

• A single formula can contain both relative and absolute cell references as needed
Examples of Relative and Absolute Cell Referencing

**COPYING WITH RELATIVE CELL REFERENCES**
In most formulas, cell addresses are relative and will be adjusted as the formula is copied.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cones</td>
<td>Sundaes</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>April</td>
<td>600</td>
<td>200</td>
<td>800</td>
</tr>
<tr>
<td>3</td>
<td>May</td>
<td>800</td>
<td>500</td>
<td>1300</td>
</tr>
<tr>
<td>4</td>
<td>June</td>
<td>1500</td>
<td>600</td>
<td>2100</td>
</tr>
<tr>
<td>5</td>
<td>Total</td>
<td></td>
<td></td>
<td>4200</td>
</tr>
</tbody>
</table>

Formula in cell D2. Results when the formula in cell D2 is copied to cells D3 and D4. Formula in cell D4 is =B4+C4.

**COPYING WITH ABSOLUTE CELL REFERENCES**
A dollar sign ($) marks a cell reference as absolute; it will be copied exactly as it appears in the source cell.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
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<tr>
<td>1</td>
<td>Cones</td>
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<td></td>
<td></td>
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<td>2</td>
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<td>800</td>
</tr>
<tr>
<td>3</td>
<td>May</td>
<td>800</td>
<td>500</td>
<td>1300</td>
</tr>
<tr>
<td>4</td>
<td>June</td>
<td>1500</td>
<td>600</td>
<td>2100</td>
</tr>
<tr>
<td>5</td>
<td>Total</td>
<td></td>
<td></td>
<td>4200</td>
</tr>
</tbody>
</table>

Formula in cell D2. Results when the formula in cell D2 is copied to cells D3 and D4. Formula in cell D3 is =$B$2+$C$2. Formula in cell E2. Results when the formula in cell E2 is copied to cells E3 and E4. Formula in cell E4 is =D4/$D$5.

**IMPROPER USE**

**PROPER USE**
Charts and What-If Analysis

• Most spreadsheet programs include some type of charting or graphing capability
  – Can create charts from the data in the spreadsheet (do not have to reenter it)

• Charts change accordingly if the data in the spreadsheet changes

• When cell contents are changed, formulas are automatically recalculated

• What-if-analysis
  – Tool frequently used to help make business decisions
Spreadsheets and the Web

• Most spreadsheet programs have built-in Web capabilities enabling the user to:
  – Save the current worksheet as a Web page
  – Insert hyperlinks inserted into worksheet cells
  – Select and copy ranges of cells to a Web publishing or word processing program to insert spreadsheet data into a Web page as a table
  – Send a workbook as an e-mail message
  – Collaborate online
Quick Quiz (2)

1. Changing the font face or size of text in a document is an example of which word processing feature?
   a. page orientation
   b. paragraph formatting
   c. character formatting

2. True or False: A spreadsheet document created in spreadsheet program is often called a worksheet.

3. The intersection of a row and column into which spreadsheet data may be typed is called a(n) _________.

Answers:
1) c; 2) True; 3) cell
Database Concepts

- A **database** is a collection of related data that is stored in a manner enabling information to be retrieved as needed
  - Database management system (DBMS) or **database software** allows the creation and manipulation of an electronic database
  - Most widely used relational database programs
    - Microsoft Access
    - Corel Paradox
    - Oracle Database
    - IBM’s DB2
Database Organization

- Data in a database is organized into fields (columns), records (rows), and tables
  - A **field** (column) is a single type of data to be stored in a database
  - A **record** (row) is a collection of related fields
  - A **table** is a collection of related records
  - Database file is a collection of related tables
Paper-Based vs. Computerized Databases

**FIGURE 6-19**
Paper-based vs. computerized databases. Data is organized into fields (columns), records (rows), and tables.
Creating a Database

• Create the database file first
  – Contains objects, such as tables, forms, and queries
• Create one or more tables
  – Can use either the table’s Datasheet view or Design view
  – The table structure is created:
    • Field name (unique identifying name)
    • Data type (text, number, date, object)
    • Field size (maximum number of characters)
    • Default value (initial content of the field)
  – Data is entered into the table
  – A form can be create to use for data entry if desired
Microsoft Access 2016

**DATABASE FILE**
Contains the Inventory database objects.

**RIBBON**
Contains tabs of commands grouped by function; the Create tab, which is used to create new database objects, is selected.

**DATABASE OBJECTS**
Include Tables (for storing data), Forms (for viewing and editing table data), and Queries and Reports (for retrieving information from tables).

**FIGURE 6-20**
Typical database objects. Common database objects include tables, forms, queries, and reports. The first object to be created is the table.
Example of Creating a Database Table

As data is entered into a new table using Datasheet view, the structure of the table is created.

This button was clicked to select Design view.

Properties of the Product Name field.

The table has been saved as “Product” and is in Design view.

This field was renamed “Product Name” and is a Text field.

FIGURE 6-21
Creating a database table.
Modifying Table Data

- Data can be displayed using either Form view or the table’s Datasheet view
  - Open a form to view data via the form
- Data can be added, edited, or deleted in either view
- Record buttons are used to move through the records

**FIGURE 6-22**
Table data can be modified using a form or the Datasheet view.
Queries and Reports

• A query is a question, or a request for specific information from the database
  – Contains criteria to specify the records and fields to be included in the query results
  – Named and saved so it can be run again at a later time
  – Displays the current data meeting the criteria each time it is opened

• A report is created when a more formal output is desired
  – Associated with either a table or a query
  – Displays the current data in the report format each time it is opened
Example of Creating and Using a Database Query

**QUERY DESIGN VIEW**
This query will display only the records that meet the specified criteria each time the query is retrieved.

**QUERY RESULTS (DATASHEET VIEW)**
The two records meeting the specified criteria are displayed.

**FIGURE 6-23**
Creating and using a database query.
Databases and the Web

• Many Web sites use one or more databases to:
  – Keep track of inventory
  – Allow searching for people, documents, products, or other information
  – Place real-time orders
A **presentation graphic** is an image designed to visually enhance a presentation

- Can be used in electronic slide shows
- Can be inserted into reports and other written documents
Presentation Graphics Terms

• An electronic **slide** is a one-page presentation graphic that can contain images, text, video, and more.

• An **electronic slide show** is a group of electronic slides that are displayed one after the other on a computer monitor or other display device.

• **Presentation graphics software** is used to create presentation graphics:
  - Microsoft PowerPoint
  - Corel Presentations
  - Google Slides
  - Apple Keynote
Creating a Presentation

• New slides can be added to a new or existing presentation as needed
• Preformatted slide layouts that contain placeholders for text, images, and other items can be used
• Slides can contain a variety of elements
  – Text
  – Images
  – Charts
  – Audio clips
  – Video clips
FIGURE 6-25
Some features in a typical presentation graphics program.

- **NEW SLIDES**: Click to add a new slide.
- **SLIDE THUMBNAILS**: Are displayed in this pane in Normal view.
- **VIEW TAB**: Use to change the view (such as from Normal, shown here, to Outline or Slide Sorter).
- **TEXT**: Can be formatted using commands on the Ribbon or the Mini toolbar, like in other Office programs.
- **RIBBON**: Contains tabs of commands grouped by function; the Home tab is selected.
- **CLIP ART AND OTHER GRAPHICS**: Can be inserted and resized or otherwise modified.
- **SLIDES**: Can contain elements such as text, clip art, photographs, bulleted lists, charts, and video clips. Often a theme, color scheme, or design layout is used to apply a universal appearance to all slides.
- **DRAWN OBJECTS**: Can be added, formatted, and resized; include lines, shapes, and more.
- **AUDIO CLIPS**: Can be inserted into slides and set up to play automatically when the slide is loaded or when the sound placeholder is clicked.
- **STATUS BAR**: Includes information such as the current slide number and the total number of slides.
- **VIDEO CLIPS**: Can be inserted into slides and set up to play automatically when the slide is loaded or when the video placeholder is clicked.
- **NOTES**: Can be added so they can be seen by the presenter during the slide show or included on printouts.
- **SLIDE SHOW BUTTON**: Click to run the slide show beginning with the current slide.
Finishing a Presentation

• Objects can be animated
• Transitions between slides can be added
• Slide Sorter view can be used to rearrange the slide order
• Show can be set up to run automatically or manually
• Can print slides to create overhead transparencies or an audience handout
• Speaker tools include:
  – Speaker notes and pens
  – Presenter view
Example of Running a Slide Show

**SLIDE SHOW VIEW**
Displays the slide show for the audience in full screen with the software interface hidden. Slides can be advanced at predetermined intervals, by clicking or tapping on the screen, or by pressing the spacebar.

**PRESENTER VIEW**
Seen only by the presenter on a different display device; includes a preview of the next slide or animation, a timer, speaker notes, annotation tools, and so forth.

**FIGURE 6-26**
Running an electronic slide show.
Presentation Graphics and the Web

- Presentation graphics programs can be used to generate Web pages or Web page content
- Slides can include hyperlinks
- Users can usually control Web-based presentations accessed via a Web browser
Graphics and Multimedia Concepts

• **Graphics** are digital representations of images, such as digital photographs, clip art, scanned drawings, and original images created using a software program.

• **Multimedia** technically refers to any application that contains more than one type of media—Often used to refer to audio or video content.

• There is a large variety of **graphics software** to create or modify graphics, edit digital audio or video, play multimedia files, and burn CDs and DVDs.
Types of Graphics Software

• Painting programs typically create bitmap images
  – Don’t usually support layers
  – Microsoft Paint

• Drawing programs (illustration programs) typically create vector graphics using mathematical formulas
  – Adobe Illustrator CC, Corel Painter

• Image editing or photo editing programs are designed for touching up or modifying images
  – Adobe Photoshop, Picasa, Apple Photos
Examples of Graphics Software Programs

**FIGURE 6-27**
Graphics software.
Audio Capture and Editing Software

• Audio editing software is used to create and edit audio files
  – Sound recorder software captures sound from a microphone
  – Ripping software captures sound from a CD
• Audio can be edited, spliced, and otherwise modified
• Professional and consumer software
  – Adobe Audition CC
  – Apple GarageBand
  – Audacity
Video Editing and DVD Authoring Software

- Video editing software modifies existing videos
  - Prepares video clips for presentations, Web sites, YouTube, etc.
  - Video is first imported into the computer
- DVD authoring software organizes content to be transferred to DVD
- DVD burning software records data on recordable or rewritable DVDs
- Professional and consumer software
  - Adobe Premiere Elements, Corel VideoStudio, Apple iMovie, etc.
Example of Video Editing Software

Video clips are previewed here.

Video clips can be edited as needed; the timeline is used to crop out sections of the current video clip.

Audio clips can be edited in a manner similar to video clips.

FIGURE 6-29
Video editing software.
Media Players

• Media players are programs designed to play audio and video files
  – Music CDs, downloaded music, streaming audio, etc.
  – Video stored on device or streamed from the Internet
  – Typically allow you to arrange your stored music and videos into playlists
    • Transfer them to a CD or smartphone
    • Some players include the ability to purchase and download music via an associated music store
  – Important to adhere to copyright laws when using digital music
Example of a Media Player Program

Current library content is listed here. Additional music and videos can be purchased via the iTunes Store.

FIGURE 6-30
A typical media player program.
Graphics, Multimedia, and the Web

• Often used by individuals and businesses to create content to be included on a Web sites or shared via the Web
  – Company logos
  – Web site banners
  – Games
  – Tutorials
  – Videos
  – Demonstrations

• Web multimedia content can be created using animation (Adobe Flash) and multimedia authoring (Adobe Director) software
Other Types of Application Software

- Desktop and personal publishing software
- Web publishing software and Web site builders
- Educational and entertainment software
- Reference software
  - Much is available via the Web today

**FIGURE 6-31**
Web site builders. Allow users to create Web sites quickly and easily.

- Click to publish the Web site.
- Content is contained in modules, which can be edited, moved, or deleted.
- Drag a new module to the page and then specify the content.

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Other Types of Application Software (cont’d)

• Note taking software and Web notebooks
• CAD and other types of design software
• Accounting and personal finance software
• Project management, collaboration, and remote access software
Remote Access Software
Quick Quiz (3)

1. A single category of data to be included in a database (viewed as a column in a table) is called a __________.
   a. record  
   b. field  
   c. table

2. True or False: Each slide in a slide presentation can contain only one type of element, such as text, an image, or a video clip.

3. DVD ________ refers to recording data (such as a collection of songs or a finished video) on a recordable or rewritable DVD.

Answers:
1) b; 2) False; 3) burning
Summary

• The Basics of Application Software
• Word Processing Concepts
• Spreadsheet Concepts
• Database Concepts
• Presentation Graphics Content
• Graphics and Multimedia Concepts
• Other Types of Application Software