

Microsoft Excel 2003

EXERCISE PACK

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Getting Started

1. Create a new workbook as shown below.
2. Enter **Apr**, **May** and **Jun** in B1, C1 and D1.
Tips: Use AutoFill.
3. Enter sales person names and quantity sold as below.
Tips: Remember to select the range A2:D4 before enter ing the data.

	A	B	C	D	E
1		Apr	May	Jun	
2	John	180	325	341	
3	Tom	240	186	228	
4	Mary	256	245	176	
5					

4. Type text **Report prepared by Sales Department** in cell A30.
Tips: Use Go To command / name box to go to cell A30.
5. Go back to cell A1.
Tips: Use <Ctrl>+<Home>.
6. Delete row 1 content.
Tips: Select row 1 and press <Delete>.
7. Fill in **Jan**, **Feb** and **Mar** in B1, C1 and D1.
Tips: Use AutoFill.
8. Edit Tom to **Tommy** .
Tips: Use <F2>.
9. Replace John and Mary with **Brian** and **Cindy** .
Tips: Select nonad jacent cell A2 and cell A4, type Brian and Cindy.
10. Type text **Total** in cell A5 and E1
11. Type text **Sales** in cell F1
12. Type text **Commission** in cell G1
13. The worksheet is displayed as illustrated:

	A	B	C	D	E	F	G	H
1		Jan	Feb	Mar	Total	Sales	Commission	
2	Brian	180	325	341				
3	Tommy	240	186	228				
4	Cindy	256	245	176				
5	Total							
6								

14. Save the file to a diskette with the name **training.xls**
15. Create another copy onto your hard disk.
Tips: Use Save As command.
16. Search Help on how to create a drawing object.

Performing Calculations

- 1. Open the training.xls from previous exercise as illustrated below.**

Tips: If you do not have the file, just create the following table in a new workbook.

	A	B	C	D	E	F	G	H
1		Jan	Feb	Mar	Total	Sales	Commission	
2	Brian	180	325	341				
3	Tommy	240	186	228				
4	Cindy	256	245	176				
5	Total							
6								

- 2. Calculate total for Jan, Feb and Mar.**

Tips: Use AutoSum.

- 3. Calculate total for Brian.**

Tips: Use simple formula =B2+C2+D2 for Brian

- 4. Get the total for Tommy and Cindy.**

Tips: Use AutoFill to copy the formula from Brian (E2) to cell E3 and E4

- 5. Type Unit Price 55 and CR 7% (commission rate) as illustrated.**

	A	B	C
6			
7	Unit Price	55	
8	CR	7%	
9			

- 6. Calculate the sales using formula**

$$\text{Sales} = \text{Total} * \text{Unit Price}$$

Tips: Use absolute reference for B7.

- 7. Calculate the Commission using formula**

$$\text{Commission} = \text{Sales} * \text{CR}$$

Tips: Use absolute reference for B8

Managing Worksheet and Workbook Information

1. Open the training.xls from previous exercise as illustrated below.

Tips: If you do not have the file, just create the following table in a new workbook.

	A	B	C	D	E
1		Jan	Feb	Mar	Total
2	Brian	180	325	341	846
3	Tommy	240	186	228	654
4	Cindy	256	245	176	677
5	Total	676	756	745	2177
6					
7	Unit Price	55			
8	CR	7%			

2. Copy range A1:E8 .
Tips: Select the range and click copy button.
3. Add a new worksheet and rename it **report** .
4. Paste the copied table to the new sheet "report".
5. Delete sheet3.
6. Move the report sheet to the left of sheet1.
7. Insert new row between Brian and Tommy and enter the data as illustrated:

		Jan	Feb	Mar	Total
2	Brian	180	325	341	846
3	John	121	248	119	
4	Tommy	240	186	228	654

8. Calculate the total for John.
Tips: Use AutoFill.
9. Delete row 5 .
Tips: The Cindy record.
10. Insert 2 new columns on the left of column A
11. Move C1:G8 to C3:G10.
Tips: Select range, then drag and drop.

12. The worksheet is displayed as shown below.

	A	B	C	D	E	F	G	H
1								
2								
3				Jan	Feb	Mar	Total	
4			Brian	180	325	341	846	
5			John	121	248	119	488	
6			Tommy	240	186	228	654	
7			Total	541	759	688	1988	
8								
9			Unit Price	55				
10			CR	7%				
11								
12								
13								
14								

Report Sheet1 Sheet2

Formatting Worksheet

1. Open the training.xls from previous exercise as illustrated below.
 Tips: If you do not have the file, just create the following table in a new workbook.

	A	B	C	D	E	F	G	H
1								
2								
3				Jan	Feb	Mar	Total	
4			Brian	180	325	341	846	
5			John	121	248	119	488	
6			Tommy	240	186	228	654	
7			Total	541	759	688	1988	
8								
9			Unit Price	55				
10			CR	7%				
11								
12								
13								
14								

2. Adjust the row height for row 3 to 33.00.
3. Adjust the column weight for column C to 15.00.
4. Change sales person names (C4:C6) font to Times New Roman, Font size to 12, Italic, underlined and blue font color.
5. Format months (D3:F3) to bold, aligned center, red font color, text align center vertically, text orientation to 90°.
6. Edit cell C7 to **Total Sales for each month** and word wrap the cell.
7. Change cell D9 to currency format.
8. Increase D10 decimal to 2 decimal places.
9. Merge and center the range C2:G2 and type in the title **Sales Report for First Quarter** . Change title font to Arial.
10. Draw thick outline as the border for the table range C3:G7 and a double line above the Total Sales for each month range C7:G7.
11. Change background color for range C7:G7 to yellow.
12. The formatted table is shown as shown below.

Sales Report for First Quarter				
	Jan	Feb	Mar	Total
<i>Brian</i>	180	325	341	846
<i>John</i>	121	248	119	488
<i>Tommy</i>	240	186	228	654
Total Sales for each month	541	759	688	1988
Unit Price	\$ 55.00			
CR	7.00%			

Creating Chart

Create Column Chart

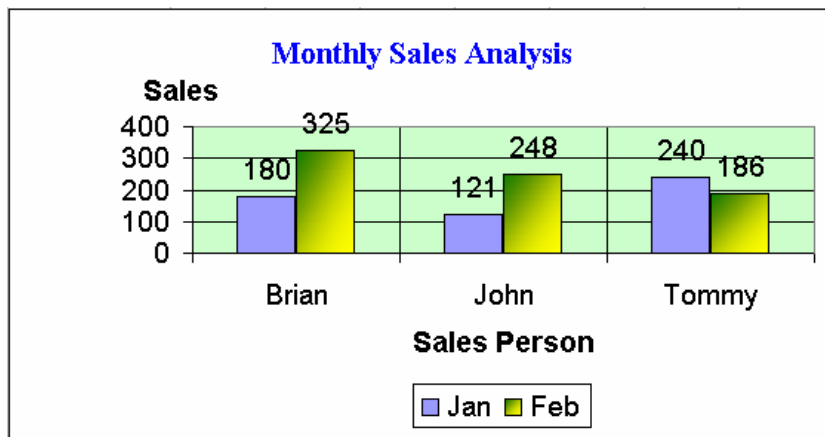
1. Open the training.xls from previous exercise as shown below.

Tips: If you do not have the file, just create the following table in a new workbook (you can ignore the cell format used).

	C	D	E	F	G
3		Jan	Feb	Mar	Total
4	Brian	180	325	341	846
5	John	121	248	119	488
6	Tommy	240	186	228	654

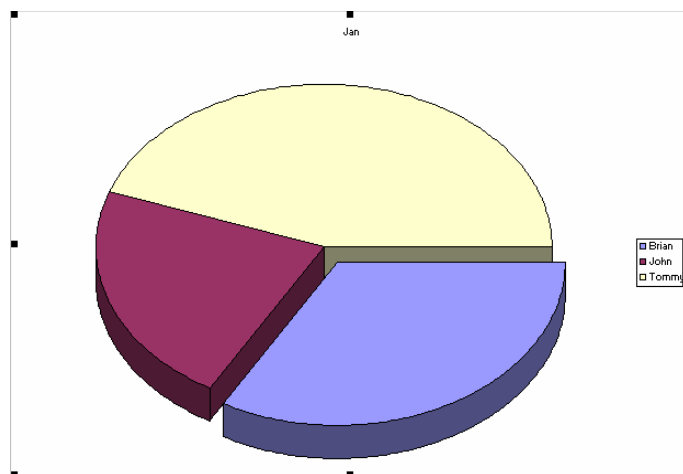
2. Select the range for the chart (C3:F6).
3. Create column chart using chart wizard.
4. Move the chart to cell C12.
5. Resize the chart to fit in range C12:J28.
6. Change the chart type to bar chart type.
7. Change the chart type back to column chart type.
8. Change the chart source data to range C3:E6 only
9. Swap Data series legend with the x-axis. (Data series in rows to columns)
10. Add the Chart Title to **Monthly Sales Analysis**.
11. Add the X-axis Title to Sales Person and Y-axis Title to **Sales**.
12. Add Major gridlines for category X-axis.
13. Change the position of the legend to the bottom of the plot area.
14. Show values in the plot area (Add data labels: show value)
15. Format the Title font to Times New Roman, size 16, bold and in blue.
16. Format the Y-axis title (Sales) to horizontal text orientation and move it to the top of the Y-axis.
17. Change the plot background color to light green.
18. Change Feb data to gradient effect: 2 colors (green and yellow), diagonal up shading style.
19. Delete Jan data series using **<delete>** key
20. Add Jan data series back into chart using mouse.
21. Rearrange Jan data series before Feb.

22. The formatted column chart is displayed as shown below:



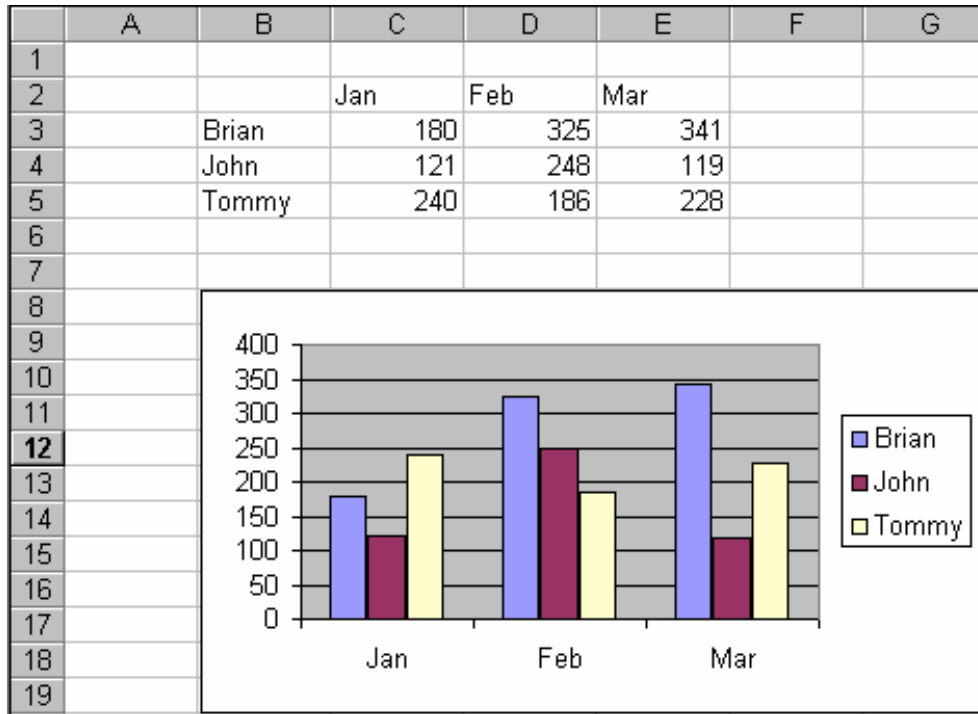
Create Pie Chart

1. Select the range for the pie chart (C3:D6)
2. Create 3-D pie chart using chart wizard onto a new chart worksheet name **Sales Pie Chart** .
3. Rotate the pie chart 90 °, elevation 45 ° and height 70% of base.
4. Explode Tommy wedge from the pie chart.
5. The formatted pie chart is displayed as shown below.



Setting Up Page And Print

1. Create the following table and chart in a new worksheet.

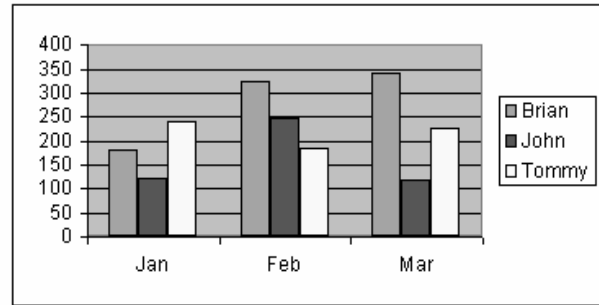


2. Preview the printing.
3. Change the page orientation to **Landscape**.
4. Change the scaling to **150 %**.
5. Change page margin: Left margin **1.5 "** and Right margin **1.5 "**
6. Align the table and chart to the center of the page horizontally and vertically.
7. Add **Sales Department** in the left section of the page header.
8. Add **Page numbering** to the right section of the page footer.

9. Preview the printing as shown below.

Sales Department

	Jan	Feb	Mar	
Brian	180	325	341	
John	121	248	119	
Tommy	240	186	228	



Page 1

10. Select the table and print only the table.

11. Select the chart and print only the chart.

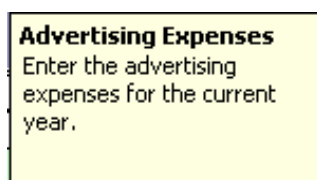
Validating, Protecting, Auditing Form And Template

1. Create the following form and format as below.
 Type **New Year Estimation** in cell C2
 Create formulas in cells C3:C5. For example, cell C3:
 $=B3*(100%+\$B\$8)$
 Cell B6 formula: $=SUM(B3:B5)$
 Cell C6 formula: $=SUM(C3:C5)$

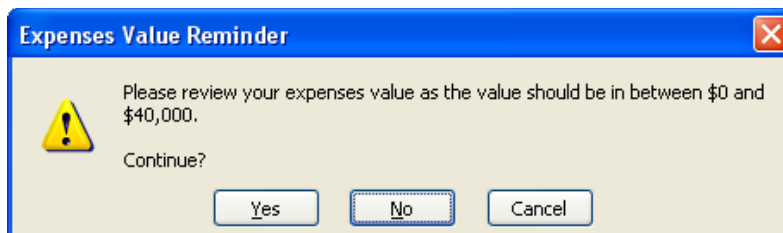
	A	B	C
1	Total Advertising Expenses		
2	Branch Name	Expenses	Next Year Estimation
3	<i>New York</i>	\$	-
4	<i>London</i>	\$	-
5	<i>Sydney</i>	\$	-
6	Total	\$ -	\$ -
7			
8	Inflation Rate	8%	

2. Set **Input Validation** for cell B3:B5 to accept decimal value between 0 and 40000.
 Tips: Use Warning style for Error Alert.

Input Message:



Error Alert:



3. Type **50000** in cell B4 and press **<Enter>**.
 Tips: You can type the value in any cell in B3:B5.
4. Trace precedents cells for cell C6.
5. Trace dependents cells for cell B8.
6. Remove all arrows.
7. Grant a selected user right to change the cell B8 without password.
8. Set a password to edit cell A3:A5.

9. Protect the worksheet.
 Use password: **protect**
 Allow users to enter/edit value in cells B3:B5.
 Hide the formula in cells C3:C5.
10. Protect the workbook structure.
11. Save the workbook as a template and name it **Advertising Expenses** .
12. Close the workbook.
13. Create a new workbook from the Advertising Expenses template.
 Tips: Click General Template in the task pane.
14. Enter **10000** , **20000** and **25000** in cell B3, B4 and B5. The next year estimation and total are displayed automatically.

	A	B	C
1	Total Advertising Expenses		
2	Branch Name	Expenses	Next Year Estimation
3	<i>New York</i>	\$ 10,000.00	\$ 10,800.00
4	<i>London</i>	\$ 20,000.00	\$ 21,600.00
5	<i>Sydney</i>	\$ 25,000.00	\$ 27,000.00
6	Total	\$ 55,000.00	\$ 59,400.00
7			
8	Inflation Rate	8%	

15. Save the file with a password to open.
 Save file name: **Year 2003 Advertising Expenses** .
 Set open file password: **openpassword** .
16. Close the file.
17. Open the file.
 Tips: Use the password "openpassword".
18. Remove the open file password.
19. Unprotect the worksheet.
 Tips: Use the password "protect".
20. Edit Inflation Rate in cell B8 to **9%** . The Next Year Estimation is recalculated as below.

	A	B	C
1	Total Advertising Expenses		
2	Branch Name	Expenses	Next Year Estimation
3	<i>New York</i>	\$ 10,000.00	\$ 10,900.00
4	<i>London</i>	\$ 20,000.00	\$ 21,800.00
5	<i>Sydney</i>	\$ 25,000.00	\$ 27,250.00
6	Total	\$ 55,000.00	\$ 59,950.00
7			
8	Inflation Rate	9%	

21. Create a new workbook using Balance Sheet template and save the workbook as **Balance Sheet for the year 2003** .

Using Advanced Formatting, Style And Outlining

1. Create the following table in your worksheet.
Profit/(Loss) formula in cell E5: **=C5-D5** .

	A	B	C	D	E
1	Profit / Loss Analysis				
2	Report Date	2/17/02			
3					
4	Country	Branch	Revenue	Expenses	Profit/(Loss)
5	US	New York	350000	120000	230000
6	US	California	445000	170000	275000
7	US	Florida	235000	284000	-49000
8	UK	London	430000	165000	265000
9	AU	Sydney	372000	410000	-38000
10	AU	Perth	263000	160000	103000

2. Change the format of the Revenue, Expenses and Profit/(Loss) to **Currency** as below.

4	Country	Branch	Revenue	Expenses	Profit/(Loss)
5	US	New York	\$350,000.00	\$120,000.00	\$230,000.00
6	US	California	\$445,000.00	\$170,000.00	\$275,000.00
7	US	Florida	\$235,000.00	\$284,000.00	(\$49,000.00)
8	UK	London	\$430,000.00	\$165,000.00	\$265,000.00
9	AU	Sydney	\$372,000.00	\$410,000.00	(\$38,000.00)
10	AU	Perth	\$263,000.00	\$160,000.00	\$103,000.00

3. Customize the date to the following custom format: **(ddd) mmm-d-yyyy**

Profit / Loss Analysis	
Report Date	(Sun) Feb-17-2002

4. Use Conditional formatting to format the value for expenses column.
Bold in Red if the value is more than \$200,0000.
Italic in Blue if the value is less than \$150,0000.
The format of the expenses is changed as shown below.

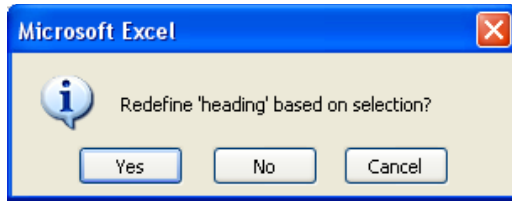
Expenses
\$120,000.00
\$170,000.00
\$284,000.00
\$165,000.00
\$410,000.00
\$160,000.00

5. Format the text in cell A4 to **Bold in Blue**, and **Yellow** cell pattern.
6. Create a style for format in cell A4 with style name: **heading** .

7. Apply the style to cells B4:E4.

4	Country	Branch	Revenue	Expenses	Profit/(Loss)
5	US	New York	\$350,000.00	\$120,000.00	\$230,000.00

8. Change and redefine the style to Font: Times New Roman in Red.
 Make sure you see the redefine dialog as below.



The format is updated as below.

4	Country	Branch	Revenue	Expenses	Profit/(Loss)
5	US	New York	\$350,000.00	\$120,000.00	\$230,000.00

9. Create outline with **Auto Outline** to hide the column C and D.

	A	B	E
1	Profit / Loss Analysis		
2	Report Date	(Sun) Feb-17-2002	
3			
4	Country	Branch	Profit/(Loss)
5	US	New York	\$230,000.00
6	US	California	\$275,000.00
7	US	Florida	(\$49,000.00)
8	UK	London	\$265,000.00
9	AU	Sydney	(\$38,000.00)
10	AU	Perth	\$103,000.00

10. Remove the Auto Outline.

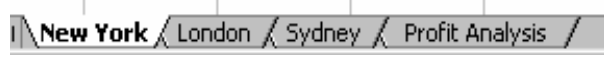
11. Create a subtotal to calculate Total Profit, Total Expenses and Total Profit/(Loss) by Country.
 Expand US Total to see the details as below.

1	2	3	A	B	C	D	E
	1		Profit / Loss Analysis				
	2		Report Date	(Sun) Feb-17-2002			
	3						
	4		Country	Branch	Revenue	Expenses	Profit/(Loss)
	5	·	US	New York	\$350,000.00	\$120,000.00	\$230,000.00
	6	·	US	California	\$445,000.00	\$170,000.00	\$275,000.00
	7	·	US	Florida	\$235,000.00	\$284,000.00	(\$49,000.00)
	8	-	US Total		\$1,030,000.00	\$574,000.00	\$456,000.00
	10	*	UK Total		\$430,000.00	\$165,000.00	\$265,000.00
	13	*	AU Total		\$635,000.00	\$570,000.00	\$65,000.00
	14	-	Grand Total		\$2,095,000.00	\$1,309,000.00	\$786,000.00

12. Remove the subtotal.

Working With Multiple Worksheets And Workbooks

1. Create a new workbook.
2. Rename the worksheet as below. If you have only 3 sheets, insert another new worksheet.



3. Create the following table into all the worksheets simultaneously.
 Tips: Use <Shift> or <Ctrl> to select multiple sheets.

	A	B
1		Profit
2	Qtr1	
3	Qtr2	
4	Qtr3	
5	Qtr4	

4. Enter data into the tables on each worksheet as shown below.
 New York London Sydney

	A	B
1		Profit
2	Qtr1	15000
3	Qtr2	24000
4	Qtr3	16000
5	Qtr4	34000

	A	B
1		Profit
2	Qtr1	14000
3	Qtr2	19500
4	Qtr3	14600
5	Qtr4	24300

	A	B
1		Profit
2	Qtr1	13500
3	Qtr2	17300
4	Qtr3	24000
5	Qtr4	23600

5. In **Profit Analysis** sheet, change cell B1 to **Total Profit** . Then find total profit for Qtr1 using **SUM** function. Use 3-D formula to add profit across New York to Sydney sheet.
 Tips: Your formula will look like this, =SUM('New York:Sydney!B2)
6. Define range name **NY_Profit** for cell range B2:B5 in New York sheet.
7. In Profit Analysis sheet, create the following text and use formula with range name NY_Profit to calculate the total for New York profit.
 Tips: use <F3> to open the paste name dialog to show all the range names.

	A	B	C	D	E	F
1		Total Profit				
2	Qtr1	42500				
3	Qtr2					
4	Qtr3					
5	Qtr4					
6						
7	What is the total profit in New York?				=SUM(NY_Profit)	

8. Define 3-D range name **Qtr2_Profit** for cells B3 across New York sheet to Sydney sheet.

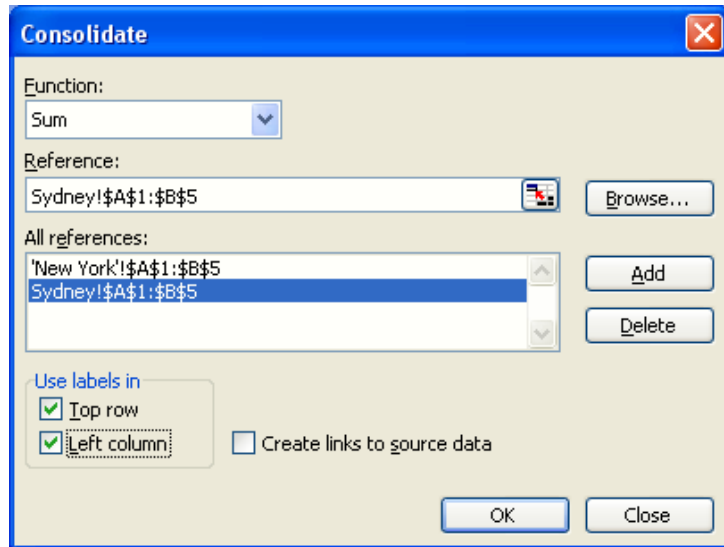
9. In Profit Analysis sheet, calculate the total profit for Qtr2 using the 3-D range name **Qtr2_Profit** .
 Tips: use <F3> to open the paste name dialog to show all the range names.

	A	B	C
1		Total Profit	
2	Qtr1	42500	
3	Qtr2	=SUM(Qtr2_Profit)	
4	Qtr3		
5	Qtr4		

10. Define Qtr3 and Qtr4 profit, find the total profit in the Profit Analysis sheet.
 11. In Profit Analysis sheet, type in the text in cell A9.

9	Total Profit for New York and Sydney.		
10			
11			

12. Click the cell A10 and use **Data Consolidation** method to get total profit from New York and Sydney sheets.



The consolidated data is shown as below.

9	Total Profit for New York and Sydney.		
10		Profit	
11	Qtr1	28500	
12	Qtr2	41300	
13	Qtr3	40000	
14	Qtr4	57600	

Using Advanced Functions

1. Create the following tables in a new worksheet.

	A	B	C	D	E	F	G
1	Loan Analysis						
2							
3	Loan Amount	\$ 130,000.00		Financing Options			
4	Term (months)	300		Term	200	300	400
5	Interest			Interest	7%	8%	9%
6	Monthly Payment						

2. Find Interest for cell B5. Use nested **IF()** function to find the Interest from the Financing Options table if the Term is changed in cell B4. Change cell B5 to percentage format

Tips: If you type 200 in cell B4, B5 will show 7%, if you type 300 in cell B4, B5 will automatically change to 8%. Your formula in cell B5 will look like this: =IF(B4=E4,E5,IF(B4=F4,F5,G5)).

3. Find Monthly Payment in cell B6 using **=PMT()** function.
 Tips: remember to divide interest by 12 months.

4. Change the Monthly Payment value to a positive value using **=ABS()** function.

Loan Amount	\$ 130,000.00
Term (months)	300
Interest	8%
Monthly Payment	\$ 1,003.36

5. Create the table below in cell A8.

8	Applicants	Monthly Income	Qualify for the Housing Loan
9	John	\$ 3,200.00	
10	James	\$ 900.00	
11	Mary	\$ 1,600.00	

6. Use logical test to get **TRUE** or **FALSE** for Qualify for the Housing Loan column.

8	Applicants	Monthly Income	Qualify for the Housing Loan
9	John	\$ 3,200.00	TRUE
10	James	\$ 900.00	FALSE
11	Mary	\$ 1,600.00	TRUE

7. Type the following question in cell A13. Use **=AND()**, **=OR()** and **=COUNTIF()** functions to get the answers as shown below.

13	Are all the applicants qualify for the housing loan?	FALSE
14	Is there any applicants qualify for the housing loan?	TRUE
15	How many applicants are qualify for the housing loan?	2

Using Workgroup Features

1. Create a new workbook. Enter the information as shown below and save as **Budget.xls**.

	A	B
1	Project Budget	
2	Project NY	\$14 million
3	Project NJ	\$3 million
4	Project MI	\$9 million
5	Project FL	\$12 million

2. Insert a comment at cell B2 as shown below.

	A	B
1	Project Budget	
2	Project NY	\$14 million
3	Project NJ	\$3 million
4	Project MI	\$9 million
5	Project FL	\$12 million

John:
 This is an estimation from James.

3. Show the comment permanently on screen.
4. Hide the comment.
5. Hide the comment indicator.
6. Edit the comment. Change the person who gives the comment from **John** to **Johnny**.
7. Delete the comment.
8. Enable the file sharing.
9. Create a new copy of the current workbook and save as **Budget Revision.xls**.
10. Give **Budget Revision.xls** to your partner for new updates. Ask them to change the workbook to the following.

	A	B
1	Project Budget	
2	Project NY	\$14 million
3	Project NJ	\$6 million
4	Project MI	\$9 million
5	Project FL	\$15 million

11. Merge the **Budget Revision.xls** with the original file **Budget.xls**.
12. Track the changes and accept or reject each change.
13. Restrict a user to change a workbook using IRM.
14. Set the workbook expiration date 10 days from today's date

Creating Powerful Database

1. Create the title and database fields into a new worksheet as below.
 Type in the first record manually.

	A	B	C	D
1	Product Orders Details			
2	OrderID	Product Name	Country	Sales
3	E101	Pen	US	\$1,060.00

2. Add records using Data Form into the database as shown below.

	A	B	C	D
1	Product Orders Details			
2	OrderID	Product Name	Country	Sales
3	E101	Pen	US	\$1,060.00
4	E102	Pen	UK	\$ 870.00
5	E103	Ink	US	\$5,200.00
6	E104	Ink	Canada	\$2,100.00
7	E105	Pen	Canada	\$1,850.00
8	E106	Ink	US	\$3,050.00
9	E107	Pen	Australia	\$ 950.00
10	E108	Pen	US	\$1,470.00
11	E109	Ink	Canada	\$5,040.00
12				

3. Search for E106 using data form. Edit the sales in that record to **\$2,050.00**.
4. Using multiple sort to sort the records by **Country** in ascending order then by **Sales** in descending order as below.

Product Orders Details			
OrderID	Product Name	Country	Sales
E107	Pen	Australia	\$ 950.00
E109	Ink	Canada	\$5,040.00
E104	Ink	Canada	\$2,100.00
E105	Pen	Canada	\$1,850.00
E102	Pen	UK	\$ 870.00
E103	Ink	US	\$5,200.00
E106	Ink	US	\$2,050.00
E108	Pen	US	\$1,470.00
E101	Pen	US	\$1,060.00

5. Use **AutoFilter** to:
 - Show only records for Pen.
 - Show only records from US, which are having Sales more than \$1000.00.
 - Show only records, which are having Sales between \$1,000.00 and \$2,000.00.
 - Show only records for Canada and UK.
 - Show only records from countries, which name starts with letter `U`.
6. Hide the AutoFilter.

7. Use **Advanced Filter** to:
 Show only records Ink
 Show only records for Canada, UK and Australia.
 Show only records for Ink orders from Canada.
 Show all records from US and all records that are for Ink product.
 Tips: This means all the records from US OR all records for Ink (Use OR function).

8. Type in text as below in cells A13:A17.
 Use **=DSUM()** function in cell D13.
 Use **=DAVERAGE()** function in cell D14
 Use **=DMAX()** function in cell D15
 Use **=DMIN()** function in cell D16
 Use **=DSUM()** function in cell D17

	A	B	C	D
12				
13	What is the Total Sales for Pen?			
14	What is the Average Sales in US?			
15	What is the Maximum Sales for Ink?			
16	What is the Minimum Ink Sales in Canada?			
17	How many records are from US and UK?			

9. Create table as below:
 When you type in the OrderID in cell C20, product name and sales are displayed immediately in cells C21 and C22. Use **=VLOOKUP()** function in cells C21 and C22 to do this.
 Important: You must first sort ascending the OrderID in the database table.

	A	B	C
18			
19	Records Retrieval		
20	Please Enter the OrderID		
21	The product in this order is		
22	The sales in this order is		

Creating PivotTable And Analyzing Data

1. Create a new database as below.

Tips: You can also use the previous exercise database.

	A	B	C	D
1	Product Orders Details			
2	OrderID	Product Name	Country	Sales
3	E101	Pen	US	\$ 1,060.00
4	E102	Pen	UK	\$ 870.00
5	E103	Ink	US	\$ 5,200.00
6	E104	Ink	Canada	\$ 2,100.00
7	E105	Pen	Canada	\$ 1,850.00
8	E106	Ink	US	\$ 2,050.00
9	E107	Pen	Australia	\$ 950.00
10	E108	Pen	US	\$ 1,470.00
11	E109	Ink	Canada	\$ 5,040.00

2. Create a PivotTable from the database and place the PivotTable at cell A15.

Use **Product Name** field as Column heading.

Use **OrderID** field as Row heading.

Use **Sales** field as Data content.

The PivotTable appears as below.

	A	B	C	D
14				
15	Sum of Sales	Product Name		
16	OrderID	Ink	Pen	Grand Total
17	E101		1060	1060
18	E102		870	870
19	E103	5200		5200
20	E104	2100		2100
21	E105		1850	1850
22	E106	2050		2050
23	E107		950	950
24	E108		1470	1470
25	E109	5040		5040
26	Grand Total	14390	6200	20590

3. Change the Sales for **OrderID E108** from \$1470 to **\$1270** . Then refresh the PivotTable.

Sum of Sales	Product Name		
OrderID	Ink	Pen	Grand Total
E101		1060	1060
E102		870	870
E103	5200		5200
E104	2100		2100
E105		1850	1850
E106	2050		2050
E107		950	950
E108		1270	1270
E109	5040		5040
Grand Total	14390	6000	20390

4. Add **Country field to Column heading as below.**

Sum of Sales	Product Name	Country	Ink Total		Pen			Pen Total	Grand Total
OrderID	Canada	US			Australia	Canada	UK	US	
E101								1060	1060
E102							870		870
E103			5200	5200					5200
E104	2100			2100					2100
E105						1850			1850
E106			2050	2050					2050
E107					950				950
E108								1270	1270
E109	5040			5040					5040
Grand Total	7140		7250	14390	950	1850	870	2330	6000

5. Rearrange the Column heading as below.

Sum of Sales	Country	Product Name	Australia Total		Canada	Canada Total	UK	UK Total	US	US Total	Grand Total
OrderID	Pen		Ink	Pen			Pen		Ink	Pen	
E101							870	870		1060	1060
E102											870
E103									5200		5200
E104			2100			2100					2100
E105				1850		1850					1850
E106								2050			2050
E107	950			950							950
E108									1270		1270
E109					5040	5040					5040
Grand Total	950		950	7140	1850	8990	870	870	7250	2330	9580

6. Filter PivotTable to show only Ink records.

Sum of Sales	Country	Grand Total	
OrderID	Canada	US	
E103		5200	5200
E104	2100		2100
E106		2050	2050
E109	5040		5040
Grand Total	7140	7250	14390

Then, use Filter PivotTable to show only Pen records

Sum of Sales	Country	Canada	UK	US	Grand Total
OrderID	Australia				
E101				1060	1060
E102			870		870
E105		1850			1850
E107	950				950
E108				1270	1270
Grand Total	950	1850	870	2330	6000

[Tips: Use page area in PivotTable to create new worksheets.](#)

Create all different product PivotTables onto separate worksheets.

[Tips: Use show page to do this. 2 new worksheets are created named Ink and Pen as below](#)



7. Place the **Product Name** field as Row heading and remove the field from the PivotTable as below.

OrderID

Sum of Sales	Country				Grand Total
Product Name	Australia	Canada	UK	US	
Ink		7140		7250	14390
Pen	950	1850	870	2330	6000
Grand Total	950	8990	870	9580	20390

8. Change Sum function for Sales to **Average** as below.

Average of Sales	Country				Grand Total
Product Name	Australia	Canada	UK	US	
Ink		3570		3625	3597.5
Pen	950	1850	870	1165	1200
Grand Total	950	2996.666667	870	2395	2265.555556

9. Add a calculated field: **Profit** into the PivotTable.
 Formula for Profit field: **Sales * 20%** .
 The PivotTable is show as below.

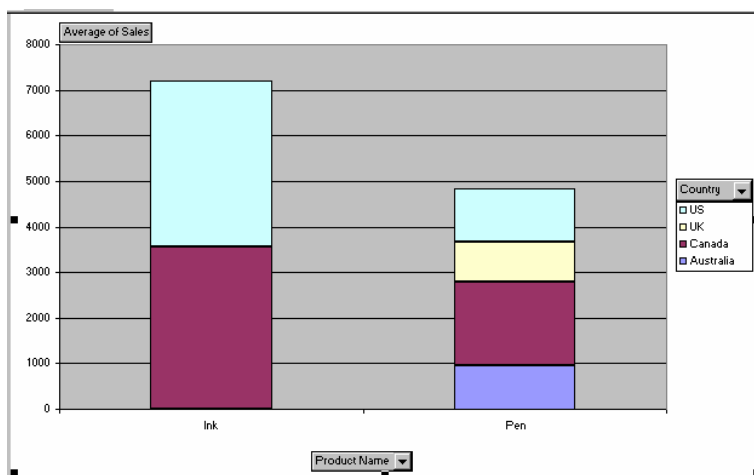
		Country				Grand Total
Product Name	Data	Australia	Canada	UK	US	
Ink	Average of Sales		3570		3625	3597.5
	Sum of Profit	\$ -	\$ 1,428.00	\$ -	\$ 1,450.00	\$ 2,878.00
Pen	Average of Sales	950	1850	870	1165	1200
	Sum of Profit	\$ 190.00	\$ 370.00	\$ 174.00	\$ 466.00	\$ 1,200.00
Total Average of Sales		950	2996.666667	870	2395	2265.555556
Total Sum of Profit		\$ 190.00	\$ 1,798.00	\$ 174.00	\$ 1,916.00	\$ 4,078.00

10. Hide Average of Sales as below.

Sum of Profit	Country				Grand Total
Product Name	Australia	Canada	UK	US	
Ink	\$ -	\$ 1,428.00	\$ -	\$ 1,450.00	\$ 2,878.00
Pen	\$ 190.00	\$ 370.00	\$ 174.00	\$ 466.00	\$ 1,200.00
Grand Total	\$ 190.00	\$ 1,798.00	\$ 174.00	\$ 1,916.00	\$ 4,078.00

11. Delete Calculated field **Profit** .

12. Create Pivot Chart as shown below.



13. Create another report as below on a new worksheet.

Formula:

Minimum Fee (B5): =B4*E3

Overtime Fee (B6): =(B3-B4)*E4

Total Fee Payable: =B5+B6

	A	B	C	D	E
1	Weekly Consultation Fee Payable				
2					
3	Total Consultation Hours	35		Hourly Rate	\$ 80
4	Minimum Consultation Hours	30		Overtime Hourly Rate	\$ 120
5	Minimum Fee	\$ 2,400			
6	Overtime Fee	\$ 600			
7	Total Fee Payable	\$ 3,000			

14. Create a One Variable What-If table to get the Overtime Fee and Total Fee Payable with the Overtime Hourly Rate of \$100, \$110, \$120, \$130, \$140 and \$150.

Place the table at cell A9. The result will look like below.

		Overtime Fee	Total Fee Payable
9		\$600	\$3,000
10		\$500	\$2,900
11	\$100	\$500	\$2,900
12	\$110	\$550	\$2,950
13	\$120	\$600	\$3,000
14	\$130	\$650	\$3,050
15	\$140	\$700	\$3,100
16	\$150	\$750	\$3,150

15. Create a Two Variables What-If table to get the Total Fee Payable for the Overtime Hourly Rate of \$100, \$110, \$120, \$130, \$140, \$150 and the Minimum Consultation Hours of 28, 29, 30, 31, 32 hours.

Place the table at cell A19. The result will look like below.

	\$ 3,000	28	29	30	31	32
19	\$ 3,000					
20	\$100	\$2,940	\$2,920	\$2,900	\$2,880	\$2,860
21	\$110	\$3,010	\$2,980	\$2,950	\$2,920	\$2,890
22	\$120	\$3,080	\$3,040	\$3,000	\$2,960	\$2,920
23	\$130	\$3,150	\$3,100	\$3,050	\$3,000	\$2,950
24	\$140	\$3,220	\$3,160	\$3,100	\$3,040	\$2,980
25	\$150	\$3,290	\$3,220	\$3,150	\$3,080	\$3,010

16. Create Scenarios as below:

Scenario 1 Scenario 2 Scenario 3

Scenario Name Steve As

Consultant

Mary as
Consultant

John As
Consultant

Hourly Rate \$90 \$80 \$80

Overtime Rate \$120 \$110 \$120

Minimum Consultation Hours 25 30 35

Hours

17. Apply the scenarios and determine which consultant charges the least fee.
18. Delete scenario **Steve As Consultant** .
19. Assign John as our consultant. Use **Goal seek** to find how many hours does he need to work to earn \$3,300.
20. Assign John as our consultant. Use **Solver** to find the maximum fee he will earn if the hourly rate and the overtime hourly rate cannot exceed \$100 and \$120 respectively.

Automating Routine Tasks With Macros

1. Create a new workbook.
2. Record a new macro **DrawSalesReportTable** that creates a table as show below. You can use this macro to create the table at any location on your worksheet.

Tips: Enable Relative Reference before you record the macro. Use <Ctrl>+<Shift>+<R> as the shortcut to run the macro. Save the macro in the current workbook.

	A	B	C	D	E	F	G
1							
2							
3		Product	1 Qtr	2 Qtr	3 Qtr	4 Qtr	Total
4		A1					
5		A2					
6		A3					
7		A4					
8		Total					

3. After you stop recording the macro, delete the table on the worksheet.
4. Click cell D5 and run the macro. The table will appear at the cell D5.
5. On the Standard toolbar, create a custom button on the right of the Save button as shown below. Change the image of the button to a bell. Assign the DrawSalesReportTable macro to the button.



6. Create a command button with the following text on the worksheet. Assign the DrawSalesReportTable macro to the button.



7. Delete the table from the worksheet.
8. Run the macro using the button on the Standard toolbar.
9. Delete the table from the worksheet.
10. Run the macro using the command button on the worksheet.

Integrating With Other Applications

1. Create a text file using notepad and name it **sales** as below.

```
OrderID Product Sales
E101 Pen 10000
E102 Ink 21000
E103 Pen 17000
E104 Ink 19800
```

2. Import the text into Excel worksheet.
3. Create a Word Document as below.

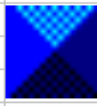
Company Address

```
EBook Publishing Inc.
13 Walnut Street
Green Cove Spring
32430 FL
```

4. Select and copy only the address and paste it into the Excel worksheet at cell C7 as below.

	A	B	C	D
1	OrderID	Product	Sales	
2	E101	Pen	10000	
3	E102	Ink	21000	
4	E103	Pen	17000	
5	E104	Ink	19800	
6				
7			EBook Publishing Inc.	
8			13 Walnut Street	
9			Green Cove Spring	
10			32430 FL	

5. Insert a graphical object from C:/Windows/Triangles.bmp as company logo.
6. Place the logo on the left of the address as below.

	A	B	C	D
1	OrderID	Product	Sales	
2	E101	Pen	10000	
3	E102	Ink	21000	
4	E103	Pen	17000	
5	E104	Ink	19800	
6				
7			EBook Publishing Inc.	
8			13 Walnut Street	
9			Green Cove Spring	
10			32430 FL	

7. Export the file to become web page format.
 Tips: use Save As command.
8. Retrieve the Employee information from the Northwind.mdb database using Database Query.
 Tips: Northwind.mdb database is located in C:\Program Files\Microsoft Office\Office11\Samples folder.

Working With The Web

1. Create a new workbook, as shown below.

	A	B	C
1	Total Advertising Expenses		
2	Branch Name	Expenses	Next Year Estimation
3	<i>New York</i>	\$ 10,000.00	\$ 10,800.00
4	<i>London</i>	\$ 20,000.00	\$ 21,600.00
5	<i>Sydney</i>	\$ 25,000.00	\$ 27,000.00
6	Total	\$ 55,000.00	\$ 59,400.00
7			
8	Inflation Rate	8%	

2. Preview the workbook as a web page.
3. Create an interactive web page from the workbook.
4. Create a hyperlink to link the following cells:
Cell A3 (New York) links to <http://www.abc.com/NewYork/>
Cell A4 (London) links to <http://www.abc.com/London/>
Cell A5 (Sydney) links to <http://www.abc.com/Sydney/>
5. Publish the web page.