

Microsoft Excel 2007

Intermediate Level



SAMPLE

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Contact Information

Australia / Asia Pacific / Europe (ex. UK) / Rest of the World

Email: info@cheltenhamcourseware.com.au

Web: www.cheltenhamcourseware.com.au

USA / Canada

Email: info@cheltenhamcourseware.com

Web: www.cheltenhamcourseware.com

UK

Email: info@cctglobal.com

Web: www.cctglobal.com

 **CHEL TENHAM**
COURSEWARE
SAMPLE

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Manipulating Data & Named Ranges

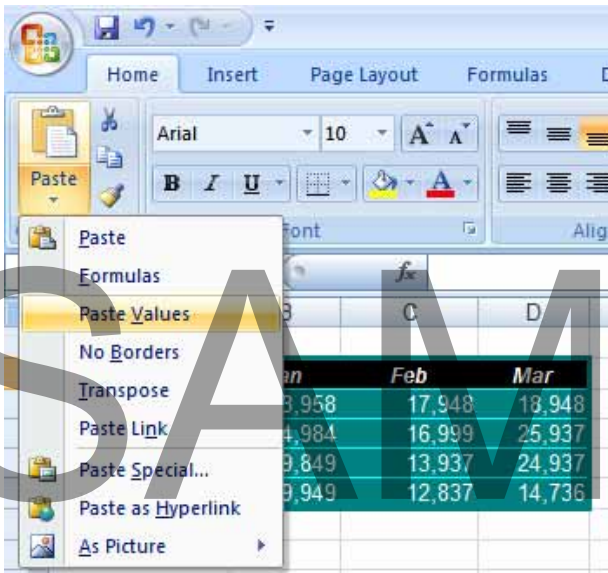
Paste Special Techniques

Paste Special

- Open a workbook called **Paste special 01**.
- Select the cell(s) containing the data you wish to copy, in this case the range **A2:D6**.
- Press **Ctrl+C** to copy the range.
- Select the cell you want to paste the copied data into, in this case cell **F2**.
- Click on the **down arrow** under the **Paste** icon (on the **Home** Tab).



This will display a range of Paste options. In this case select **Paste Values**.



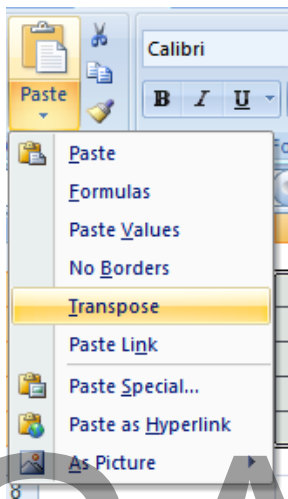
- You will notice that just the values are pasted, without any of the formatting that was applied to the original table.

	A	B	C	D	E	F	G	H	I	J
1										
2	Sales by Region	Jan	Feb	Mar		Sales by Region	Jan	Feb	Mar	
3	North	23,958	17,948	18,948		North	23958	17948	18948	
4	South	34,984	16,999	25,937		South	34984	16999	25937	
5	East	19,849	13,937	24,937		East	19849	13937	24937	
6	West	29,949	12,837	14,736		West	29949	12837	14736	
7										

- Save your changes and close the workbook.

Transposing data

- Open a workbook called **Paste special 02**.
- Select the cell(s) containing the data you wish to copy, in this case select the range **A2:D6**.
- Press **Ctrl+C** to copy the range.
- Select the cell you want to paste the copied data into, in this case click on cell **F2**.
- Click on the **down arrow** under the **Paste** icon.



- Select the **Transpose** command. The data should resemble the illustration below.

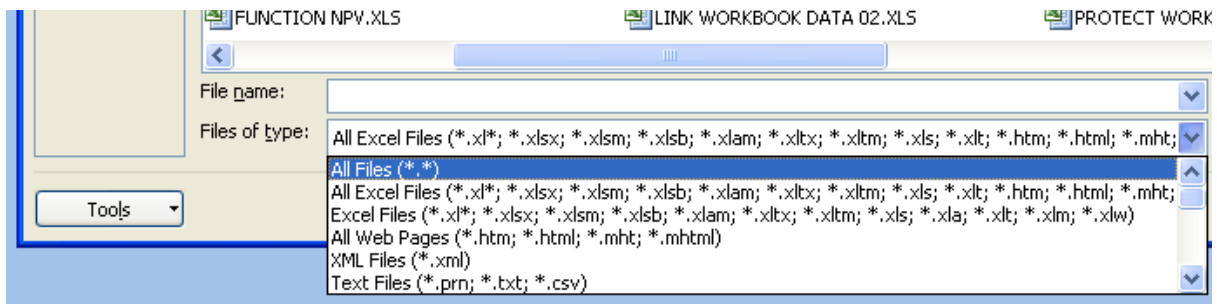
	A	B	C	D	E	F	G	H	I	J
1										
2	Sales by Region	Jan	Feb	Mar		Sales by Region	North	South	East	West
3	North	23,958	17,948	18,948		Jan	23,958	34,984	19,849	29,949
4	South	34,984	16,999	25,937		Feb	17,948	16,999	13,937	12,837
5	East	19,849	13,937	24,937		Mar	18,948	25,937	24,937	14,736
6	West	29,949	12,837	14,736						
7										

- Save your changes and close the workbook.

Importing a text file and delimit by comma, space or tab

Importing text and delimiting by space, comma or tab

- Click on the **Office Button** icon (top-left of your screen) and select the **Open** command. The **Open** dialog box will be displayed. In the **Files of type** section click on the **down arrow** and select **All Files**.

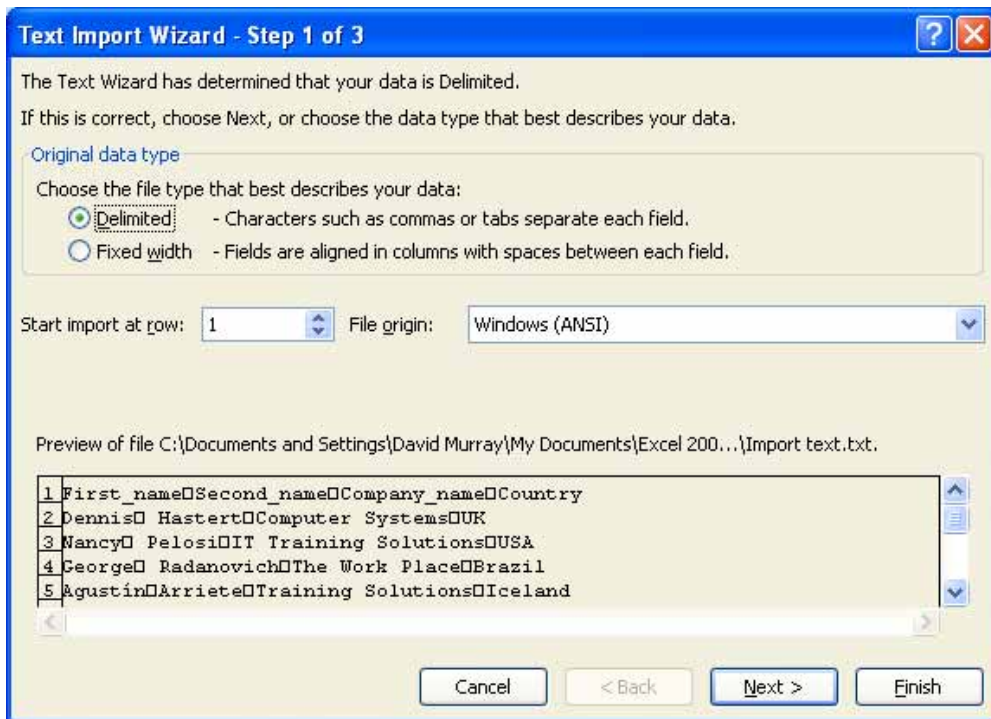


- Select a text file called **Import text.txt**. This file is delimited by tab stops.



- Click on the **Open** button. You will see the **Text Import Wizard (Step 1 of 3)** dialog box, as illustrated.

SAMPLE



- Notice that the dialog box has two areas, the upper referring to choices you can make, the lower showing the data you are about to import. The wizard looks at your source data and the original file format and determines whether it is delimited or not. You can choose to alter this decision if you wish. In this case **Delimited** text is automatically detected.
- Click **Next** and the **Text Import Wizard (Step 2 of 3)** dialog box is displayed. The upper half of this box allows you to select the required field delimiter. The default is **Tab**.

SAMPLE



- The delimited text is displayed at the bottom of the dialog box.
- Click on the **Next** button. The **Text Import Wizard (Step 3 of 3)** dialog box is displayed.

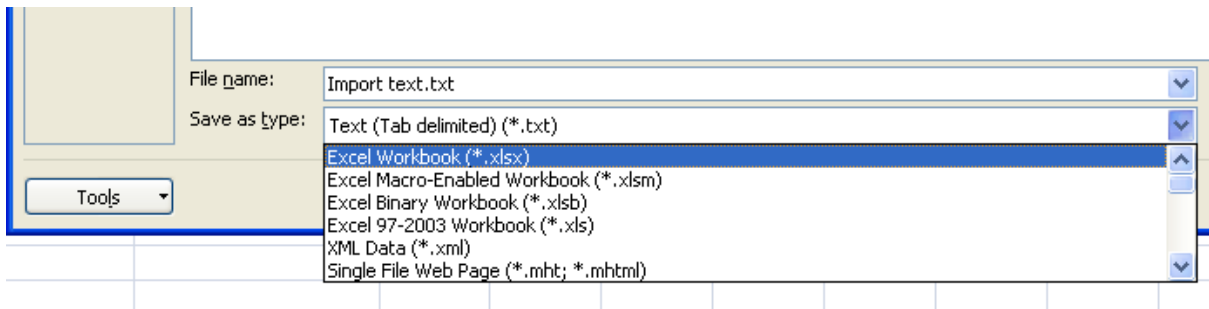
SAMPLE



- You can select the data format for each of the columns. You can also decide whether you wish to import a column or not. In this case click on the **Finish** button to import the text into your spreadsheet. The data should be neatly separated into columns, as illustrated below:

	A	B	C	D
1	First_name	Second_name	Company_name	Country
2	Dennis	Hastert	Computer Systems	UK
3	Nancy	Pelosi	IT Training Solutions	USA
4	George	Radanovich	The Work Place	Brazil
5	Agustin	Arriete	Training Solutions	Iceland
6	Ruth	Dreifuss	IT Here	Spain
7	Louis	Dumas	Internet Solutions	France
8	Valentino	Gravani	Gates Training	Germany
9	Birgit	Wilson	UK Training Solutions	UK
10	Tom	Feeney	Murray Training	USA
11	Ernst	Mach	Jones Solutions	UK
12	Christopher	Cox	Reed Consultants	Spain
13	Tom	DeLay	London IT Centre	UK

- Save your data in **Excel Workbook** format. To this click on the **Office Button** and select the **Save As** command. When the **Save As** dialog box is displayed, use the **Save as type** section of the dialog box to select **Excel Workbook**. Use **My Delimited File** as the file name.



- Close the workbook.

Named ranges

What does naming a cell range mean?

- We have seen that cells can be referred to by their location references:

Examples of single cell references would include.

C1
AA23
IV16
A1

Examples of referencing a range of contiguous cells would include.

A1:A6
B3:X3
B16:F20

- It is also possible to name cells and ranges so that they can be referred to using meaningful names, such as **'sales'**.

It is much easier to understand a formula such as:

=unit_price*no_of_units

than a formula of the type shown below.

=A9*B84

Rules for naming cells and ranges

- Range names normally begin with a letter or underscore character.
- Range names must NOT contain hyphens or spaces.
- Range names should be limited to 255 characters.

- Bear in mind that names of 10-15 characters in length will be visible in most drop-down menus.

Naming cell range(s) in a worksheet

- Open a file called **Named ranges 01**.
- We are going to name a range for the **Quantity Sold**.
- Select the cell(s) to be named, in this case cell **B10**. Click in the **Name Box** with the mouse and enter the name you want to give to the cell(s), in this case **Quantity_Sold**, and press **Enter**. (If you see an error message, this is because you did not place an underscore character between the words **Quantity** and **Sold**):

Quantity_Sold		fx		=SUM(B4:B9)	
	A	B	C	D	E
1	Sales for March				
2					
3	Sales Person	Quantity Sold		Price per item	
4	Nyah	3		52.25	
5	Carla	5			
6	Rowan	3			
7	Gina	6			
8	Shrikrishna	8			
9	Kayo	2			
10	Total quantity sold	27			
11					
12					
13	Total value of sales				
14					

- We are now going to name a range for the **Price per Item**. Highlight and select the cell(s) to be named, in this case cell **D4**. Click in the **Name Box** with the mouse and enter the name you want to give to the cell(s), in this case **Price_per_item**, and press **Enter**.

TIP: If you see an error message, this is because you did not place an underscore character between the words.

SAMPLE

	A	B	C	D
1	Sales for March			
2				
3	Sales Person	Quantity Sold		Price per item
4	Nyah	3		52.25
5	Carla	5		
6	Rowan	3		
7	Gina	6		
8	Shrikrishna	8		
9	Kayo	2		
10	Total quantity sold	27		
11				
12				
13	Total value of sales			

Named ranges within formulas

- First click on cell **B13** and enter an equals symbol (=).
- Click on cell **B10** and enter a multiply symbol (*).
- Click on cell **D4** and then press the **Enter** key.
- Click on cell **B13** again and notice the formula in the Formula Bar. As you can see this makes the formula much easier to understand:

	A	B	C	D
1	Sales for March			

Formula Bar: B13 =B10*Price_per_item

Navigating through workbooks using named ranges

- Having defined a set of named cell ranges, click the **down arrow** to the right of the **Name Box** and select the named cell/range you wish to go to from the drop down list that appears. Try going to both ranges that you have named.

	A	B	C	D
1	Sales for March			
2				
3	Sales Person	Quantity Sold		Price per item
4	Nyah	3		52.25
5	Carla	5		
6	Rowan	3		
7	Gina	6		
8	Shrikrishna	8		
9	Kayo	2		
10	Total quantity sold	27		
11				
12				
13	Total value of sales			

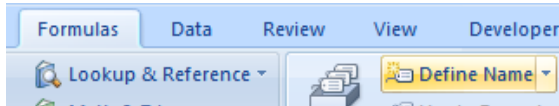
Formula Bar: D8

Name Box: Price_per_item, Quantity_Sold

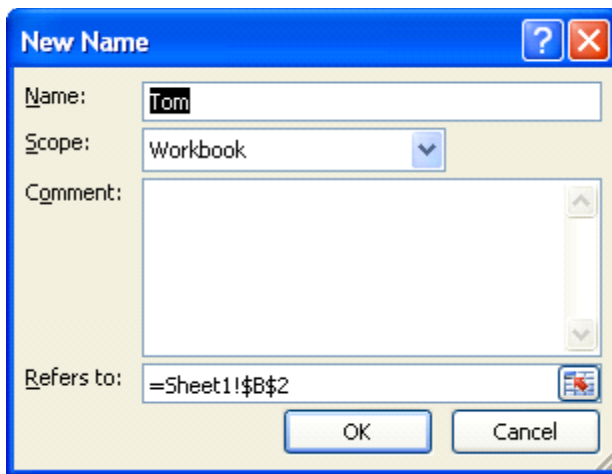
- Save your changes and close the workbook.

Creating named ranges automatically based on cell values

- Open a file called **Named ranges 02**.
- Click on cell **B2**, which we wish to name the cell using the name **Tom**.
- Click on the **Formulas** tab and then click on the **Define Name** icon.



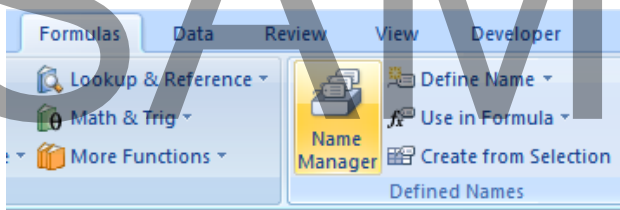
The **New Name** dialog box is displayed and as you can see, has automatically picked up the name **Tom**.



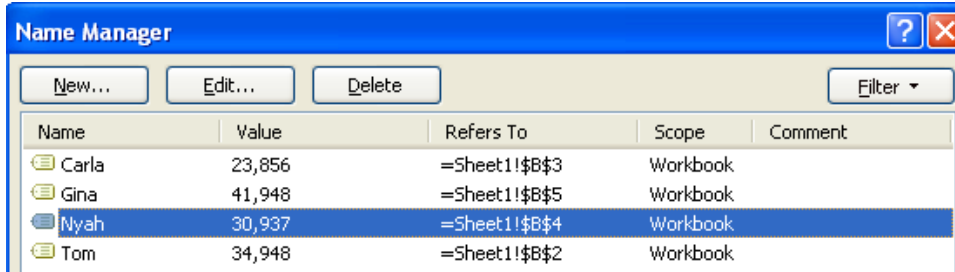
- Click on the **OK** button to complete the naming of the cell.
- Repeat these actions so that cells **B3:B5** are also named with the relevant person.

Deleting named cells/ranges

- Click on the **Formulas** tab and then click on the **Name Manager** icon.



- The **Name Manager** dialog box is displayed

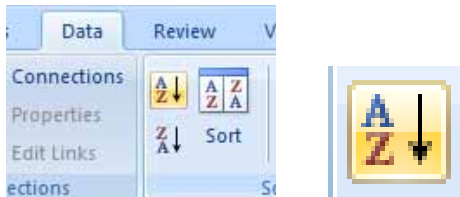


- Select the name you wish to delete, in this case **Nyah** and then click on the **Delete** button. A warning dialog box is displayed, click on the **OK** button to confirm the deletion.
- Save your changes and close the workbook.

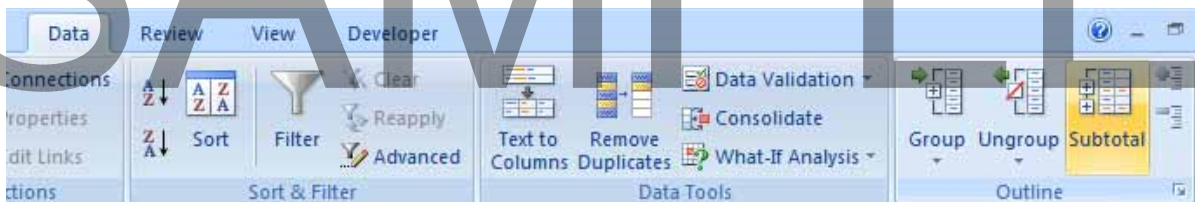
Sub-totaling

Creating subtotals

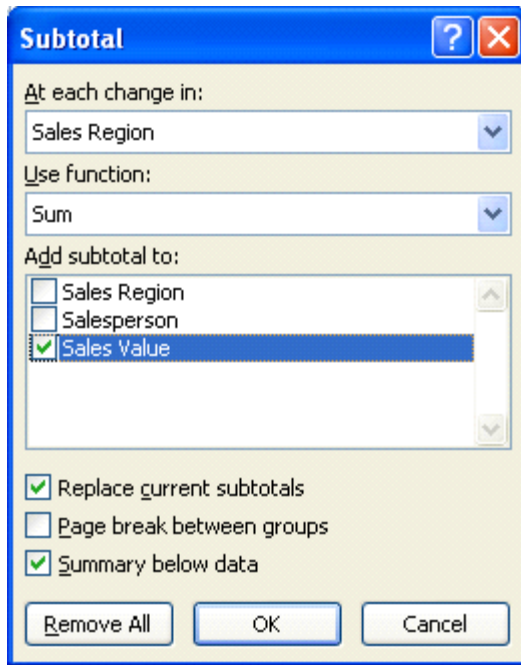
- Open a workbook called **Subtotals**.
- First, sort the data in **ascending** order, using the data in the **Sales Region** to perform the sort.
- To do this click on **Data** tab. Click on cell **A3** and then click on the **Sort Ascending** icon.



- Click within the data in the **Sales Region** column.
- Click on the **Subtotal** icon.



This will display the **Subtotal** dialog box.

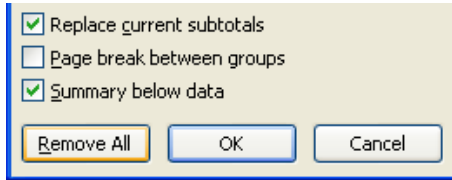


- Click on the **OK** button. You will see the data subtotaled as illustrated:

	A	B	C	D
1				
2				
3	Sales Region	Salesperson	Sales Value	
4	East	Nuo	38,953	
5	East	Anora	59,849	
6	East	Wisla	43,965	
7	East	Rowan	20,852	
8	East Total		163,619	
9	North	Karen	22,695	
10	North	Ariel	29,856	
11	North	Edda	55,865	
12	North	Junko	34,856	
13	North Total		143,272	
14	South	Dayo	56,956	
15	South	Chita	36,485	
16	South	Aeron	12,845	
17	South Total		106,286	
18	West	Cecile	10,845	
19	West	Gerge	90,395	
20	West	Hebe	60,949	
21	West	Aponi	23,456	
22	West Total		185,645	
23	Grand Total		598,822	
24				

Removing subtotals

- Click on the **Subtotal** icon and within the dialog box displayed, click on the **Remove All** button.



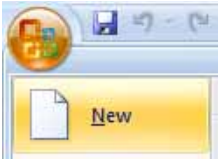
- Reapply the subtotals once again and then close the workbook, saving your data.

SAMPLE

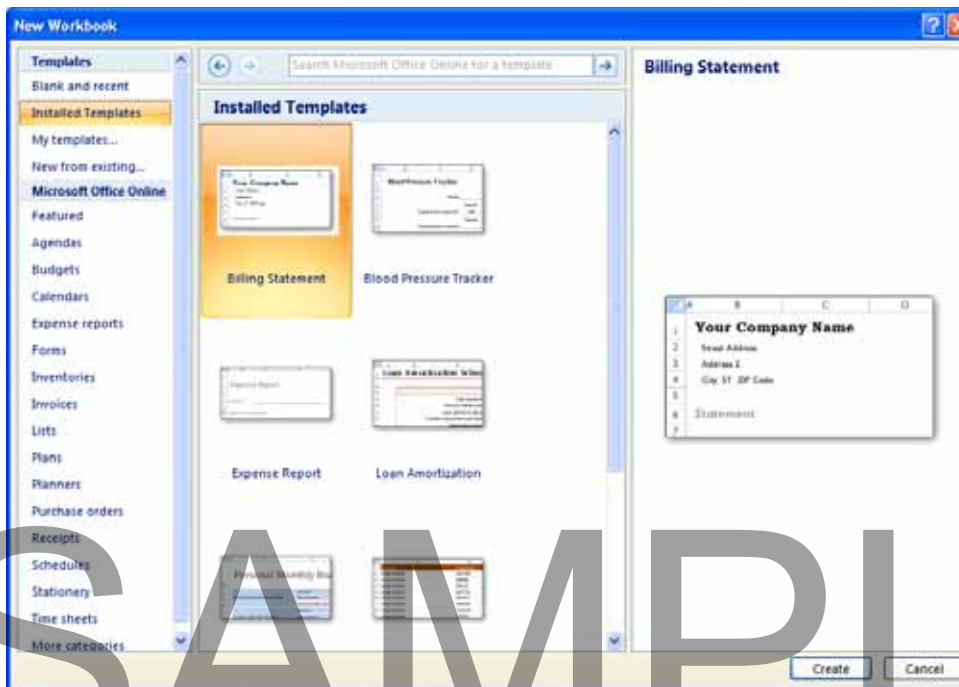
Templates

Using templates

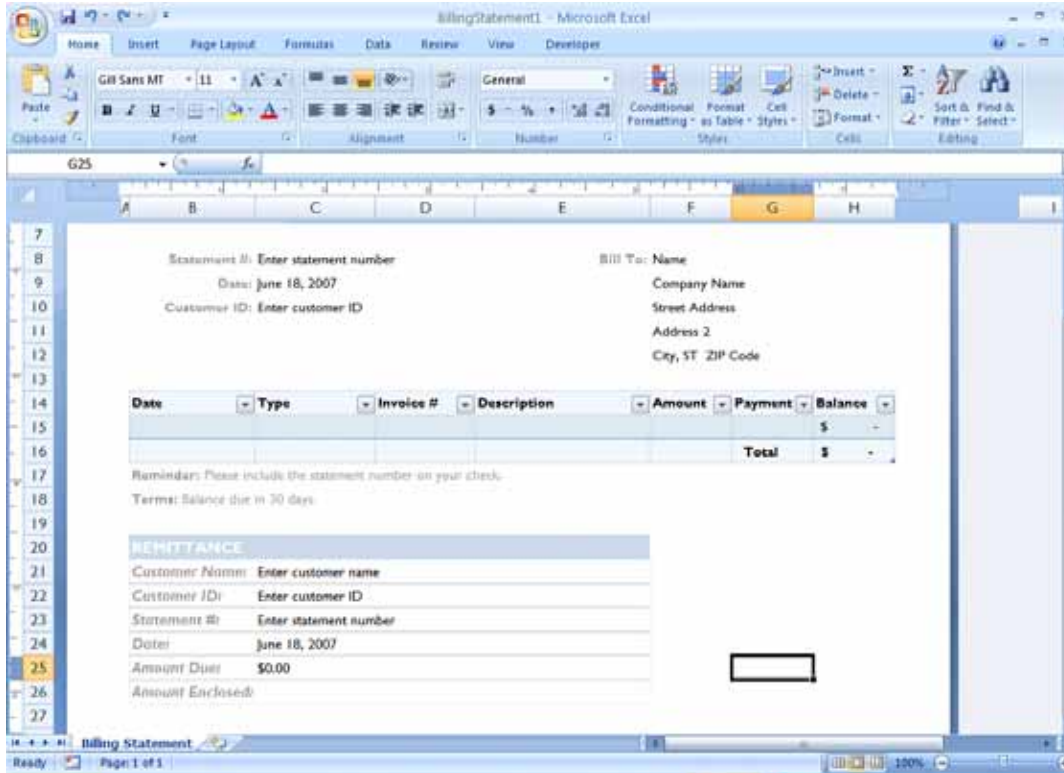
- Click on the **Office Button** and select the **New** command.



- This will display the **New Workbook** dialog box. In this case select the **Installed Templates** command (on the left of the dialog box). You should see the following displayed.



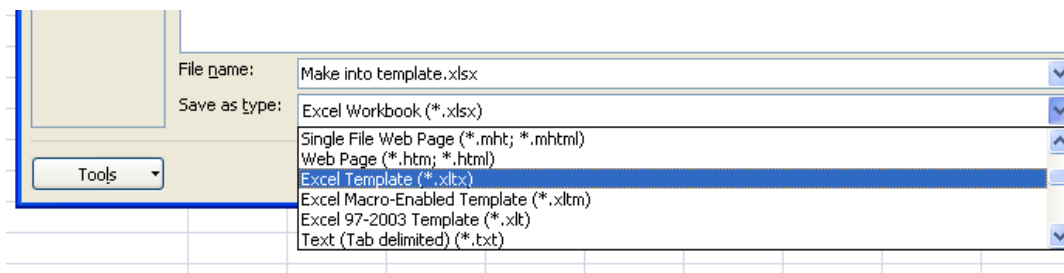
- Select the **Billing Statement** and click on the **Create** button and you will see the following.



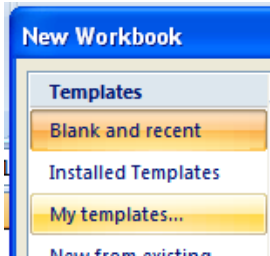
- Take a little time to examine the workbook that has been created for you. You can click on the various fields within the document. You can enter values for billing items and totals will be calculated automatically. After a short time experimenting, save the workbook as **My Billing Statement**, and close the workbook.
- If you have time take a look at some of the other installed templates.

Creating templates

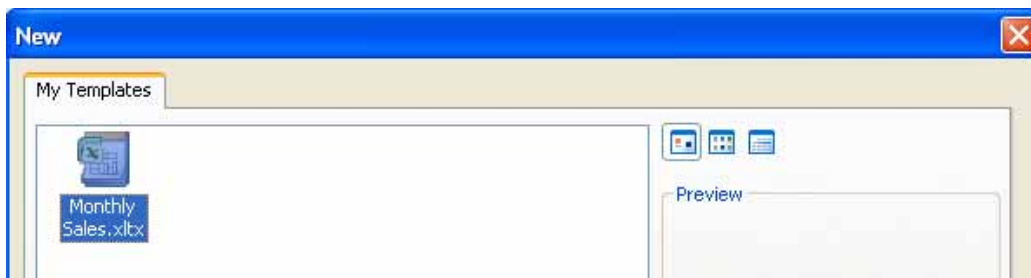
- Open a workbook called **Make into template**. This is a workbook not a template. We will now save this workbook as a template. To do this click on the Office Button and click on the **Save As** command. This will display the **Save As** dialog box.
- In the **File name** section of the dialog box, enter the name **Monthly Sales**.
- Click on the **down arrow** next to the **Save as Type** section of the dialog box and select **Excel Template**.



- Click on the **Save** button to save the template.
- Close the template.
- To use the template, click on the **Office Button** and then click on the **New** command. Select the **My templates** option.



- You will see a dialog box displaying your template file.



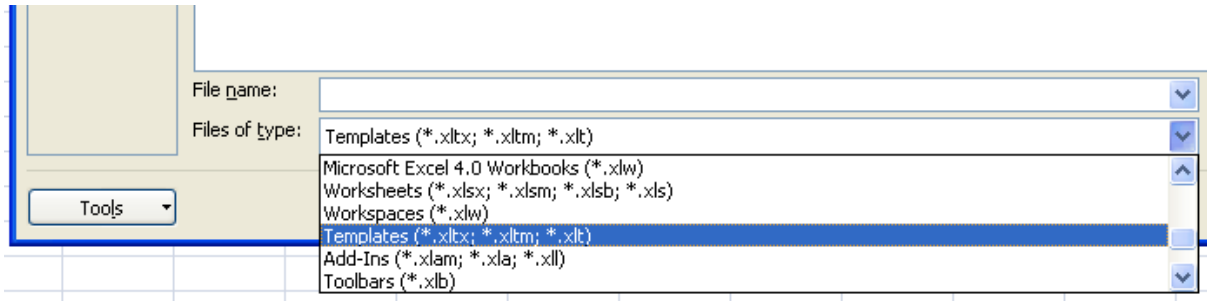
- Click on the **Monthly Sales** template and then click on the **OK** button. A new workbook will be created, based on the template.

NOTE: You have not opened the template file, you have created a new workbook, based on the template file.

You can fill in details on the workbook (just make up some data) and then save the workbook as **My New Sales Report**. Then close the workbook.

Opening and editing templates

- Click on the **Office Button**, and then click on the **Open** command, which will display the **Open** dialog box.
- In the **Files of type** section of the dialog box, select **Templates**.



- Select your template file and you can now make changes to the actual template file. Add your name next to the 'name' field and re-save the file.

NOTE: Any changes that you make to the template file will only affect new workbooks that are created using the template. Any workbooks that were previously created based on the template will remain unaffected.

- Create a new document based on your template and this time you will see that your name is now automatically displayed within the new workbook. Close the workbook without saving your changes.

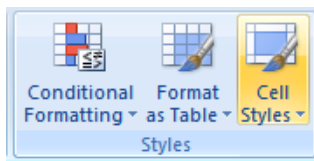
SAMPLE

Formatting & Display Techniques

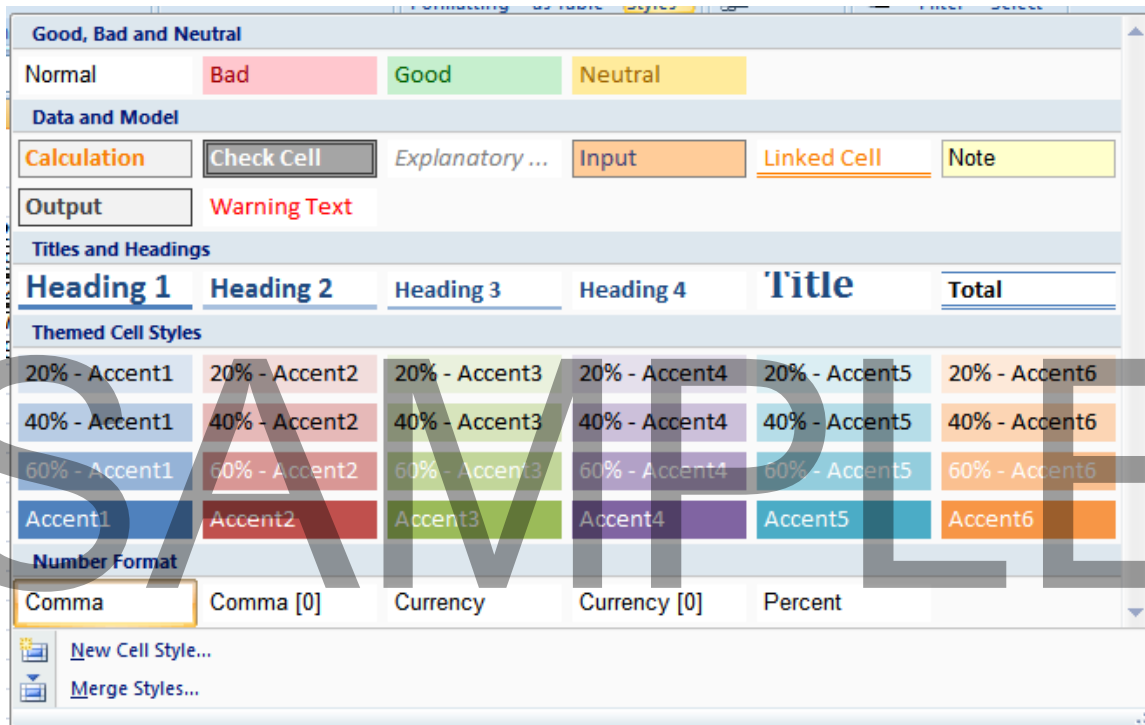
Cell Styles

Formatting tables

- Open a workbook called **Cell styles**.
- Select a cell within the data in the worksheet.
- Click on the **Home** tab and from within the **Styles** group click on the **Cell Styles** icon.



- This will display a drop down from which you can select a style to apply to the selected cell(s).



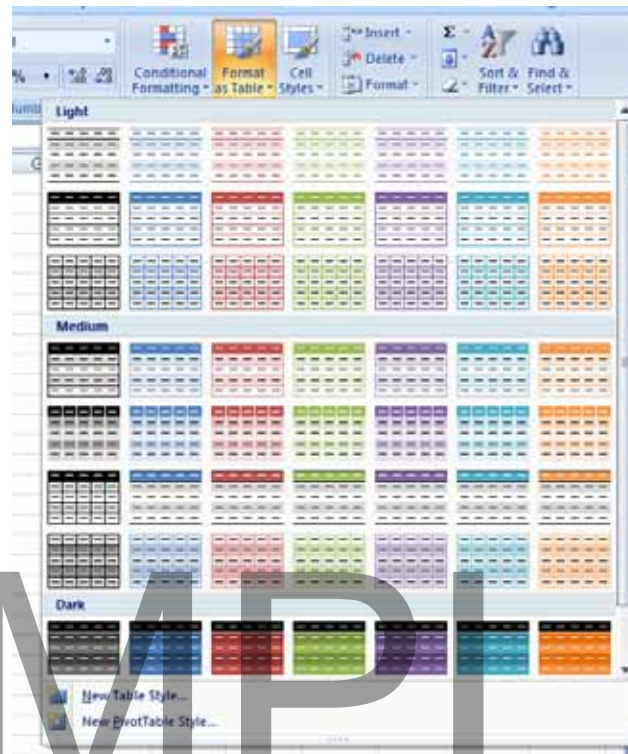
- Experiment with applying different formatting styles to different cells. Remember that you can select more than one cell at a time by keeping the **Ctrl** key pressed as

you click on cells. When you have finished experimenting save your changes and close the workbook.

Table Styles

Formatting tables using table styles

- Open a workbook called **Table styles**.
- Select the table within the worksheet.
- If necessary select the **Home** tab and then click on the **Format as Table** icon, within the **Styles** group. This will display a drop down from which you can select a style to apply to your table. Experiment with applying different styles and look at the effect it has on your table.



- An example style is shown below.

Sales person	Sales of new car	Sales of new vans
James	4	5
Josh	3	3
Sue	8	7
Diana	5	5

- When you have finished experimenting save your changes and close your workbook.

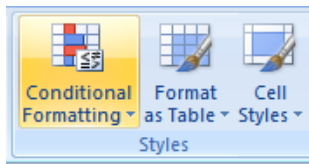
Conditional Formatting

Formatting cell ranges using conditional formatting

- Open a file called **Conditional formatting**. This workbook contains details for sales over a 3-month period. We wish to highlight all sales over 50.
- Select the range of cells to which you wish to apply conditional formatting. In this example, the range would be **C6:E13**.

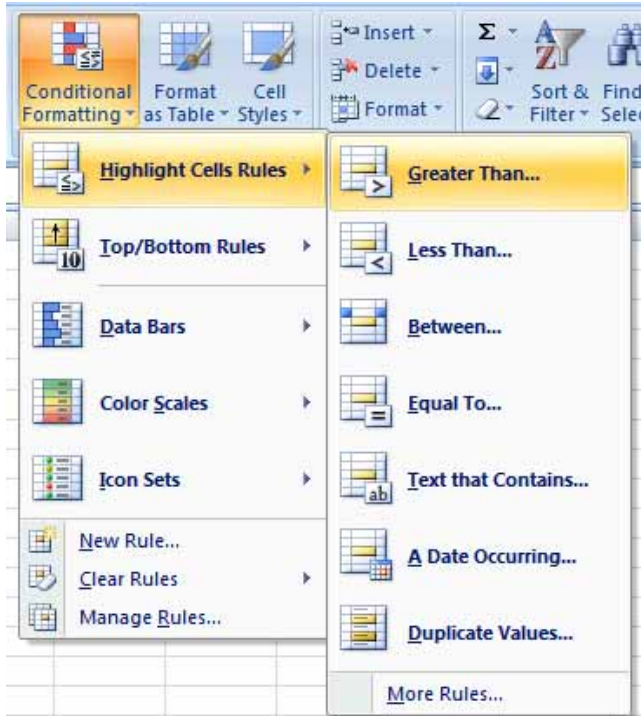
Sales person	January	February	March
James	23	45	65
Paul	34	76	45
Lou	12	33	36
Peter	43	53	64
Josh	23	76	43
Mary	65	23	25
Fiona	34	43	23
Alison	76	12	33

- Click on the **Home** tab and then click on the **Conditional Formatting** icon (within the Styles group).

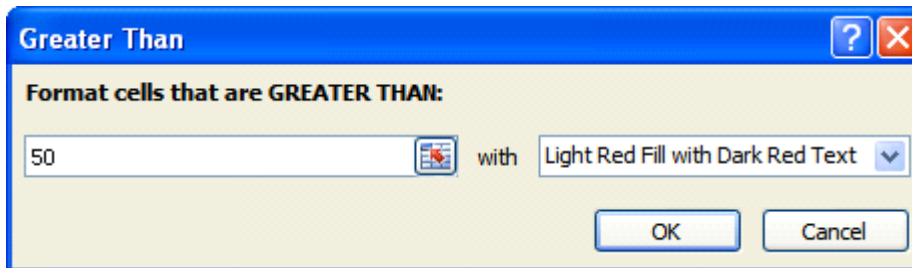


This will display a drop down list. In this case click on **Greater Than** from the submenu displayed.

SAMPLE

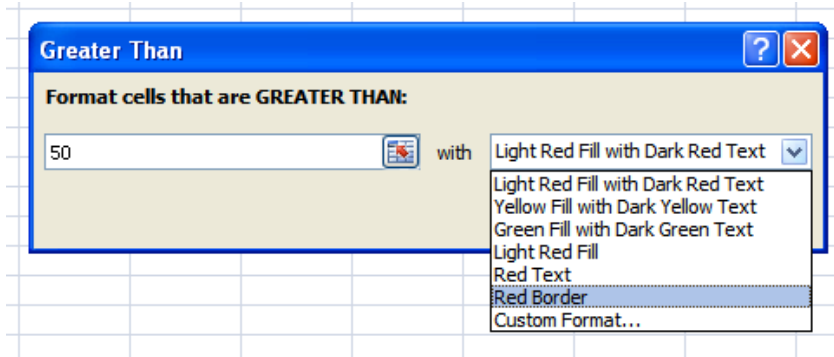


- This will display the **Greater Than** dialog box. We wish to highlight all values over 50 so we need to enter the number 50, as illustrated.



- Next, we need to set the formatting that will be displayed to highlight numbers over **50**. Click on the **down arrow** next to the **with** section of the dialog box. Pick a formatting option, such as **Red Border**.

SAMPLE



- When finished click on the **OK** button and you will see that all cells containing values over **50**, are now formatted, as requested.

Sales person	January	February	March
James	23	45	65
Paul	34	76	45
Lou	12	33	36
Peter	43	53	64
Josh	23	76	43
Mary	65	23	25
Fiona	34	43	23
Alison	76	12	33

- If you have time investigate some of the other conditional formatting options. When you have finished experimenting save your changes and close the file.

Custom number formats

Creating custom number formats

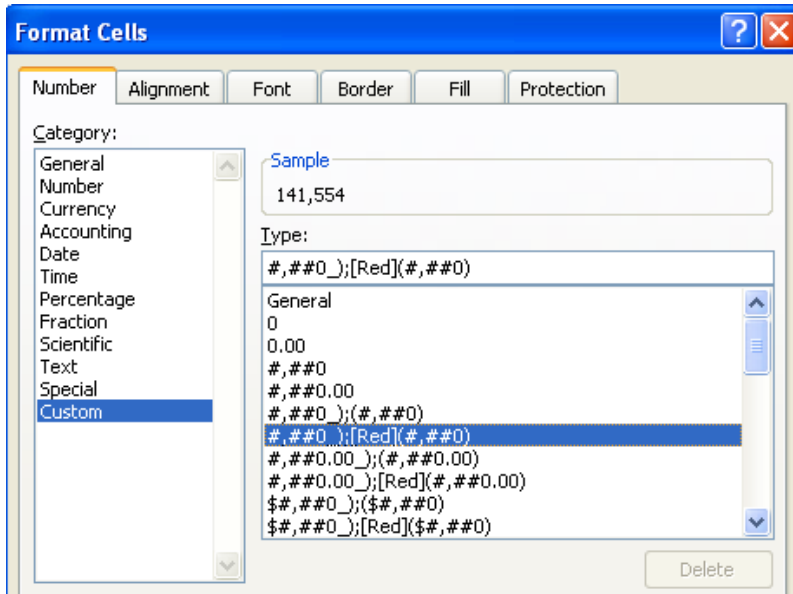
- Open a workbook called **Custom number formats**.
- Select cells **C6** and **D6**, which contain the annual balance information.

	A	B	C	D
1				
2				
3			For 2005	For 2006
4		Income	639,938	485,938
5		Expenditure	498,384	548,857
6		Balance	141,554	-62,919
7				

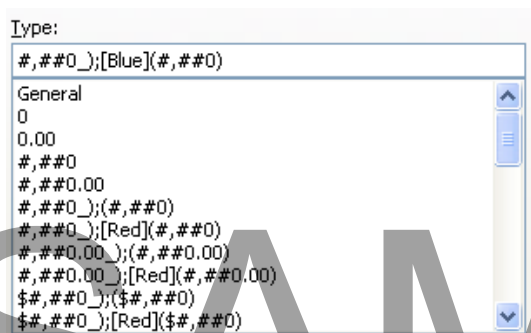
- Right click on the selected cells and from the popup menu displayed select the **Format Cells** command, which will display a dialog box.
- Select the **Number** tab.

- From the **Category** section of the dialog box, select **Custom**.
- Within the **Type** section of the dialog box, select a format code similar to that shown below:

#,##0;[Red]-#,##0



- Within the format code, change the word **Red** to **Blue**:



- Click on the **OK** button and the negative balance for the year 2006 will be displayed in blue.
- Save your changes and close the workbook.

Freezing row and column titles

Freezing the top row

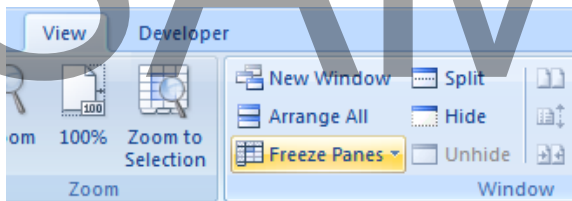
- Open a workbook called **Freeze titles**.
- In this example, we have column titles, which in this case, are the months of the year, and row titles, which relate to 'stock numbers'. The main data area displays the number of each stock type sold in a particular month:

	A	B	C	D	E	F	G	H	I
1	Stock Number	January	February	March	April	May	June	July	August
2	456	3	9	6	6	8	4	4	5
3	465	6	5	7	8	3	0	5	3
4	474	8	6	8	3	6	8	7	8
5	483	3	7	9	6	7	3	8	3
6	492	6	4	8	7	3	6	9	6
7	501	7	3	6	3	6	7	8	7
8	510	3	5	7	6	9	3	7	3
9	519	6	5	3	5	8	6	6	6
10	528	5	4	6	7	6	3	6	8
11	537	7	6	5	4	8	6	8	3
12	546	9	7	7	3	3	7	3	6
13	555	8	3	6	5	6	3	6	7
14	564	0	6	6	7	7	6	7	3
15	573	8	7	8	2	3	5	3	6

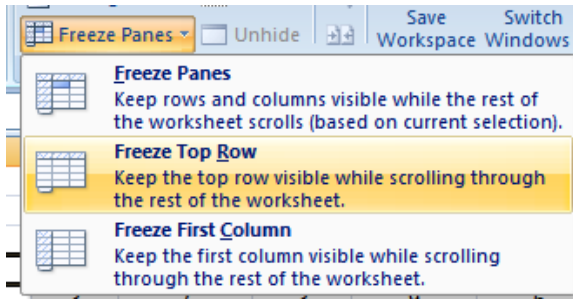
- If we scroll down the page we would soon see the following. As you can see the column titles are no longer visible.

	A	B	C	D	E	F	G	H	I
4	474	8	6	8	3	6	8	7	8
5	483	3	7	9	6	7	3	8	3
6	492	6	4	8	7	3	6	9	6
7	501	7	3	6	3	6	7	8	7
8	510	3	5	7	6	9	3	7	3
9	519	6	5	3	5	8	6	6	6
10	528	5	4	6	7	6	3	6	8
11	537	7	6	5	4	8	6	8	3

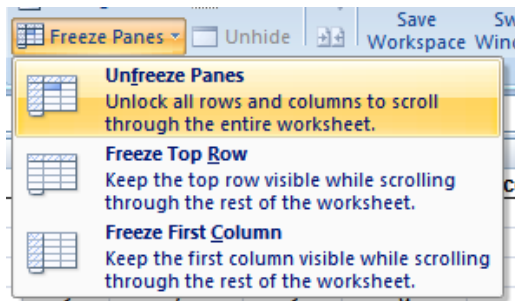
- Click on the **View** tab and from within the **Window** group select the **Freeze Panes** icon.



- You will see a drop down list of options. Click on **Freeze Top Row**.



- Now when you scroll down the page the top row containing the column headers remains frozen and visible at all times.
- To unfreeze the pane, click on the **Freeze Panes** button and select the **Unfreeze Panes** command.

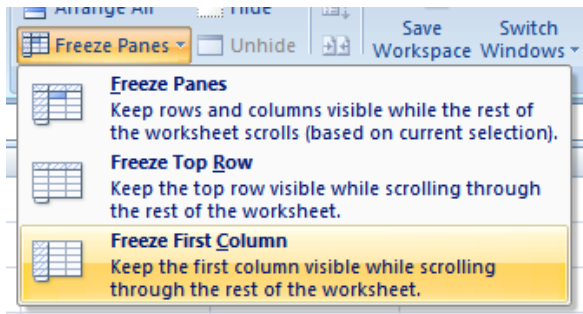


Freezing the first column

- If we now scroll to the right, we will see the following. The row titles are no longer visible:

	C	D	E	F	G	H
1	February	March	April	May	June	July
2	9	6	6	8	4	4
3	5	7	8	3	0	5
4	6	8	3	6	8	7
5	7	9	6	7	3	8
6	4	8	7	3	6	9
7	3	6	3	6	7	8
8	5	7	6	9	3	7
9	5	3	5	8	6	6
10	4	6	7	6	3	6
11	6	5	4	8	6	8

- To freeze the first column, click on the **View** tab and from within the **Window** group select the **Freeze Panes** icon. Click on the **Freeze First Column** command.



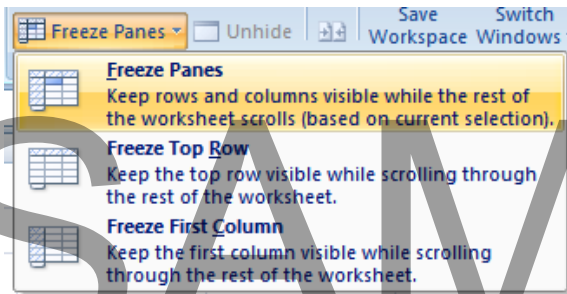
- If we now scroll to the right, the row titles will remain visible, as illustrated:

	A	G	H	I
1	Stock Number	June	July	August
2	456	4	4	5
3	465	0	5	3
4	474	8	7	8
5	483	3	8	3
6	492	6	9	6

- To unfreeze the pane, click on the **Freeze Panes** button and select the **Unfreeze Panes** command.

Freezing the top row and the first column at the same time

- Click on cell **B2** and then click on the **View** tab and from within the **Window** group select the **Freeze Panes** icon. Click on the **Freeze Panes** command.



- You will find that the top row and the first column have now both been frozen.
- Save your changes and close the workbook.

Hiding and un-hiding rows and columns

Hiding and un-hiding rows

- Open a file called **Hide**.
- Click the row heading to select the row you wish to hide. Highlight other rows by pressing **Ctrl** while you click on each row heading. In this case, select the row relating to **Carla**. Right click on the selected row and from the popup menu displayed select the **Hide** command.

	A	B	C	D	E
1					
2	Salesperson	Sales for 2004	Sales for 2005	Sales for 2006	Sales for 2007
3	Sue	33,985	34,858	20,576	20,558
4	Nyah	31,984	33,586	33,586	72,069
5	Carla	29,984	43,856	42,586	43,856
6	Rowan	39,375	43,856	42,586	43,856
7	Gina	30,447	36,886	36,586	44,586
8	Shrikrishna	30,274	23,857	63,968	52,586
9	Kayo	29,844	20,485	30,885	34,496
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

- The selected row is now hidden. As you can see Carla's details are no longer displayed.

	A	B	C	D	E
1					
2	Salesperson	Sales for 2004	Sales for 2005	Sales for 2006	Sales for 2007
3	Sue	33,985	34,858	20,576	20,558
4	Nyah	31,984	33,586	33,586	72,069
6	Rowan	39,375	43,856	42,586	43,856
7	Gina	30,447	36,886	36,586	44,586
8	Shrikrishna	30,274	23,857	63,968	52,586
9	Kayo	29,844	20,485	30,885	34,496
10					

- To unhide the row, select the rows above and below the hidden row, and right click over the selected rows. From the popup menu displayed select the **Unhide** command. The hidden rows will now be displayed again.

	A	B	C	D	E
1					
2	Salespers			Sales for 2006	Sales for 2007
3	Sue			20,576	20,558
4	Nyah	31,984		33,586	72,069
5	Rowan	39,375		42,586	43,856
6	Gina	30,447		36,586	44,586
7	Shrikrishna	30,274		63,968	52,586
8	Kayo	29,844		30,885	34,496
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					

Hiding and un-hiding columns

- Select the column you wish to hide, in this case the column relating to **Sales for 2005**. Right click over the selected column and from the popup menu displayed, select the **Hide** command.

	A	B	C	D	E
1					
2	Salesperson	Sales for 2004	Sales for 2006	Sales for 2007	
3	Sue	33,985	34,858	20,576	20,558
4	Nyah	31,984			
5	Carla	29,948			
6	Rowan	39,375			
7	Gina	30,447			
8	Shrikrishna	30,274			
9	Kayo	29,844			
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

- The column will no longer be displayed, as illustrated.

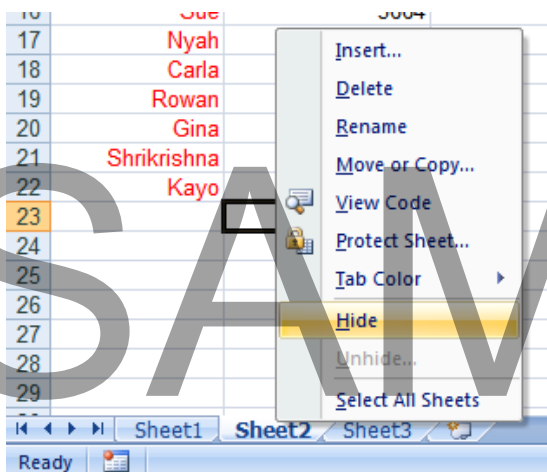
	A	B	D	E
1				
2	Salesperson	Sales for 2004	Sales for 2006	Sales for 2007
3	Sue	33,985	20,576	20,558
4	Nyah	31,984	33,586	72,069
5	Carla	29,948	20,586	34,475
6	Rowan	39,375	42,586	43,856
7	Gina	30,447	36,586	44,586
8	Shrikrishna	30,274	63,968	52,586
9	Kayo	29,844	30,885	34,496
10				

- To unhide the column, select the columns on either side of the hidden column and right click over the selected column. From the popup menu displayed select the **Unhide** command.
- Experiment a little more with hiding and un-hiding rows and columns. When you are finished, save your changes and close your workbook.

Hiding / un-hiding worksheets

Hiding and un-hiding worksheets

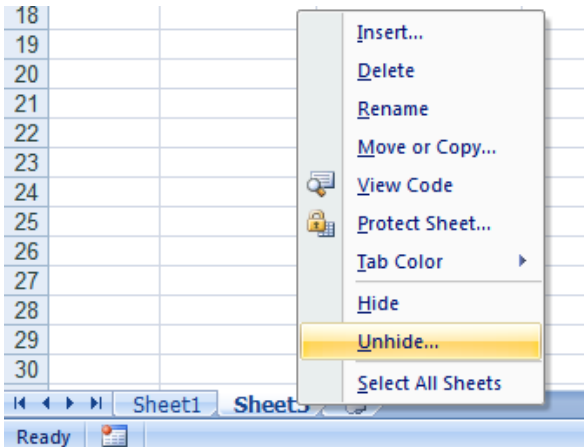
- Open a workbook called **Worksheet**.
- Right click on the sheet tab to select the sheet you wish to hide, in this case **Sheet 2**. From the popup menu displayed select the **Hide** command.



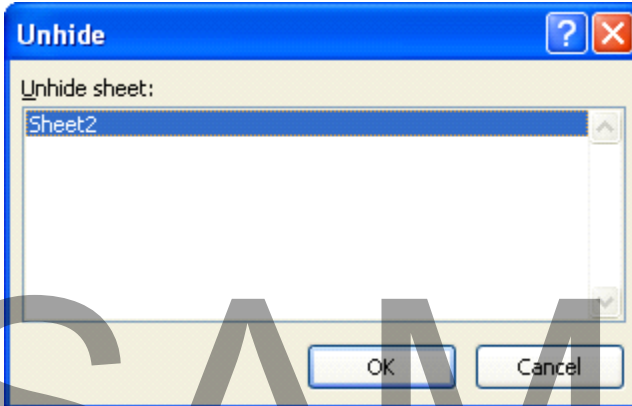
- **Sheet2** will now be hidden, as illustrated.



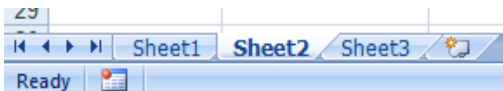
- To unhide the worksheet, right click on one of the worksheet tabs and from the popup menu displayed, select the **Unhide** command.



- You will see a dialog box displayed from which you can select the hidden sheet you wish to unhide.



- Click on the **OK** button and the hidden sheet will now be displayed again.



- Experiment with hiding another worksheet and then save your changes and close the workbook.

Sorting and Querying Data

Sorting data by multiple columns

Sorting internal Excel databases

- Open a file called **Sort data 01**.
- In this example, we wish to sort the data by second name, and then by first name. As you can see, there are three people with the last name **Gutierrez**.
- Click within the **Second_name** column of data:

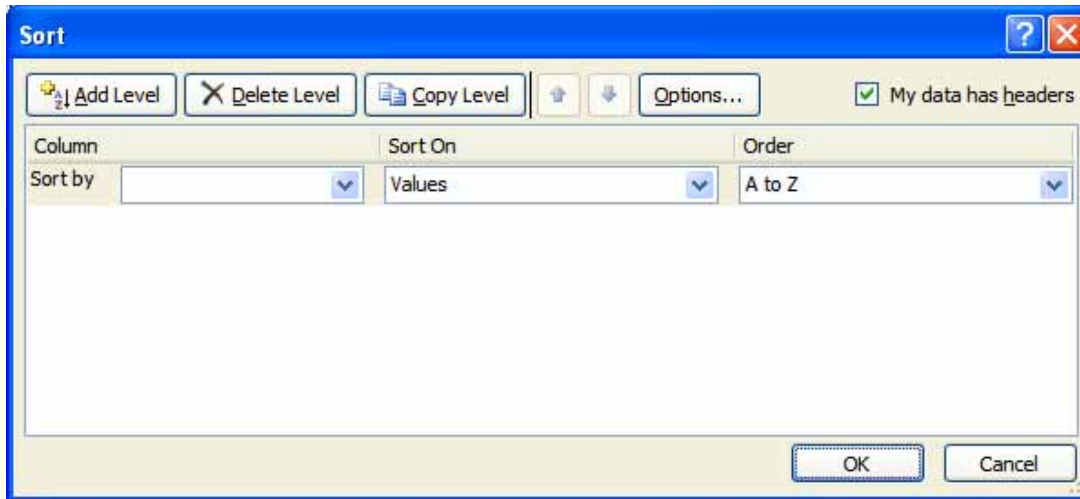
	A	B	C
1	First_name	Second_name	Department
2	Elliot	Smith	Marketing
3	Rob	Jones	Marketing
4	Peter	Hague	Production
5	Sue	Major	Production
6	Dave	Murray	Sales
7	Lou	Peters	Sales
8	Robin	Smith	Sales
9	Tim	Smith	Sales

- Click on the **Data** tab and from within the **Sort & Filter** group click on the **Sort** icon.

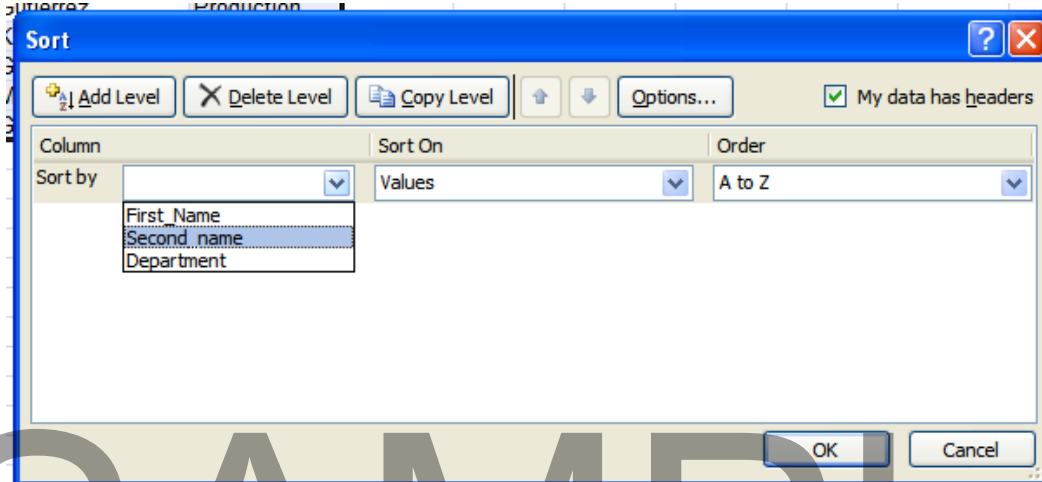


SAMPLE

- This will display the **Sort** dialog box:

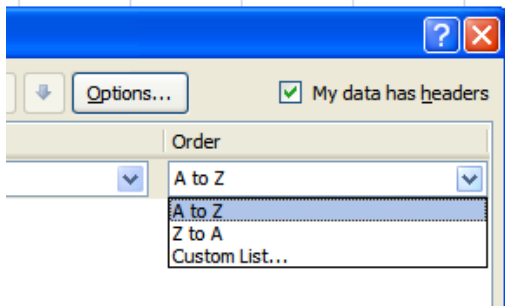


- Click on the **down arrow** to the right of the **Sort by** section of the dialog box and select **Second_name**.

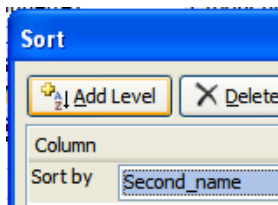


- Make sure that the **A to Z** option is selected within the **Order** section of the dialog box.

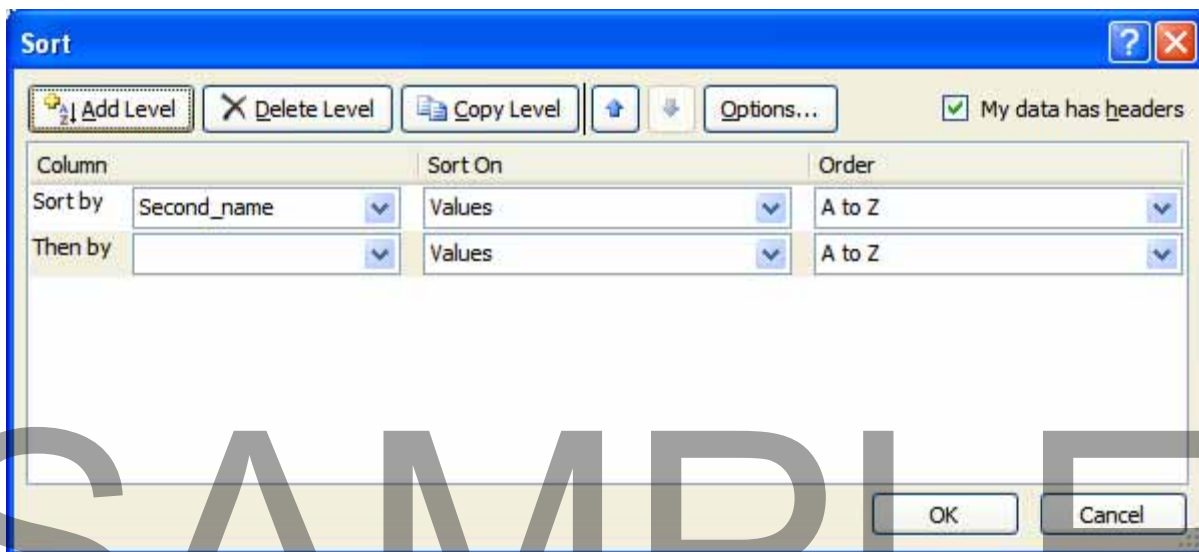
SAMPLE



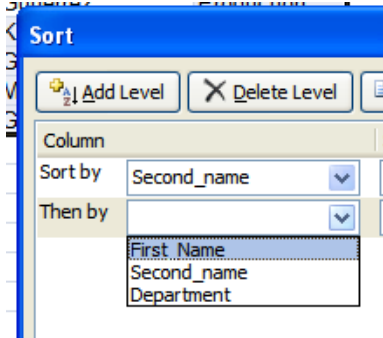
- Click on the **Add Level** button.



You will see a **Then by** section added to the dialog box.



- Click on the **down arrow** to the right of the **Then by** section of the dialog box, and select **First_Name**.



- Make sure that the **A-Z** option button is marked within the **Order** section of the dialog box.
- Click on the **OK** button and the data will be sorted by second name and then by first name, as illustrated:

	A	B	C	D
1	First Name	Second_name	Department	
2	Neil	Abercrombie	Marketing	
3	Gary	Ackerman	Marketing	
4	Elijah	Cummings	Production	
5	Ciro	Gutierrez	Sales	
6	Luis	Gutierrez	Production	
7	Zoe	Gutierrez	Sales	
8	Joe	Knollenberg	Sales	
9	Marilyn	Musgrave	Sales	

- Save your changes and close the workbook.

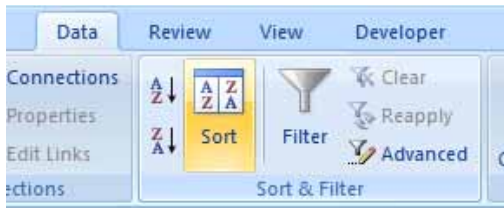
Custom sorts

Custom sort options

- Open a workbook called **Custom sorts**. This contains details for a small air travel company, operating flights to different countries that leave on specific days of the week. We wish to sort the data by the days of the week, but if we do this alphabetically, we would get the following:

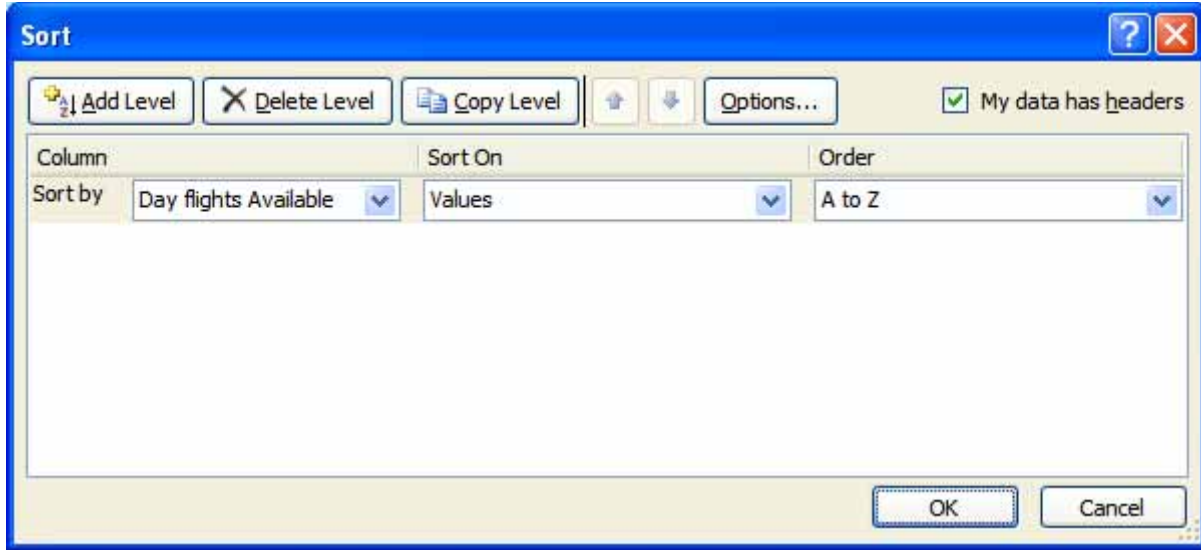
	A	B
1	Country	Day flights Available
2	Tuvalu	Friday
3	Uruguay	Friday
4	Yugoslavia	Friday
5	Yemen	Monday
6	Turkey	Monday
7	Uganda	Thursday
8	Venezuela	Thursday
9	Zaire	Thursday
10	Zambia	Thursday
11	Ukraine	Tuesday
12	Vanuatu	Tuesday
13	Western Sahara	Tuesday
14	Turkmenistan	Wednesday
15	United Arab Emirates	Wednesday
16	Uzbekistan	Wednesday
17	Vietnam	Wednesday
18		

- What we want is the list sorted so that we see Monday's flights listed first, then Tuesday's and so on. To do this we need to perform a custom sort.
- Click on a cell within the **Day flights Available** column.
- Click on the **Data** tab and from within the **Sort & Filter** group click on the **Sort** icon.

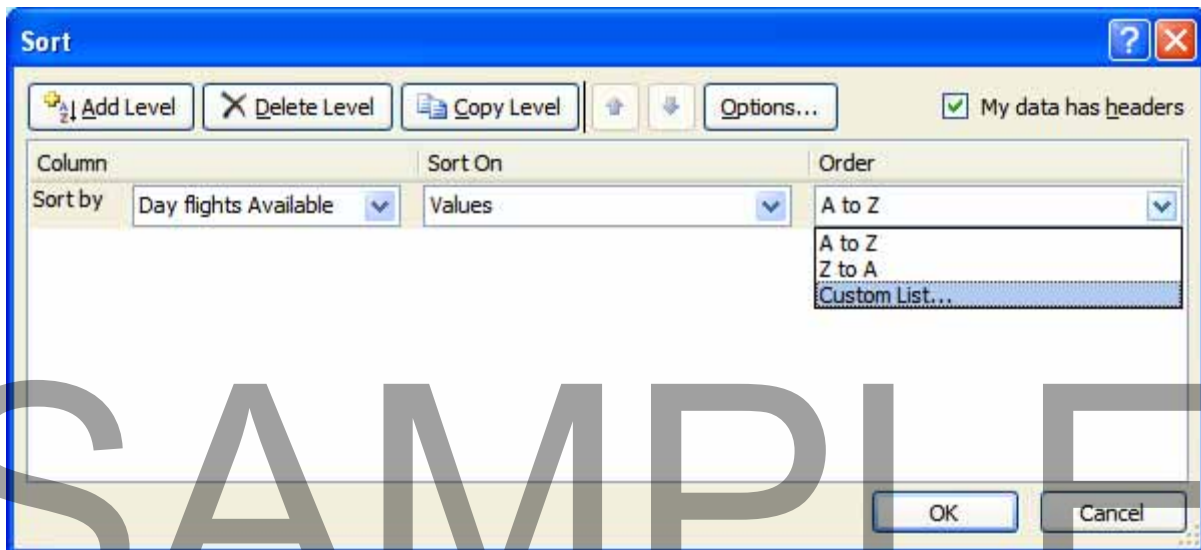


This will display the **Sort** dialog box.

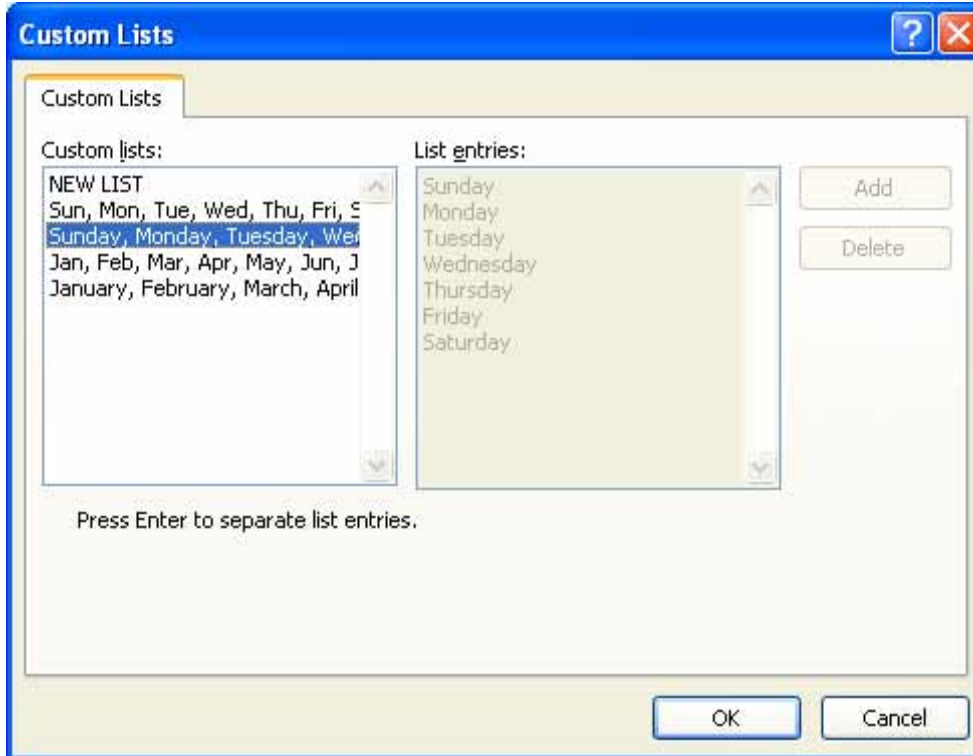
SAMPLE



- Click on **down arrow** within the **Sort by** section of the dialog box, and select **Day flights Available**.
- Click on **down arrow** within the **Order** section of the dialog box, and select **Custom List**.



- The **Custom List** dialog box is displayed. Select the option illustrated.



- Click on the **OK** button and close all open dialog boxes. The list will then be sorted by weekday, as illustrated.

	A	B
1	Country	Day flights Available
2	Yemen	Monday
3	Turkey	Monday
4	Ukraine	Tuesday
5	Vanuatu	Tuesday
6	Western Sahara	Tuesday
7	Turkmenistan	Wednesday
8	United Arab Emirates	Wednesday
9	Uzbekistan	Wednesday
10	Vietnam	Wednesday
11	Uganda	Thursday
12	Venezuela	Thursday
13	Zaire	Thursday
14	Zambia	Thursday
15	Tuvalu	Friday
16	Uruguay	Friday
17	Yugoslavia	Friday

- Save your changes and close the workbook.

Using AutoFilter

Using AutoFilter to query data

- Open a workbook called **Autofilter 01**.
- Click on any cell within the list.
- Click on the **Data** tab and from within the **Sort & Filter** group click on the **Filter** icon.

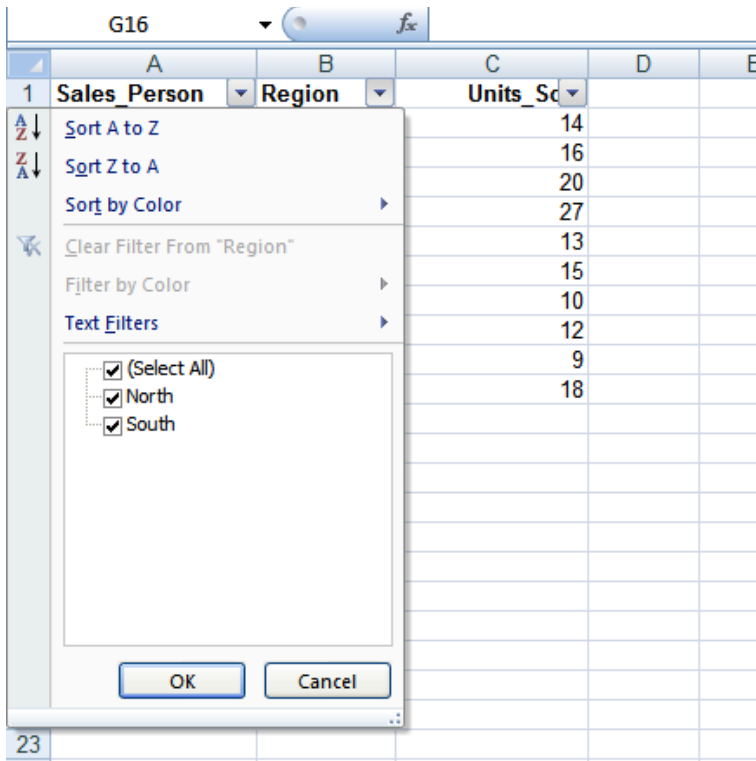


The table will then look like this.

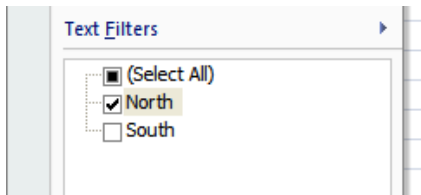
	A	B	C
1	Sales_Person	Region	Units_Sc
2	Sue	North	14
3	Nyah	South	16
4	Carla	South	20
5	Rowan	North	27
6	Lou	South	13
7	Shrikrishna	South	15
8	Kayo	North	10
9	Dave	North	12
10	Bob	North	9
11	Gina	South	18
12			

- We can click on the **down arrows** displayed to apply filters to the data. Click on the down arrow at the top of the **Region** column, and you will see the following.

SAMPLE



- De-select **Select All** and then select **North**, as illustrated, and click on the **OK** button.

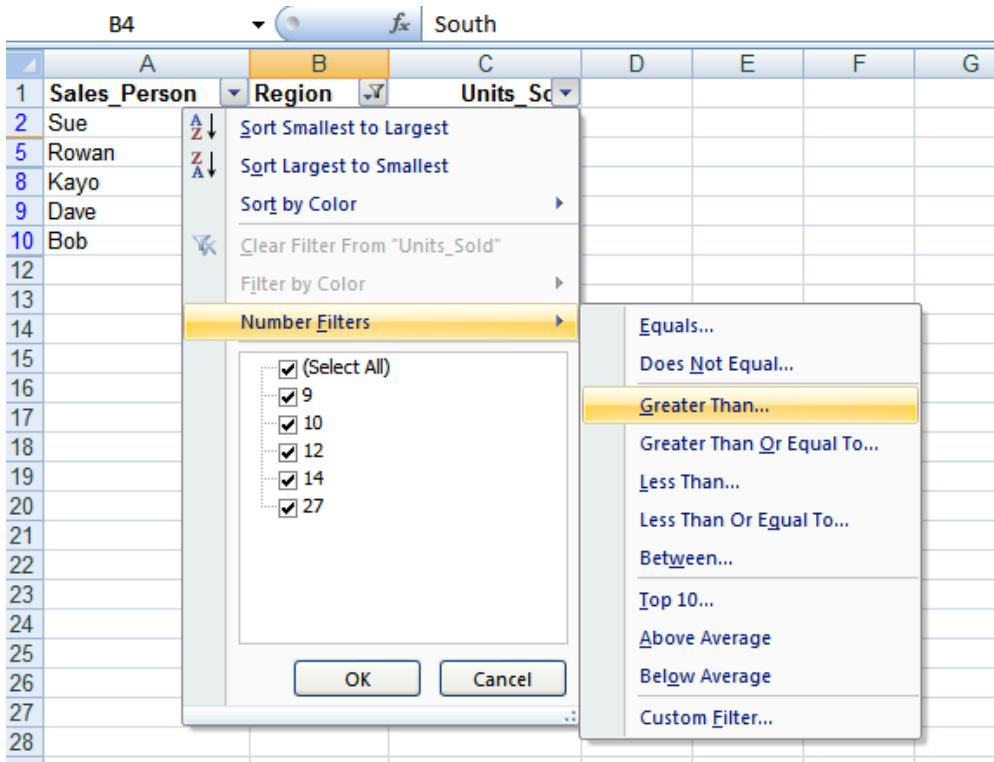


- You will now only see details relating to the **North** region.

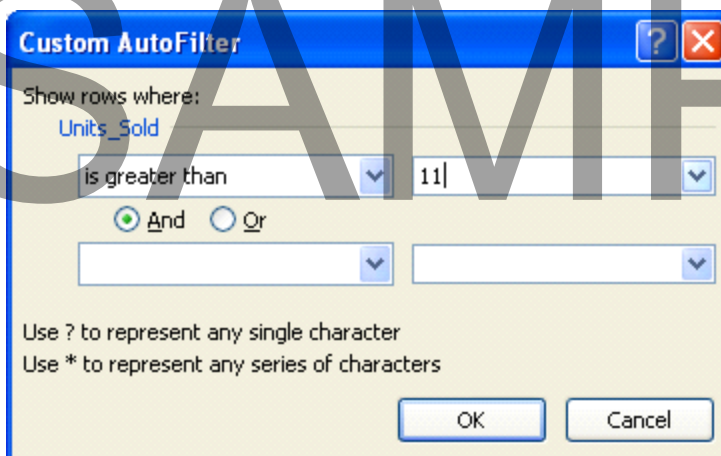
	A	B	C	D
1	Sales_Person	Region	Units_Sc	
2	Sue	North	14	
5	Rowan	North	27	
8	Kayo	North	10	
9	Dave	North	12	
10	Bob	North	9	
12				
13				

Multiple queries

- So far, we have filtered the data to show only sales in the **North** region. We can now add a second filter to show only sales in the North region, over a certain amount, say **11**.
- To do this, click on the **down arrow** in the **Units_Sold** column and select **Number Filters**. From the submenu displayed select **Greater Than**.



- This will display the **Custom Autofilter** dialog box. Enter the number **11**, as illustrated and click on the **OK** button.



- The data will now be displayed as illustrated below. Only sales above **11** within the **North** region will be displayed.

	A	B	C
1	Sales_Person	Region	Units_Sold
2	Sue	North	14
5	Rowan	North	27
9	Dave	North	12

Removing filters

- To remove the filter re-click on the **Filter** icon.

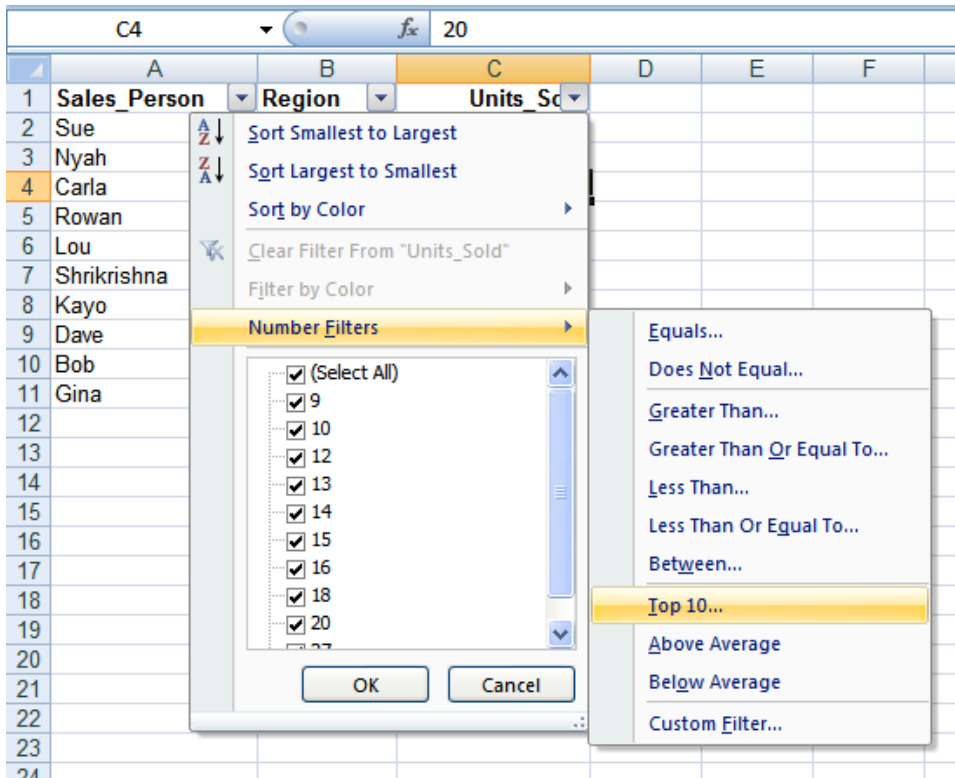


- Save your changes and close the workbook.

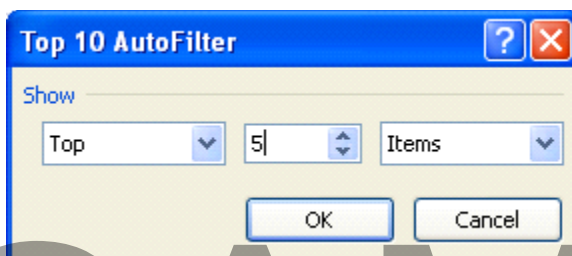
Top 10 AutoFilter

- Open a workbook called **Autofilter 02**.
- Click on any cell within the list.
- Click on the **Data** tab and from within the **Sort & Filter** group click on the **Filter** icon. You will see drop down arrows applied to the top of each column of data.
- Click on the **down arrow** in the **Units_Sold** column. Click on the **Number Filters** command and from the submenu displayed select the **Top 10** command.

SAMPLE



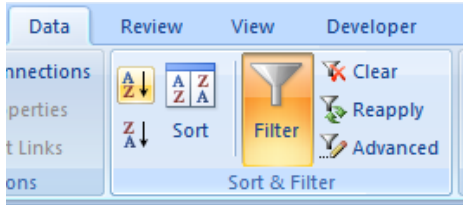
- This will display the **Top 10 AutoFilter** dialog box. Type in the number **5**, as illustrated and click on the **OK** button.



- You will see the top 5 entries listed, as illustrated:

	A	B	C
1	Sales_Person	Region	Units_Sold
3	Nyah	South	16
4	Carla	South	20
5	Rowan	North	27
7	Shrikrishna	South	15
11	Gina	South	18

- If you wish you can sort these, by clicking on the **A-Z Sort** icon within the **Sort & Filter** group of the **Data** tab.



- The data will now look like this.

	A	B	C
1	Sales_Person	Region	Units_Sold
3	Shrikrishna	South	15
4	Nyah	South	16
5	Gina	South	18
7	Carla	South	20
11	Rowan	North	27

- Save your changes and close the workbook.

Using advanced query / filter options

Filtering unique records

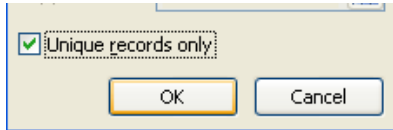
- Open a workbook called **Advanced filter**. This contains a list of names with company ID numbers. If you look carefully you can see a duplicate, i.e. **Carla** is listed twice. In this case, the list is so small that looking for duplicates is easy, but just imagine trying to do this for a list of thousands of names. We wish to filter this list to avoid duplicates.
- First click on a cell in the **Name** column. Then click on the **Data** tab and from within the **Sort & Filter** group, click on the **Advanced** button.



- The **Advanced Filter** dialog box is displayed.



- Click on **Unique records only**, and then click on the **OK** button.



- We will now see the list displayed without any duplicates. **Carla** is only listed once.

	A	B	C
1	Name	Company ID Number	
2	Sue	1187	
3	Carla	1738	
4	Rowan	2184	
5	Dave	2647	
6	Shrikrishna	2647	
7	Kayo	2765	
9	Bob	3648	
10	Gina	7364	
11	Nyah	9376	
12			

- Save your changes and close the workbook.

Advanced Filter

- Open a workbook called **Advanced Filter Criteria**. This workbook contains a simple sales list. We wish to filter the list so only sales made by **Gina** to **Germany** are displayed. So it is easier to see, we have highlighted all sales by Gina, who made two sales to Germany and one to South Africa.

- Enter the following (i.e. "Gina" and "Germany") into the criteria area beneath the list:

24				
25	Month	Sales Person	Country	Amount
26		Gina	Germany	
27				

- Select a cell within the **Sales Person** list.
- Click on the **Data** tab and from within the **Sort & Filter** group click on the **Advanced** button.



- The **Advanced Filter** dialog is displayed. Excel should have automatically entered your list range into the **List range** box.



- We wish to sort according to the criteria in cells **A25:D26**, so click within the **Criteria range** box and enter **\$A\$25:\$D\$26**:



- Click on the **OK** button and Excel will filter the list, showing only records that match your criteria.

	A	B	C	D
1	Sales Figures			
2				
3	Month	Sales Person	Country	Amount
6	June	Gina	Germany	4000
10	February	Gina	Germany	3421
21				
22			TOTAL	107133
23				
24				
25	Month	Sales Person	Country	Amount
26		Gina	Germany	
27				

- Save your changes and close the workbook.

SAMPLE

Linking & Consolidating Data

Linking data or a chart within a worksheet

Linking individual cells within a worksheet

- Open a workbook called **Link worksheet data**.

NOTE: Please be careful to open the file called **Link worksheet data**, not a file called **Link workbook data**.

- In this worksheet, the postage and packing cost is stored in cell **A3**.
- Click on cell **C7** and add the following formula: **=\$A\$3**
- Copy this formula to cells **C8:C11** (by clicking on cell **C7**, moving the pointer the bottom-right of the cell, until the mouse pointer changes to the shape of a small cross, and then drag down to cell **C11**). The worksheet should then resemble the illustration shown:

	A	B	C	D
1				
2	Postage and packing			
3	2.5			
4				
5				
6	Stock Number	Sale price	Postage and packing	Total price
7	10945	20.76	2.5	23.26
8	10748	18.64	2.5	21.14
9	10847	12.99	2.5	15.49
10	10884	13.74	2.5	16.24
11	10385	13.99	2.5	16.49
12				

- Click on cell **A3** and change the value from **2.5** to **3.0**. This should automatically change the data in the **Postage and packing** column data. This demonstrates the advantage of linking data - it saves the time it would take to change each value individually.
- Save your changes and close the workbook.

Linking charts to data within a worksheet

- Open a workbook called **Link worksheet chart**.
- When you select data within a worksheet and create a chart from this, by default the chart is automatically linked to the data. Any changes made to the data that the chart was based on, will be reflected in the chart.
- Click within the data.

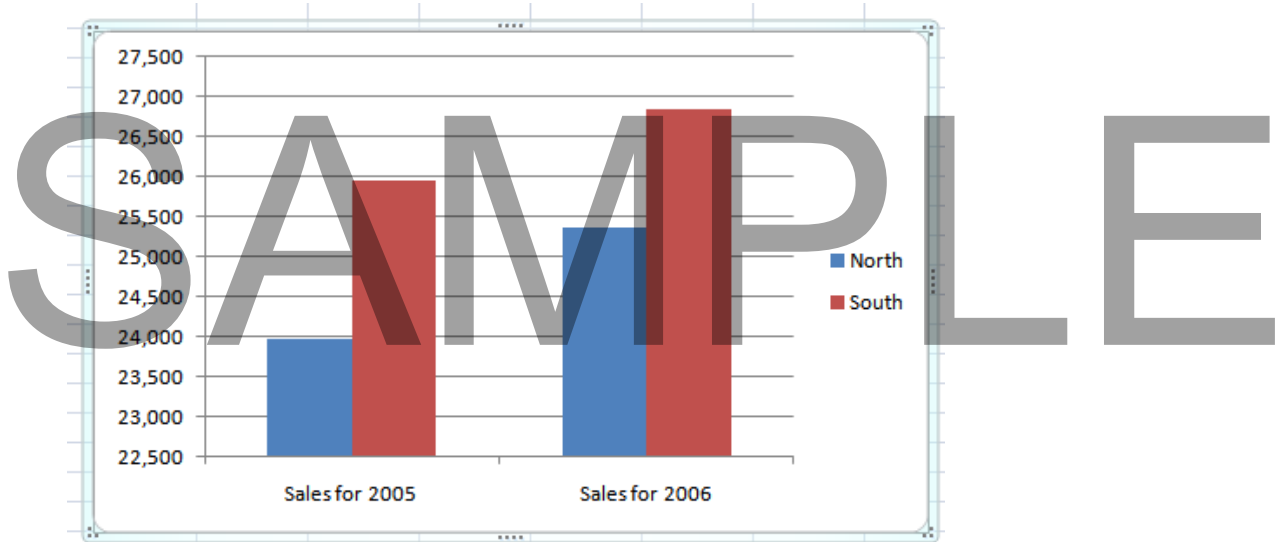
- Click on the **Insert** tab and from within the **Charts** group click on the **Column** icon.



- This will display a drop down list of chart options. Click on the first **2-D** chart option illustrated.



- The chart will be displayed as illustrated.



- Change the sales values for the **North** or **South** regions and the chart will automatically update to reflect these changes.



- Save your changes and close the workbook.

Linking data or a chart between worksheets [within a workbook]

Linking a cell range on one worksheet to another worksheet (within the same workbook)

- Open a workbook called **Link data between worksheets**. This workbook contains two page tabs. Note that postage and packing value is stored on the second sheet.
- In this example, we will link the **Postage and packing** value on the second worksheet to a cell within the first worksheet of the workbook.
- Click on cell **C4** on the first worksheet.
- Type in the equals sign (=).
- Click on the tab of the second worksheet (at the bottom of the workbook).
- Click on cell **A4** (in the second worksheet).
- Press **Enter** and you will return to **Sheet 1**.
- Re-click on cell **A4** and you examine the formula within this cell:

	A	B	C	D
1				
2				
3	Stock Number	Sale price	Postage and packing	Total price
4	10945	20.76	2.50	23.26
5				

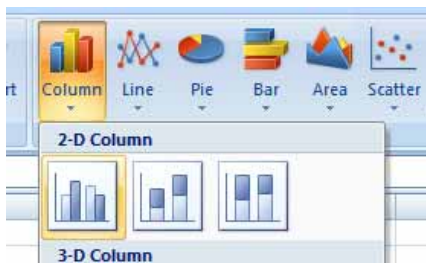
- You have linked data from one worksheet to another worksheet. Notice the syntax in cell **A4**. You can use the help within Excel to get more information. Save your changes and close the workbook

Linking data on one worksheet to a chart in another worksheet (within the same workbook)

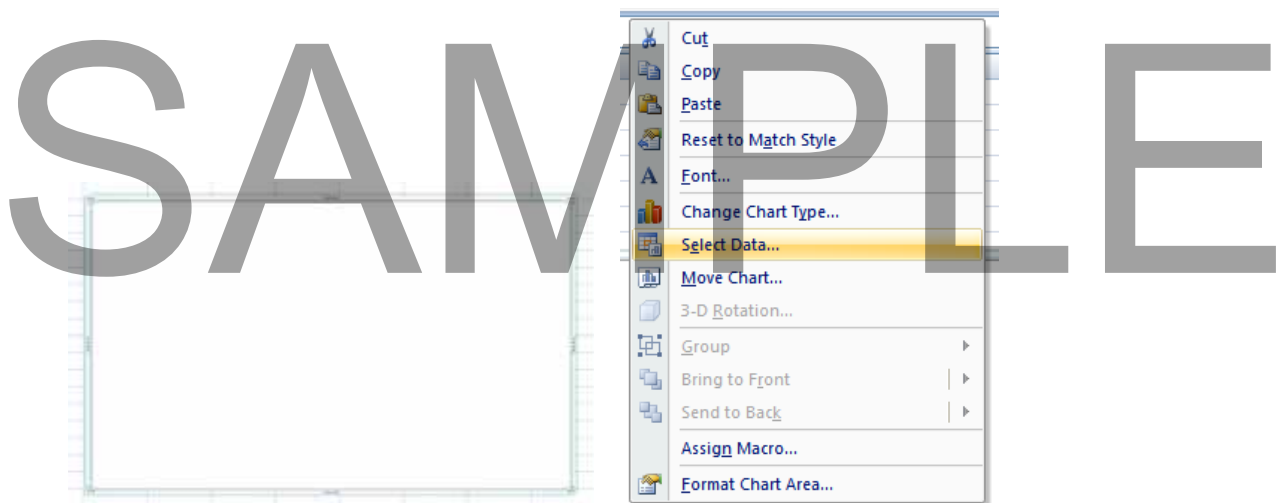
- Open a workbook called **Link chart between worksheets**.

NOTE: Be careful not to open a different file called **Link chart between workBOOKS**

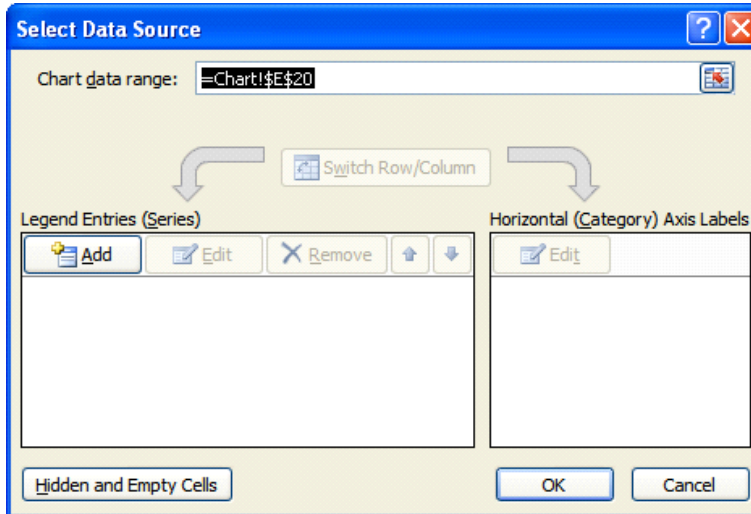
- Click on the worksheet tab called **Chart**. You should now be viewing an empty worksheet.
- Click on the **Insert** tab and from within the **Charts** group click on the **Column** button. Select the first chart within the **2-D** options.



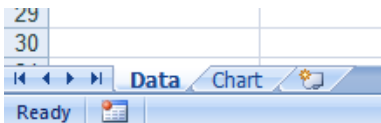
- You will see an empty chart placeholder displayed within your worksheet. Right click on this empty chart placeholder and you will see a popup menu displayed. Click on the **Select Data** command.



- This will display the **Select Data Source** dialog box.



- Click on the **Data** worksheet tab (bottom-left of your screen).



- Select the table of data.

NOTE: You may have to move the dialog box so that you can select the data.

Sales Region	Sales for 2005	Sales for 2006
North	28,576	30859.00
South	27,958	29968.00

- Click on the **OK** button and the chart will be displayed on the second worksheet, using that data you selected on the first worksheet.

- Try altering the data on the first worksheet and if you switch to the second worksheet, you should find that the chart has changed to reflect your changes.
- Save and close your workbook.

SAMPLE

End of the preview sample



This sample is approximately half of the full course. Please see the table of contents at the beginning of this document to see the full list of topics covered in the full course.

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