Basic Application Software

Chapter 3

Learning Outcomes

- Identify general-purpose applications
- Describe word processors, spreadsheets, presentation programs, and database management systems.
- Identify specialized applications.
- Describe graphics programs, web authoring programs, and other specialized professional applications.
- Describe mobile apps and app stores.
- Identify software suites.
- Describe office suites, cloud suites, specialized suites, and utility suites.

Introduction

- Not long ago, trained specialists were required to perform many of the operations you can now do with a personal computer.
- Competent end users need to understand the capabilities of basic application software including:
  - Word processors
  - Spreadsheets
  - Presentation programs
  - Database management systems

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Application Software

- Application software
  - End user software
  - Accomplish a variety of tasks
- Three categories
  1. General Purpose Applications
  2. Specialized Applications
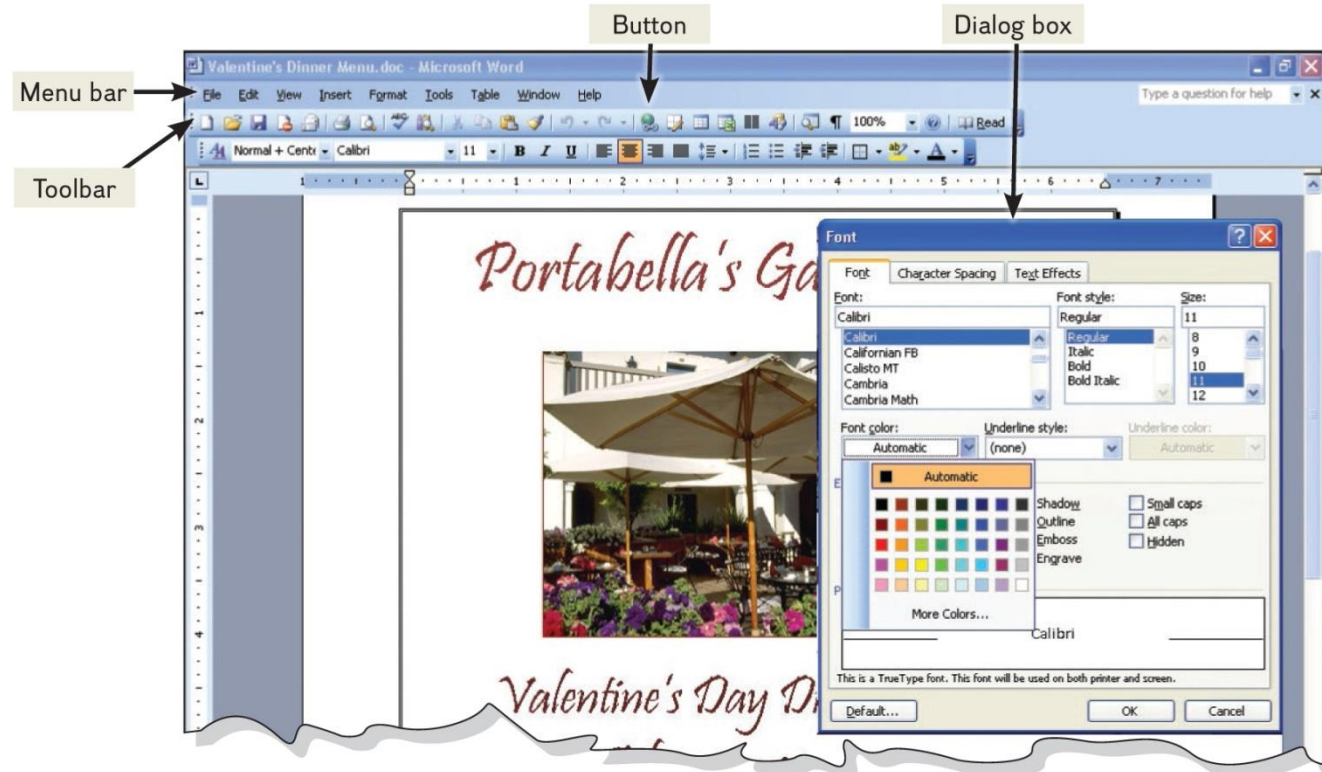 3. Mobile Apps

User Interface

- Graphical User Interface (GUI) consists of:
  - Icons
  - Pointer
  - Windows
  - Menus
  - Toolbars
    - Buttons
  - Dialog Boxes

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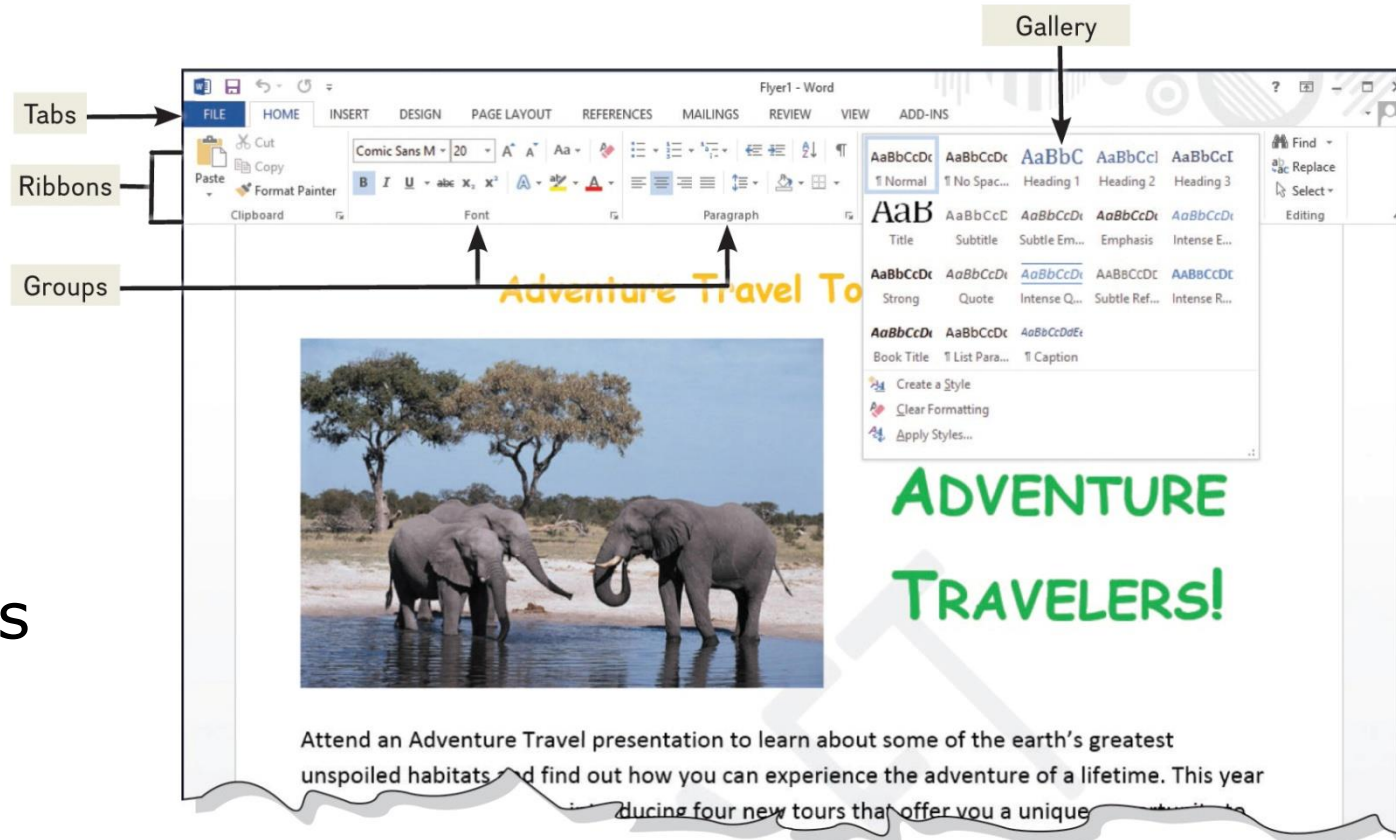
Button

Dialog box

Menu bar

Toolbar

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Common Features in Microsoft

- Ribbon GUI
  - Ribbons
  - Tabs
    - Groups
    - Contextual tabs
  - Galleries
- Spell checkers
- Alignment
- Font and Font Sizes
- Tables
- Reports

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Gallery

Tabs

Ribbons

Groups

Adventure Travel To

ADVENTURE
TRAVELERS!

Attend an Adventure Travel presentation to learn about some of the earth's greatest unspoiled habitats and find out how you can experience the adventure of a lifetime. This year ducing four new tours that offer you a unique

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General Purpose Applications

- General purpose applications include:
  - Word processor programs
  - Spreadsheet programs
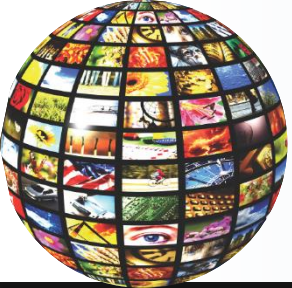 - Presentation graphics programs
  - Database management systems

Word Processor Programs

- Create text-based documents
  - Memos, letters, and faxes
  - Newsletters, manuals, and brochures
- Word processing programs
  - Microsoft Word
    - Most popular
  - Apple Pages
  - Google Docs
  - Corel WordPerfect
  - OpenOffice Writer
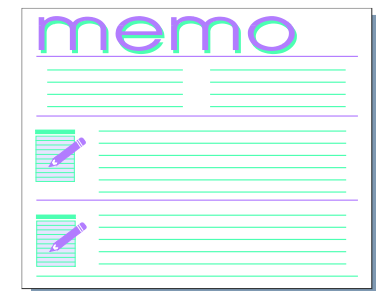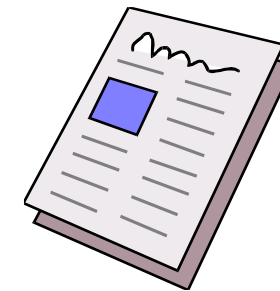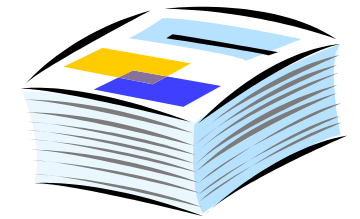
Creating a Flyer

- Flyer Features
  - Spell Checker
  - Center-alignment
  - Grammar Checker
  - Fonts
  - Font Sizes
  - Word Wrap
  - Character Effects

Spelling Checker
Correcting spelling and typing errors identified by the **spelling checker** creates an error-free and professional-looking document.

Fonts and Font Size
Using interesting **fonts** and a large **font size** in the flyer's title grabs the reader's attention.

Center-Aligning
Center-aligning all of the text in the flyer creates a comfortable, balanced appearance.

Adventure Travel Tours
New Adventures

Attention adventure travelers! Attend an Adventure presentation to learn about some of the earth's greatest unspoiled habitats and find out how you can experience the adventure of a lifetime. This year we are offering four new tours:

- India Wildlife Adventure
- Inca Trail to Machu Picchu
- Safari in Tanzania
- Costa Rica Rivers and Rainforests

Call Student Name at 1-800-555-0004 for presentation locations, full color brochures, itinerary information, costs, and trip dates.

Character Effects
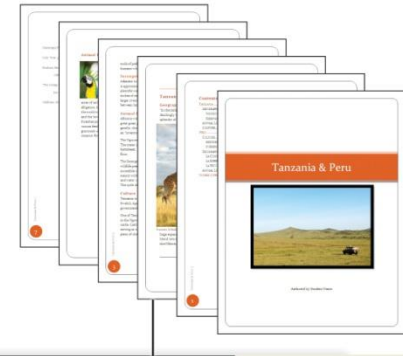Adding **character effects** such as bold and color makes important information stand out and makes the flyer more visually interesting.

Grammar Checker
Incomplete sentences, awkward wording, and incorrect punctuation are identified and corrections are offered by the **grammar checker.**

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Creating a Report

- Report Features
  - AutoCorrect
  - Footnote
  - Header or Footer
  - Captions and Cross References
  - Tables

Spreadsheet Programs

- Organize, analyze, and graph numeric data
- Spreadsheet programs
  - Microsoft Excel
    - Most widely used
  - Apple Numbers
  - OpenOffice Calc
  - Corel Quattro Pro
  - Google Sheets

Creating a Sales Forecast

- Features
  - Worksheets
  - Text entries
  - Functions
  - Cells
  - Formulas

Worksheets
Worksheets are used for a wide range of different applications. One of the most common uses is to create, analyze, and forecast budgets.

Text Entries
Text entries provide meaning to the values in the worksheet. The rows are labeled to identify the various sales and expense items. The columns are labeled to specify the months.

Functions
Functions are prewritten formulas. In this case, cell C22 (Total Expenses for February) contains the function SUM(C14:C21) rather than the formula = C14 + C15 + C16 + C17 + C18 + C19 + C20 + C21.

Cells
Cells can contain labels, numbers, formulas, and functions. A cell's content is indicated by the row and column labels. For example, cell D16 contains a number for the Payroll expense expected for March.

Formulas
Formulas provide a way to perform calculations in the worksheet. In this case, cell C24 contains the formula = C12 (Total Sales for February) – C22 (Total Expenses for February) and displays the result of the calculation for the Net Income for February.

C22 | × ✓ fx | =SUM(C14:C21)

Downtown Internet Café
First Quarter Forecast

	A	B	C	D	E	F
5		JAN	FEB	MAR	TOTAL	AVG
6	Sales					
7	Espresso	$ 13,300	$ 13,600	$ 14,200	$ 41,100	$ 13,700
8	Drip Coffee	$ 5,800	$ 6,000	$ 6,200	$ 18,000	$ 6,000
9	Food/Beverage	$ 3,600	$ 3,800	$ 3,800	$ 11,200	
10	Merchandise	$ 1,000	$ 1,100	$ 1,100	$ 3,200	
11	Computer	$ 400	$ 400	$ 400	$ 1,200	
12	Total Sales	$ 24,100	$ 24,900	$ 25,700	$ 74,700	
13	Expenses					
14	Cost of Goods	$ 7,225	$ 7,480	$ 7,690	$ 22,395	
15	Cost of Merchandise	$ 700	$ 770	$ 770	$ 2,240	
16	Payroll	$ 9,000	$ 9,000	$ 9,000	$ 27,000	$ 9,000
17	Internet	$ 325	$ 325	$ 325	$ 975	$ 325
18	Building	$ 2,100	$ 2,100	$ 2,100	$ 6,300	$ 2,100
19	Advertising	$ 600	$ 600	$ 600	$ 1,800	$ 600
20	Capital Assets	$ 1,500	$ 1,500	$ 1,500	$ 4,500	$ 1,500
21	Miscellaneous	$ 1,300	$ 1,300	$ 1,300	$ 3,900	$ 1,300
22	Total Expenses	$ 22,750	$ 23,075	$ 23,285	$ 69,110	$ 23,037
23	Income					
24	Net Income	$ 1,350	$ 1,825	$ 2,415	$ 5,590	$ 1,863
25	Profit Margin	5.60%	7.33%	9.40%	7.48%	7.48%
26			Income Year-To-Date	$ 5,590		

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Analyzing Your Data

- **Analysis Features**
  - Workbook and worksheets
  - What-if Analysis

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Presentation Graphics Programs

- Combine a variety of visual objects to create visually interesting presentations
- Presentation programs
  - Microsoft PowerPoint
  - OpenOffice Impress
  - Apple Keynote
  - Google Slides
  - Corel Presentations

Creating a Presentation

- Presentation Features
  - Document Theme
  - Animation
  - Templates

Templates
Templates provide an excellent way to quickly create a presentation by providing predesigned styles and layouts as well as suggested content based on the type of template you select.

Document Theme
To make your presentation more professional and eye-catching, you select a **document theme**, built-in sets of colors, fonts, and effects that can be quickly applied to your entire presentation.

How Does the Foundation Help?
- Provides temporary homes
- Provides obedience training
- Provides veterinary care
- Finds loving permanent homes

Who Are Animal Angels?
- Believe unwanted animals deserve a h...
- Believe you can teach an old dog new t...
- Believe you can retrain animals to be l...

Animation
To provide additional emphasis to items or show the information on a slide in phases, you add **animation** to text and objects. Finally, you use slide **transition** effects to animate the transition from one slide to the next.

Join Animal Angels
Animal Rescue Foundation
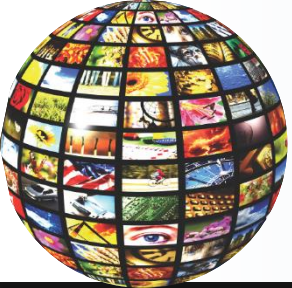*Volunteer Coordinator*

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Database Management Systems (DBMS)

- A collection of related data
- Electronic equivalent of a file cabinet
- Two most widely used systems
  - Microsoft Access
  - OpenOffice Base
  - Apple FileMaker
  - Google Obvibase

Creating a Database

- First steps is to plan
- Database Features
  - Primary Key
  - Fields
  - Record
  - Table
  - Form

Primary Key
The **primary key** is the unique employee identification number. You considered using the last name field as the primary key but realized that more than one employee could have the same last name. Primary keys are often used to link tables.

Fields
Fields are given field names that are displayed at the top of each table. You select the field names to describe their contents.

Table
Tables make up the basic structure of a relational database with columns containing field data and rows containing record information. This table records basic information about each employee, including name, address, and telephone number.

Record
Each **record** contains information about one employee. A record often includes a combination of numeric, text, and object data types.

Form
Like printed paper forms, electronic **forms** should be designed to be easy to read and use. This form makes it easy to enter and view all employees' data, including their photographs.

Basic Application Software

Specialized Applications

- Programs that more narrowly focused on specific disciplines and occupations
- Includes:
  - Graphics Programs
  - Web Authoring Programs

Graphics Programs

- Widely used in graphic arts
- Types of graphics programs are:
  - Desktop Publishing Programs
  - Image Editing Programs
  - Illustration Programs
  - Image Galleries

Desktop Publishing Programs

- Also known as Page Layout Programs
- Mix text and graphics to create brochures, newsletters, newspapers and textbooks
- Popular programs:
  - Adobe InDesign
  - Microsoft Publisher
  - QuarkXPress

Image Editors

- Also know as Photo Editors
- Editing or modifying digital photographs
- Photographs consist of thousands of pixels that form images knows as bitmaps
- Popular image editors
  - Adobe Photoshop
  - Corel PaintShop Pro
  - GIMP (GNU Manipulation Program)
  - Windows Live Photo Gallery

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Letter A

Expanded view
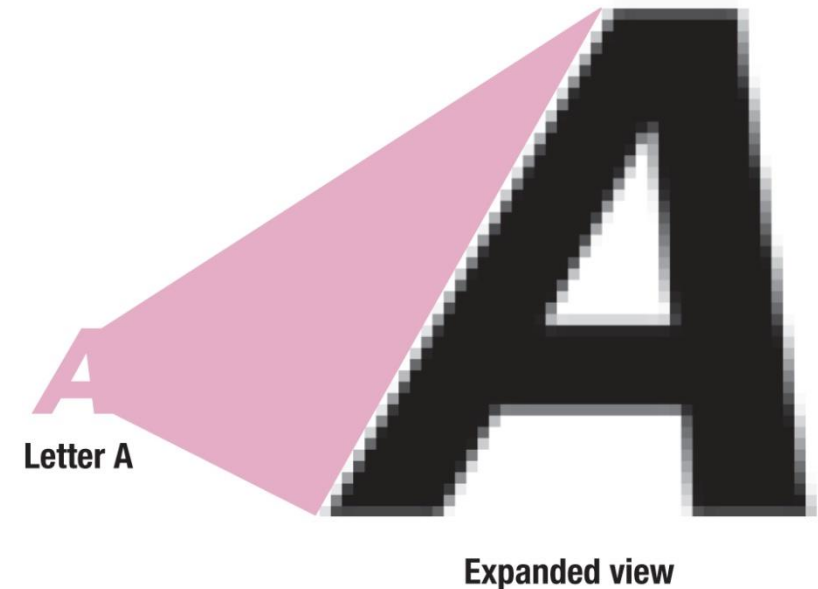
Illustration Programs

- Drawing programs
- Create and edit vector images
  - Vector illustrations
- Geometric shapes or objects
- Created by connecting lines and curves
- Defined by mathematical equations
- Popular Illustration Programs
  - Adobe Illustrator
  - CorelDraw
  - Inkscape

Video Editors

- Edit videos to enhance quality and appearance
  - Can now use your smartphone to edit videos
- Well-known programs
  - Windows Live Movie Maker
  - Apple iMovie
  - YouTube Video Editor

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Screenshot credit to come

Video Game Design Software

- Video Game Design Software helps
  - Organize thoughts
  - Guide user through game design process
    - Character development
    - Environmental design
  - Free / inexpensive video game design software
    - YoYo GameMaker
    - Stencyl
    - Unity

Screenshot of the Unity editor, courtesy of Unity Technologies

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Web Authoring Programs

- Web authoring is the creation of a site
  - Design
  - Document file displaying website's content
- Blog
  - Online diary/commentaries
- Web Authoring Programs
  - Typically used to create commercial sites
  - Web page editors or HTML editors
  - WYSIWYG (what you see is what you get)
- Most widely used programs
  - Adobe Dreamweaver
  - Microsoft Expression Web

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Mobile Apps

- Mobile Applications or Mobile Apps
  - Add-on programs for a variety of mobile devices
  - Smartphones or tablets
- Apps
  - Breadth and scope are ever-expanding
  - 500,000 just for iPhone
  - Music, videos, social networking, shopping, games

Basic Application Software

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App Stores

- App Stores
  - Provides access to mobile apps for downloads
    - Apple's App Store
      - Apple Devices
      - www.apple.com/itunes/charts
    - Google Play
      - Andriod Devices
      - Play.google.com/store/apps
    - Appszoom
      - Andriod and Apple Devices
      - www.appszoom.com

iPhone 6

Explore

Buy Now

Over one million apps.
Infinite possibilities.

For just about anything you can imagine, there's an app to help you do it. With over one million apps, the App Store has the best selection of mobile apps — many of them free — from Apple and third-party developers.² All designed for iPhone.

Learn more about apps in the App Store
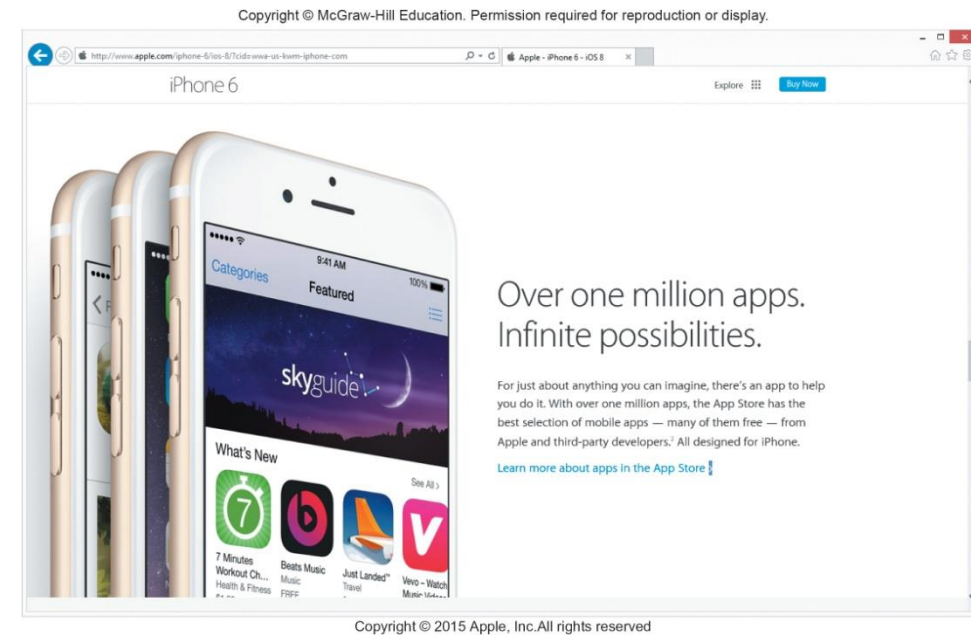
Software Suites

- Collection of separate application programs
  - Bundled together – sold as group
- Four types of suites
  1. Office suites or office software suite / productivity suites
     - Microsoft Office
     - Apple iWork, OpenOffice
  2. Cloud suites or online office suites
     - Google Docs (Making IT Work for You), Zoho, Microsoft Office 365

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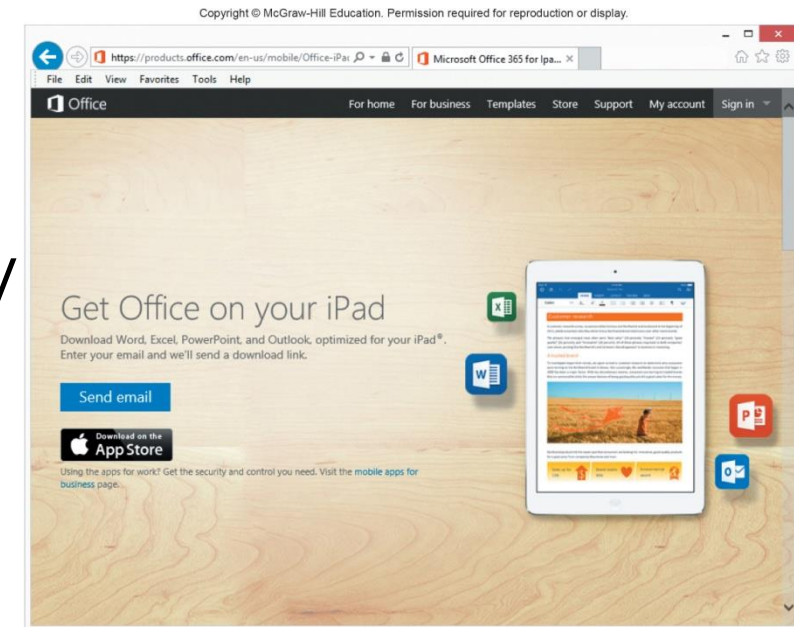
Suites continued

- Specialized suites
  - Focus on specific applications
    - Corel Draw Graphics Suite X6
    - Moneyfree Software TOTAL Planning Suite
- Utility suites
  - Designed to make computing easier and safer
    - Norton Systems Works
    - Norton Internet Security suite

Making IT Work for You - Google Docs

- Tool to create and collaborate with others
- Creating /sharing documents
  - Free and easy to use
  - Free Google account
  - Free online storage

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Google

Docs

Docs

Sheets

Slides

Settings

Help & Feedback

Drive

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People

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Thanks for your help at the meeting today!   ✓ Can edit
                                                      ✓ Can comment
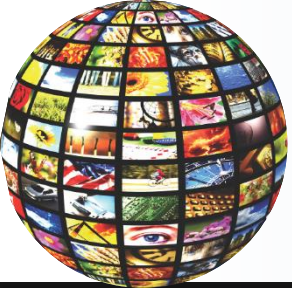   Can view

Send   Cancel   Advanced

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Basic Application Software

Careers In IT

- ● **Software Engineers**
  - ● Analyze users' needs and create application software
- ● **Attributes**
  - ● Good communication and analytical skills
  - ● Programming experience
  - ● Detail oriented
  - ● Web application experience
  - ● Analytical skills
- ● Earning potential of $55,000 to $71,000 annually

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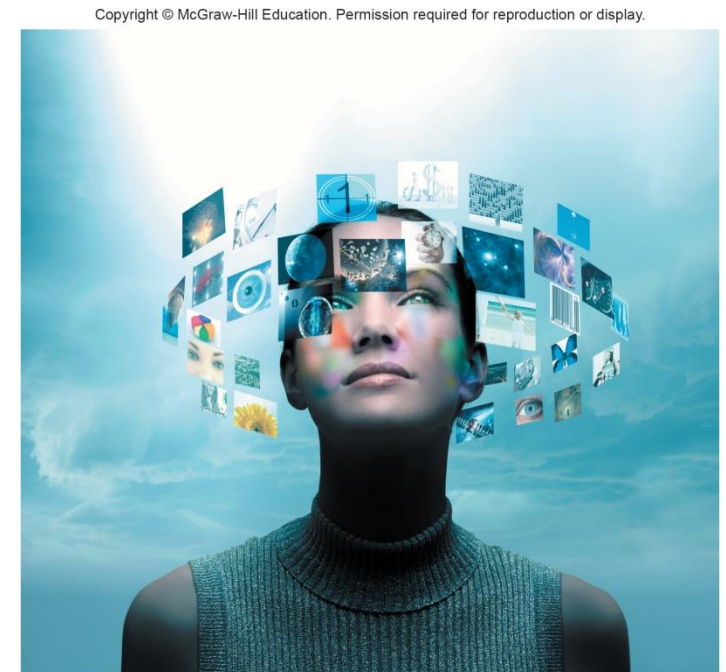
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A Look to the Future

- Next-Generation User Interfaces
  - Doubtful a single interface will serve everyone
  - Must be comfortable to use
    - Touch / interactive screen
   - Voice recognition
    - Gestures
    - Augmented Reality

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1. Explain the difference between general-purpose and specialized applications. Also discuss the common features of application programs, including those with traditional and ribbon graphical user interfaces.

2. Discuss general-purpose applications including word processors, spreadsheets, database management systems, and presentation graphics.
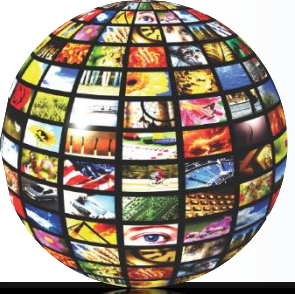
Basic Application Software

3. Discuss specialized applications, including graphics programs, video game design software, web authoring programs, and other professional specialized applications

4. Describe mobile apps, including popular apps and app stores.

5. Describe software suites, including office suites, cloud suites, specialized suites, and utility suites.

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