

SCSD1513 Information Systems and Information Technology

Md Hafiz Selamat
Faculty of Computing
Universiti Teknologi Malaysia



SCSD1513 Information Systems and Information Technology

Basic Application Software



Competencies (Page 1 of 2)

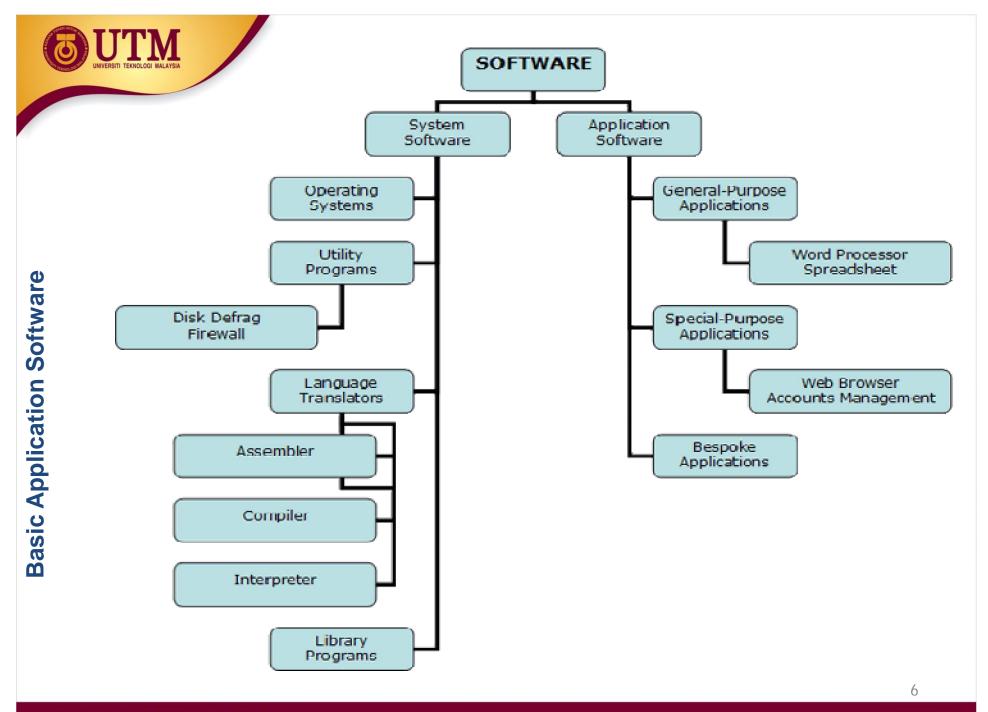
- Discuss common features of most software applications.
- Discuss word processors and word processing features.
- Describe spreadsheets and spreadsheet features.
- Discuss database management systems and database management features.



Competencies (Page 2 of 2)

- Describe presentation graphics and presentation graphics features.
- Discuss integrated packages.
- Describe software suites including 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 microcomputer.

 Competent end users need to understand the capabilities of basic application software including:

- Word processors
- Spreadsheets
- Database management systems
- Presentation programs





Application Software

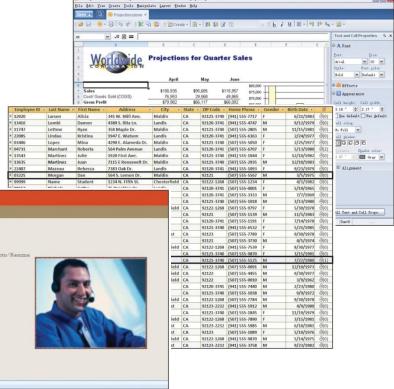
 Application software is end user software that is used to accomplish a variety of tasks



 Basic applications (focus of this chapter)

Specialized applications







Basic Applications

- Basic applications are also called general-purpose
- Common types
 - Word processors
 - Spreadsheets
 - Database management systems
 - Presentation graphics





Specialized Applications

- Also known as special-purpose applications
- There are thousands of programs more narrowly focused on specific disciplines and occupations
- Includes:
 - Graphics programs
 - Audio and video editors
 - Multimedia authoring programs
 - Web authoring programs
 - Virtual reality programs
 - ... and more

Return



Common Features

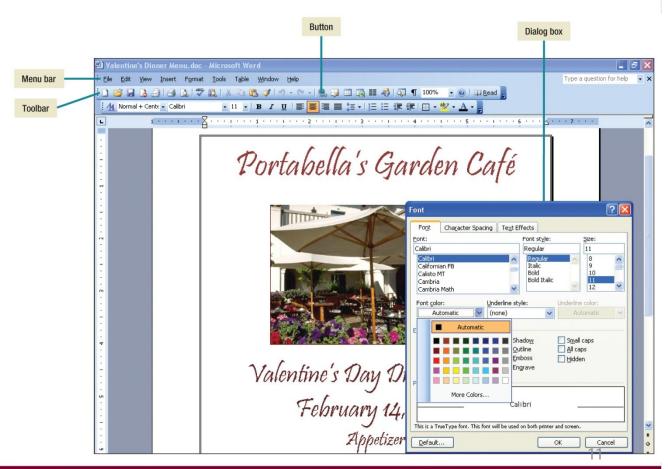
Graphical User Interface (GUI)

Icons

Windows

Menus

Toolbars





Toolbars

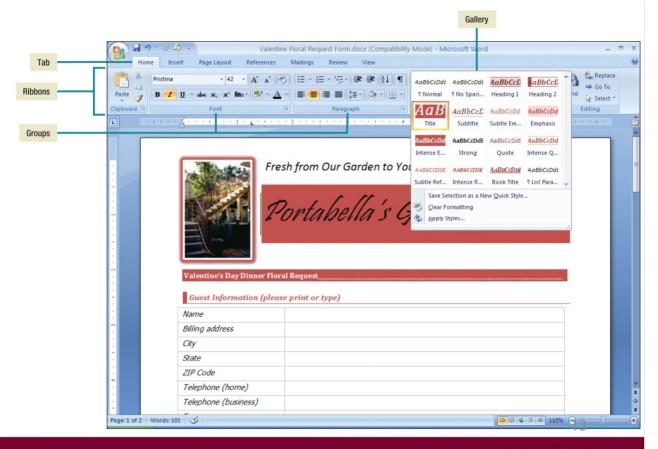
- Quick access to commonly used commands
- Contains buttons that provide shortcuts
- Examples
 - Standard Toolbar in Microsoft
 Office Excel 2003





Microsoft Office 2007 & 2010

- Office 2010 is the latest version of Microsoft Office
- Office 2007 introduced a new interface
 - Ribbons
 - Tabs
 - Galleries





Making IT Work for You Speech Recognition

- Allows your voice to control application software
- For best results, use your voice along with your mouse and keyboard
 - Train the software
 - Control a program
 - Dictate a document



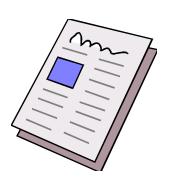


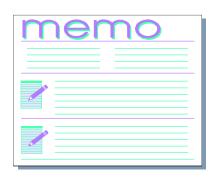
Word Processors

- Used to create text-based documents
 - Memos, letters, and faxes
 - Newsletters, manuals, and brochures



- Word processing programs
 - Microsoft Word
 - Corel WordPerfect
 - Apple Pages

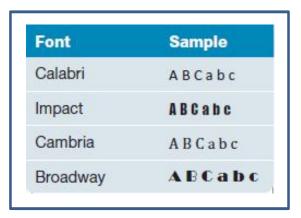






Word Processor Features

- Word Wrap
- Editing
 - Thesaurus
 - Find and Replace
 - Spelling and grammar checkers
- Formatting
 - Font and font sizing
 - Character effects
 - Bulleted and numbered lists





Word Processor Case

Creating a Flyer

Creating a Report

Adventure Travel Tours

New Adventures



Attention 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 we are introducing four new tours that offer you a unique opportunity to combine many different outdoor activities while exploring the world.

India Wildlife Adventure

Inca Trail to Machu Picchu

Safari in Tanzania

Costa Rica Rivers and Rainforests

Presentation dates and times are January 5 at 7:00 p.m., February 3 at 7:30 p.m., and March 8 at 7:00 p.m. All presentations are held at convenient hotel locations.

The hotels are located in downtown Los Angeles, in Santa Clara, and at the LAX airport.

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



Creating a Flyer

Spelling Checker

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

Adventure Travel Tours New Adventures



Attention adventure travelers! Attend an Adventure presentation to learn about some of the earth's greatest unspailed 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.

Fonts and Font Size

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

Word Wrap

The automatic word wrap feature frees you to focus your attention on the content of the flyer.

Character Effects

Adding character effects such as bold and color make important information stand out and make the flyer more visually interesting.

Grammar Checker

Center Aligning

Center aligning all of

the text in the flyer creates a comfortable, balanced appearance.

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

Return



Creating a Report

Captions and Cross References

Identifying figures with captions and using cross references in a report make the report easier to read and more professional.

Tanzania & Peru

Tanzania

Geography and Climate

"In the midst of a great wilderness, full of wild beasts...I fancied I saw a summit...covered with a dazzlingly white cloud (qtd. in Cole 56). This is how Johann Krapf, the first outsider to witness the splendor of Africa's highest mountain, described Kilimaniaro. The peak was real, though the white

clouds he "fancied" he saw were the dense layer of snow that coats the mountain.

Tanzania is primarily a plateau that slopes gently downward into the country's five hundred miles of Indian Ocean coastline. Nearly three-quarters of Tanzania is dry savannah, so much so that the Swahillword for the central plateau is nyike, meaning "wasteland." Winding through these flatlands is the Great Rift Valley, which forms narrow and shallow lakes in its long path. Several of these great lakes form a belt-like oasis of green vegetation. Contrasting with the severity of the plains are the coastal areas, which are lush with ample rainfall. In the north the plateau slopes dramatically into Mt. Kilimaniaro.



Some of Tanzania's most distinguishing geographical features are found in the Ngorongoro Conservation Area. The park is composed of many craters and gorges, as well as lakes, forest, and plains. Among these features is the area's namesake, the Ngorongoro Crater. The Crater is a

huge expanse, covering more than one hundred square miles. On the Crater's floor, grasslands blend into swamps, lakes, rivers, and woodland. Also within the Conservation Area's perimeter is the Olduvai Gorge, commonly referred to as the "Cradle of Mankind," where in 1931 the stone

¹Mt Kilimanjaro is _{19,34}0 feet high, making it the fourth tallest mountain in the world.

*The Conservation Area is a national preserve spanning 3,196 square miles.

AutoCorrect

As you enter text, you occasionally forget to capitalize the first word in a sentence. Fortunately, AutoCorrect recognizes the error and automatically capitalizes the word.

Citations

The sources of information you used in developing the report appear in citations.

Header or Footer

Page numbers and other documentrelated information can be included in a header or footer.

Footnote

To include a note about Mt. Kilimanjaro, you use the footnote feature. This feature inserts the footnote superscript number and automatically formats the bottom of the page to contain the footnote text.

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Spreadsheets

Programs that organize, analyze, graph, and otherwise manipulate numeric data

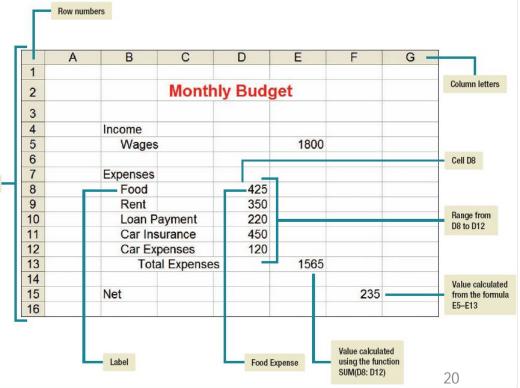
Worksheet

Spreadsheet programs

Microsoft Excel

Corel QuattroPro

Apple iWork'sNumbers





Spreadsheet Features

Workbook files

Worksheet or spreadsheet or sheet

- Formulas
- Functions
- Analytical graphs or charts
- What-if Analysis

Туре	Function	Calculates
Financial	PMT	Size of loan payments
	PV	Present value for an investment
Mathematical	SUM	Sum of the numbers in a range of cells
	ABS	Absolute value of a number
Statistical	AVERAGE	Average or mean of the numbers in a range of cells
	MAX	Largest number in a range of cells
Logical	IF	Whether a condition is true; if true, a specified value is displayed; if not true, then a different specified value is displayed
	AND	Whether two conditions are true; if both are true, then a specified value is displayed; if either one or both are not true, then a different specified value is displayed

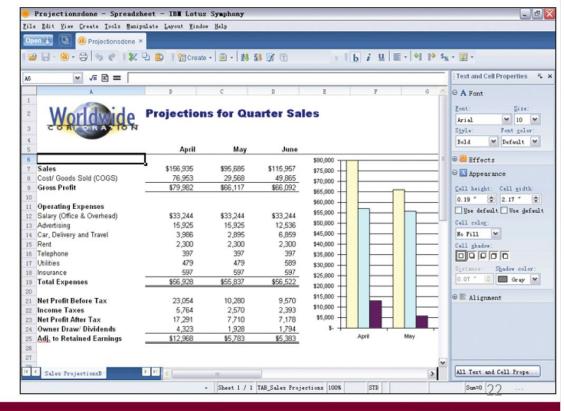


Spreadsheet Case

Creating a Sales Forecast

Creating a Chart

Analyzing Your Data





Creating a Sales Forecast

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.

	A	В	С	D	E	F	
2		Τ.	4	T4		.ez	
3 4 5		יע		vn Intei Quarter Fo		ire	
6		JAN	FEB	MAR	TOTAL	AVG	
7	Sales						
8	Beverage	\$ 13,600	\$ 14,600	\$ 15,600	\$ 43,800	\$ 14,600	
9	Food	\$ 7,100	\$ 7,300	\$ 7,400	\$ 21,800	\$ 7,267	
10	Internet	\$ 4,000	\$ 4,300	\$ 4,500	\$ 12,800	\$ 4,267	
11	Merchandise	\$ 3,100	\$ 3,200	\$ 3,300	\$!	11	
12	Total Sales	\$ 27,800	\$ 29,400	\$ 30,800	\$ 8 Ce	lls	
13	Expenses				Cell	s can con	tain labels, numbers,
14	Cost of Goods	\$ 6,950	\$ 7,300	\$ 7,600	\$ 2 forn	nulas, and	functions. A cell's
15	Payroll	\$ 7,500	\$ 7,500	\$ 7,500	\$ 2 con	tent is ind	icated by the row and
16	Computers	\$ 6,400	\$ 6,400	\$ 6,400	\$ 1! colu	ımn labels	. For example, cell D15
17	Lease	\$ 5,500	\$ 5,500	\$ 5,500			mber for the Payroll
18	Marketing	\$ 1,000	\$ 1,000	\$ 1,000			ected for March.
19	Miscellaneous	\$ 1,500	\$ 1,500	\$ 1,500	\$.	ciise expe	
20	Total Expenses	\$ 28,850	\$ 29,200	\$ 29,500	\$ 87,550	\$ 29,183	
21	Income						
22	Net Income	\$ (1,050)	\$ 200	\$ 1,300	\$ 450	\$ 150	1
23	Profit Margin	-3.73%	0.68%	4.22%	0.51%		
24			Income Y	ear-To-Date	\$ 450		

Functions

One advantage of using functions rather than entering formulas is that they are easier to enter. In this case, cell C20 (Total Expenses for February) contains the function SUM(C14: C19) rather than the formula = C14+C15+ C16+C17+C18+C19.

Formulas

Formulas provide a way to perform calculations in the worksheet. In this case, Cell B22 (Net Income for January) contains the formula = B12 (Total Sales for January) - B20 (Total Expenses for January).

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Creating a Chart

Chart Titles

Including a chart title and subtitle as well as titles along the x-axis and y-axis make the chart easier to read and understand.

Chart Types

To display the monthly expenses over the quarter, you consider several different chart types before selecting the 3D column chart. The 3D variation of the chart provides an interesting depth perception to the columns.

Chart

Once data is in the worksheet, it is very easy to chart the data. All you need to do is to select the data to chart, select the chart type, and add some descriptive text.







Analyzing Your Data

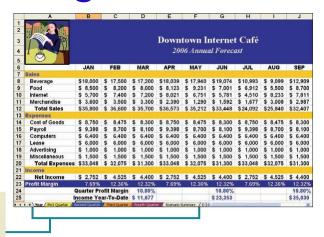
Workbook

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.

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.

would need to be adjusted to meet that goal.



What-If Analysis

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

C	3	115														
Sales			JAN		FEB		MAR		TOTAL		AVG		Fi	rst Quarter I	Profit Margin	
		4	18,000		17,500	3	17,200	\$	52,700	\$	17,587		- 1	or donato.	Territ intel giri	
Enn	rerage	\$	8,500	3	9,200		8,000		24,700		8,233					
Inter		\$	5,700		7.400		7,200		20,300		8,787	MAR	_		12,32%	
	rriet chandise	\$	3,600		3,500		3,300		10.400		3,467	IIID-IIX			12.DE III	
	otal Sales	\$	35,800		38,800	\$	35,700		108,100		38.033					
Exper			33,000	4	30,000	4	32,100	\$	100,100	4	30,033	FER	12.36%			
	at of Goods.	\$	8.750	2	8.475	\$	8,300	\$	25.525	\$	8.508	FEB	12.36%			
Pay		\$	9.398		8,700		8,100		26,198	\$	8,733					
	nputers	\$	B.400		8,400		6,400		19,200		6,400					
Lea		\$	6,000			\$	6,000		18,000		6,000	JAN		7.69%	6	
Mar	keting	\$	1,000		1,000		1,000		3,000		1,000				-	
Misc	cellaneous	\$	1,500	\$	1,500	\$	1,500	\$	4,500	\$	1,500	0.0	196	5.00%	10.00%	15.00%
Т	otal Expenses	\$	33,048	\$	32,075	\$	31,300	\$	96,423	\$	32,141	0.0		5.00%	10.00%	13.00 //
Incom	16												_			
N	let Income	\$	2,752	\$	4,525	\$	4,400	\$	11,677	\$	3,892	Goal Se	ek		X	
Profit	Margin		7.69%				12.32%		10.80%			Set cell:			1	
					Income Y	ear	-To-Date	\$	11,677			100		E23		
												To yaluc		15		
	8		- 6									By chang	ing cell:	\$E\$10	3	
	Goal S	e	ek													
						r.			1.1					K Can	.61	
	A comm	on	goal	ın	many	tir	nancia	IV	vorkbo	00	(S					
									it. Go							

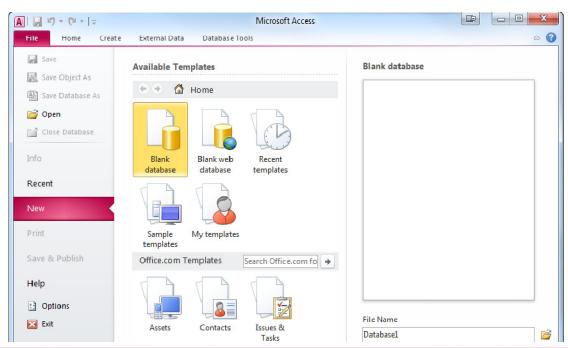
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Database Management Systems (DBMS)

- A database is a collection of related data
- Comprised of tables, queries, forms, and reports
- Microsoft Access is the most popular desktop database management software





Database Features

- Relational
- Tables
 - Records
 - Fields
- Record sorting
- Queries
- Forms
- Reports

Employee III	- Last Name -	First Name -	Address -	City -	State -	ZIP Code -	Home Phone -	Gender -	Birth Date -	8
+ 12920	Larson	Alicia	345 W. Mill Ave.	Maldin	CA	92121-3740	(941) 555-7717	F	6/21/1983	Ø(0)
± 13416	Lembi	Damon	4389 S. Riha Ln.	Landis	CA	42120-3741	(941) 555-4747	M	9/12/1979	dign
± 11747	Lettow	Ryan	358 Maple Dr.	Maldin	CA	92121-3740	(507) 555-2805	M	11/15/1961	8(0)
¥ 22085	Lindau	Kristina	1947 L. Wetson	Landis	CA	92120-3741	(941) 555-6363	f.	2/24/1977	8(0)
E 05400	Lopez	Minu	4290 E. Alameda Dr.	Maldin	CA	92121-1740	(507) 555-5050	r	2/25/1977	(810)
* 04/31	Marchant	Koberta	504 Palm Avenue	Landis	CA	92120-3/41	(507) 555-6707	1	5/13/1980	(8)(2)
H 13543	Martinez	Julie	1920 First Ave.	Maldin	CA	92121-3740	(941) 555-1044	F	12/10/1982	(B(0)
+ 13635	Martinez	Juan	7115 E Roosevelt Dr.	Maldin	CA	92121-3740	(507) 555-2935	M	12/10/1983	8(0)
+ 22407	Mazeau	Rebecca	7383 Oak Dr.	Landis	CA	92120-3741	(941) 555-1093	F	9/23/1979	@(0)
+ 03225	Morgan	Dan	564 S. Lemon Dr.	Maldin	CA	92121	(507) 555-5567	IM	3/5/1975	S(0)
H 00000	Name	Student	1234 N. Fifth St.	Chesterfield	CA	42122-1268	(507) 555-1234	F	4/1/1982	- Øjrn
+ 00617	Nichols	Cathy	75 Brookles Dr.	Landix	CA	92130-3741	(507) 555-0001	\$	5/19/1965	(B(0)
¥ 00907	Pennington	Mark	23 Mill Ave.	Landis	CA	92120-3741	(507) 555-3333	M	7/7/1969	8(0)
± 12194	Pulunsky	Mitch	8701 E. Sheridan	Maldin	CA	92121-1740	(507) 555-1018	IM	3/15/1980	(810)
* 1284/	Hath	Kathy	8/ E. Aurora Ave.	Chesterfield	CA	92122-1208	(507) 555-9797	+	5/30/19/8	Str.
± 12594	Reddie	Mark	900 W. Campus Dr.	Maldin	CA	92121	(507) 555-1139	M	11/5/1983	\$10
± 12230	Reddie	Suzanne	932 E. Parkway Dr.	Landis	CA	92120-3741	(507) 555-1191	F	7/14/1978	810
± 13005	Reilly	Emily	125 N. Marigold St.	Maldin	CA	92121-3740	(041) 555-6532	F	5/21/1985	610
12012	Richards	Melissa	5522 W. Marin Lane	River Mist	CA	92123	(507) 555-7789	F	9/30/1978	B(0)
± 06000	Bobertson	RTrik	832 S. William Ave.	Maldin	CA	42121	(507) 555-3730	M	4/5/1974	वीत्र
¥ 22307	Rogondino	Patricia	7582 Turquoise	Chesterfield	CA	92132-1268	(941) 555-7539	1	8/30/1977	810
+ 07287	Roman	Anita	2348 S. Bala Dr.	Maldin	CA	92121-3740	(507) 555-9670	٢	3/15/1981	810
+ 12918	Buic	Carlos	10101 First St.	Maldin	CA	92121-3740	(507) 555-5125	M	7/27/1980	6(1)
+ 08391	Huiz	Enrique	35 Palm St.	Chesterfield	CA	92122-1208	(507) 555-0091	BVI .	12/10/19/3	8(0)
± 04321	Sabin	Greg	90 E. Rawhide Ave.	Chesterfield	CA	92122	(507) 555-4455	M	9/30/1977	Ø10
+ 00212	Schiff	Chad	235 N. Cactus Dr.	Chesterfield	CA	92122	(507) 555-0010	M	3/9/1962	810
+ 22114	Schneider	Paul	1731 Jackson Ave.	Landis	CA	92120-3741	(941) 555-7440	M	2/23/1980	300
+ 01421	Spehr	Timothy	90 Royal Dr.	Maldin	CA	92121-3740	(507) 555-1038	M	9/9/1972	\$10
+ 12366	Stacey	David	737 S. College Rd.	Chesterfield	CA	92122-1268	(507) 555-7784	M	9/30/1978	Miles
+ 13397	Steele	Juff	1011 F. Holly Ln.	River Mist	CA	92123-2212	(001) 555-2012	M	4/9/1980	610
12668	Stucland	Valerie	34 University Dr.	Moldin	CA	92121 3740	(507) 555 1845	F	11/19/1979	8(0)
12503	Sullivan	Marie	78 Omega Drive	Chesterfield	CA	92122-1208	(507) 555-7890	r	1/15/1981	610
12867	Tallc	Elvis	21 Oasls St.	River Mist	CA	92123-2232	(941) 555-5985	D/I	6/10/1981	810
+ 03890	Thi	Erona	7867 Forest Ave.	River Mist	CA	92123	(507) 555-1089	F	5/10/1976	510
+ 22304	Torcivia	Peter	904 S. Dorsey Dr.	Chesterfield	CA	92122-1268	(941) 555-9870	M	5/14/1975	610
+ 22100	Vaccaro	Louis	289 E. Heather Ave.	River Mist	CA	92123-2232	(941) 555-3758	M	9/23/1982	Sto



Database Case

Creating a Database

Creating a Query



Creating a Database



Return



Creating a Query

Query

Your query requests the names, addresses, and telephone numbers of all employees living in Maldin or Chesterfield who work in Landis.

Joined

Since the query involves two tables, they must be linked or joined by common fields. You chose to link the tables by the key field Employee ID.



Criteria

The query criteria to produce the car pool list requires that both the Employee Records table and the jobs table be consulted. The criteria identifies all employees who work at Landis and live either in Maldin or Chesterfield.

Report

From a variety of different report formats, you selected this format to display the names, addresses, and telephone numbers of all employees who might commute from either Maldin or Chesterfield to Landis.

Sorted

To make the report easier for employees to locate employees who live in the same city, you sorted the query results alphabetically by city.



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Presentation Graphics

Programs that create visually interesting

presentations

Presentation programs

- Microsoft PowerPoint
- Corel Presentations
- Apple Keynote





Presentation Graphics Features

- Slides or pages
- AutoContent wizard
- Design templates
- Content templates
- Animations
- Transitions
- Master slide



Presentation Graphics Case

Creating a Presentation

Updating a Presentation



Creating a Presentation

Customize the Template

You customize the presentation by replacing the sample text and modifying the design as needed. This includes inserting and deleting slides as needed, rearranging slide order, and inserting graphics and pictures.

How Does The Foundation Help?



- Provide temporary homes
- Provide obedience training
- Provide veterinary care
- Find loving permanent homes

*Who Is An Animal Angel?



- Believes unwanted pets deserve a home
- Believes you can teach an old dog nev
- Believes you can retrain animals to be

Join Animal Angels

Animal Rescue Foundation

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.

Return



Updating a Presentation

Document Theme

To make your presentation more professional and eyecatching, 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?

- Provide temporary homes
- Provide obedience training
- Provide veterinary care
- Find loving permanent hor

- Believes unwanted pets deserve a home
- Believes you can teach an
- Believes you can retrain a

Rehearse

Now that the presentation is nearly complete, you rehearse it by running it electronically on the computer screen and planning what you want Who Is An Anin to say to supplement the information on the slides.





Join Animal Angels

Animal Rescue Foundation

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 transitions effects to animate the transition from one slide to the next.

Return



Integrated Packages

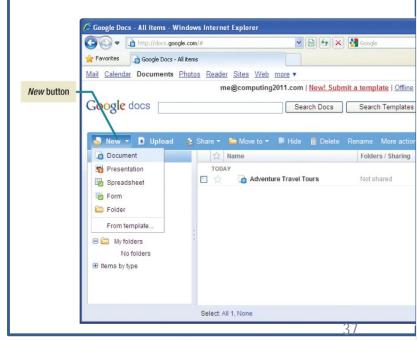
- A single program that provides the functionality of several widely used programs
 - Popular with many home users
 - Classified as personal or home software
- Advantages are cost and simplicity
- Disadvantages are limited functions
- The most widely used package is Microsoft Works





Software Suites

- Collection of separate application programs bundled together and sold as a group
- Four types of suites
 - Productivity suites or office software suite
 (e.g., Microsoft Office)
 - Cloud suites or online office suites (e.g., Google Docs)
 - Specialized suites
 - Utility suites (e.g., Norton Internet Security suite)



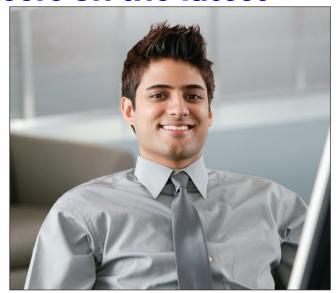


Careers In IT

Computer trainers instruct new users on the latest

software or hardware

- Attributes
 - Good communication skills
 - Teaching experience
 - Detail oriented
 - IT Experience
 - Comfortable speaking to groups
- Earning potential of \$25,000 to \$50,500 annually





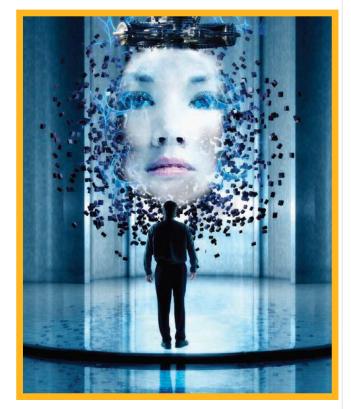
A Look to the Future

Agents will help write papers, pay bills, and shop on

the Internet

 Intelligent programs that can understand your needs and act to fulfill them.

Currently primitive agents exist,
 but next generation agents may
 provide the most efficient way
 to locate information on the Web





Open-Ended Questions (Page 1 of 2)

 Explain the difference between general-purpose and special-purpose applications.

 Discuss the common features of most software programs. Describe the new interface introduced with Microsoft Office 2007 and Office 2010.

 What is the difference between a function and a formula? How is a formula related to what-if analysis?



Open-Ended Questions (Page 2 of 2)

What are presentation graphics programs?
 How are they used?

 What is the difference between an integrated package and a software suite? What are the advantages and disadvantages of each?



