Operating Systems:
Hardware Basics

Hardware: Physical components that comprise a computer system.

Software: Applications that direct a computer to perform various operations.

The two major hardware platforms are **IBM compatibles** (IBM clones or PCs) and **Macintoshes**. IBM compatibles are made by such companies as IBM, Compaq, Dell, Hewlett-Packard, Gateway, Acer, Micron and Toshiba. Apple Inc. manufactures Macintoshes.

Computers work on Base 2 numbers, instead of Base 10 and only know two possible states, on (1) or off (0),

Computers store data as a 1 (one) or a 0 (zero). This digit is known as a **bit** (binary digit).
8 bits = 1 byte = 1 character
1 kilobyte = 1 K = 1,024 bytes
1 megabyte = 1 MB = 1,024 K = 1,048,576 bytes
1 gigabyte = 1 GB = 1,024 MB = 1,048,576 K = 1,100,000,000,000 bytes

---

A computer system contains input devices, processing components, storage devices and output devices.

Input Devices

Keyboard: Similar to a typewriter keyboard, with extra keys such as control (Ctrl), escape (ESC), alt, enter, arrow keys and function keys (F1, F2, etc.).

Mouse: Small handheld device with a rotating ball underneath that when moved across a flat surface, such as a mousepad, relays signals to move the cursor on the screen. The mouse button is pressed to perform tasks. Similar devices include the trackball, track pad and track point. Mice are also available in optical and laser, in place of the conventional ball mouse.

Scanner: Device that converts text or graphics from a printed page into an electronic file that can be stored or manipulated. Flatbed and handheld scanners are the two main scanner types.

Miscellaneous: Joysticks, touch screens, bar code readers, graphics tablets, digital cameras and microphones are also input devices.

Hardware Basics [continued]

Output Devices

Monitor: Video display unit. Monitors can display at least 65,000 colors using 16 bit color. Typical monitors these days display using 32 bit color which is about 16.7 million colors.

Printer: Device that allows users to obtain a hard copy of their documents. Two main types of printers are inkjet and laser. Printer quality is determined by dots per inch (dpi).

Speakers: Devices for audio output. Speakers today can produce stereo-quality sound.

Input and Output

Modem (modulator demodulator): A mechanism that converts the digital data from the computer to analog signals (waves as tones) so that information can be transmitted over telephone or cable lines. It also translates the incoming analog signals back to digital data. A modem's bps (bits per second) indicates how fast it can send and receive information. Modems can be external or internal to the computer system.

Peripherals: A term used to describe all input and output devices.

Processing Components

CPU (central processing unit): The speed of the microprocessor's internal clock, measured in megahertz (MHz), determines how many times it can transition between on (1) or off (0) each second. This is a prime, though not the only, indication of processing speed and power as every transition indicates instructions being executed. Pentium, Pentium II, Pentium III, Celeron and K6 are CPU type examples.

ROM (read-only memory): Fundamental instructions required for the computer to operate that cannot be erased. ROM is recorded during the computer's manufacturing.

RAM (random-access memory): "Working memory" accessed when software is used. RAM is cleared when the computer is turned off and can be upgraded to increase the memory capacity.

Hardware Basics [continued]

Storage Devices

Floppy disk drive: A device that allows a computer to read from and write to the floppy disk. The 3.5-inch floppy disk holds 1.5 megabytes of data enclosed in a plastic case. Floppy disks use a magnetically coated flexible Mylar disk enclosed in a plastic case.

Hard drive: A device that uses many rigid disks coated with magnetic material that are permanently mounted inside the encased part of the computer system. Hard disks have much more data capacity than floppy disks and can be accessed more quickly. External hard drives may also be purchased.

Floppy disks and hard disks are magnetic storage media.

CD-ROM (compact disc read-only memory): Information can be read from the disc but not written to it. It uses optical storage techniques to store up to 650 MB of data. Information can be accessed from a CD-ROM faster than from a floppy disk but slower than from a hard drive.

CD-ROM-RW (compact disc read-write): Information can be both written to and read from the disc. Optical storage techniques can store up to 700 MB of audio or data files. CD-R discs can be recorded but are permanent and are often used for audio files; CD-RW discs can be erased and re-recorded but may only be used for data.

ZIP Drive: Data can be stored on these "super" discs which hold 100 MB to 250 MB of information. These devices are often external peripherals, but they can be internal.

DVD (Digital Video Disc): DVD is becoming much more common due to the large storage capacity (over 4 GBs). DVD is an optical disc storage media format that can be used to store high video and sound quality. They resemble CDs but are encoded in a different format and a much higher density.

USB Flash Drive: Flash memory data storage devices integrated with a USB interface. These are typically small, lightweight, removable and rewritable. Memory capacity typically ranges from 8 megabytes up to 64 gigabytes.

Operating Systems: File Organization

Back up (*verb*): the act of copying information to a disk

Backup (*noun*): the information copied to a disk

It is important to back up all new document files. Files that have been backed up can be restored in case a file becomes corrupt (damaged).

Backing up should be performed regularly. Back ups should also be stored in a physically separate location from the main data to prevent loss from events that can cause the loss of the main data (i.e. fire, flood, earthquake).

Utility applications can be purchased that contain features to help back up files.

The *Microsoft Windows* backup utility can be launched by selecting START → ALL PROGRAMS → ACCESSORIES → SYSTEM TOOLS → BACKUP. Depending on your version of Windows, this might be slightly different.

Using Windows Explorer, files can be backed up manually by copying them to a floppy disk or to a networked drive.

Be careful when replacing a file or folder with another of the same name. In general, the newer version should replace the older. When in doubt, it is prudent to save the new file with a slightly different file name so that important data is not lost.

The following instructions apply to both Windows Explorer and My Computer.

To select more than one file:

1. Choose the first file.
2. Hold down the CONTROL key.
3. Select other files as desired.

or

1. Choose the first file.
2. Hold down the SHIFT key.
3. Select the last file, and all other files between the first and the last are highlighted.

To move files from one location on a drive to another location on the same drive:

1. Select the files.
2. Drag the files to another location on the same drive.

File Organization [continued]

To copy files from one location on a drive to a different drive:

1. Select the files.
2. Drag the files to another drive.

To copy files from one location on a drive to another location on the same drive:

1. Select the files.
2. Press and hold down the CONTROL key.
3. Drag the files from one location to another.

To format a floppy disk:

1. Insert the floppy disk into the floppy drive.
2. Right-click the floppy drive and choose FORMAT from the pop-up menu.
3. Choose the FULL radio button in the Format Type group.
4. Click start.
5. After the formatting is complete, select the CLOSE button when the summary appears.
6. Close the Format Floppy window.

Tips for Organizing the Hard Drive:

1. Organize the hard drive by using Windows Explorer or My Computer.
2. Use folders liberally to help categorize the files in a meaningful manner.
3. Hard drive organization will likely change with time and experience. Be certain to incorporate new techniques as they are learned.
4. Attempt to determine the most efficient way to organize files and folders with respect to the potential tasks and users.

Word Processing Basics

Word processing is the use of a computer application to create, edit, format and print documents.

Common word processing programs today are *Microsoft Word, WordPerfect, AppleWorks* and *WordPro.* Word processing applications specifically designed for children include *Storybook Weaver Deluxe, The Writing Center, Creative Writer* and *ClarisWorks for Kids*.

Word wrap is a word processing feature that automatically moves continuing text to the line below when the previous line becomes full. The ENTER key should be pressed only at the end of a paragraph to move the cursor to the next line.

The paragraph symbol ¶ indicates the end of each paragraph but does not appear on the printed document. Other non-printing characters include a raised dot ▪ representing a space, and an arrow ➡ for a tab. Users may choose whether to display these non-printing characters.

Word Processors today are WYSIWYG in format (pronounced wizzy-wig, short for What You See Is What You Get). The screen shows the appearance of the printed document.

The main features of word processing can be categorized as either editing or formatting functions. Editing features allow users to alter the content of text. Formatting features affect how information appears within a document. Formatting can be performed before the text is entered, while text is entered, or after the text is complete. To format text after it has been entered, highlight the text, then choose the desired formatting options.

Word processors allow users to access a variety of fonts. A font is an individual design of letters, numbers and punctuation characters. Many thousands of fonts exist. Fonts can be categorized as either serif or sans serif. Serif refers to cross strokes at the end points of letters and numbers, and sans is French for without. Compare the following:

```
Courier New is an example of a serif font.
```

Arial is an example of a sans serif font.

Consider using a serif font for text in the body of a document because it is easier to read. Sans serif fonts are typically used for shorter amounts of text, such as titles.

The size of a font is measured in **points**. One inch is equal to 72 points, and one centimeter is equal to 28 points. Font sizes of 10 or 12 point are common for text in the body of documents.

Word Processing Basics [continued]

The **font style** refers to the defining characteristics that can be applied to fonts. The most common font styles are *italic*, underline and **bold**. In general, avoid applying multiple styles, such as bold and italics, to text.

Bullets are symbols (often a solid circle or square) used to distinguish items in a list. Bullets are used when listing items of relatively equal importance. Numbers can be inserted automatically to signify order in a list of items.

Margins are the blank spaces at the top, bottom, left and right edges of a document. The word wrap feature keeps text within the specified margins. Most printers require margins of at least half an inch.

Text alignment (also known as justification) refers to how text appears in relation to the left and right margins. Alignment applies to all of the text within a paragraph. Compare the alignment of the following three sentences.

This sentence is left aligned.

<div align="center">This sentence is center aligned.</div>

<div align="right">This sentence is right aligned.</div>

Other sentences in this document are justified (also known as full justification), meaning the text is aligned with both the left and the right margins.

The **header** comprises the text or graphics that appear at the top of every page in a multi-page document. Text or graphics at the bottom of each page comprise the **footer**. Page numbers are often inserted into the header or footer. It is possible to create different headers and footers for odd and even pages, as well as for the first page of a document.

A **footnote** is a note of reference or a comment that appears at the bottom of a page. An **endnote** is a note of reference or a comment that appears at the end of the document. To let readers know that a footnote or an endnote exists for a particular section of body text, superscript numbers (or sometimes symbols) are inserted after the corresponding sentence.

Clip art is a collection of previously created graphics that can be added to documents.

Documents can be printed in different **page orientations**. **Portrait** orientation refers to a printed page that is taller than it is wide. Portrait orientation is the default printing option in almost all applications. **Landscape** orientation is used to print a page that is wider than it is tall.

Word Processing Basics:
Using Microsoft Word 2007

The Ribbon

Microsoft Office Button
Quick Access Toolbar
Save   Undo   Redo   Font Name
Increase/Decrease Font Size
Numbering
Font Size
Clear Formatting
Multilevel List
Increase Indent
Show/Hide
Decrease Indent
Sort
Cut
Bullets
Copy
Paste
Bold   Italics   Underline   Change Case   Font Color   Center   Justify   Shading
Paste   Strikethrough   Align Left   Align Right   Borders
Format   Subscript   Text Highlight Color   Line Spacing
Superscript

Microsoft Office Button

File Menu

Using Microsoft Word 2007:
Getting Started

To open an existing document:

1. From the MICROSOFT OFFICE button ⬚ in the top left corner choose OPEN.

2. Locate the file and click OPEN.

To create a new document:

1. From the MICROSOFT OFFICE button choose NEW. ⬚

2. Select BLANK DOCUMENT and click CREATE.

To create a new document based on a template or a wizard:

1. From the MICROSOFT OFFICE button choose NEW.

2. Under Template Categories on the left, chose a document type. For some templates you must have internet access.

3. Select the desired document style and click CREATE.
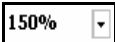
To display a document in Normal View:

❑   From the VIEW TAB select DRAFT.

To display a document in Print Layout View:

❑   From the VIEW TAB select PRINT LAYOUT.

To enlarge or to reduce the view of a document:

1. From the VIEW TAB click the ZOOM button, then choose a percentage from the preset choices or a custom percent with the PERCENT drop-down box. 150%

2. Select the desired percentage. Click OK.

To hide or to show non-printing characters:

❑   From the HOME TAB click the SHOW/HIDE button. ¶

To check spelling while typing:

1. From the REVIEW TAB select SPELLING & GRAMMAR. The document will be auto checked for spelling and grammar.

2. *Word* indicates possible spelling errors with wavy red underlines. To correct an error, right-click a word with a wavy red underline, then select the appropriate correction listed in the pop-up menu.

Using Microsoft Word 2007:
Inserting Text and Objects

To insert a table:

1. Position the cursor where the table will be added.
2. From the INSERT TAB select the TABLE button.
3. Highlight the appropriate number of cells from the menu.
4. Click the left mouse button to insert the table into the document.

To insert a picture from another file:

1. Position the cursor in the location where the picture will be placed.
2. From the INSERT TAB click on the PICTURE button.
3. Locate and select the appropriate file, then click INSERT.

To insert clip art:

1. Position the cursor where the clip art will be added.
2. From the INSERT TAB click on the CLIP ART button.
3. Select the clip art to be added and click the insert clip button from the menu on the right side of the screen.
4. Close the INSERT CLIP ART TAB.

To insert SmartArt (Diagram):

1. Position the cursor where the diagram will be added.
2. From the INSERT TAB click on the SMARTART button.
3. Choose a DIAGRAM TYPE and click OK.

To insert WordArt:

1. From the INSERT TAB click on WORDART.
2. Choose a WordArt style and click OK.
3. Enter and format the text, then click OK.
4. Resize and reposition the WordArt as desired.

To insert a page break:

1. Position the cursor on the line below where the page break will be added.
2. From the INSERT TAB click on PAGE BREAK.

Using Microsoft Word 2007:
Inserting Text and Objects [continued]

To insert page numbers:

1. Position the cursor in the footer or where the page numbers will be inserted.

2. From the INSERT TAB click on PAGE NUMBER.

3. Make the desired selections from the Position and Alignment drop-down lists.

4. The page number will be automatically added to the document.

To create a header or a footer:

1. From the INSERT TAB click on HEADER or FOOTER.

2. From the drop-down list choose the HEADER style.

3. To create a footer, click the GO TO FOOTER button in the NAVIGATION SECTION.

4. Select the CLOSE button in the DESIGN TAB.

To insert a footnote or an endnote:

1. From the REFERENCES TAB click on INSERT FOOTNOTE.

2. From the REFERENCES TAB click on INSERT FOOTNOTE.

To insert a symbol not shown on the keyboard:

1. Position the cursor where the symbol will be added.

2. From the INSERT TAB click on SYMBOL.

3. From the drop-down menu, select the symbol or character to be inserted.

To insert the current date and time in a document:

1. Position the cursor where the date or time will be added.

2. From the INSERT TAB click on the DATE AND TIME logo.

3. Choose the desired option from the Available Formats list, then click OK.

    Tip: To automatically update the date or time whenever a document is opened or printed, check the UPDATE AUTOMATICALLY option in the Date and Time dialog box when inserting the date or time. Otherwise, the document will print the original date or time.

Using Microsoft Word 2007: Editing

To select all of the text in a document:

1. From the HOME TAB click on SELECT.

2. From the drop-down box click on SELECT ALL.

To find a keyword or a phrase in a document:

1. From the HOME TAB click on FIND.

2. Enter the keyword or phrase in the Find What text box, and select FIND NEXT.

    Tip: The located text will be automatically highlighted. To edit the text, close the Find and
    Replace dialog box and make the necessary changes.

To replace a keyword or a phrase in a document:

1. From the HOME TAB click on REPLACE.

2. Enter the text to be replaced in the Find What text box.

3. Enter the replacement text in the Replace With text box.

4. Select FIND NEXT to locate the text.

5. Choose REPLACE to make the change, then click FIND NEXT to continue or select CLOSE.

    Tip: If multiple occurrences of text are being replaced, choose the REPLACE ALL button.

To view a specific page within a multi-page document:

1. From the HOME TAB click on GO TO.

2. On the GO TO tab of the Find and Replace dialog box, verify that page is selected in the GO TO
    WHAT list box.

3. Enter the desired page number in the Enter Page Number text box, then click GO TO.

4. Click the CLOSE button to close the dialog box.

To copy text:

1. Highlight the text to be copied.

2. From the HOME TAB click on the COPY button.

Using Microsoft Word 2007:
Editing [continued]

To cut text from a document:

1. Highlight the text to be cut.
2. From the HOME TAB click on the CUT button.

To paste text that has been copied or cut from a document:

1. Position the cursor where the text is to be pasted.
2. From the HOME TAB click on the PASTE button.

    Tip: The last text copied or cut to the Clipboard will be pasted.

To undo the last action performed:

1. Select the UNDO button on the QUICK ACCESS TOOLBAR on the top left.

To undo one or more previous actions:

1. Select the drop-down arrow next to the UNDO button.
2. Select the appropriate actions to be undone.

To redo the last action undone:
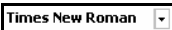
❑   Select the redo button on the on the QUICK ACCESS TOOLBAR.

To replace text manually:

1. Highlight the text to be replaced.
2. Enter the new text.

Using Microsoft Word 2007: Formatting

To change the text font:

1. Highlight the text to be changed.
2. Select the appropriate font from the FONT drop-down list. | Times New Roman |

To change the size of text:

1. Highlight the text to be changed.
2. Select a point size from the FONT SIZE drop-down list. | 12 |

To bold text:

1. Highlight the text.
2. Select the BOLD button **B** on the FONT GROUP of the HOME TAB.

To italicize text:

1. Highlight the text to be italicized.
2. Select the ITALIC button *I* on the FONT GROUP of the HOME TAB.

To underline text:

1. Highlight the text to be underlined.
2. Select the UNDERLINE button U on the FONT GROUP of the HOME TAB.

To change the color of text:

1. Highlight the text to be changed.
2. Click the FONT COLOR drop-down arrow. **A** ▾
3. Select the appropriate color from the menu.

To center a paragraph of text:

1. Highlight the text to be centered.
2. Click the CENTER button on the PARAGRAPH GROUP of the HOME TAB.

To align a paragraph of text to the left margin:

1. Highlight the text to be aligned.
2. Click the ALIGN LEFT button on the PARAGRAPH GROUP of the HOME TAB.

To align a paragraph of text to the right margin:

1. Highlight the text to be aligned.
2. Click the ALIGN RIGHT button on the PARAGRAPH GROUP of the HOME TAB.

Using Microsoft Word 2007:
Formatting [continued]

To justify a paragraph of text:

1. Highlight the text to be justified.
2. Click the JUSTIFY button ☰ on the PARAGRAPH GROUP of the HOME TAB.

To increase the indent of a paragraph:

1. Highlight the text to be indented.
2. Choose the INCREASE INDENT button ⬚ on the PARAGRAPH GROUP of the HOME TAB.

To decrease the indent of a paragraph:

1. Highlight the text to be changed.
2. Choose the DECREASE INDENT button ⬚ on the PARAGRAPH GROUP of the HOME TAB.

To change the vertical alignment of text in a document:

1. From the PAGE LAYOUT TAB, open the PAGE SETUP box by clicking ⬚ in the bottom right corner of the PAGE SETUP GROUP. This button is called the Dialog Box Launcher.
2. On the LAYOUT tab, choose a VERTICAL ALIGNMENT from the drop-down box.
3. Click OK.

To change line spacing:

1. Highlight the paragraphs to be changed.
2. From the PAGE LAYOUT TAB, open the PARAGRAPH box by clicking ⬚ in the bottom right corner of the PARAGRAPH GROUP.
3. On the INDENTS AND SPACING TAB, select an option from the LINE SPACING drop-down list.
4. Click OK.

To create a bulleted list from text:

1. Highlight the text to be bulleted.
2. Click the BULLETS button ⬚ on the PARAGRAPH GROUP of the HOME TAB.

To modify a bulleted list:

1. Highlight the bulleted list to be changed.
2. Click the drop-down arrow on the BULLETS button on PARAGRAPH GROUP of the HOME TAB.
3. On the BULLET drop-down, select a bullet.

Using Microsoft Word 2007:
Formatting [continued]

To create a numbered list from text:

1. Highlight the text to be numbered.
2. Click the NUMBERING button ⊞ on the PARAGRAPH GROUP of the HOME TAB.

To modify a numbered list:

1. Highlight the numbered list to be changed.
2. Click the drop-down arrow on the NUMBERING button on the PARAGRAPH GROUP of the HOME TAB.
3. On the NUMBER drop-down list, select the appropriate options.

To add a border to a page in a document:

1. From the PAGE LAYOUT TAB choose PAGE BORDERS.
2. Select the desired options and click OK.

To format text as columns:

1. Highlight the text to be formatted as columns.
2. Choose the COLUMNS button ⊞ on the PAGE LAYOUT TAB.
3. Select the appropriate number of columns from the drop-down menu.

To set a tab:

1. Highlight the paragraphs to be formatted.
2. Click the horizontal ruler at the desired location for the tab.
   Tip: If you do not see the ruler at the top of the screen, go to the VIEW TAB and click the checkbox next to RULER.

Using Microsoft Word 2007:
Finishing Touches

To check spelling and grammar:

1. From the REVIEW TAB select SPELLING & GRAMMAR. The document will be auto checked for spelling and grammar.

2. *Word* indicates possible spelling errors with wavy red underlines. To correct an error, right-click a word with a wavy red underline, then select the appropriate correction listed in the pop-up menu.

3. When a possible spelling or grammatical error has been located, make the necessary changes in the Spelling and Grammar dialog box and select CHANGE.

   Tip: To check spelling or grammar on a particular section of the document, highlight only that section before choosing the SPELLING & GRAMMAR button.

To count the number of words in a document:

❑   From the REVIEW TAB select WORD COUNT.

To change the margins of a document:

1. From the PAGE LAYOUT TAB select MARGINS.

2. On the MARGINS drop-down, select the desired margin settings.

To save a new document:

1. From the MICROSOFT OFFICE button choose SAVE.

   or

1. Click the SAVE button on the QUICK ACCESS TOOLBAR.

2. Navigate to the appropriate location to store the document, enter a name for the document in the File Name box and select SAVE.

   Tip: To save the document in a new folder, click the NEW FOLDER button before selecting SAVE.

To save a document with the same name:

1. From the MICROSOFT OFFICE button choose SAVE.

   or

2. Click the SAVE button on the QUICK ACCESS TOOLBAR.

Using Microsoft Word 2007:
Finishing Touches [continued]

To save a document with a new name:

1. From the MICROSOFT OFFICE button choose SAVE AS.

2. Navigate to the desired location and enter a new name in the File Name box.

3. Click SAVE.

To preview a document before printing:

1. From the MICROSOFT OFFICE button choose PRINT then PRINT PREVIEW.

   or

1. Click the PRINT PREVIEW button [image] on the QUICK ACCESS TOOLBAR.

2. Select the CLOSE button to exit Print Preview.

   Tip: The PRINT PREVIEW button may have to be added by customizing this toolbar.

To print a document:

1. From the MICROSOFT OFFICE button choose PRINT.

2. Enter the range of pages and the number of copies to be printed.

3. Click OK.

   Tip: To print the whole document, click the PRINT button [image] on the QUICK ACCESS TOOLBAR.

To print an envelope:

1. From the MAILINGS TAB choose ENVELOPES.

2. On the ENVELOPES tab, enter the envelope size under OPTIONS and click ok.

3. Enter the delivery address and the return address (or select the OMIT check box) and click PRINT.

   Tip: To print an envelope for an existing letter, select the name and address within the text body, then follow the steps above and verify that the delivery address appears on the ENVELOPES tab.

To close a document:

❑   From the MICROSOFT OFFICE button choose CLOSE.

Additional Features in Microsoft Word 2007:

Quick Access Toolbar:

1. Tools or commands that are not as readily available as you would like can be easily accessed by adding them to the QUICK ACCESS TOOLBAR.

2. To add a button right click on a feature in a tab, then click ADD TO QUICK ACCESS TOOLBAR. You may remove a button the same way, by right clicking and choosing REMOVE FROM QUICK ACCESS TOOLBAR.

Graphics Basics

The term graphics refers to the use of a computer to create and modify images. *Microsoft Paint 5.1* is an example of a graphics program. *Microsoft Office 2000 Professional* contains graphics tools that are collectively known as *Office Art*. The newest drawing tool to be added to the Microsoft family is called *SmartArt*, and is available in the Office 2007 Suite. *SmartArt* graphics allow you to create process charts, radial charts, organization charts, and more. More advanced graphics applications include *Adobe Illustrator, Adobe Photoshop, CorelDRAW* and *Dabbler by Fractal Design.*

Common graphics file formats include:

 *.bmp (Bitmap graphics), *.jpg (Joint Photographic Experts Group), *.gif (Graphics Interchange Format) and *.tif (Tagged-Image File Format).

Painting Programs:

The two basic types of computer graphics applications are paint programs and draw programs. *Paint* is an example of a paint program.

1. Graphics are created by modifying pixels. A pixel is a single point in a graphic image.

2. Images are known as bitmap graphics (or raster graphics).

3. Painting tools mimic such real-life art tools as a pencil, an eraser, an airbrush, a paintbrush and a paint bucket.

4. Lines and shapes of varying thickness and color can be created.

5. Any portion of the picture can be selected to be moved, resized, flipped or rotated.

6. Clipart images can be inserted and modified.

7. Graphics become distorted (pixelated) when enlarged.

8. Painting programs are best suited for free-form artwork including delicate designs, shading and other artistic effects.

Drawing Programs:

Office Art is a set of drawing tools found in *Microsoft Word 2003, Excel 2003 and PowerPoint 2003,* and is accessible through the Drawing toolbar. The Drawing toolbar is not available in most of *Microsoft Office 2007*, and has been replaced by the Ribbon.
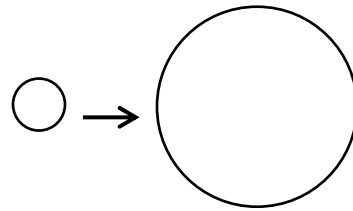
1. Images are known as object-oriented graphics (or vector graphics).

2. The directional lines (vectors) that constitute a graphic are stored as mathematical formulas.

3. Graphics are treated as separate objects.
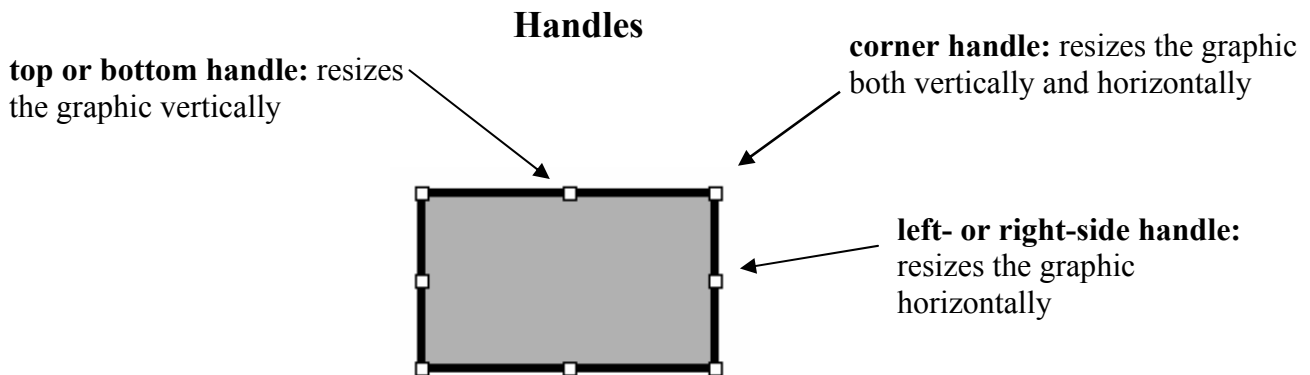
Graphics Basics [continued]

1. Graphics can be grouped and manipulated as one object or ungrouped and manipulated as separate objects.

2. Graphics are created in separate layers that can be reordered.

3. Graphics can be easily modified at any time.

4. Lines and shapes of various thickness and color can be created.

5. Objects can be selected and moved, resized, flipped or rotated.

6. Clip art can be inserted and modified.

7. Graphics do not become distorted when enlarged.

8. Drawing programs are best-suited for projects using shapes and lines in which the ability to reposition and resize is important.
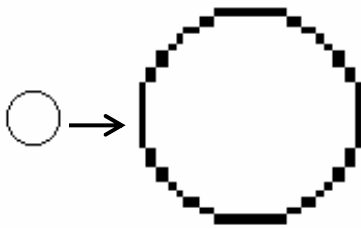
This circle was enlarged in a painting program. Note the distortion.

This circle was enlarged in a drawing program. No distortion occurred.

Handles

top or bottom handle: resizes the graphic vertically

corner handle: resizes the graphic both vertically and horizontally

left- or right-side handle: resizes the graphic horizontally

Graphics Basics: Sources of Graphics

Original Work

Graphics created from scratch are considered original artwork. When time is limited, previously created graphics can be reused and modified. Some benefits of creating original images include fostering artistic and creative skills, ensuring the complete ownership of the material (no copyright issues) and promoting exploration and discovery of the capabilities of the graphics tools.   Disadvantages include the time-consuming nature of creating original artwork, the difficulty of making realistic-looking images and the limitations of the graphics capabilities within some programs.

Scanners

Scanners are peripheral devices that convert artwork or text from a printed page to an electronic file which can be stored or manipulated in other programs. The conversion process is known as digitizing. The two main types of scanners are flatbed, which are similar to a photocopy machine, and handheld, which are dragged across the page. Like printer quality, scanner quality is determined by its dpi (dots per inch). Some advantages of scanning artwork include the abilities to use previously created images, to scan photographs and to personalize documents easily. Some disadvantages include potential copyright violations, the length of time required to scan many images and the storage space demands that result from the large file sizes of scanned photographs and pictures.

Digital Cameras

A digital camera is similar to a regular camera in that a user points the lens of the handheld device at a subject, looks through a viewfinder and presses a button to take a picture. A critical difference, however, is that a digital camera does not use film. Instead, images are saved digitally and can be copied to a computer's hard drive with a connecting cable. Benefits of using a digital camera include the elimination of expensive and time-consuming film processing and scanning, the portability of the camera and low operating costs. Some negative aspects include the high price of the camera, lower-quality pictures than film-based cameras, long downloading time and large hard drive space requirements.

Graphics Basics:
Sources of Graphics [continued]

Clip Art

Clip Art is previously created digital artwork intended to be integrated into documents. A collection of clip art is known as a clip art library. To make it easier for users to browse and locate specific images, graphics in clip art libraries are often grouped in such categories as animals, food, household, maps and transportation. When some applications, including *Microsoft Word 2007* and *Microsoft Publisher 2007*, are installed, a clip art library is copied onto the computer's hard drive. With the exception of creating another clip art library, clip art can be used in any way without copyright violation. There are CD-ROMs that contain clip art libraries of images either within a particular category or with an assortment of categories.

Desktop Publishing: Basics

Desktop publishing is the process of using a computer to position text and graphics on a page to produce printed documents such as signs, newspapers, newsletters, magazines, brochures, banners, cards, calendars, letterheads, certificates, business cards, reports and resumes. The term desktop publishing was coined in the mid-1980s with the arrival of the Apple Macintosh, page layout software and the laser printer. For the first time, people could "publish" from their "desktop", creating professional-looking printed materials at home.

Examples of desktop publishing applications include *Microsoft Publisher 2007, Adobe PageMaker* and *QuarkXPress*. Other software packages with desktop publishing features include the *Print Shop* series (from Broderbund), *Print Artist* (from Sierra On-Line), *The Children's Writing and Publishing Center* (from The Learning Company) and *Corel Print House.*

Desktop Publishing Terminology
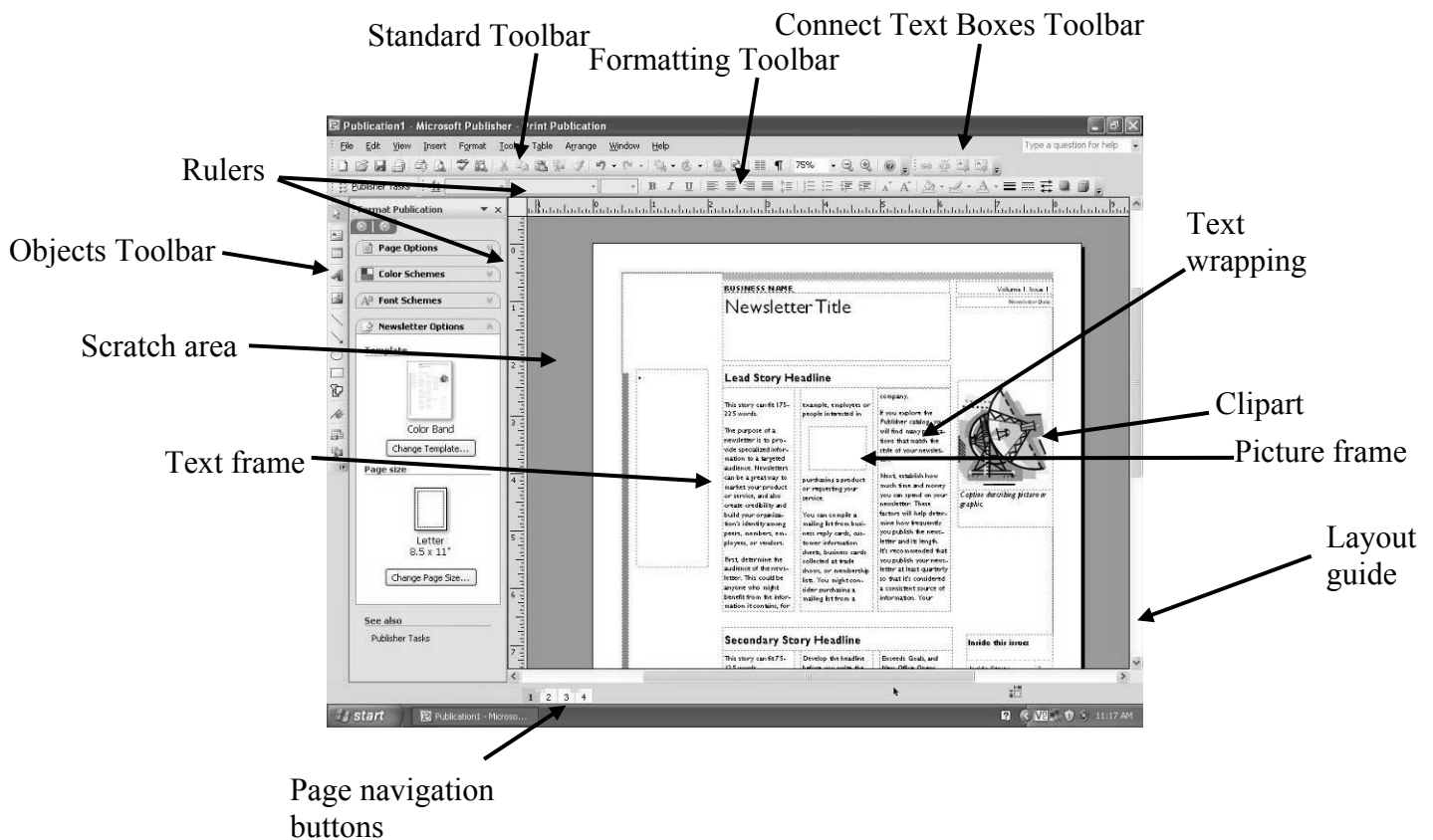
Desktop Publishing Basics [continued]

background: the layer in which text and images that appear in the same location on every page of a document are placed

clip art: previously created digital artwork that is intended to be integrated into documents

foreground: the layer in which the text and images that vary from page to page in a document are placed

Greek text: a block of nonsensical text (representing the size and position of the actual text) used to evaluate the aesthetics of the page design

grouping: joining together separate objects so the components can be manipulated as one object

importing: the process of inserting text or graphics that originated in one program into another program

landscape: the page orientation in which the page is wider than it is tall

layers: invisible sheets on which users can place text or graphics so the objects are independent of other objects on other sheets

layout: the process of arranging text and graphics on a page

layout guides: nonprinting lines that can be helpful when placing text and graphics within a document

linking: connecting text frames so that the excess text from the first frame flows into the second frame

portrait: the page orientation in which the page is taller than it is wide

picture frame: a movable and resizable placeholder for a graphic

pull quote: a short phrase set in a larger type size that repeats information found within the article

rulers: on-screen bars that measure the page horizontally and vertically

scratch area: the nonprinting work area in which text and graphics can be placed before they are moved into a document

text frame: a placeholder for text, which can be moved or resized

text wrapping: the way that text flows around a graphic

wizard: a Help feature that guides users through multistep processes to create common documents; including creating cards, newsletters, banners and resumes

Desktop Publishing:
Using Microsoft Publisher 2007

To create a new publication:

1. Choose FILE → NEW.

2. In the POPULAR PUBLICATION TYPES Task Pane, select the appropriate options to create the desired publication.

3. When finished click CREATE.

To create a bulleted list or a numbered list:

1. Highlight the desired lines of text.

2. Choose the BULLETS button ⊞ on the Formatting toolbar.

    Tip: To apply customized bullets, choose FORMAT → BULLETS AND NUMBERING. From the BULLETS tab, choose the desired bullet shape and size and select OK.

To undo the last action:

❑   Choose EDIT → UNDO.

To insert page numbers on every page:

1. Choose INSERT → PAGE NUMBERS.

2. Select the POSITION and ALIGNMENT and click OK.

To create a calendar, an advertisement, a coupon or a logo for an existing publication:

1. Choose INSERT → DESIGN GALLERY OBJECT.

2. On the OBJECTS BY CATEGORY tab, select CALENDARS, ADVERTISEMENTS, COUPONS or LOGOS from the Categories list.

3. Choose the desired publication option in the menu to the right and click INSERT OBJECT.

4. Resize and reposition the object and make any desired changes.

    Tip: You can double click on the desired publication option and it will be added to your document.

To insert a new page:

1. Select INSERT → PAGE.

2. Enter and choose the desired options and click OK.

To preview the document as it will be printed:

1. Select VIEW

2. Click on BOUNDARIES AND GUIDES to remove the checkmark.

Using Microsoft Publisher 2007 [continued]

To change the orientation of a page:

1. Select FILE → PAGE SETUP.

2. In the BLANK PAGE SIZES group, select a page type.

3. Choose a page option and click OK.

To view the page at a specific percentage:

❑   Click the ZOOM drop-down box on the Standard toolbar and choose a percentage.

To view a different page within a document:

❑   Click the appropriate PAGE NAVIGATION button at the bottom-left corner of the screen.

Text Formatting and Editing

To insert text:

1. Click the TEXT FRAME tool on the Objects toolbar.

2. Drag to create a text frame.

3. Enter text.

To import text:

1. Confirm that a text frame is selected.

2. Choose INSERT → TEXT FILE.

3. Navigate to and select the desired text file and click OK.

To change the text font or text size:

1. Highlight the desired text.

2. Make the desired selections from the Font drop-down list or the Font Size drop-down list.

Using Microsoft Publisher 2007:
Text Formatting and Editing [continued]

To change the text style:

1. Highlight the desired text.
2. Choose the BOLD button ⬛, the ITALIC button ⬛ or the UNDERLINE button ⬛ on the Formatting toolbar.

To change the color of text:

1. Highlight the desired text.
2. Select the FONT COLOR button ⬛ on the Formatting toolbar, then select a color.

To change text alignment:

1. Highlight the desired text.
2. Select the LEFT button ⬛, the CENTER button ⬛, the RIGHT button ⬛ or the JUSTIFY button ⬛ on the Formatting toolbar.

To link two text frames:

1. Verify that a second frame already exists. If not, create one.
2. Click the text frame containing the text. Confirm that the TEXT IN OVERFLOW button ⬛ is displayed on the frame's bottom edge.
3. Choose CREATE TEXT BOX LINK button ⬛ from the Connect Text Boxes toolbar on the top right.
4. With the pitcher-shaped pointer ⬛, select the second text frame into which the overflow text should be placed.

To change the number of columns in a text frame:

1. Select a text frame.
2. On the formatting toolbar choose the column button.
3. Highlight the number of columns.

To wrap text closely around an image:

1. Select a graphic.
2. Choose FORMAT → PICTURE.
3. In the LAYOUT tab, select the features you desire and click OK.

Using Microsoft Publisher 2007:
Text Formatting and Editing [continued]

To insert the date or time into a text frame:

1. Position the cursor in the desired location within a text frame.

2. Choose INSERT → DATE AND TIME.

3. Select an option from the Available Formats list.

4. Choose the UPDATE AUTOMATICALLY check box if desired, then click OK.

Graphics Formatting and Editing

To insert clip art:

1. Select the PICTURE FRAME tool on the Objects toolbar.

2. Choose the Clip Art logo from the dropdown menu.

3. Enter a keyword or keywords in the Search For Clips box, then press the GO.

4. Choose the desired clip art image and it will automatically be entered into the document.

5. Close the Insert Clip Art window.

To insert a picture file:

1. Select the PICTURE FRAME tool on the Objects toolbar

2. Choose PICTURE FROM FILE.

3. Drag and create graphics frame.

4. Navigate to and select the desired picture file from the Insert Picture box, then choose INSERT.

To create a straight line:

1. Choose the LINE tool on the Objects toolbar.

2. Click and hold down the mouse button to establish the line's starting point, then drag to create the line.

    Tip: Holding down the SHIFT key while dragging the mouse can create horizontal, vertical and 45-degree angle lines.

To create a straight line with one or two arrowheads:

1. Select an existing line, or draw a new line.

2. Choose the ARROW STYLE button on the Formatting toolbar and choose an arrow style from the drop-down box.

Using Microsoft Publisher 2007:
Graphics Formatting and Editing [continued]

To change the thickness and color of a line:

1. Select a line.

2. Choose the LINE/BORDER STYLE button ☰ on the Formatting toolbar.

3. Select one of the displayed options in the menu, or choose MORE STYLES to select a customized line width, style and color.

To create an oval:

1. Select the OVAL tool ⬭ on the Objects toolbar.

2. Drag the mouse diagonally to create an oval.

   Tip: Holding down the SHIFT key while dragging creates a circle.

To create a rectangle:

1. Click the RECTANGLE tool ▭ on the Objects toolbar.

2. Drag the mouse diagonally to create a rectangle.

   Tip: Holding down the SHIFT key while dragging creates a square.

To create a custom shape:

1. Select the CUSTOM SHAPES tool 🔷 on the Objects toolbar.

2. Click the desired shape from the pop-up menu, then drag to create the shape.

   Tip: Holding down the SHIFT key while dragging creates a shape with the same horizontal and vertical proportions.

To crop a bitmap image:

1. Select an image.

2. Click the CROP PICTURE tool ⌗ on the Picture toolbar.

3. Drag a handle to crop the image.

Using Microsoft Publisher 2007: WordArt

To insert WordArt:

1. Click the WORDART FRAME tool 📄 on the Objects toolbar.

2. Select the WordArt shape, font and font size as desired, then click OK.

3. Enter text into the Enter Your Text Here box, then click OK.

4. Resize WordArt frame if needed.

To change the style of the WordArt:

1. Make sure the WordArt is chosen, and click EDIT TEXT on the WordArt toolbar.

2. Use the BOLD button 🅱 to bold text and the ITALIC button 🅘 to italicize text.

3. From the WordArt toolbar select the SAME LETTER HEIGHTS button 🔲 to make all of the letters the same height.

4. To change the alignment of the WordArt text, click the JUSTIFICATION button ≣ and select one of the alignment options.

5. Select the CHARACTER SPACING button ᴬⱽ to change the spacing between the letters.

To change the orientation of the WordArt:

1. Verify that the WordArt toolbar is open. If it is not displayed, click the WordArt.

2. Select the WORDART VERTICAL TEXT button to toggle the WordArt between Vertical and Horizontal.

3. From the Arrange Menu choose ROTATE OR FLIP to rotate the WordArt at specified angles

To change the color, shading, shadow and border for WordArt:

1. From the Formatting menu choose the FILL COLOR button to change the color of the text.

2. Choose the LINE COLOR button to change the color of the border around the text.

3. Choose the SHADOW STYLE button to add shadow to the WordArt.

Using Microsoft Publisher 2007:
Working with Objects

To group objects:

1. Hold down the SHIFT key and click the objects to select them.
2. Choose ARRANGE → GROUP OBJECTS.

To ungroup an object:

1. Confirm that the grouped object is selected.
2. Choose ARRANGE → UNGROUP OBJECTS.

To create a table:

1. Select the INSERT TABLE button on the Objects toolbar.
2. Drag to create a table frame of the desired dimensions.
3. In the Create Table dialog box, enter the number of rows and columns, choose a table format and click OK.
4. Enter information into the cells of the table, pressing the TAB key to move to the next cell.

To change an object's layer:

1. Select an object.
2. Choose the BRING FORWARD button on the Standard toolbar.
    or
1. Select an object.
2. Choose ARRANGE → ORDER → BRING TO FRONT or ARRANGE → ORDER → SEND TO BACK.

To move an object:

1. Select an object.
2. Position the pointer inside the object.
3. When the pointer takes the shape of a quad arrow with a moving-truck icon, drag the object.

Using Microsoft Publisher 2007:
Working with Objects [continued]

To move an object in small increments:

1. Select an object.

2. Choose ARRANGE → NUDGE.

3. Click one of the arrow buttons to move the object in the desired direction.

   Tip: Objects can also be nudged by holding down the ALT key and pressing one of the arrow keys on the keyboard.

To duplicate an object:

1. Select the object.

2. Choose the COPY button on the Standard toolbar or select EDIT → COPY.

3. Choose the PASTE button on the Standard toolbar or select EDIT → PASTE.

   Tip: Use the keyboard shortcut of CONTROL + C for the COPY command and CONTROL + V for the PASTE command.

To resize an object:

1. Select an object.

2. Position the pointer on the handle.

3. When the pointer takes the shape of a double arrow labeled *resize*, drag the handle.

   Tips: The corner handles resize the selection both horizontally and vertically. The left- and right-side handles resize the object horizontally. The top and bottom handles resize the object vertically. Holding down the SHIFT key will keep the proportions of the object intact as it is resized.

To fill an object with a solid color:

1. Select an object.

2. Choose the FILL COLOR button on the Formatting toolbar and select a color or an option from the drop-down menu.

To fill an object with a pattern:

1. Select an object. Choose the FILL COLOR button on the Formatting toolbar and select FILL EFFECTS.

2. Click the PATTERNS tab and choose a pattern style.

3. Make the desired selections from the FOREGROUND and BACKGROUND drop-down menus, then click OK.

Using Microsoft Publisher 2007:
# Working with Objects [continued]

To fill an object with a gradient:

1. Select an object. Choose the FILL COLOR button ⬚ on the Formatting toolbar and select fill effects. Click the GRADIENT tab and choose a gradient style.

2. Make the desired selections from the Color 1 and Color 2 drop-down menus, then click OK.

To add a border to an object:

1. Select an object. Choose the LINE/BORDER STYLE button ≡ on the Formatting toolbar.

2. Choose one of the displayed line widths in the drop-down menu or select MORE LINES to customize the line width, style and color.

To add a shadow to an object:

1. Select an object.

2. Choose SHADOW STYLE button. ⬚

To flip an object:

1. Select an object.

2. ARRANGE → ROTATE OR FLIP → FLIP HORIZONTAL button ⬚ or ARRANGE → ROTATE OR FLIP → FLIP VERTICAL button. ⬚

To rotate an object 90 degrees:

1. Select an object.

2. ARRANGE → ROTATE OR FLIP → ROTATE RIGHT button ⬚ or ARRANGE → ROTATE OR FLIP → ROTATE LEFT button. ⬚

To rotate an object any number of degrees:

1. Select an object.

2. ARRANGE → ROTATE OR FLIP → FREE ROTATE button. ⬚

3. Rotate the object from the corners.

To align objects:

1. Select all of the objects to be aligned. Choose ARRANGE → ALIGN OR DISTRIBUTE.

2. Choose align left, align center, align right, align top, align middle or align bottom.

Multimedia Basics

Multimedia can be defined as the use of two or more media elements, such as text, graphics, sound, animation and video. Although a book containing text and graphics would be considered multimedia by this definition, most people consider television and computers typical multimedia environments. The term hypermedia is often used as a synonym for multimedia.

Common multimedia applications include *Microsoft PowerPoint 2007*, *HyperStudio* (by Knowledge Adventure) and *Director* (by Macromedia). For younger children, *Kid Pix Studio Deluxe* (by Broderbund) and *Storybook Weaver Deluxe* (by The Learning Company) are appropriate. Other common multimedia applications are encyclopedias on CD-ROM including *Microsoft Encarta, Grolier Multimedia Encyclopedia, Britannica CD* and *World Book Multimedia Encyclopedia.*

Many different media elements may be used when creating a multimedia presentation. The following is a list of file extensions and file formats.

- ❑　*.AVI (Audio Visual Interleave, a common *Windows* format for audio/video files)
- ❑　*.MOV (a Macintosh-based audio/video file)
- ❑　*.WAV (a *Windows* sound file)
- ❑　*.JPG (Joint Photographic Experts Group, a graphics format often found on the World Wide Web)
- ❑　*.GIF (Graphics Interchange Format, a graphics format often found on the World Wide Web)
- ❑　*.BMP (Bitmap, a common format for *Windows* bitmap graphics)
- ❑　*.WMF (Windows Metafile, a *Windows* object-oriented graphic)

Multimedia Basics [continued]

Related Terms:

animation: a series of still images displayed in rapid succession to create the illusion of movement

branching slide: a slide that is linked to another slide in a presentation, providing users with a choice of which slide to view next

digitalization: the process of transferring a film or video image to a format that a computer can use

hot spot: an area on the screen that can be selected to trigger an action, such as playing a sound, animating a graphic or displaying a different slide

medium: a single method used to communicate a message to an audience, including video, sound, text and graphics

multimedia: a computer-based method of presenting information by using more than one medium of communication, such as text, graphics, sound and video

slide: a screen in a *PowerPoint* presentation resembling an index card, on which users may arrange media elements

Slide Master: a special slide that can be used to determine the layout and formatting of all slides in a presentation

slide show: in presentation programs, several screens of information organized in a particular sequence
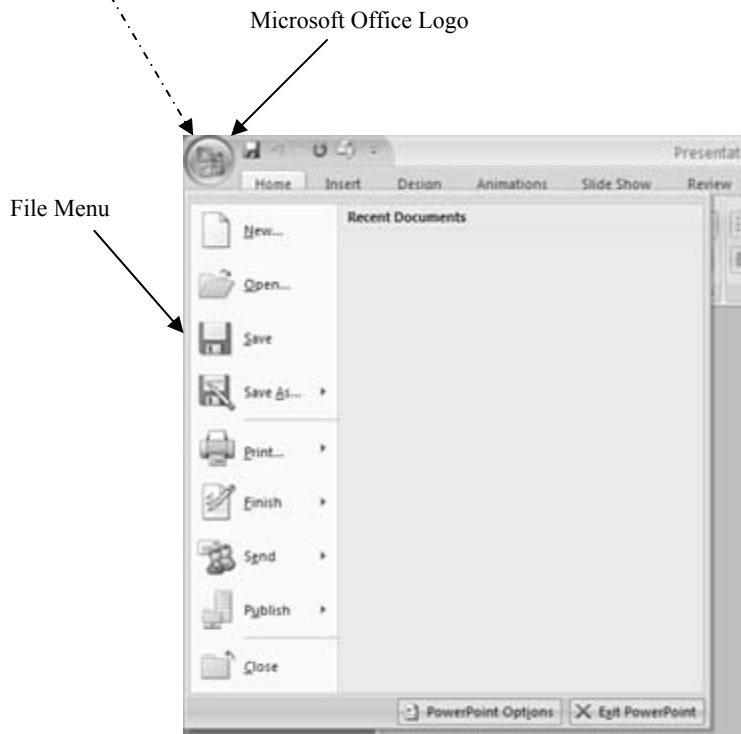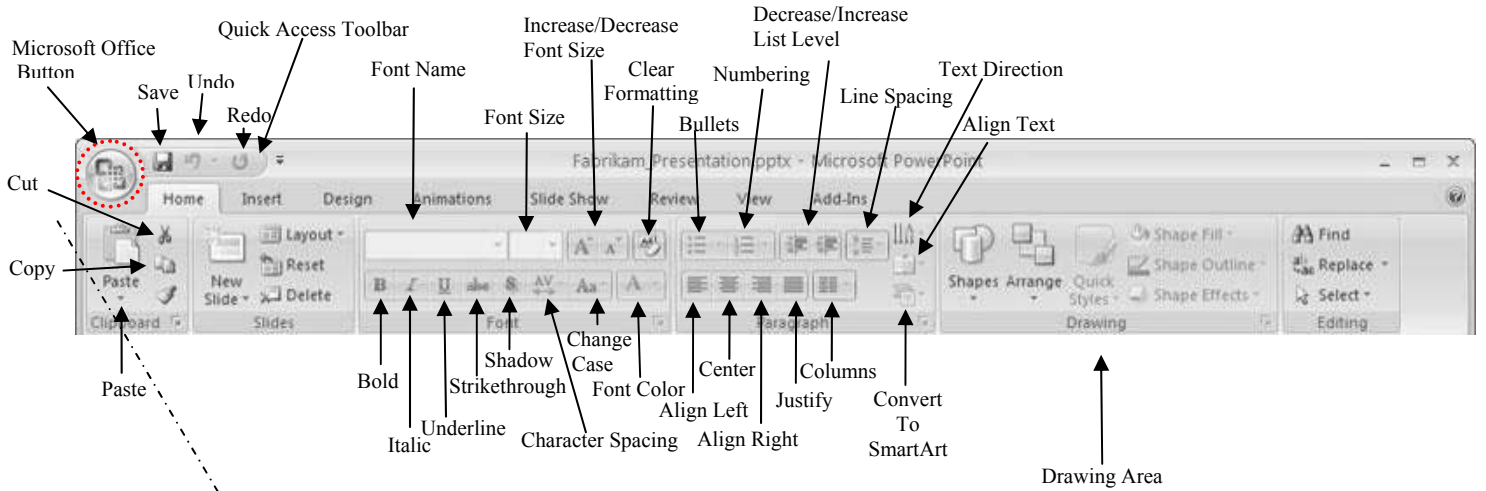
stereo: sound that is recorded and played back on two or more channels

storyboard: a series of panels on which a set of sketches is arranged for planning purposes

transition: the special effect that occurs when one slide advances to the next in a presentation

Using Microsoft PowerPoint 2007

The Ribbon

Using PowerPoint 2007: Getting Started

To create a new presentation:

1. From the MICROSOFT OFFICE button 🔲 in the top left corner choose NEW.

2. In the NEW PRESENTATION Task Pane, select BLANK PRESENTATION, click CREATE.

3. In the SLIDE GROUP of the HOME TAB, click on LAYOUT and select a slide layout for the first slide.

To open an existing presentation:

1. From the MICROSOFT OFFICE button in the top left corner choose OPEN.

2. Locate the file to be opened and click OPEN.

To create a new slide:

❑   In the SLIDE GROUP of the HOME TAB, click on ADD SLIDE.

To change the slide layout:

1. In the SLIDE GROUP of the HOME TAB, click on LAYOUT and select a slide layout.

2. This will only change the slide you are currently on.

3. Choose a new master style in the VIEW TAB on the MASTER LAYOUT GROUP to change the style of all slides.

To change the slide theme:

1. In the THEMES GROUP of the DESIGN TAB, click on a theme.

2. This theme will apply to all slides in the presentation.

   Tip: You can scroll through the theme options by pressing the down arrow on the right side of the themes box.

Using Microsoft PowerPoint 2007:
Inserting Text and Objects

To insert a text box:

1. Choose the TEXT BOX tool 🖾 on the INSERT TAB.

2. Hold down the mouse button and drag to create a text box.

To insert clip art:

1. Choose the CLIP ART tool on the INSERT TAB.

2. Enter a keyword or keywords in the Search text box, then press GO.

3. Choose the desired clip art image and it will automatically be added to the current slide.

4. Close the CLIP ART Task Pane.

To insert a picture from a file:

1. Choose the PICTURE tool on the INSERT TAB.

2. Navigate to the appropriate folder, select the file and click INSERT.

To insert WordArt:

1. Click the WORDART button 🖾 on the INSERT TAB.

2. Select a WordArt style.

3. Double click in the WordArt box to edit the text.

4. You can format the WordArt on the FORMAT TAB.

Using Microsoft PowerPoint 2007:
Inserting Text and Objects [continued]

To insert a chart:

1. Click the CHART button 📊 on the INSERT TAB.

2. Choose a chart style from the CREATE CHART box and click OK.

3. Edit the chart's contents in the Datasheet window.

4. Click a blank space on the slide to return to the presentation.

5. To close the Datasheet, go to the MICROSOFT OFFICE button in the top left corner choose CLOSE.

6. You can edit the data by choosing the EDIT DATA SOURCE button on the DESIGN TAB.

To insert a header or a footer:

1. From the INSERT TAB choose HEADER & FOOTER. 📄

2. Select the desired options and click APPLY TO ALL.

To insert the date and time:

1. From the INSERT TAB choose DATE & TIME. 📅

2. Mark the checkbox next to Date and time and click APPLY TO ALL.

Editing

To cut text from a presentation:

1. Highlight the text to be cut.

2. Choose the CUT button ✂ on the HOME TAB.

To copy text:

1. Highlight the text to be copied.

2. Select the COPY button 📋 on the HOME TAB.

Using Microsoft PowerPoint 2007:
Editing [continued]

To paste the most recently copied or cut text:

1. Position the cursor where the text will be pasted.

2. Choose the PASTE button ▤ on the HOME TAB.

To undo the last action:

❑　Select the UNDO button ⟲ on the QUICK ACCESS TOOLBAR on the top left.

To redo the last undone action:

❑　Select the REDO button ⟳ on the QUICK ACCESS TOOLBAR.

To delete a slide:

1. In Normal View, display the slide to be deleted.

2. Choose the DELETE button on the HOME TAB.

To duplicate an object in the presentation:

1. Select the object to be duplicated.

2. From the HOME TAB click on the PASTE drop-down menu and choose DUPLICATE.

　　Tips: Because clicking a text box once only positions the cursor, text boxes need to be clicked twice before the DUPLICATE command becomes available. To select more than one object at a time to be duplicated, hold down the SHIFT key while selecting objects.

To find text in a presentation:

1. Select FIND from the HOME TAB.

2. In the Find What box, enter the text to be located and click FIND NEXT.

3. After the text has been found, close the Find dialog box.

To replace text in a presentation:

1. Select REPLACE from the HOME TAB.

2. In the Find What box, enter the text to be replaced.

3. Enter the replacement text in the Replace With box and click FIND NEXT or REPLACE ALL.

4. After the text has been replaced, close the Replace dialog box.

Using Microsoft PowerPoint 2007: Formatting

To animate an object:

1. Select the object to be animated.
2. Click on the ANIMATIONS TAB and select the desired animation effect from the ANIMATE drop-down box.
3. To add sound effects to an animation, choose a sound from the TRANSITION SOUND drop-down box.

To format the slide color scheme:

1. From the DESIGN TAB click on the COLORS drop-down box.
2. Highlight a color and you will see a preview of your slide will look.
3. Once you click on a color it will apply to all slides.

To change the background color of the presentation:

1. From the DESIGN TAB click on the BACKGROUND STYLES drop-down box.
2. Select a color from the drop-down menu or click on BACKGROUND to add a gradient, texture or pattern fill.

To reorder slides within a presentation:

1. From the VIEW TAB choose SLIDE SORTER.
2. Drag the slide to be reordered to the appropriate location.
3. From the VIEW TAB choose NORMAL after the slides have been properly ordered.
   Tip: You can also reorder the slides in the preview tab on the left side in NORMAL view.

To resize a text box or a picture:

1. Select the object to be resized.
2. Drag one of the object's handles until it is properly resized.

Using Microsoft PowerPoint 2007:
Formatting [continued]

To bold text:

1. Select the text to be bolded.
2. Choose the BOLD button **B** on the HOME TAB.

To italicize text:

1. Select the text to be italicized.
2. Choose the ITALIC button *I* on the HOME TAB.

To underline text:

1. Select the text to be underlined.
2. Choose the UNDERLINE button U on the HOME TAB.

To change the text font:

1. Highlight the text.
2. Select a new font from the FONT drop-down list on the HOME TAB.

To change the text size:

1. Highlight the text.
2. Select a new font size from the FONT SIZE drop-down list.

To change the text color:

1. Highlight the text
2. Select a color from the FONT COLOR drop-down list. A ▾

To increase or decrease line or paragraph spacing:

1. Highlight the text.
2. Choose the LINE SPACING drop-down menu from the HOME MENU.
3. Make the desired selection or click on more for additional options then click OK.

Using Microsoft PowerPoint 2007:
Formatting [continued]

To change text alignment:

1. Highlight the text.
2. From the HOME TAB choose the desired alignment option (Left/Center/Right/Justify).

To add bullets to text:

1. Highlight the text to be bulleted.
2. Select the BULLETS button ▤ on the HOME TAB.

   Tips: To apply custom bullets, or to change the appearance of existing bullets, choose BULLETS drop-down menu. A bullet is added each time the ENTER key is pressed.

Finishing Touches

To add a transition between two slides:

1. From the ANIMATIONS TAB click on a transition option in the TRANSITION TO THIS SLIDE GROUP.
2. You can scroll through all options by moving the scroll bar on the right of the transition options box. To see all options at one time click the MORE arrow at the bottom of the scroll bar.

   Tip: Select APPLY TO ALL to apply a transition to all of the slides in a presentation.

To check the spelling in the presentation:

1. Select the SPELLING button ▤ on the REVIEW TAB.
2. Follow the prompts to correct any misspelled words.

To preview slide animation:

1. From the ANIMATIONS TAB select PREVIEW.
2. To edit, choose CUSTOM ANIMATION, Modify as needed and click PLAY.
3. When the preview is complete, close the CUSTOM ANIMATION Task Pane.

Using Microsoft PowerPoint 2007:
Finishing Touches [continued]

To view the slide show presentation:

1. From the SLIDE SHOW TAB choose FROM BEGINNING or FROM CURRENT SLIDE.

2. Hit the SPACEBAR to transition between slides more quickly.

    Tip: Press the ESCAPE key to end the slide show and to return to Normal View.

To set slide show options:

1. From the SLIDE SHOW TAB choose SET UP SLIDE SHOW.

2. Select the desired options and click OK.

To change the page setup of the presentation:

1. From the DESIGN TAB click on PAGE SETUP.

2. Make the appropriate changes and click OK.

To print a presentation:

1. From the MICROSOFT OFFICE button choose PRINT

2. Choose the appropriate options in the Print dialog box and click OK.

Spreadsheet Basics

A **spreadsheet application** allows users to enter data, such as numbers and formulas, into an electronic worksheet and to use this data to perform multiple calculations. A document created by this type of program is called a **spreadsheet**.

The most popular spreadsheet applications are *Microsoft Excel 2007* and *Lotus 1-2-3*. Programs such as *AppleWorks* and *Microsoft Works* contain spreadsheet components. *The Cruncher*, by Knowledge Adventure, is a spreadsheet program for young children.
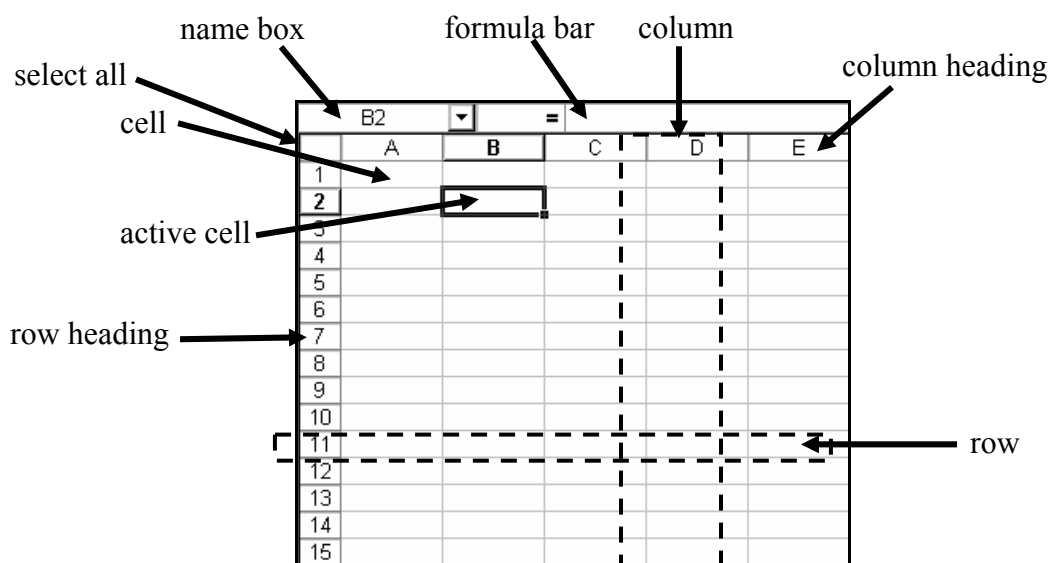
Related Terms:

absolute cell reference: a cell reference that does not change when a formula is copied or moved; contains a $ symbol before the column letter and row number

active cell: the cell currently selected in a spreadsheet, identified by its black border

cell: a rectangle in a spreadsheet, formed by the intersection of a row and a column, which can contain text, numbers or a formula

cell reference: the coordinates of the column and row position of a cell, or a cell address

column: a vertical line of cells in a spreadsheet, identified by a letter

column heading: a letter at the top of a column that can be clicked to select the entire column

column label: text at the top of a row that indicates the type of information in that column

Spreadsheet Basics [continued]

formula: a mathematical equation that performs a calculation in a cell; formulas follow a specific structure beginning with an equal sign (=) followed by the elements to be calculated (the operands) and the calculation operators

formula bar: the bar at the top of a spreadsheet that displays the information contained or being entered in a cell

function: a ready-to-use formula that performs common calculations, such as averages and sums

name box: the box in a spreadsheet that lists the column letter and row number of a selected cell or a range of selected cells

range: a single cell or a rectangular group of adjacent cells within a spreadsheet

row: a horizontal line of cells in a spreadsheet, identified by a number

row heading: a number at the far-left side of a row that can be clicked to select the entire row of cells

row label: text at the left side of a row that indicates the type of information in that row

worksheet: a spreadsheet containing cells in columns and rows

Important symbols used in spreadsheet formulas:

=   **equal sign**: used at the beginning of each formula entered (e.g., =A2+B2-C2)

+   **addition sign**: adds values (e.g., =A1+A2); also can be used at the beginning of a formula instead of an equal sign

-   **subtraction sign**: subtracts values (e.g., =B3-B4)

*   **asterisk**: multiplies values (e.g., =C2*C6)

/   **slash**: divides values (e.g., =D1/D3)

:   **colon**: used to indicate a consecutive range of cells in a row or column (e.g., =SUM(A2:A10), indicating the sum of the values in cells A2 through A10)

,   **comma**: used to indicate a series of non-consecutive cells in a formula, (e.g., =SUM(B6,C12,D15), indicating the sum of the values in cells B6, C12 and D15)

( ) **parentheses**: used in functions to indicate a range of values or cell references to be calculated (e.g., =AVERAGE(F1:F6), indicating the average of the values in cells F1 through F6)

Spreadsheet Basics: Charting Terminology

chart: a visual representation of data

labels: words or numbers, often found along the X axis and Y axis, which identify information in a chart

legend: the part of a chart in which the colors or patterns used in the chart are displayed with the items they represent

series: the basic unit of information in a chart, often contained in a single row or column.
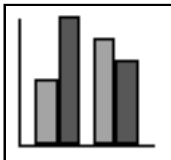
values: numeric entries within a spreadsheet

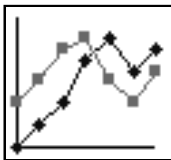**X series**: the labels and data charted along the X axis, or horizontal axis

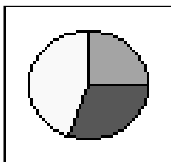**Y series**: the labels and data charted along the Y axis, or vertical axis
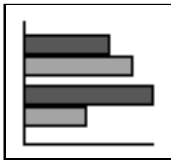
Bar chart: compares data or values horizontally without reference to trends over time

Column chart: compares data or values vertically without reference to trends over time

Line chart: shows trends or changes in values over time

Pie chart: shows the ratio of individual values to a total, or parts to a whole

Using Microsoft Excel 2007

To enter data into a cell:

1. Click the desired cell.

2. Use the keyboard to enter numbers or text; the entry will also appear in the Formula bar.

3. Press the ENTER key to accept the entered information and to advance to the cell below.

To edit the contents of a cell:

1. Double-click the cell.

2. Make the desired changes.

3. Press the ENTER key.

   Tip: To replace the entire contents of a cell, single-click the cell and enter the new data.

To increase the width of a column manually:

1. Place the pointer on the right side of the heading of the column to be increased.

2. When the pointer takes the shape of a double arrow, hold down the mouse button and drag to the right to widen the column.

   Tip: To make a series of columns the same width, select the appropriate columns, from the HOME TAB choose FORMAT, THEN WIDTH. Enter the desired width in the Column Width field and click OK.

To change the width of a column using the AutoFit feature:

1. Click the column heading to select the entire column.

2. From the HOME TAB choose FORMAT, then WIDTH. On the WIDTH drop-down menu choose AUTOFIT SELECTION.

To select a range of cells:

1. Click the first cell in the range and hold down the mouse button.

2. Drag to highlight the desired cells in the range, then release the mouse button.

To delete a row or column:

1. Click the appropriate row or column heading to select the entire row or column.

2. From the HOME TAB choose DELETE to delete the entire row or column.

   Tip: To delete a row or column's contents without actually removing the cells from the spreadsheet, press the DELETE key on the keyboard instead of DELETE on the HOME TAB.

Using Microsoft Excel 2007 [continued]

To insert a row:

1. Click a cell in the row below where the new row will be inserted.

2. From the HOME TAB choose the INSERT drop-down menu, and choose INSERT SHEET ROWS.

To insert a column:

1. Click a cell in the column to the right of where the new column will be inserted.

2. From the HOME TAB choose the INSERT drop-down menu, and choose INSERT SHEET COLUMNS.

To insert a new worksheet:

❑   From the HOME TAB choose the INSERT drop-down menu, and choose INSERT SHEET.

   Tip: To name the new worksheet, double-click the appropriate tab in the bottom-left corner of the screen and enter a new name.

To protect a worksheet:

1. From the HOME TAB choose the FORMAT drop-down menu then PROTECTION → PROTECT SHEET.

2. Enter a password (if desired) and select OK.

Formulas and Calculations

To enter a formula:

1. Enter the equal sign followed by the desired formula, then press the ENTER key.

2. Examples of basic formulas:

   - =45+67

   - =C4-C5 (the contents of C4 minus the contents of C5)

   - =D3*D6 (the contents of D3 multiplied by the contents of D6)

   - =A1/2 (the contents of A1 divided by 2)

To copy a formula from one cell into a series of cells:

1. Starting with the cell that already contains the formula; select the entire series of cells into which the formula will be placed.

2. In the HOME TAB, choose the FILL drop-down button

3. You may fill DOWN, RIGHT, UP or LEFT.

4. Click one of the highlighted cells to confirm that the cell references in the formula were updated properly.

Using Microsoft Excel 2007:
Formulas and Calculations [continued]

To sum a series of cells:

1. Click the appropriate cell.

2. Enter the sum formula into that cell.

3. Sample sum formula: =SUM(E4:E8). The contents of cells E4 through E8 will be added, and the sum will be displayed in the cell that was initially selected.

    or

1. Highlight the cells to be added.

2. Choose the AUTOSUM button $\boxed{\Sigma}$ on the HOME TAB, and the calculated total will be placed in the cell immediately below or to the right of the selected range.

    or

1. Click the cell in which the calculated sum should be displayed and choose the AUTOSUM button $\boxed{\Sigma}$ on the HOME TAB.

2. Accept the default cell range, or enter the corrected cell range in the formula bar.

3. Press the ENTER key to accept the formula.

To create a chart:

1. Select the cells to be included in the chart.

2. Choose the INSERT TAB then in the CHART GROUP choose a chart option.

3. From the DESIGN TAB you may edit the specific features of your chart.

To resize a chart:

1. Click the chart to select it.

2. Drag the handles to resize the chart.

To reposition a chart:

1. Click the chart to select it.

2. Drag the chart to reposition it on the worksheet.

To change the colors in a chart:

1. Click the chart. The DESIGN, LAYOUT and FORMAT TABS will appear in the Ribbon.

2. When you click on a specific area of the chart, this will be noted under the CURRENT SELECTION GROUP of the FORMAT TAB. You may now edit the colors of the chart by choosing SHAPE FILL.

Using Microsoft Excel 2007:
Formulas and Calculations [continued]

To create an absolute cell reference:

1. When entering a formula, place a dollar sign ($) before both the column letter and the row number of the cell or cells to be designated as absolute references. A sample formula would be =SUM(A5:B6).

    Tip: In the above example, if the FILL or the COPY and PASTE commands are used to place the formula into additional cells, cell A5 will be referenced regardless of the new formula's column and row position. However, because the second cell in the formula is designated as a relative cell reference, it will change according to the location of the cell in which the formula is placed.

To insert a function:

1. Click the appropriate cell.
2. Choose the FUNCTION WIZARD f_x from the FORMULAS TAB.
3. Select the appropriate option from the Select a Function list and click OK.
4. Verify that the correct cell range is shown in the Number1 box and make any necessary changes.
5. Click OK.

Formatting

To bold text within a range of cells:

1. Select the cells.
2. Click the BOLD button **B** on the HOME TAB.

To underline text within a range of cells:

1. Select the cells.
2. Choose the UNDERLINE button **U** on the HOME TAB.

To italicize text within a range of cells:

1. Select the cells.
2. Click the ITALIC button *I* on the HOME TAB.

Using Microsoft Excel 2007:
# Formatting [continued]

To format a spreadsheet by applying Format as Table:

1. Select the cells to be formatted.

2. On the HOME TAB choose FORMAT AS TABLE.

3. Select a table style.

To format numbers in cells as percentages:

1. Select the cells to be formatted.

2. On the HOME TAB choose the drop-down box in the NUMBER GROUP then choose PERCENTAGE

3. You can also select the Dialog Box Launcher in the NUMBER GROUP to open the FORMAT CELLS box. On the NUMBER tab, select percentage from the Category list. If necessary, change the value in the Decimal Places box, then click OK.

    Tip: This procedure can also be followed to customize appearance of existing percentages.

    or

1. Select the cells to be formatted.

2. Click the PERCENT STYLE button on the NUMBER GROUP of the HOME TAB.

To format numbers in cells as currency:

1. Select the cells to be formatted.

2. On the HOME TAB choose the drop-down box in the NUMBER GROUP then choose CURRENCY from the list.

3. You can also select the Dialog Box Launcher in the NUMBER GROUP to open the FORMAT CELLS box. On the NUMBER tab, select CURRENCY from the Category list. If necessary, change the value in the Decimal Places box and select different options from the Symbol and Negative Numbers drop-down lists, then click OK.

    or

1. Select the cells to be formatted.

2. Choose the CURRENCY STYLE button on NUMBER GROUP of the HOME TAB.

**To format cell values with commas in the thousandth place:**

1. Select the cells to be formatted.

2. Choose the COMMA STYLE button on the NUMBER GROUP of the HOME TAB.

To display cell values with an additional decimal place:

1. Select the cells to be formatted.

2. Choose the INCREASE DECIMAL button NUMBER GROUP of the HOME TAB.

Using Microsoft Excel 2007:
Formatting [continued]

To display cell values with one fewer decimal place:

1. Select the cells to be formatted.

2. Click the DECREASE DECIMAL button ![icon] on the NUMBER GROUP of the HOME TAB.

To change the font of characters within a cell:

1. Select the cell(s) to be formatted.

2. Choose the desired font from the Font drop-down list on the FONT GROUP of the HOME TAB.

To fill a cell with color:

1. Select the cell(s) to be formatted.

2. Click the FILL COLOR drop-down arrow ![icon] on the FONT GROUP of the HOME TAB and choose a color from the pop-up menu.

To change the color of characters within a cell:

1. Select the cell(s) to be formatted.

2. Click the FONT COLOR drop-down arrow ![icon] on the FONT GROUP of the HOME TAB and choose a color from the pop-up menu.

To sort rows:

1. Select the cells to be included in the sort.

2. From the EDITING GROUP of the HOME TAB choose SORT & FILTER.

3. From the SORT & FILTER drop-down list, select CUSTOM SORT to specify the column by which the information should be sorted.

4. If you want to sort by column header, check MY DATA HAS HEADERS.

5. As appropriate, click either A TO Z (ASCENDING) or Z TO A (DESCENDING) from the ORDER drop-down list

6. If sorting according to another column, click ADD LEVEL then make the desired selections in the Then By group(s).

7. Click OK.

    or

1. Select the cells to be included in the sort.

2. Click the SORT A TO Z ![icon] button or the SORT Z TO A ![icon] button on the EDITING GROUP of the HOME TAB.

Using Microsoft Excel 2007:
Formatting [continued]

To add headers or footers to a printed worksheet:

1. Choose FILE → PAGE SETUP.

2. Select the HEADER/FOOTER tab.

3. Choose the desired header text from the HEADER drop-down list or the desired footer text from the Footer drop-down list, then click OK.

    or

1. Click the CUSTOM HEADER or CUSTOM FOOTER buttons, enter the desired text in the appropriate column and choose OK.

2. Click OK again.

To insert a picture into the worksheet:

1. From the INSERT TAB choose the PICTURE logo.

2. Locate and select the desired graphics file and select INSERT.
    or

1. From the INSERT TAB choose the CLIP ART logo.

2. Enter a keyword or keywords in the Search For box, then press the ENTER key or choose GO.

3. Click on the desired clip art. It will be automatically inserted into the spreadsheet.

To change the page orientation:

1. On the PAGE LAYOUT TAB choose ORIENTATION.

2. From the drop-down menu select PORTRAIT or LANDSCAPE.

To modify print options:

1. On the PAGE LAYOUT TAB you can modify print settings from the PAGE SETUP GROUP.

2. You can also access all PAGE SETUP options by pressing ▣ in the PAGE SETUP GROUP.

3. Select the SHEET TAB, then enter or choose the desired print options.

4. Click OK to return to the spreadsheet or select PRINT.

Database Basics

Data is information that can be processed and from which conclusions can be inferred. A **database** is a collection of related information. A **database application** is a computer program that allows users to enter, update, organize and retrieve information. Popular database applications today include *Microsoft Access 2007, FileMaker Pro*, *Lotus Approach* and *Microsoft Visual FoxPro*. There are also database components in *AppleWorks* and *Microsoft Works*. Database programs designed for children include *Tabletop Jr., Tabletop Sr.* and *ClarisWorks for Kids*.

Although most databases today are stored on computers, databases can also be stored in paper form, such as a Rolodex or index cards. A box of index cards containing recipes is an example of this type of database. A **field** is the location reserved for a category of information within a database. Fields in a recipe database could include recipe name, ingredients, preparation time, directions and serving size. A **record** is a complete unit of categorized information. In the recipe example, each recipe written on a single index card would be a record. **Form** is the term often used to describe the display of one record at a time. Many users prefer to use a form when entering information into a database.

A **table** is a way of displaying information in a database in which records appear in rows and fields appear in columns. The basic layout of a database table is similar to that of a spreadsheet.

Database Basics [continued]

Sorting is rearranging data so it appears in ascending or descending order, either alphabetically or numerically. To sort information in a database, a field must be specified. A database can also be sorted by multiple fields.

A **filter** is a set of criteria applied to records to show a subset of the records. Mathematical operations can be applied to build the criteria, including greater than (>), less than (<), greater than or equal to (>=), less than or equal to (<=) and not equal to (<>). *And, or* and *not* are **Boolean operators**, which are used to specify the logical relationship between values. All of these terms can be used to broaden or narrow a filter.

Specifying criteria with a **query** is a method that can be used to indicate what records should be retrieved. Queries are more flexible and more advanced than filters, although both queries and filters can perform the same basic functions. If desired, queries can also be saved so the search results can be accessed in the future.

Mail merge allows information in a database to be inserted into a word processing document to create individualized letters, envelopes and labels. The most common way that mail merge is used is to personalize form letters.

A **report** is a way of printing the information in a database. There is considerable flexibility in the generation of reports. All aspects of the layout, as well as which fields and records are included, can be specified.

Using Microsoft Access 2007
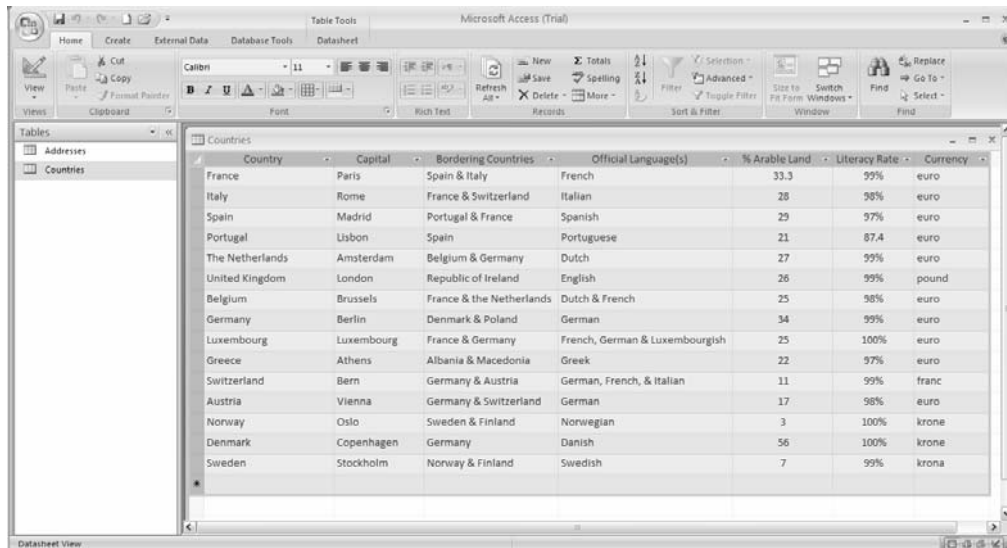
A table in Datasheet View can be used to add, edit or view the data in a table. Also in this view, it is possible to print the table, to sort or filter the records, to modify the appearance of the data and to insert or delete columns (fields) and rows (records).
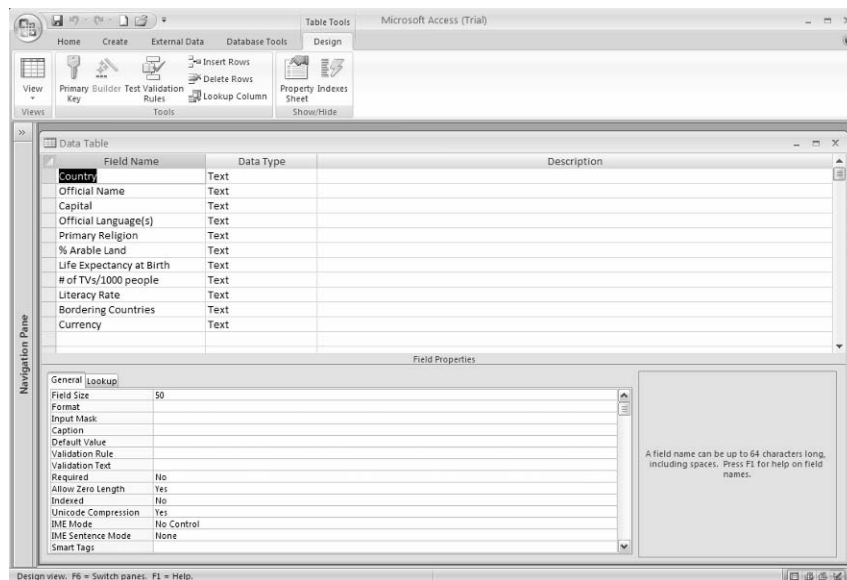
In Design View, an existing table's fields can be added, deleted or customized. Also, a new table can be created from scratch.

Using Microsoft Access 2007 [continued]

A form in Form View displays one record at a time, and this view is often used to enter and edit information within a database. In Form View it is also possible to sort and filter records.
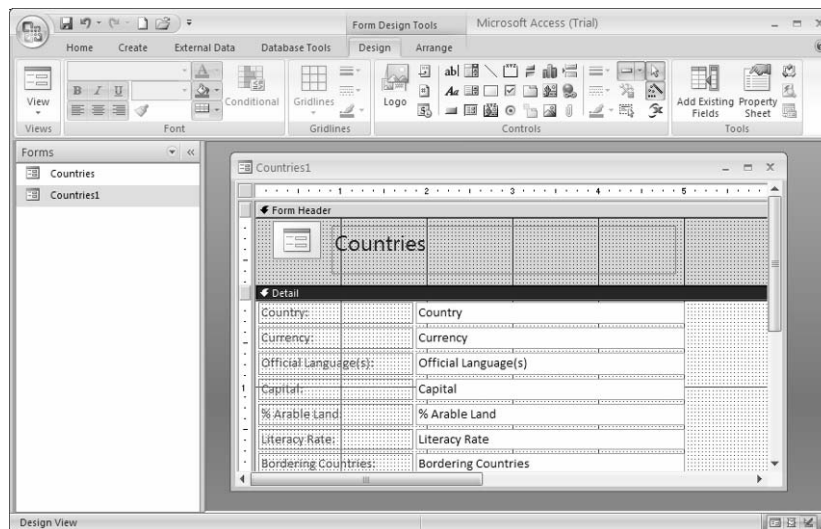
The appearance of a form can be modified in Design View. The label text can be edited and formatted. Fields can be added, moved and resized. Text color, background colors and graphics can be added, and header and footer text can be inserted.

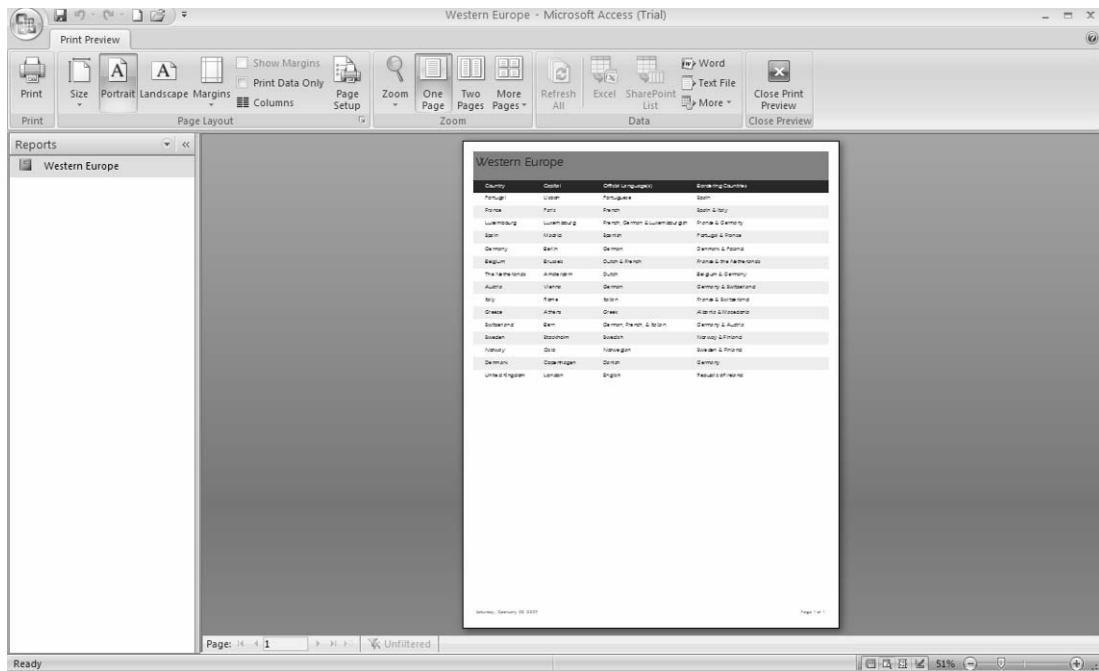# Using Microsoft Access 2007 [continued]

A report in Print Preview is displayed the way that the report will be printed. A report is an effective way to present data in a printed format.
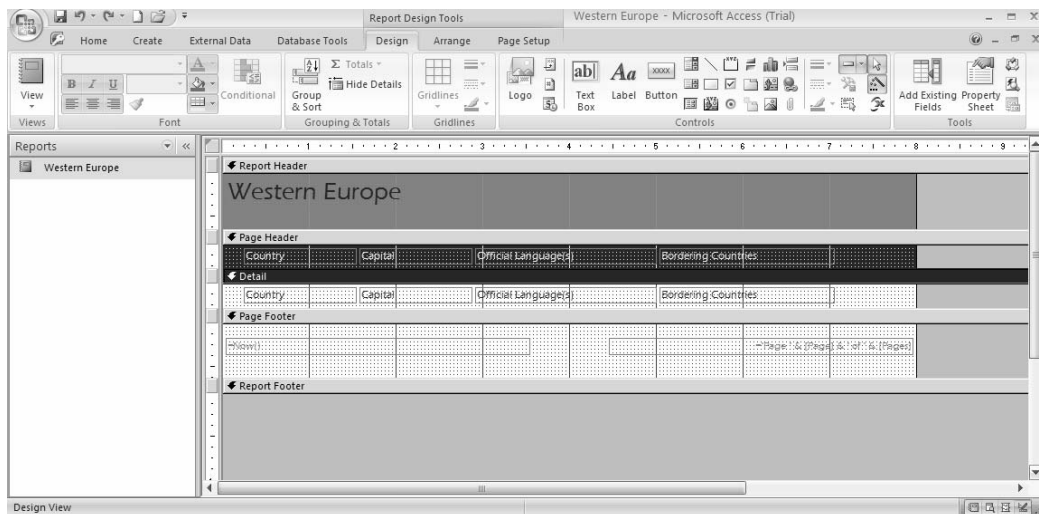
The appearance of a report can be modified in Design View. Label text, header and footer text, graphics and colors within a report can be altered in this view, with formatting options similar to those available for a form in Design View.

Using Microsoft Access 2007: Basic Database Management, Editing and Formatting

To create a new database:
1. From the MICROSOFT OFFICE button choose NEW.

2. In the NEW BLANK DATABASE Task Pane, select BLANK DATABASE.

3. Enter a name in the File Name box on the right hand side of the screen. Click on the file folder button to navigate to the location where the database should be saved, click OK and then choose CREATE.

To rename a table or a form within a database:
1. In the Database window, select the appropriate icon and right-click the name of the file to be changed.
2. Select RENAME and enter the new name.
3. Press the ENTER key on the keyboard.

To copy text:
1. Highlight the text to be copied.
2. Select the COPY button on the HOME TAB.

To cut text:
1. Highlight the text to be cut.
2. Select the CUT button on the HOME TAB.

To paste text that has been cut or copied:
1. Position the cursor where the text will be inserted.
2. Select the PASTE button on the HOME TAB.

   Tip: The most recently copied or cut text will be pasted.

Using Microsoft Access 2007: Creating Tables

To create a table:

1. In the Datasheet view, click the TABLE button on the CREATE TAB.

2. To enter the first field name, double-click the field name *Add New Field*.

3. Enter the name for the first field then press the ENTER key to add another field.

4. Repeat until all the necessary fields have been added.

or

1. In the Design View, click the TABLE DESIGN button on the CREATE TAB.

2. Enter the appropriate field names and click the SAVE button.

3. Enter the table name and click OK.

To switch between Design View and Datasheet View of a table:

❑ Select the VIEW button on the HOME TAB.

    Tip: The VIEW button toggles between the DESIGN icon and the DATASHEET icon depending upon the current view.

To choose a primary key in a table:

1. In Design View, position the cursor in the row to be designated the primary key.

2. Click the PRIMARY KEY button on the DESIGN TAB in the TOOLS GROUP.

    Tip: Each entry in the primary key field must be unique.

To change a field's data type in a table:

1. In Design View, position the cursor in the data type field to be changed.

2. Select the desired data type from the DATA TYPE drop-down menu on the DATASHEET TAB.

To change a field size in a table:

1. In Datasheet View, position the pointer on the field name's right or left border.

2. When the pointer takes the shape of a double-arrow, drag to widen the field.

To select an entire field (column) in a table:

❑ Click the field name at the top of the column.

Using Microsoft Access 2007:
Creating Tables [continued]

To add a row (record) to a table:

❑   In Datasheet View, select the NEW button ⬚ in the RECORDS GROUP on the HOME TAB.

   Tip: The new record will be inserted at the bottom of the table.

To add a field to a table:

1. In Datasheet View, position the cursor in the column to the right of where the new column will be inserted.
2. Select the INSERT COLUMN button ⬚ on the DATASHEET TAB.

   or

1. In Design View, position the cursor in the row above where the new row will be inserted.
2. Select the INSERT ROWS button ⬚ on the DESIGN TAB.

To delete a row (record) from a table:

1. In Datasheet View, position the cursor within the record to be deleted.
2. On the HOME TAB, click the drop-down arrow next to the DELETE button ⬚ and select DELETE RECORD. ⬚
3. Click YES to confirm the deletion.
   or
1. Select the record to be deleted by clicking in the box to the left of the first field.
2. Click the DELETE button ⬚ on the HOME TAB.
3. Click YES to confirm the deletion.
   Tip: Once a record has been deleted, it cannot be retrieved.

To delete a column (field) from a table:

1. In Datasheet View, select the column to be deleted by clicking on the field name at the top of the column.
2. Click the DELETE button ⬚ on the HOME TAB.
3. Click YES to confirm the deletion of the field.
   or
1. In Design View, position the cursor in the row to be deleted.
2. Choose the DELETE ROWS button ⬚ on the DESIGN TAB.
3. Click YES to confirm the deletion of the field.

Using Microsoft Access 2007:
Creating Tables [continued]

To change the gridline layout in a table:

❑   In Datasheet View, click the GRIDLINES button ⊞▾ on the HOME TAB and make the desired selection.

To change the gridline color in a table:

1. In Datasheet View, click the Dialog Box Launcher button 🔲 on the HOME TAB in the bottom right-hand corner of the FONT GROUP to open the DATASHEET FORMATTING box.

2. In the Datasheet Formatting dialog box, make the desired selection from the GRIDLINE COLOR drop-down list and click OK.

Creating Forms

To create a form:

1. On the CREATE TAB in the Database window, click the MORE FORMS drop-down arrow and select FORM WIZARD. 📇

2. Make the appropriate selections to create the form.

To add a record to a form:

1. In Form View, click the NEW button 🔳 on the HOME TAB.
    or
2. In Form View, choose the NEW (BLANK) RECORD button ▶▪ in the bottom-left corner of the window.

To delete a record from a form:

1. In Form View, display the record to be deleted.
2. On the HOME TAB, click the drop-down arrow next to the DELETE button ✕ and select DELETE RECORD. 🔳
3. Click YES to confirm the deletion.
    Tip: Once a record has been deleted, it cannot be retrieved.

To advance one record in Form View:

❑   Select the NEXT RECORD button ▶ in the bottom-left corner of the window.
    Tip: To advance to the final record, select the LAST RECORD button. ▶▮

Using Microsoft Access 2007:
Creating Forms [continued]

To view the preceding record in Form View:

❑ Select the PREVIOUS RECORD button ◀ in the bottom-left corner of the window.

Tip: To advance to the first record, select the FIRST RECORD button. |◀

Sorts, Filters, Queries and Reports

To edit an existing table, query, form or report:

1. In the Navigation Pane of the Database window, select the appropriate icon for the file to be edited.

2. Right-click the file to be edited and choose OPEN or DESIGN VIEW.

To sort a table or form by one field:

1. In Datasheet View or Form View, position the cursor in the field to be sorted.

2. Select either the ASCENDING button ↓ or the DESCENDING button ↓ in the SORT & FILTER GROUP on the HOME TAB.

To sort a table or form by more than one field:

1. In Datasheet View or Form View, click the ADVANCED FILTER OPTIONS button on the HOME TAB.

2. Select ADVANCED FILTER/SORT from the menu.

3. Position the cursor in the Field box in the grid's first column.

4. From the drop-down list that appears, select the field to be sorted.

5. Position the cursor in the corresponding Sort box.

6. Select ASCENDING or DESCENDING from the drop-down list.

7. In the neighboring columns in the grid, choose additional fields to sort.

8. After all of the fields have been set, click the ADVANCED FILTER OPTIONS button and select APPLY FILTER/SORT.

Tip: The field farthest to the left in the design grid will be sorted first.

To remove a sort or a filter from a table or form:

❑ In Datasheet View or Form View, click the REMOVE ALL SORTS button on the HOME TAB.

Using Microsoft Access 2007:
Sorts, Filters, Queries and Reports [continued]

To perform a filter in a table or form:

1. In Datasheet View or Form View, click the ADVANCED FILTER OPTIONS button.

2. Select ADVANCED FILTER/SORT from the menu.

3. Position the cursor in the Field box in the grid's first column.

4. From the drop-down list that appears, select the field to be filtered.

5. Position the cursor in the corresponding Sort box.

6. Select ASCENDING, DESCENDING or NOT SORTED from the drop-down list.

7. Position the cursor in the corresponding Criteria box.

8. Enter the desired value or expression.

9. Click the ADVANCED FILTER OPTIONS button and select APPLY FILTER/SORT.

    Tip: To perform additional sorts or filters on the filtered data, click on the small filter graphic in the field which has been filtered. A pop-up menu will appear.

To create a query:

1. In Datasheet View, on the CREATE TAB click the QUERY DESIGN button.

2. In the Show Table window, choose the table to be used in the query on the TABLES TAB and click ADD. Close the Show Table window.

3. Position the cursor in the Field box in the grid's first column.

4. From the drop-down list, select the field to be included in the query.

5. Make the desired selection from the Sort drop-down list and enter the desired value in the Criteria box.

6. In neighboring columns in the grid, add other fields to be included in the query and enter the desired sorting and criteria information.

7. Select the RUN button from the DESIGN TAB.

To save a query:

1. Click the SAVE button on the QUICK ACCESS TOOLBAR on the top left.

2. Enter a query name and select OK.

To create a report:

1. Click the REPORT WIZARD button on the CREATE TAB.

2. Follow the instructions in the Report wizard and select FINISH when completed.

Using Microsoft Access 2007 [continued]

To start a mail merge document:

1. Launch *Microsoft Word 2007*.

2. On the MAILINGS TAB, click START MAIL MERGE and select STEP BY STEP MAIL MERGE WIZARD from the drop-down menu.

3. Choose a document type from the Mail Merge pane. For example, select the DIRECTORY document type to create a continuous document of entries, such as a bibliography.

4. At the bottom of the Mail Merge pane, click NEXT: STARTING DOCUMENT to continue to the next step.

5. Select the starting document and click NEXT: SELECT RECIPIENTS.

To link the mail merge document to an *Access* database:

1. Choose the USE AN EXISTING LIST radio button then click the BROWSE button to locate the data source for the recipients.

2. In the FILES OF TYPE list, choose ALL DATA SOURCES then locate the desired database file.

3. Select the table or query containing the desired data and click OK.

4. Review the list of recipients to include and click OK.

5. Click NEXT: WRITE YOUR LETTER.

To add merge fields to the mail merge document:

1. Position the cursor where the first field will be placed on the page.

2. Select the desired item to merge from the Mail Merge pane.

3. Verify that the example is correct. If it is correct, click OK to close the window. If it is incorrect, click the MATCH FIELDS button to fix any errors.

4. Continue this process for all desired merge fields.

To merge the mail merge document with the data source:

1. Click the NEXT: PREVIEW YOUR LETTERS button. At the top of the Mail Merge pane, use the double arrows to preview all of the documents.

2. Click the NEXT: COMPLETE THE MERGE button. Individual documents may now be edited if desired. The merged documents can also be printed now.

Using Microsoft SharePoint Designer 2007

Open

New
Page/Web

Save

Standard Toolbar

Preview in
Browser

Formatting Toolbar

Hyperlink

Insert
Picture
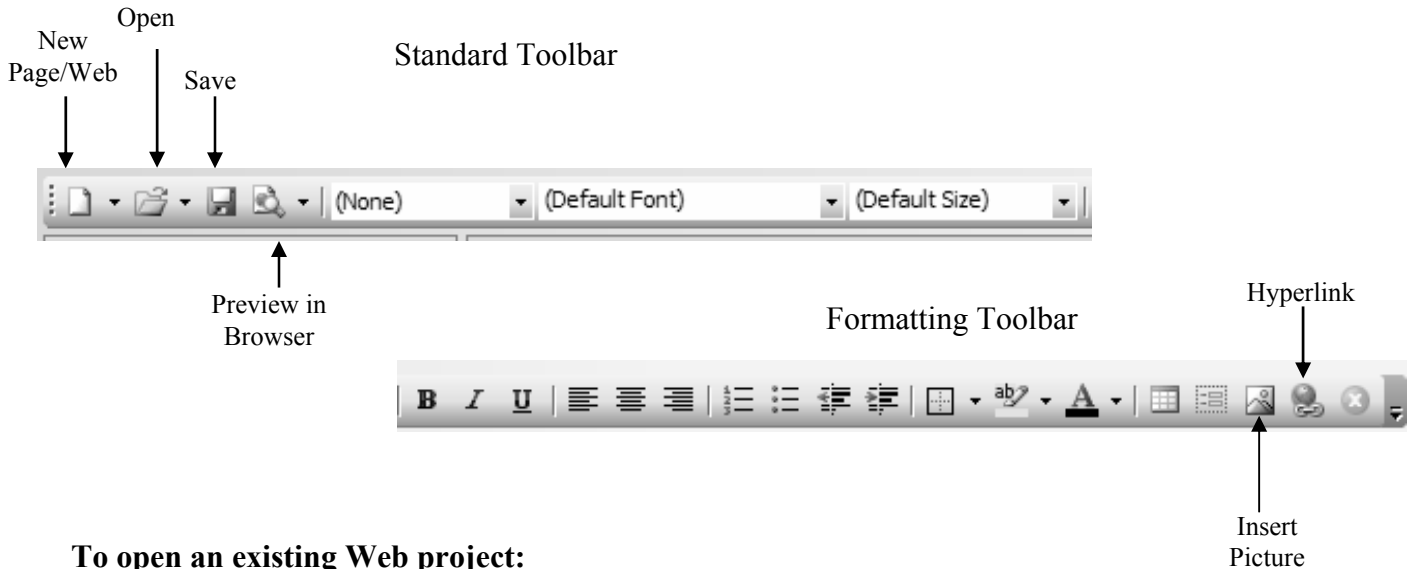
To open an existing Web project:

1. Select FILE → OPEN.

2. Locate the Web (.html, .htm, .asp) file containing the first page of the Web project and click OPEN.

To create a new Web page:

1. Choose FILE → NEW → PAGE.

2. In the New dialog box, choose GENERAL for a standard HTML page, or choose one of the CSS Layouts or Frames Pages for specific needs.

3. Click OK.

Tip: ASP.Net options are for advanced programmers.

To save a Web project:

1. Choose FILE → SAVE.

2. Locate the folder in which you wish to save the Web project and click SAVE.

3. When the Save Embedded Files dialog box appears, verify that all component files are saved in the Web project folder and click OK.

   Tip: A Web project is composed of one or more linked HTML files, each representing one page of the project, along with files containing any components embedded in the HTML pages, such as pictures or music. The collection of files that make up a Web project is typically organized in one folder for convenience.

Using Microsoft SharePoint Designer 2007: Inserting Objects

To insert a hyperlink to a file:

1. Highlight the image or text that will serve as the starting point for the hyperlink.
2. Choose INSERT → HYPERLINK.
3. In the Insert Hyperlink dialog box, click the BROWSE THE WEB button [Q] or the BROWSE FOR FILE button [📁] to locate the destination file, or ending point, for the hyperlink and click OK.

To insert a hyperlink to a location within a page:

1. Mark the destination, or ending point, for the hyperlink by highlighting an image or text and selecting INSERT → BOOKMARK.
2. Enter a name for the bookmark and click OK.
3. Create the hyperlink by selecting the starting image or text for the hyperlink and choosing INSERT → HYPERLINK.
4. Delete any text in the Address box.
5. Click BOOKMARK. Select the bookmark name from the Select Place in Document dialog box and click OK twice.

To insert a picture:

1. Choose INSERT → PICTURE → CLIP ART.
2. Locate and click the desired clipart picture and select INSERT from the popup menu.

or

1. Choose INSERT → PICTURE → FROM FILE.
2. In the Picture dialog box, locate the desired picture file and click INSERT.

Using Microsoft SharePoint Designer 2007: Inserting Objects [continued]

To insert sound or music:

1. Choose FILE → PROPERTIES.
2. On the GENERAL TAB, select the BROWSE button in the Background Sound group.
3. Locate the desired music or sound clip and click OPEN.
4. Make sure that the FOREVER checkbox is selected or choose a number in the Loop spin box, then click OK.

To insert a button:

1. Choose INSERT → INTERACTIVE BUTTON.
2. In the Interactive Buttons dialog box, choose a button from the Buttons list.
3. Enter the text that should appear on the button in the Text box.
4. Select the BROWSE button to locate a destination for the button's hyperlink.
5. Choose a font and text size on the FONT TAB.
6. Select the colors and size of the button on the IMAGE TAB and click OK.

To insert a horizontal line:

1. Choose TASK PANES → TOOLBOX. The TOOLBOX will appear to the right of the main .htm pane.
2. Double-click on HORIZONTAL LINE.

To insert scrolling text:

1. Choose INSERT → WEB COMPONENT. Make sure DYNAMIC EFFECTS is selected under Component Type and select MARQUEE under Choose an Effect. Click FINISH.
2. Enter the text in the Text box.
3. Select LEFT or RIGHT for the direction and click OK.

Using Microsoft SharePoint Designer 2007:
Inserting Objects [continued]

To insert a background picture:

1. Select FORMAT → BACKGROUND.

2. On the FORMATTING TAB, select the BACKGROUND PICTURE checkbox.

3. Click the BROWSE button.

4. Locate the desired picture and click OPEN.

5. Click OK to close the Page Properties window.

Designing a Page or Web Project

To choose a background color:

1. Select FORMAT → BACKGROUND.

2. On the FORMATTING TAB, click the BACKGROUND drop-down arrow, choose a color and click OK.

To preview a Web page as it would appear in a Web browser:

❑   Choose FILE → PREVIEW IN BROWSER and select the appropriate browser from the list.

or

❑   Click the arrow next to the PREVIEW IN BROWSER button on the Standard Toolbar and select the appropriate browser from the list.

Miscellaneous Topics:
Creating a Screen Shot

A **screen shot** is a graphic image of what appears on the computer screen. Screen shots can be helpful in acquiring an image of something on the screen for incorporation into another document. Remember that the screen shot will include everything that appears on your monitor.

Follow the steps below to create, insert and size a screen shot.

1. Choose an image that you want to insert into another document. You may want to choose a graphic, a picture file, or the desktop itself.

2. Press the PRINT SCREEN key on the upper right side on the keyboard to copy the image on the screen to the Clipboard. **Note**: The screen shot shows everything that appears on the computer screen. If you only want one small part or area of the screen shot, launch Paint by selecting START → PROGRAMS → ACCESSORIES → PAINT. Select EDIT → PASTE. Choose the SELECT tool or the FREE-FROM SELECT tool and select only the area that you want. Select EDIT → COPY or EDIT → CUT and close Paint.

3. Open the application into which you want to insert the screen shot, for example *Word 2007*.

4. From the MICROSOFT OFFICE button in the top left corner choose NEW.

5. From the HOME TAB click on the PASTE button.

6. Your screen shot will have the Windows frame around it. To eliminate the frame and insure that you have exactly the image desired, click on the image.

7. Go to the PICTURE TOOLS/FORMAT TAB.

8. Click on the CROP tool from the SIZE GROUP.

9. Position the CROP tool on the handles of the screen shot and crop unneeded portions of the image.

10. If you desire to change the size of the image, adjust the vertical and horizontal measurements on the SIZE GROUP on the FORMAT TAB. An alternative method to re-size the image is to click on the image, position the cursor at any corner and drag the image to the desired size.

Miscellaneous Topics: Troubleshooting Tips

Common problems and solutions:

Problem: After the computer starts up, a blank screen appears.

Potential Solutions:

Be certain that the monitor is turned on. Check for the lights on the surge protector (if applicable), the system unit and the monitor indicating that electricity is traveling through that component. Check the cable connections to and from each component, in case they have become loose.

If these measures do not solve the problem, insert a boot disk and restart the machine. An emergency boot disk is packaged with diagnostic programs such as *Norton Utilities*. A boot disk can also be created in *Microsoft Windows* by selecting the ADD/REMOVE PROGRAMS icon from the Control Panel, choosing the STARTUP DISK tab and following the directions. If the computer does not start using a boot disk, the problem may be with the hardware. The appropriate hardware vendor should be contacted for service instructions.

Problem: When attempting to print, nothing happens.

Potential Solutions:

Verify that the printer is turned on and check the cable connections. Look at the lights on the printer to see whether an error is indicated. If so, check the printer manual for interpretations and solutions: the printer could be out of paper or have a paper jam. Check the printer status by choosing START → SETTINGS → PRINTERS, then double-clicking the printer in question. Try printing another document or printing from another program (such as WordPad) to see whether the problem is with the particular file or application.

Problem: The computer is frozen.

Potential Solutions:

If possible, select the CANCEL or CLOSE button. If the computer is still not responding, press the CONTROL, ALT and DELETE keys simultaneously. From the Close Program dialog box, select the application that is not responding and click END TASK. If the computer is still frozen, the CONTROL, ALT and DELETE key combination can be used to restart the computer. The reset button on the computer system unit may need to be used to restart the computer. If the reset button does not work, turn the computer off, wait 15 seconds or so and turn it back on. Windows should detect that the computer was not shut down properly and will execute the Scandisk program to check the hard drive for errors. If the computer freezes each time the same particular action is performed, it may help to reduce the number of files or applications open at one time.

Miscellaneous Topics:
Troubleshooting Tips [continued]

Problem: A "not enough memory" error message appears.

Potential Solutions:

Try restarting the computer and launching the program again. If the message still appears, disable the programs that automatically start up. To do so, select START → SETTINGS → TASKBAR & START MENU. Choose the START MENU PROGRAMS tab, then the ADVANCED button and select the PROGRAMS folder. Move the shortcuts from the Startup folder into another folder, and restart the computer. If the error message continues to appear, try removing unnecessary files (such as unnecessary or backed-up documents) from the hard drive to free space that *Windows* can use for memory management.

Problem: A "not enough disk space" message appears when installing a program or when copying files to the hard drive.

Potential Solutions:

Right-click the RECYCLE BIN icon on the desktop, and choose EMPTY RECYCLE BIN . Check the amount of free hard drive space by right-clicking the HARD DRIVE icon in Windows Explorer and selecting PROPERTIES. Choose the TOOLS tab and select CHECK NOW to check the hard drive for errors that may be taking up space. To free some hard drive space, back up files to floppy disks or delete files that are no longer needed.

To help prevent this type of problem, consider compressing the hard drive before it becomes too full. To do so, select START → PROGRAMS → ACCESSORIES → SYSTEM TOOLS → DRIVESPACE.

Problem: No sound is heard from the speakers.

Potential Solutions:

Verify that the speakers are turned on and check the volume knob and the cable connections. Be certain that the speakers are connected to the correct jack (often labeled *Out* or *Speaker Out*). From the Control Panel, double-click the SOUNDS icon and determine if sound is heard when the name of a sound is highlighted and the PLAY button selected. From the Control Panel, double-click the MULTIMEDIA icon, select the AUDIO tab and adjust the Playback volume control.

Miscellaneous Topics:
Troubleshooting Tips [continued]

Problem: A software program does not run properly.

Potential Solutions:

First, create backups of any document files created by the program. Double-click the ADD/REMOVE PROGRAMS icon in the Control Panel window, choose CHANGE/REMOVE and follow the instructions to uninstall the program. If problems still persist, right-click the HARD DRIVE icon in Windows Explorer and select PROPERTIES. Verify that there is adequate hard drive space available. Choose the TOOLS tab, then select CHECK NOW and DEFRAGMENT NOW. Reinstall the program.

Problem: An error occurs when copying a file or when installing software.

Potential Solutions:

The actual file being copied could be damaged. Try copying the file or installing the program on other computers. If the same error message occurs during the same process on a few different machines, the floppy disk or CD-ROM could be defective or could contain a corrupt file. The appropriate software manufacturer must be contacted to receive replacement disks.

Problem: The colors on the screen appear unnatural.

Potential Solutions:

The monitor display settings may need to be changed. Double-click the DISPLAY icon in the Control Panel window and click the SETTINGS tab. Choose a different option in the COLOR QUALITY drop-down list. Also, from the SETTINGS tab, select ADVANCED and click the MONITOR tab to verify that the correct monitor is chosen. If not, select CHANGE and choose another monitor.

Office 2007 Tips and Tricks

The Ribbon

The menus and toolbars in some programs have been replaced with the Ribbon, a panel that runs along the top of each application window.
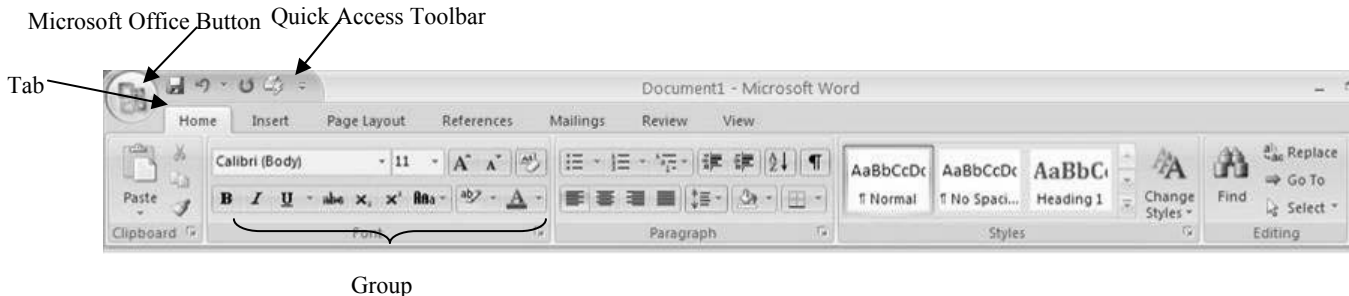
The Ribbon is divided into a series of *tabs*. In Word, for example, you will see tabs for Home (the default tab view), Insert, Page Layout, References, Mailings, Review, and View. There are also tabs that only appear when needed. So, for example, if you insert a table in Word, you'll get a new Table tab, or if you insert a picture, you will see a Picture tab.

Commands are organized in logical *groups*, which are collected together under the tabs. The groups on each tab are organized to help you complete a task.

The Ribbon can be found in Office Access 2007, Office Excel 2007, Office PowerPoint 2007, Office Word 2007 and Office Outlook 2007.

Office 2007 Tips and Tricks [continued]

Microsoft Office Button

The Microsoft Office Button [icon] replaces the file menu. When you click the Microsoft Office Button, you see the same basic commands available in earlier releases of Microsoft Office to open, save, and print your file.

Microsoft Office Button   Quick Access Toolbar

File Menu
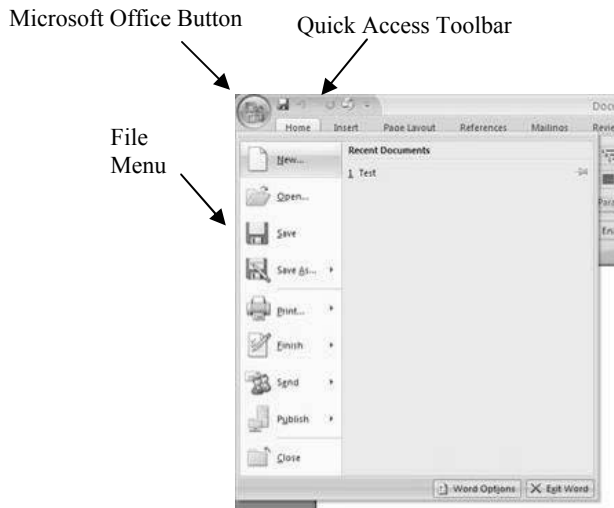
Quick Access Toolbar

Tools or commands that are not as readily available as you would like can be easily accessed by adding them to the quick access toolbar. To add a button right click on a feature in a tab, then click ADD TO QUICK ACCESS TOOLBAR. You may remove a button the same way, by right clicking and choosing REMOVE FROM QUICK ACCESS TOOLBAR.

Saving a File

Office 2007 saves files in a slightly different format, as compared to previous Office versions. To ensure you can access your 2007 files in other versions of Office, you must click on SAVE AS from the File menu. Choose *[Office Program] 97-2003 [File Type]* from the SAVE A COPY OF THE [FILE TYPE] list. Name the file and click SAVE.

For example from Word, you would choose *Word 97-2003 Document* from the SAVE A COPY OF THE DOCUMENT list.

Glossary

absolute cell reference: a cell reference that does not change when a formula is copied or moved; contains a $ symbol before the column letter and row number

active cell: the cell currently selected in a spreadsheet, identified by its black border

animation: a series of still images displayed in rapid succession to create the illusion of movement

background: the layer in which text and images that appear in the same location on every page of a document are placed

Boolean operators: words used to specify a logical relationship *And, or* and *and not* are Boolean operators

bullets: symbols (often a solid circle or square) used to distinguish items in a list

branching slide: a slide that is linked to another slide in a presentation, providing users with a choice of which slide to view next

cell: a rectangle in a spreadsheet, formed by the intersection of a row and a column, which can contain text, numbers or a formula

cell reference: the coordinates of the column and row position of a cell, or a cell address

clip art: previously created digital artwork that is intended to be integrated into documents

column: a vertical line of cells in a spreadsheet, identified by a letter

column heading: a letter at the top of a column that can be clicked to select the entire column

column label: text at the top of a row that indicates the type of information in that column

data: information that can be processed and from which conclusions can be inferred

Glossary [continued]

database: a collection of related information

database application: a computer software program that allows users to enter, update, organize and retrieve information

digitalization: the process of transferring a film or video image to a format that a computer can use

field: the location reserved for a category of information within a database

filter: a set of criteria applied to records to show a subset of the records

footer: the text or graphics that appear at the bottom of a page

foreground: the layer in which the text and images that vary from page to page in a document are placed

formula: a mathematical equation that performs a calculation in a cell; formulas follow a specific structure beginning with an equal sign (=) followed by the elements to be calculated (the operands) and the calculation operators

formula bar: the bar at the top of a spreadsheet that displays the information contained or being entered in a cell

frames: a term related to the viewing and layout style of a Web site in which two or more Web pages are loaded at the same time within the same screen; Web pages with frames contain scroll bars for each embedded page that can be viewed independently

Function: a ready-to-use formula that performs common calculations, such as averages and sums

Greek text: a block of nonsensical text that represents the size and position of text so the aesthetics of the page design can be evaluated

grouping: joining together separate objects so the components can be manipulated as one object

hot spot: an area on the screen that can be selected to trigger an action, such as playing a sound, animating a graphic or displaying a different slide

Glossary [continued]

HyperText Markup Language (HTML): the special code that allows the Web browser to display the layout of a document

HyperText Transfer Protocol (HTTP): the Internet standard that enables access to documents on the World Wide Web

Importing: the process of inserting text or graphics that originated in one program into another program

landscape: the page orientation in which the page is wider than it is tall

layers: invisible sheets on which users can place text or graphics so the objects are independent of other objects on other sheets

layout: the process of arranging text and graphics on a page

layout guides: nonprinting lines that can be helpful when placing text and graphics within a document

linking: connecting text frames so that the excess text from the first frame flows into the second frame

mail merge: merging database information and word processing to create individualized letters, envelopes and labels

medium: a single method used to communicate a message to an audience, including video, sound, text and graphics

name box: the box in a spreadsheet that lists the column letter and row number of a selected cell or a range of selected cells

picture frame: a movable and resizable placeholder for a graphic

points: a font measure. One inch is equal to 72 points, and one centimeter is equal to 28 points. Font sizes of 10 point or 12 point are common for text in the body of documents.

Portrait: the page orientation in which the page is taller than it is wide

Glossary [continued]

pull quote: a short phrase set in a larger type size that repeats information found within the article

query: a method used to specify criteria to indicate what records should be retrieved from a database

range: a single cell or a rectangular group of adjacent cells within a spreadsheet

Record: a complete unit of fields (categorized information)

row: a horizontal line of cells in a spreadsheet, identified by a number

row heading: a number at the far-left side of a row that can be clicked to select the entire row of cells

row label: text at the left side of a row that indicates the type of information in that row

rulers: on-screen bars that measure the page horizontally and vertically

scratch area: the nonprinting work area in which text and graphics can be placed before they are moved into a document

slide: a screen in a *PowerPoint* presentation resembling an index card, on which users may arrange media elements

slide master: a special slide that can be used to determine the layout and formatting of all slides in a presentation

slide show: in presentation programs, several screens of information organized in a particular sequence

smart tags: a set of buttons shared across Office 2007 applications, smart tags appear as needed to provide options for completing a task quickly

sorting: rearranging data so that it appears in ascending or descending order, either alphabetically or numerically

spreadsheet: a document created by a spreadsheet application

spreadsheet application: allows users to enter data, such as numbers and formulas, into an electronic worksheet and to use this data to perform multiple calculations

Glossary [continued]

storyboard: a series of panels on which a set of sketches is arranged for planning purposes

table: Information displayed in rows and columns

task panes: located on the right side of the screen, allows users to access important tasks such as performing searches, opening documents, viewing the Clipboard, formatting documents and more

text alignment: (also known as justification) refers to how text appears in relation to the left and right margins

text frame: a placeholder for text, which can be moved or resized

text wrapping: the way that text flows around a graphic

transition: the special effect that occurs when one slide advances to the next in a presentation

Uniform Resource Locator (URL): A Web page's address, often beginning with *http://www*

wizard: a Help feature that guides users through multi-step processes to create common documents

Word wrap: a word processing feature that automatically moves continuing text to the line below when the previous line becomes full.

Worksheet: a spreadsheet containing cells in columns and rows