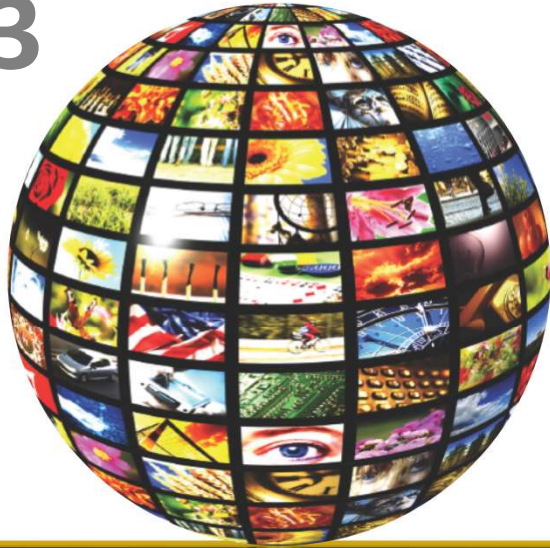


Chapter**3**

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

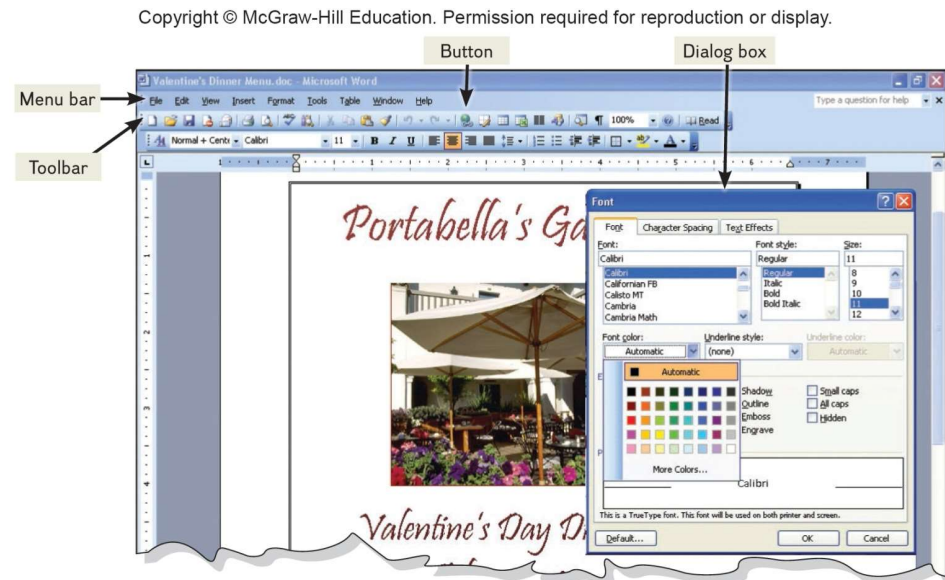
- Application software
 - End user software
 - Accomplish a variety of tasks
- Three categories
 1. General Purpose Applications
 2. Specialized Applications
 3. Mobile Apps



User Interface

Graphical User Interface (GUI) consists of:

- Icons
- Pointer
- Windows
- Menus
- Toolbars
 - Buttons
- Dialog Boxes

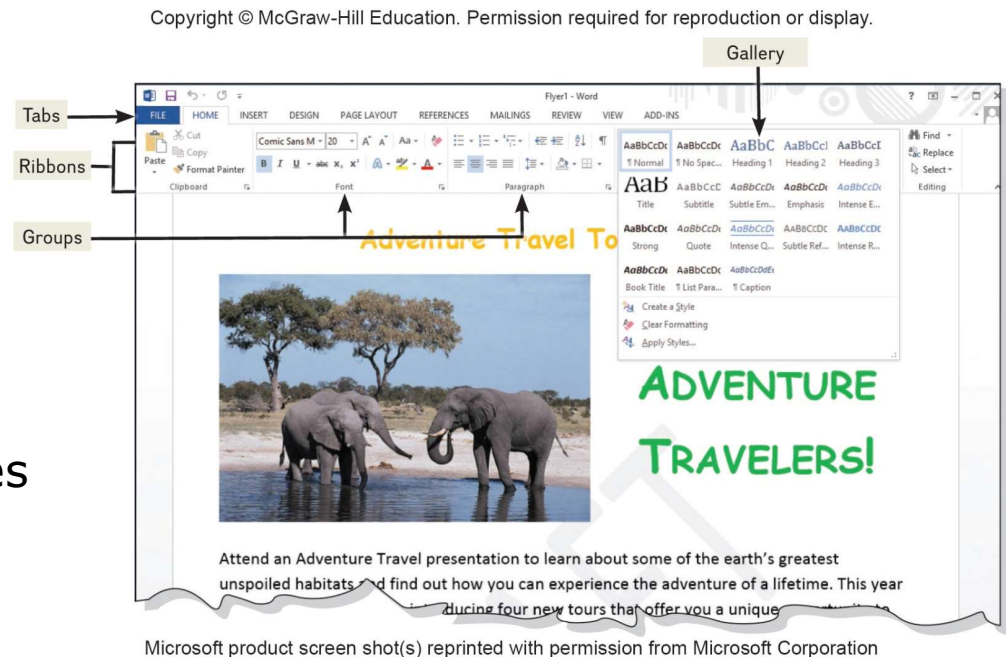


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Common Features in Microsoft

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





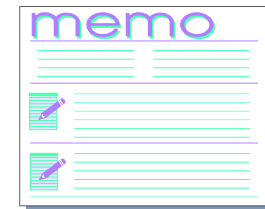
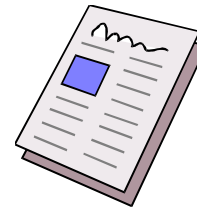
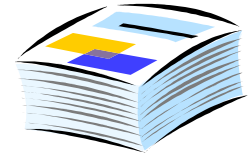
General Purpose Applications

- 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

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Spelling Checker

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

Center-Aligning

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

Fonts and Font Size

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

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**.



- ## Basic Application Software





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

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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.

Downtown Internet Café First Quarter Forecast						
	JAN	FEB	MAR	TOTAL	AVG	
Sales						
Espresso	\$ 13,300	\$ 13,600	\$ 14,200	\$ 41,100	\$ 13,700	
Drip Coffee	\$ 5,800	\$ 6,000	\$ 6,200	\$ 18,000	\$ 6,000	
Food/Beverage	\$ 3,600	\$ 3,800	\$ 3,800	\$ 11,200		
Merchandise	\$ 1,000	\$ 1,100	\$ 1,100	\$ 3,200		
Computer	\$ 400	\$ 400	\$ 400	\$ 1,200		
Total Sales	\$ 24,100	\$ 24,900	\$ 25,700	\$ 74,700		
Expenses						
Cost of Goods	\$ 7,225	\$ 7,480	\$ 7,690	\$ 22,395		
Cost of Merchandise	\$ 700	\$ 770	\$ 770	\$ 2,240		
Payroll	\$ 9,000	\$ 9,000	\$ 9,000	\$ 27,000	\$ 9,000	
Internet	\$ 325	\$ 325	\$ 325	\$ 975	\$ 325	
Building	\$ 2,100	\$ 2,100	\$ 2,100	\$ 6,300	\$ 2,100	
Advertising	\$ 600	\$ 600	\$ 600	\$ 1,800	\$ 600	
Capital Assets	\$ 1,500	\$ 1,500	\$ 1,500	\$ 4,500	\$ 1,500	
Miscellaneous	\$ 1,300	\$ 1,300	\$ 1,300	\$ 3,900	\$ 1,300	
Total Expenses	\$ 22,750	\$ 23,075	\$ 23,285	\$ 69,110	\$ 23,037	
Income						
Net Income	\$ 1,350	\$ 1,825	\$ 2,415	\$ 5,590	\$ 1,863	
Profit Margin	5.60%	7.33%	9.40%	7.48%	7.48%	
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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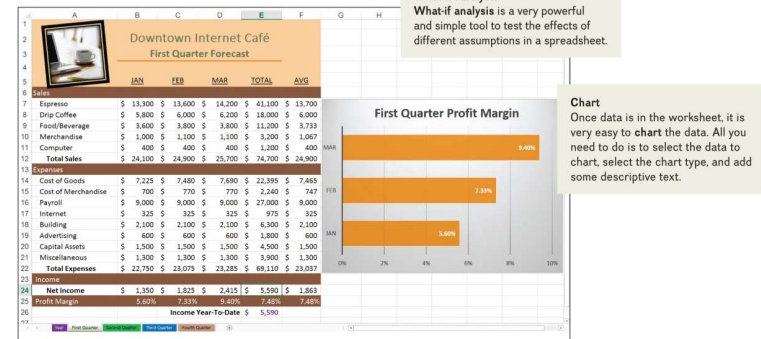
Workbook
The first worksheet in a workbook is often a summary of the following worksheets. In this case, the first worksheet presents the entire year's forecast. The subsequent worksheets provide the details.

Downtown Internet Café Annual Forecast

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Sales									
Espresso	\$13,300	\$13,600	\$14,200	\$14,400	\$15,200	\$15,500	\$15,300	\$15,300	\$15,800
Drip Coffee	\$3,800	\$6,200	\$6,200	\$6,200	\$6,200	\$6,200	\$6,200	\$6,200	\$6,200
Food/Beverage	\$3,600	\$3,800	\$3,800	\$3,800	\$3,800	\$3,800	\$3,800	\$3,800	\$3,800
Merchandise	\$1,000	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100
Computer	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400
Total Sales	\$24,100	\$24,900	\$25,700	\$25,900	\$27,300	\$27,800	\$28,000	\$28,100	\$28,900
Expenses									
Cost of Goods	\$7,225	\$7,480	\$7,690	\$7,620	\$7,840	\$8,015	\$8,000	\$8,025	\$8,300
Cost of Merchandise	\$700	\$770	\$770	\$1,000	\$1,050	\$1,050	\$1,400	\$1,400	\$1,400
Payroll	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
Internet	\$325	\$325	\$325	\$325	\$325	\$325	\$325	\$325	\$325
Building	\$2,100	\$2,100	\$2,100	\$2,100	\$2,100	\$2,100	\$2,100	\$2,100	\$2,100
Advertising	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600
Capital Assets	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Miscellaneous	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300
Total Expenses	\$22,750	\$23,075	\$23,395	\$23,355	\$23,205	\$23,630	\$24,225	\$24,250	\$24,525
Income									
Net Income	\$1,350	\$1,825	\$2,415	\$2,545	\$4,095	\$4,170	\$3,775	\$3,850	\$4,375
Profit Margin	5.60%	7.40%	9.40%	9.80%	14.90%	14.90%	13.40%	13.90%	15.10%
Quarter Profit Margin	7.40%								
Income Year-To-Date	\$5,590								

Sheet Name
Each worksheet has a unique sheet name. To make the workbook easy to navigate, it is a good practice to always use simple yet descriptive names for each worksheet.

What-If Analysis
What-if analysis is a very powerful and simple tool to test the effects of different assumptions in a spreadsheet.



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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

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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 home
- Believe you can teach an old dog new tricks
- Believe you can retrain animals to be loving



Join Animal Angels

Animal Rescue Foundation
Volunteer Coordinator

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.

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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

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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.

Employee ID	Last Name	First Name	Address	City	State	ZIP Code	Home Phone	Gender	Birth Date	Photo/Resume
12055	Lamb	Jim	5401 E. Thomas Rd.	Landis	CA	92120-1741	(602) 555-4765	F	6/14/1986	[Photo]
12020	Larson	Alicia	145 W. Mill Ave.	Malden	CA	92121-1740	(941) 555-4712	F	6/21/1993	[Photo]
11446	Larwell	Deanna	4395 S. 9th Ln.	Landis	CA	92120-1741	(941) 555-4742	M	9/12/1982	[Photo]
11747	Leftow	Ryan	158 Maple Dr.	Malden	CA	92121-1740	(507) 555-2805	M	11/11/1991	[Photo]
12085	Leslow	Kristina	1047 E. Watson	Landis	CA	92120-1741	(941) 555-4361	F	2/16/1985	[Photo]
11406	Lipert	Melva	4290 E. Alameda Dr.	Malden	CA	92121-1740	(507) 555-4856	F	2/7/1985	[Photo]
10471	Marchant	Roberta	544 Palm Avenue	Landis	CA	92120-1741	(507) 555-4990	F	1/10/1980	[Photo]
11943	Marfisi	Judie	1020 First Ave.	Malden	CA	92121-1740	(941) 555-1040	F	12/20/1982	[Photo]
11635	Martinez	Joan	7111 E. Roosevelt Dr.	Malden	CA	92121-1740	(507) 555-2935	M	12/20/1982	[Photo]
12207	Mayra	-----	-----	-----	CA	92120-1741	(941) 555-1091	F	6/12/1982	[Photo]
10125	Menger	-----	-----	-----	CA	92121	(507) 555-4562	M	10/2/1984	[Photo]
10909	Nease	-----	-----	-----	CA	92121-2232	(507) 555-9999	F	12/1/1989	[Photo]
10017	Nichols	-----	-----	-----	CA	92120-1741	(507) 555-0901	F	5/16/1972	[Photo]
12194	Polinski	-----	-----	-----	CA	92120-1741	(507) 555-3111	M	7/7/1977	[Photo]
12167	Rath	-----	-----	-----	CA	92121-1740	(507) 555-1018	M	3/13/1990	[Photo]
12094	Rodriguez	-----	-----	-----	CA	92122-1268	(507) 555-4712	F	1/16/1988	[Photo]
12100	Rodriguez	-----	-----	-----	CA	92121-1741	(507) 555-1119	M	11/1/1986	[Photo]
11805	Royle	-----	-----	-----	CA	92121-1740	(941) 555-4512	F	9/12/1988	[Photo]
11912	Ruiz	-----	-----	-----	CA	92121	(507) 555-4789	F	9/10/1981	[Photo]
10000	Rutherford	Don	1113 S. Williams Ave.	Malden	CA	92121	(507) 555-3730	M	4/2/1982	[Photo]
12297	Rogers	Patricia	7413 Turquoise	Chesapeake	CA	92122-1268	(941) 555-4519	F	8/16/1980	[Photo]
10787	Roman	Arlita	1148 S. Bala Dr.	Malden	CA	92121-1740	(507) 555-4870	F	3/12/1991	[Photo]
12018	Ross	Carlyn	4012 First St.	Malden	CA	92121-1740	(507) 555-4120	M	2/22/1987	[Photo]
10835	Ruiz	Enrique	15 Palm St.	Chesapeake	CA	92122-1268	(507) 555-4091	M	12/10/1982	[Photo]
10121	Salm	Ging	80 E. Riverside Ave.	Chesapeake	CA	92122	(507) 555-4455	M	9/10/1987	[Photo]
10012	Schiff	Chad	216 N. Carlton Dr.	-----	-----	-----	-----	-----	-----	-----
12114	Schneider	Paul	1713 Jackson Ave.	-----	-----	-----	-----	-----	-----	-----
10411	Spiller	Tammy	90 Royal Dr.	-----	-----	-----	-----	-----	-----	-----
12166	Stacey	David	737 S. College Rd.	-----	-----	-----	-----	-----	-----	-----
13007	Steele	Jeff	1013 E. Holly Ln.	-----	-----	-----	-----	-----	-----	-----
12068	Stewart	Valerie	14 University Dr.	-----	-----	-----	-----	-----	-----	-----
12083	Sullivan	Marie	78 Omega Drive	-----	-----	-----	-----	-----	-----	-----
12067	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
10890	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
12104	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Employee Records

Employee ID: 08191

Last Name: Ruiz

First Name: Enrique

Address: 15 Palm St.

City: Chesapeake

State: CA

ZIP Code: 92122-1268

Home Phone: (941) 555-4091

Gender: M

Birth Date: 12/10/1982

Photo/Resume: [Photo]

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

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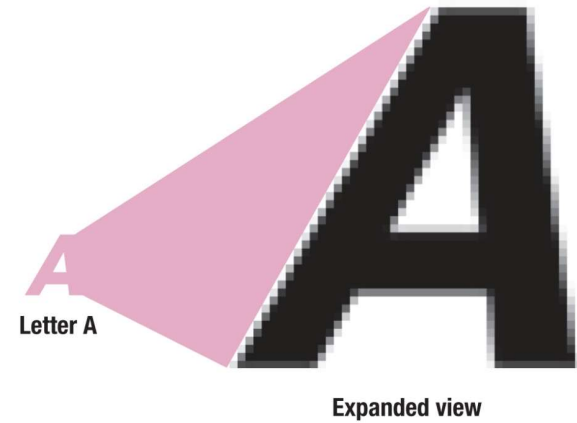




Illustration Programs

- 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

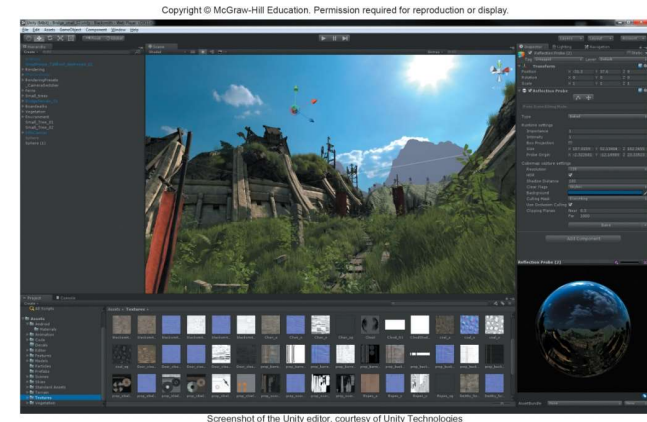


Screenshot credit to come



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





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



Mobile Apps

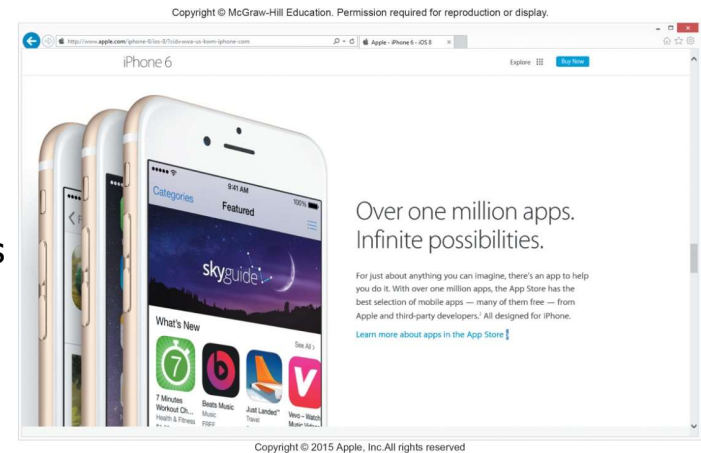
- Mobile Applications or Mobile Apps
 - Add-on programs for a variety of mobile devices
 - Smartphones or tablets
- Apps
 - Breadth and scope are ever-expanding
 - 500,000 just for iPhone
 - Music, videos, social networking, shopping, games





App Stores

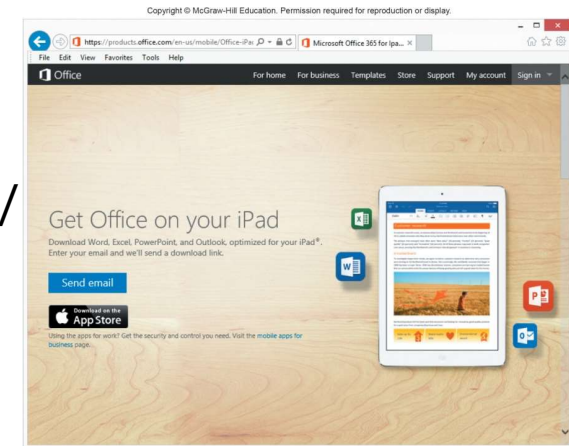
- App Stores
 - Provides access to mobile apps for downloads
 - Apple's App Store
 - Apple Devices
 - www.apple.com/itunes/charts
 - Google Play
 - Android Devices
 - [Play.google.com/store/apps](http://play.google.com/store/apps)
 - Appszoom
 - Android and Apple Devices
 - www.appszoom.com





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





Suites continued

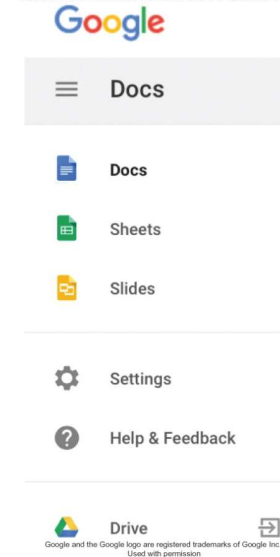
- Specialized suites
 - Focus on specific applications
 - Corel Draw Graphics Suite X6
 - Moneyfree Software TOTAL Planning Suite
- Utility suites
 - Designed to make computing easier and safer
 - Norton Systems Works
 - Norton Internet Security suite



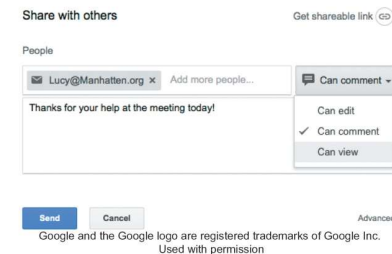
Making IT Work for You - Google Docs

- 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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Careers In IT

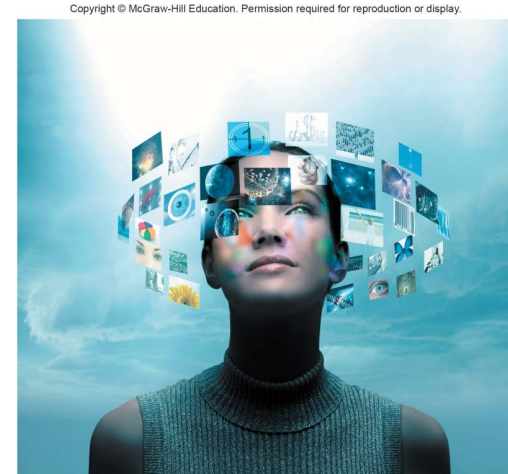
- Software Engineers
 - Analyze users' needs and create application software
- Attributes
 - Good communication and analytical skills
 - Programming experience
 - Detail oriented
 - Web application experience
 - Analytical skills
- Earning potential of \$55,000 to \$71,000 annually





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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Open-Ended Questions (Page 1 of 2)

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.



Open-Ended Questions (Page 2 of 2)

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.