Introduction to Computer CC111

Computer Applications

Overview

A look at the most widely used types of application software

The Basics of Application Software

Common Software Commands

- Editing a Document
  - Changing the content of the document, such as inserting or deleting words
  - Insertion point
    - Indicates the current location in a document, which is where the changes will be made
  - Typing text inserts the text at the insertion point location
  - Delete and Backspace keys delete text
  - Text and objects can typically be selected and moved, copied, deleted, or formatted

The Basics of Application Software

Common Software Commands

- – Formatting a Document
  - • Changes the appearance of the document
    - – Changes font face, font size, and/or font color
    - – Changes line spacing or margins
    - – Adds page numbers and/or borders

This is 10-point Arial.

This is 12-point Times New Roman.

This is 16-point Lucida Handwriting.

This is 20-point Calibri.

This 16-point Calibri text is bold and italic.

This 16-point Calibri text is red and underlined.

The Basics of Application Software

Common Software Commands

- Getting Help
  - Online help (via manufacturer's Web site and independent sites)
  - Offline help (periodicals, books, tutorial videos, classes)

Word Processing Concepts cont…

- What Is Word Processing?
  - Using a computer and word processing software to create, edit, save, and print written documents such as letters, contracts, and manuscripts
  - Common Word Processing Software Programs
    - Microsoft Word
    - Corel WordPerfect
    - Apple Pages

Word Processing Concepts cont…

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

Word Processing Concepts cont...

FONT FACE
The font face of the selected text is currently being changed.

FONT SIZE
Measured in points; the size of the selected text is 36 pts.

FILENAME
Appears on the title bar once a file has been saved one time.

ALIGNMENT
The selected text is centered.

CONTEXTUAL TAB
Provides access to additional commands when objects (such as the clip art image below) are selected.

STYLES
Can be used to apply the same formatting to similar sections of the document.

RIBBON
Contains tabs of commands; the Home tab is selected.

HEADER
Text entered by the user that appears at the top of each page.

LIVE PREVIEW
Changes the appearance of selected items when a formatting command is pointed to.

CLIP ART
Clip art and other graphics can be inserted and resized or otherwise modified as necessary.

MINI TOOLBAR
Appears when text is selected with a mouse.

WORD WRAP
Wraps text to the next line automatically when the text being typed reaches the end of the screen line; the user should not press Enter until the end of the paragraph.

STATUS BAR
Indicates the number of pages and words currently in the document, the current document view and zoom level, and so on.

TABLE
Can be used to neatly organize data or lay out the text in a document.

FOOTER
Text entered by the user that appears at the bottom of each page. This footer contains the page number.

Courtesy of Microsoft

Word Processing Concepts cont…

- Tables, Graphics, and Templates
  - Tables
    - Allow content to be organized in a table consisting of rows and columns
  - Graphics or Drawing Features
    - Allow images to be inserted into a document (clip art, photographs, drawn images, etc.) and then modified

Word Processing Concepts cont...

- Word Processing and the Web
  - Most word processing programs today include Web-related features allowing you to:
    - Send a document as an e-mail message
    - Include Web page hyperlinks in documents
    - Create or modify Web pages
    - Create and publish blogs
    - Collaborate with others online

Spreadsheet Concepts

- What is a Spreadsheet?
  - Documents containing a group of numbers and other data organized into rows and columns
  - Spreadsheet software is used to create electronic spreadsheets
    - Formulas
    - Data analysis tools
    - Charts and graphs
  - Most widely used spreadsheet programs:
    - Microsoft Excel
    - Corel Quattro Pro
    - Apple Numbers

Spreadsheet Concepts cont…

- Creating a Spreadsheet
  - Worksheet
    - A single spreadsheet
  - Workbook
    - A collection of worksheets saved in a single file
  - Worksheets are divided into rows and columns
  - Cell
    - The intersection of a row and a column
    - Each cell is identified by a cell address – A1
    - Cell pointer marks current cell
  - Groups of cells are called ranges or blocks and can be selected with mouse or keyboard
  - Data is entered into current cell

Spreadsheet Concepts cont…

- Entering Data into a Spreadsheet Cell
  - Labels
    - Text-based entry in a worksheet cell that identifies data on the worksheet
  - Constant Values
    - Numerical entry in a worksheet cell
  - Formulas
    - Perform mathematical operations on the content of other cells
    - Usually reference the cell address, not the current data in a cell
    - Use mathematical operators
    - Begin with an = sign

SYMBOL	OPERATION
+	Addition
−	Subtraction
*	Multiplication
/	Division
^	Exponentiation

Spreadsheet Concepts cont…

NAME BOX
Identifies the active cell, which is the location of the cell pointer.

COLUMNS
Run vertically and are identified by letters.

FORMULA BAR
Lists the contents of the active cell, in this case the formula entered into cell E8.

RIBBON
Contains tabs of commands grouped by function; the Home tab is selected.

NUMBER FORMATS
Used to specify the appearance of the numbers on a worksheet.

CELL HEIGHT AND WIDTH
Can be changed to a specific value or to automatically fit the content.

ACTIVE CELL/RANGE
Identifies the active cell or range; in this case the active cell is E8, and the range D8:E9 is selected.

WORKSHEET AREA
Contains the worksheet itself.

ROWS
Run horizontally and are identified by numbers.

GRAPHS
Are typically based on worksheet data and can be inserted into the worksheet area.

WORKSHEET TABS
Identify the different worksheets saved in a single spreadsheet (workbook) file.

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

Courtesy of Microsoft

Spreadsheet Concepts cont…

- – Functions
  - Named, pre-programmed formulas
  - In formulas and functions, use cell addresses of the numbers to be included in the calculations

EXAMPLES OF FUNCTIONS	
=SUM(range)	Calculates the sum of all values in a range.
=MAX(range)	Finds the highest value in a range.
=MIN(range)	Finds the lowest value in a range.
=AVERAGE(range)	Calculates the average of values in a range.
=PMT(rate, number of payments, loan amount)	Calculates the periodic payment for a loan.
=IF(conditional expression, value if true, value if false)	Supplies the values to be displayed if the conditional expression is true or if it is false.
=NOW( )	Inserts the current date and time.

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Spreadsheet Concepts cont…

- Absolute vs. Relative Cell Referencing
  - Relative cell references
    - Cell addresses are adjusted as the formula is copied
  - Absolute Cell References
    - Cell addresses are not adjusted as the formula is copied
    - Necessary when the formulas should always use the value in a particular cell, regardless of the cell in which the formula is placed
    - Use $ to make cell references absolute: $B$6

Spreadsheet Concepts cont…

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

Formula in cell D2

D2			fx	=B2+C2
	A	B	C	D
1		Cones	Sundaes	Total
2	April	600	200	800
3	May	800	500	1300
4	June	1500	600	2100
5	Total			
6				

Formula in cell D4 is =B4+C4.

Results when the formula in cell D2 is copied to cells D3 and D4.

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

Formula in cell D2

D2			fx	=$B$2+$C$2
	A	B	C	D
1		Cones	Sundaes	Total
2	April	600	200	800
3	May	800	500	800
4	June	1500	600	800
5	Total			
6				

Results when the formula in cell D2 is copied to cells D3 and D4.

Formula in cell D4 is =$B$2+$C$2.

IMPROPER USE

Formula in cell E2

E2			fx	=D2/$D$5	
	A	B	C	D	E
1		Cones	Sundaes	Total	Percent
2	April	600	200	800	19.05%
3	May	800	500	1300	30.95%
4	June	1500	600	2100	50.00%
5	Total			4200	100.00%
6					

Results when the formula in cell E2 is copied to cells E3 and E4.

Formula in cell E4 is =D4/$D$5.

PROPER USE

Courtesy of Microsoft

Spreadsheet Concepts cont…

- – Charts and What-If Analysis
  - Can create charts from the data in the spreadsheet (don't have to reenter it)

  - Charts change accordingly if the data in the spreadsheet changes

  - When cell contents are changed, formulas are automatically recalculated

  - Tools frequently used to help make business decisions

Spreadsheet Concepts cont…

- Spreadsheets and the Web
  - Most spreadsheet programs have built-in Web capabilities enabling the user to:
    - Save the current worksheet as a Web page
    - Insert hyperlinks inserted into worksheet cells
    - Select and copy ranges of cells to a Web publishing or word processing program to insert spreadsheet data into a Web page as a table
    - Send document as an e-mail message collaborate online
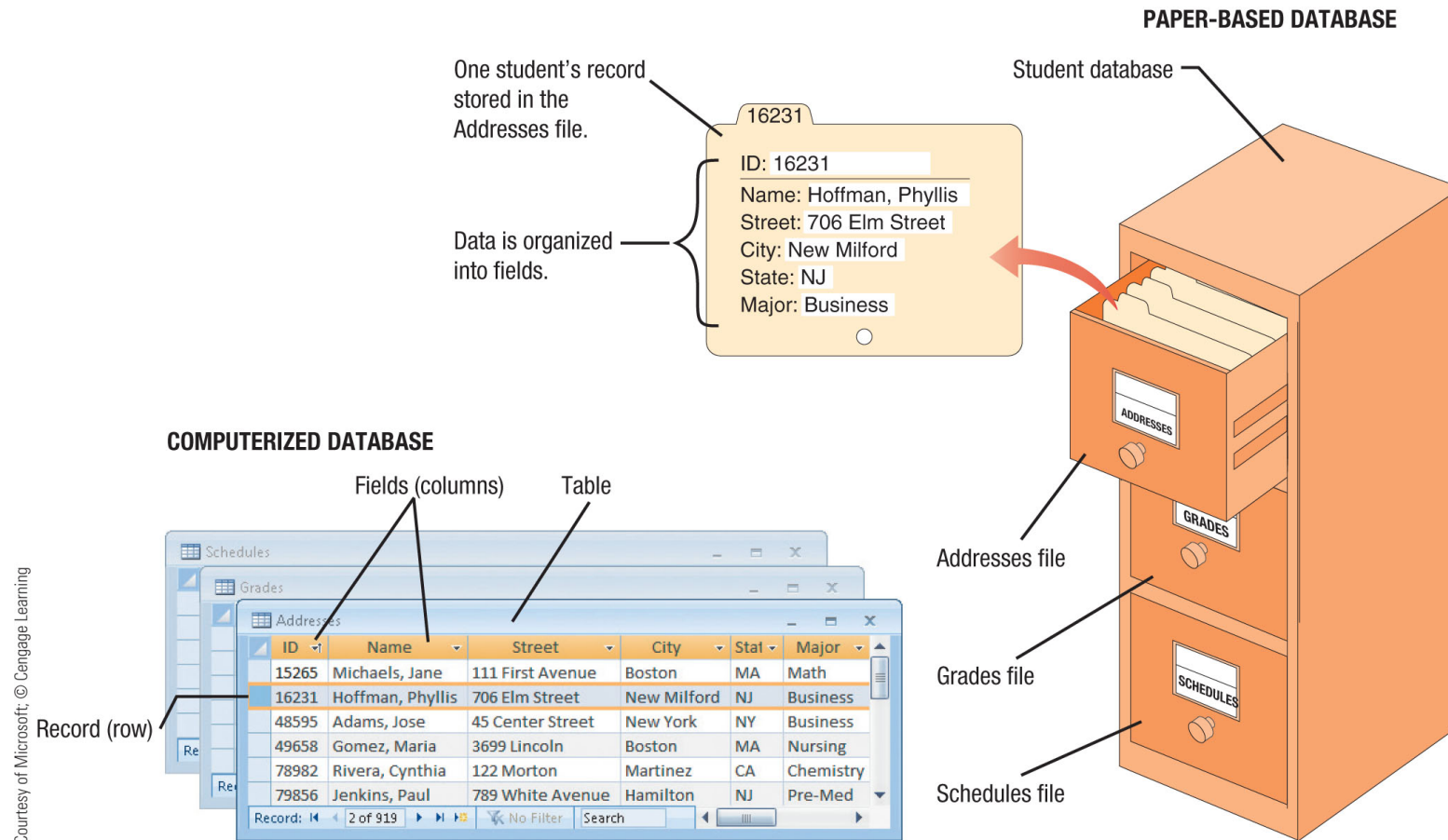
Database Concepts

- What Is a Database?
  - A collection of related data that is stored in a manner enabling information to be retrieved as needed
  - Database Management System (DBMS)
    - Software that allows the creation and manipulation of an electronic database
  - Most widely used relational database programs
    - Microsoft Access
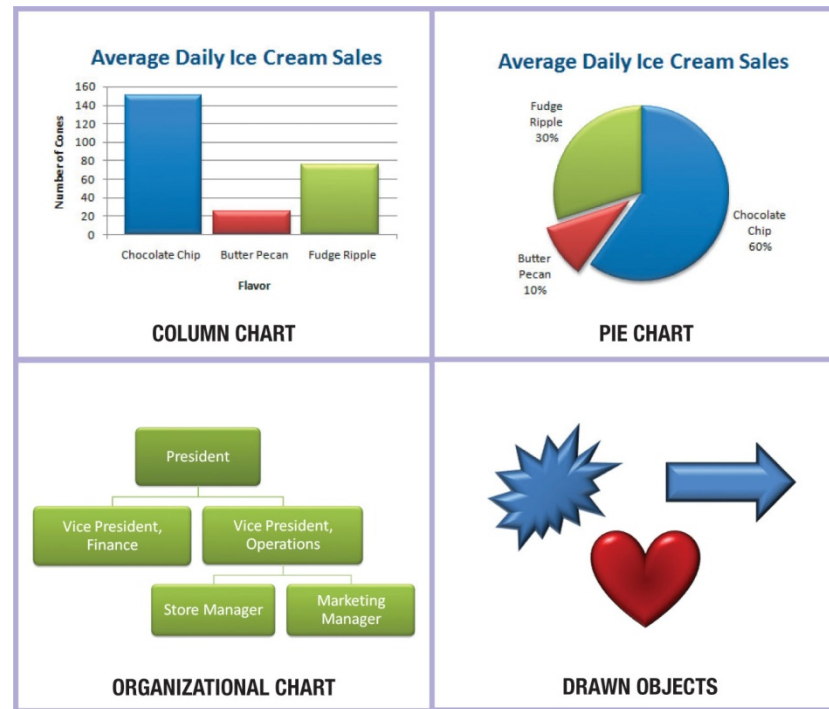   - Oracle Database
    - IBM DB2

Database Concepts cont...

— Most PC-based databases are relational databases and organized into fields (columns), records (rows), and tables

- Field (column)
  - A single type of data to be stored in a database
- Record (row)
  - A collection of related fields
- Table
  - A collection of related records
- Database file
  - Collection of related tables

Database Concepts cont...

PAPER-BASED DATABASE

Student database

One student's record stored in the Addresses file.

16231

ID: 16231
Name: Hoffman, Phyllis
Street: 706 Elm Street
City: New Milford
State: NJ
Major: Business

Data is organized into fields.

COMPUTERIZED DATABASE

Fields (columns)   Table

ID	Name	Street	City	Stat	Major
15265	Michaels, Jane	111 First Avenue	Boston	MA	Math
16231	Hoffman, Phyllis	706 Elm Street	New Milford	NJ	Business
48595	Adams, Jose	45 Center Street	New York	NY	Business
49658	Gomez, Maria	3699 Lincoln	Boston	MA	Nursing
78982	Rivera, Cynthia	122 Morton	Martinez	CA	Chemistry
79856	Jenkins, Paul	789 White Avenue	Hamilton	NJ	Pre-Med

Record: 2 of 919   No Filter   Search

Record (row)

Schedules
Grades
Addresses

Courtesy of Microsoft; © Cengage Learning

Addresses file

Grades file

Schedules file

ADDRESSES
GRADES
SCHEDULES

Presentation Graphics Concepts

- What Is a Presentation Graphic?
  - An image designed to visually enhance a presentation
  - Can be used in electronic slide shows, as well as in printed reports
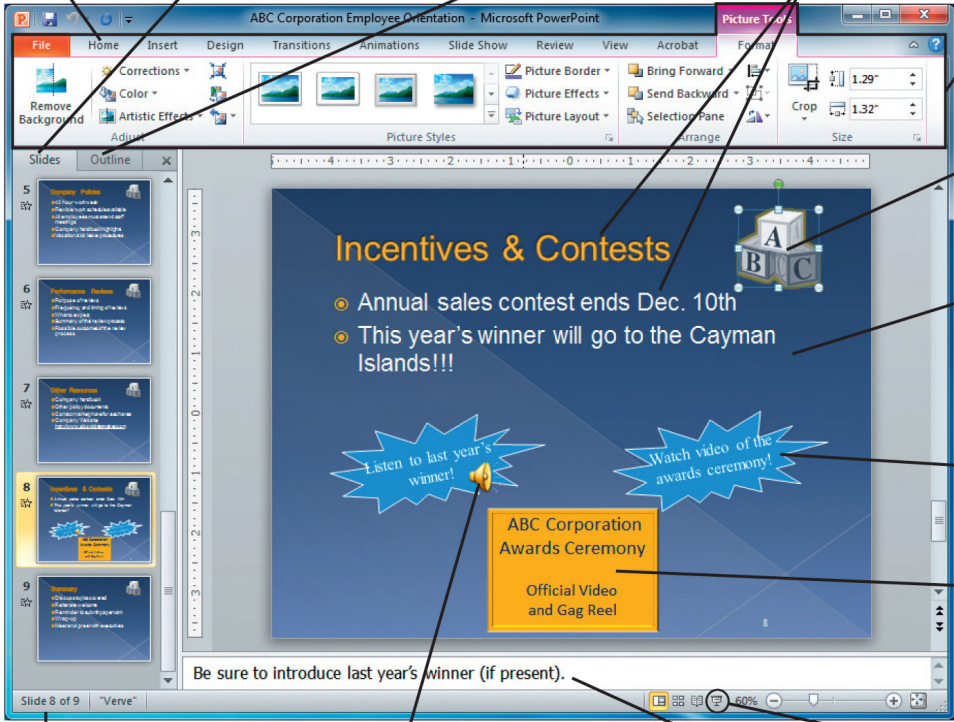
Presentation Graphics Concepts cont...

- Slide
  - A one-page presentation graphic that can be displayed in a group with others to form an electronic slide show
- Electronic Slide Show
  - A group of electronic slides that are displayed one after the other on a computer monitor or other display device
- Presentation Graphics Software
  - Used to create presentation graphics
- Most common presentation graphics programs are
  - Microsoft PowerPoint
  - Corel Presentations
  - Apple Keynote

Presentation Graphics Concepts cont...

- Creating a Presentation
  - Templates and preformatted slide layouts can often be used
  - Slides can contain a variety of elements
    - Text
    - Images
    - Charts
    - Audio clips
    - Video clips

Presentation Graphics Concepts cont…

NEW SLIDES
Use the Home tab to add a new slide.

SLIDES TAB
Click to see thumbnails of the slides in the presentation.

OUTLINE TAB
Click to see the titles and main text contained on the slides.

TEXT
Can be formatted using commands on the Ribbon or the Mini toolbar, like in other Office programs.

RIBBON
Contains tabs of commands grouped by function; the Picture Tools Format tab is selected.

CLIP ART AND OTHER GRAPHICS
Can be inserted and resized or otherwise modified.

SLIDES
Can contain elements such as text, clip art, photographs, bulleted lists, charts, and video clips. Often a theme, color scheme, or design layout is used to apply a universal appearance to all slides.

DRAWN OBJECTS
Can be added, formatted, and resized; include lines, shapes, and more.

VIDEO CLIPS
Can be inserted into slides and set up to play automatically when the slide is loaded or when the video placeholder is clicked.

STATUS BAR
Includes information such as the current slide number and the total number of slides.

SOUND CLIPS
Can be inserted into slides and set up to play automatically when the slide is loaded or when the sound placeholder is clicked.

NOTES
Can be added so they can be seen by the presenter during the slide show or included on printouts.

SLIDE SHOW BUTTON
Click to run the slide show beginning with the current slide.

Courtesy of Microsoft

Incentives & Contests

- Annual sales contest ends Dec. 10th
- This year's winner will go to the Cayman Islands!!!

Listen to last year's winner!

Watch video of the awards ceremony!

ABC Corporation Awards Ceremony

Official Video and Gag Reel

Be sure to introduce last year's winner (if present).

Presentation Graphics Concepts cont...

- Slides can be formatted as needed
- Multimedia and animation can be added to slides
  - Animation
  - Transitions
- Overall appearance of the slide show can be changed by applying a theme
  - A combination of colors, fonts, and effects
  - Can be applied to entire presentation or individual slides

Presentation Graphics Concepts cont...

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

Graphics and Multimedia Concepts

- Graphics
  - Graphical images, such as digital photographs, clip art, scanned drawings, and original images created using a software program
- Multimedia
  - Technically refers to any application that contains more than one type of media
  - Often used to refer to audio or video content
- Large variety of graphics and multimedia software used to:
  - Create or modify graphics
  - Edit digital audio or video
  - Play multimedia files
  - Burn CDs and DVDs

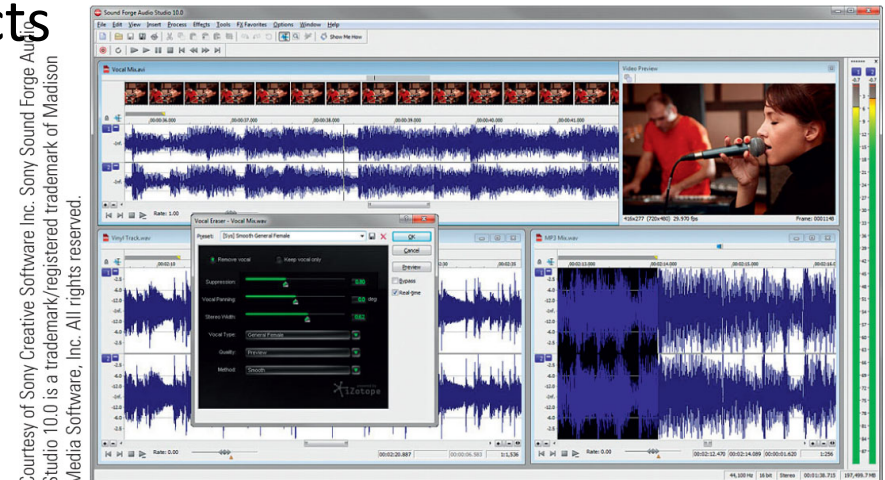# Graphics and Multimedia Concepts cont...

- **<u>Graphics Software (Digital Imaging Software)</u>**
  - Used to create or modify images

  - Drawing Programs (Illustration programs)
    - Typically create images using mathematical formulas— vector graphics (Adobe Illustrator, CorelDRAW)

  - Image Editing or Photo Editing Programs
    - Designed for touching up or modifying images
      - Correcting brightness/contrast
      - Cropping/eliminating red eye

Graphics and Multimedia Concepts cont…

- **<u>Audio Capture and Editing Software</u>**
  - Used to create and edit audio files (narrations, podcasts, etc.)
    - Sound recorder software captures sound from a microphone
    - Ripping software captures sound from a CD
  - Edits and applies special effects

Courtesy of Sony Creative Software Inc. Sony Sound Forge Audio Studio 10.0 is a trademark/registered trademark of Madison Media Software, Inc. All rights reserved.

Graphics and Multimedia Concepts cont…

- **Video Editing and DVD Authoring Software**
  - Video Editing Software
    - Modifies existing videos
    - Prepares video clips for presentations or Web sites
  - DVD Authoring Software
    - Organizes content to be transferred to DVD
      - Importing videos, creating menus, burning onto a DVD
  - DVD Burning Software
    - Records data on recordable or rewritable DVDs

Graphics and Multimedia Concepts cont…

- **<u>Media Players</u>**
  - Programs designed to play audio and video files
    - Music CDs, downloaded music, online audio
    - Downloaded and online video
    - Important to adhere to copyright laws