

Section 16

Filtering and Sorting

By the end of this Section you should be able to:

Use AutoFilter on a List

Sort Data

Sort a List

Exercise 97 - Creating a List

Guidelines:

Enter the **Column** names (**Fields**) as labels across a row. The data is entered directly below them, following these rules:

- The area to be used must be rectangular, although it may contain blanks.
- Use the same type of data in each column.
- Do not separate the labels from the data with a blank or decorative row.
- Do not duplicate column names and to avoid confusion they should be different from any range names.
- Enter all the list information across each row.

Actions:

1. In a new workbook, enter the list information as shown in the rows and columns below:

	A	B	C	D	E
1					
2					
3	Item	Classification	Price	Sold Today?	
4	Whole milk	Dairy	0.89	Yes	
5	Butter	Dairy	0.95	Yes	
6	Basmati Rice	Provisions	1.39	Yes	
7	Cauliflower	Fruit and veg	0.25	Yes	
8	Pizza	Frozen	2.99	Yes	
9	Country ham	Delicatessen	0.75	No	
10	Gorgonzola	Delicatessen	1.75	No	
11	Semi-skimmed milk	Dairy	0.89	Yes	
12	Guinness	Wines and Spirits	4.95	No	
13	Weetabix (24)	Provisions	1.26	No	
14	Crisps (6)	Provisions	0.99	Yes	
15	Coffee	Provisions	2.45	Yes	
16	Bananas	Fruit and veg	1.29	Yes	
17	Beaujolais	Wines and Spirits	3.25	Yes	
18	Yogurt	Dairy	1.25	No	
19					

2. Save the workbook as **Corner shop**.
3. Close the workbook.

Exercise 98 - Filtering Lists

Guidelines:

Filtering is a quick way to find records in a list that match search criteria. Only the rows that match are displayed. The rows that do not match are hidden.

There are two ways to filter a list: the **AutoFilter** (for a simple filter) and the **Advanced Filter** (for more complex filtering). When a list is filtered, the worksheet is placed in **Filter Mode**.

	A	B	C	D
1				
2				
3				
4				
5				
6	Surname	Initial	Department	Days Absent
7	Chapman	I	(All)	17
8	Waldram	B	(Top 10...)	2
9	Parke	N	(Custom...)	1
10	Myers	A	Administration	0
11	Westgarth	S	Advertising	0
12	Smith	F	Catering	0
13	Smith	John	Computer Services	1
14	Gardner	P	Finance	4
15	Leigh	C	Personnel	0
16	Collins	P	Production	3
17	Waterman	D	Trainee	5
18	McMillan	R	Transport Pool	7
19	Wright	B	Training	1
20	Chesterton	I	Training	4
21	Smith	James	Training	0
22	Borland	J	Production	2
			Administration	0

A worksheet in Filter Mode

In **Filter Mode**, the labels at the top of the list contain drop down arrows. If one of these arrows is clicked, a list of all items in the column is revealed. The filter to be applied can then be selected from the list.

The default view is to show all rows (**All**), until an alternative selection is made from the list. Other options include:

(Top 10...), to show rows that fall within upper or lower limits specified by the user, e.g. top 20% of sales.

(Custom), where two criteria can be applied and data can be compared.

In the example above, all members of staff in the **Training** department can be displayed by selecting **Training** from the drop down list for **Department**.

Exercise 99 - AutoFilter

Guidelines:

AutoFilter produces a subset of a list with the click of a button. This places the worksheet in **Filter Mode**. Click on any of the arrows to display a drop down list of unique items in that column. Click on any item and the matching records (rows) will be displayed with the other rows hidden.

AutoFilter always selects from the whole list. **AutoFilter** can be applied to selected columns in a list by selecting them before entering **Filter Mode**.

Actions:

1. Open the workbook **Sick** and enter **Filter Mode** by clicking on a cell in the list and then selecting **Data | Filter | AutoFilter**.
2. Using the **Surname** drop down list, scroll down the list and select **Smith**. Only the Smiths are displayed.

5				
6	Surname	Initial	Department	Absent
12	Smith	F	Finance	1
13	Smith	John	Production	4
21	Smith	James	Production	2
29	Smith	C	Training	4
30				

Note: A filtered list can be printed.

3. To redisplay the full list using the **Surname** drop down list, select **(All)** at the top of the list.
4. Exit **Filter Mode** by selecting **Data | Filter | AutoFilter** again.
5. Open the workbook **Survey**.
6. Enter **Filter Mode**.
7. To display all the males from Sunderland who have replied, select **M** from **Sex**, **Sunderland** from **Town** and **1** from **Reply**.

Note: The drop down arrows are displayed in blue if active.

8. To redisplay the whole list, instead of selecting **All** from the three lists, select **Data | Filter | Show All**.
9. Exit **Filter Mode**.
10. Close the workbook **Survey** without saving and leave the workbook **Sick** open.

Exercise 100 - Custom AutoFilter

Guidelines:

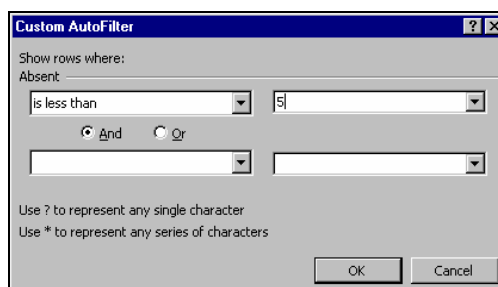
Custom AutoFilter allows more complicated details than a simple information match. Two items within the same column can be searched for using any of the 12 options (equals, is less than, etc.).

Actions:

1. The workbook **Sick** should still be open. If not, open it.
2. Using the workbook **Sick**, place the active cell inside the list and enter filter mode using **Data | Filter | AutoFilter**.
3. Click on **Absent** and select (**Custom...**) from the drop down list to display the **Custom AutoFilter** dialog box.

*Note: Simple searches can be carried out using one set of criteria. More complicated filters can be carried out using either **And** or **Or** to then add another set of criteria.*

4. To display all the employees who have had less than five days absence, select **is less than** in the **Absent** box and enter 5 in the **Information** box.



5. Click **OK**.
6. To restore the list, click on the **Absent** field drop down list and select **All**.
7. Display all the employees in either the **Administration** or **Computer Services** departments using **Custom AutoFilter** within the **Department** field, using **equals** and the **Or** option. Click **OK** to complete the filter.

6	Surname	Initial	Department	Absent
8	Waldram	B	Computer Services	2
10	Myers	A	Computer Services	0
15	Leigh	C	Administration	3
16	Collins	P	Administration	5
17	Waterman	D	Computer Services	7
22	Borland	J	Administration	0
25	Wood	R	Administration	3
26	Wilson	D	Administration	34
30				



8. Exit **Filter Mode** by selecting **Data | Filter | AutoFilter** again.
9. Close the workbook without saving.

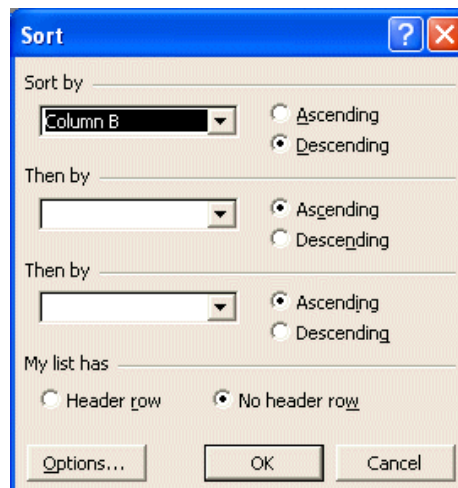
Exercise 101 - Sorting


Guidelines:

When sorting, the rows are arranged in a specific order. The column used to sort is called the **Sort Key**. There can be up to 3 sort keys.

Actions:

1. Start a new workbook.
2. Enter a column of 8 names (surnames or first names) starting in cell **B3**.
3. Sort the names into ascending alphabetic order by placing the cursor into an occupied cell in column **B** and click the **Sort Ascending** button, .
4. With the active cursor still in column **B** click the **Sort Descending** button, .
5. Add ages (in years) in column **C** adjacent to the names.
6. To sort the ages list in ascending order, place the cursor into an occupied cell in the list and select **Data | Sort**.



7. In the first **Sort by** box select **Column C** from the drop down list and change the sort to **Ascending**. The data has **No header row**. Click  to perform the sort.
8. Close the workbook without saving.

*Note: Columns can be sorted by selecting the **Options** button within **Sort** and choosing the **Sort Left to Right** option.*

Exercise 102 - Sorting a List

Guidelines:


In a list, the records (rows) are arranged in a specific order. The fields (column headings) are used to sort the records. To sort a list, the method is the same as for an ordinary sort.

The **Sort Ascending**  and **Sort Descending**  buttons can be used to sort the list automatically.

Actions:

1. Open the workbook **Cars**.
2. Sort the list into ascending order by **Make** and perform a secondary sort by **Model**, by moving the active cell into the column under **Make** and selecting **Data | Sort**.
3. The list is defined as having a header row with **Make** in the **Sort by** box. Select **Model** in the **Then by** box. Leave **Ascending** selected.



4. Click  to perform the sort.
5. Select **Edit | Undo Sort** to return the list to the original order.
6. Insert a new **Column A** and set the column width to **3.00** units.
7. Label the column **No** in cell **A1**. Number each row in column **A**, starting in cell **A2**, e.g. **1, 2, 3** etc.

continued over

Exercise 102 - Continued

- Sort by **Price** in **descending** order. Which car is the second cheapest?
- Sort the cars into ascending numeric order by **Mileage**. Which car has the most mileage?

*Note: The answers for this exercise are listed in the **Answer Section** at the end of the guide.*

- Using column **A**, re-sort the range back to its original order.

Note: Leading zeros may have to be added to labels that include numbers so that they sort correctly.

- Save the workbook as **Cars2** and close it.

Exercise 103 - Revision

- Open the workbook **League**.
- Sort the teams into alphabetic name order.
- Undo** the last operation.
- Sort the teams into descending order of points. If the points are equal, then sort on the greater goal difference - if this is the same, again in descending order. Then sort on **For** (descending).
- Print a copy of the **LEAGUE TABLE**.
- Close the workbook without saving.

Exercise 104 - Revision

1. Open the workbook **Staff**.
2. Display the **AutoFilter** and filter the list to display only the employees in the **Computer Services** department.
3. Display all the records.
4. Filter the list to show the employees between **40** and **50** years old inclusive.
5. Print a copy of the filtered list.
6. Remove the **AutoFilter**.
7. Close the workbook without saving.