

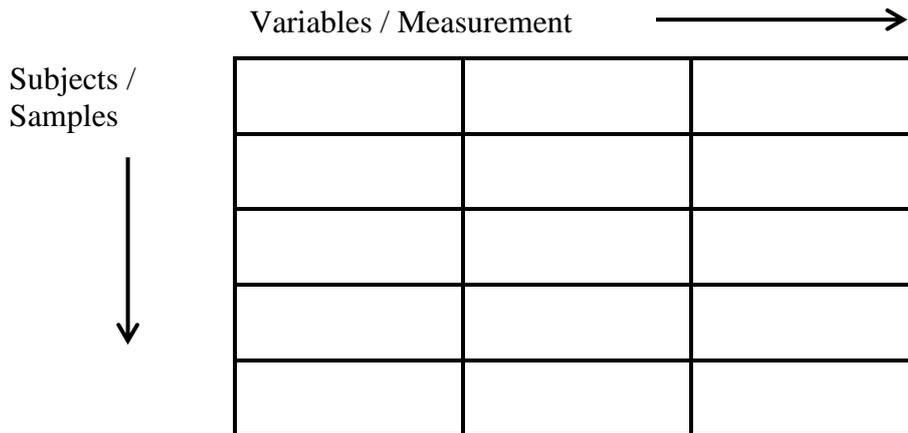
## Entering Data into Excel

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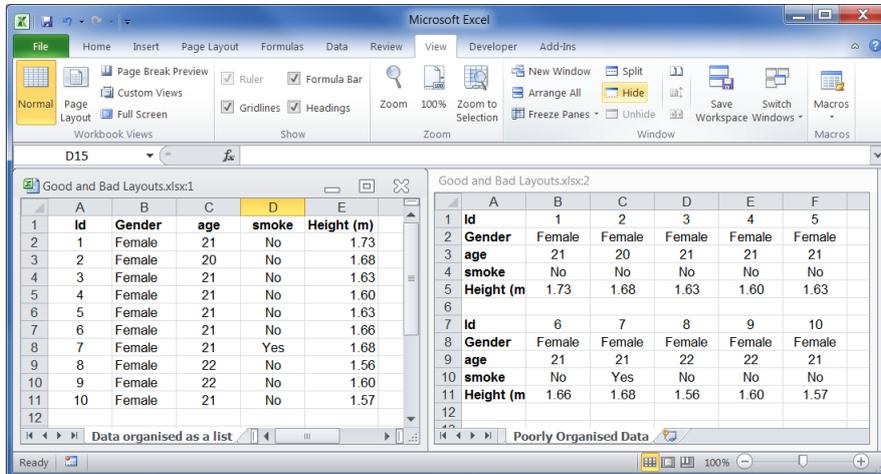
This section assumes that you know how to open Excel and type data into a worksheet and save it. The topics covered here go beyond the basics.

## Organising Data

When entering data into Excel it is important to lay the data out so that if necessary the data can be easily transferred to other software packages such as SPSS. Organise the data so they are in a list format as shown below



The screen below shows two Excel sheets correctly and poorly organised.



## Recommendations

When setting up a new sheet:

- Use the first row to provide a short label for the column.
- Keep this label short and avoid the use of spaces, if data is likely to be transferred to a statistical package.
- Keep data on the first worksheet of an Excel workbook and place calculations (stats) and graphs on other worksheets in the same workbook. Name the worksheets.
- When using character data use lists to control what is entered because Excel treats Upper and Lower case and leading or trailing spaces in conjunction with even a single letter as distinct items. For example, “*Female*” and “*FEMALE*” are treated differently.

## Entering and Validating Data

Excel allows you to validate the data entered into any cell(s). The way to do this is to enter the names of at the top each column for the data that you want to enter. For example

**Id      Gender      Age      Smoke      Height (m)**

Highlight the column of interest such as **Id** by clicking on the column cell **A**.

Select the **Data** tab and in the **Data Tools** click the



Data Validation button.

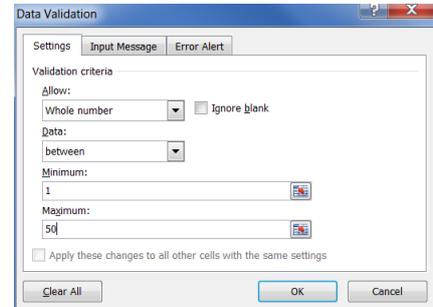
Select the **Settings** tab of the dialogue box.

The **Allow:** drop down list box specifies what type of information can be entered, for example *Any Value*, *Whole number*, *Decimal*, *List*, *Date* etc.

The **Ignore blank** check box can be ticked when a value does not have to be entered for that column, i.e. missing data can be permitted. It could be left unchecked for ID since there should be no missing ID values.

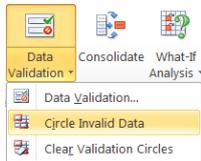
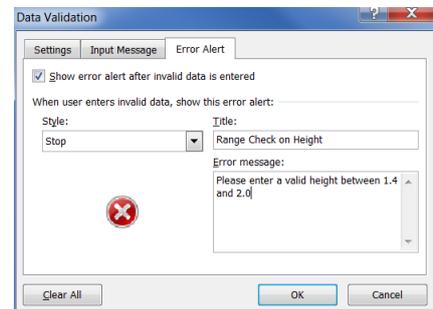
The **Data** drop down list box specifies the condition (e.g., between, greater than etc.).

**Minimum** and **Maximum** are the limits of the values.



The **Input Message** tab is used to supply a prompt when information is entered into the cell(s). If used for more than a few values, it can become annoying when you enter data.

The **Error Alert** tab is used to display messages when you enter a value that is invalid for that cell.



If you have already entered some data you can use **Data Validation** and the **Circle Invalid Data** option to identify invalid data.

In the example opposite the id label was also identified as invalid.

	A	B	
1	Id	Gender	A
2		1	
3		2	
4	300		
5		4	
6			

One way to avoid column labels from being flagged as 'invalid' is to select all of the labels in row 1 and change the **Data Validation** to **Allow: Any Value** for these cells after you have set up validation for all columns.

To find which cells have data validation go to the **Home** tab in the **Editing** group click **Find and Select**, choose **Data Validation – All or Same** to show all cells with validation or only those with identical validation properties.



To remove validation checks, select the cells, click Data Validation and:

- If you are prompted to erase the current settings and continue, click **OK**, and then click **Cancel**.
- If the **Data Validation** dialog box appears, click the **Settings** tab, and then click **Clear All**.

*Note Existing cell contents are not affected by validation, until you try to edit the cell!*

## Using Lists with Data Validation

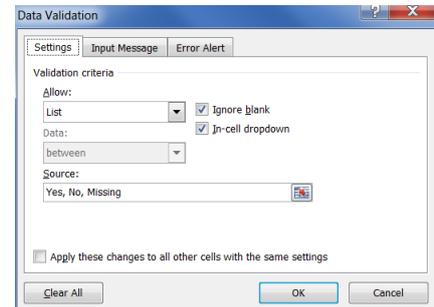
There several ways to control what text can be entered into a cell using data validation.

### Option 1 – Simple list

Select **Data Validation**

On the Setting tab select **Allow: List**

Type the options in the Source box, seperated by commas, e.g. **Yes, No, Missing**



### Option 2 – Specifying a range

Set up a list on another worksheet.

First enter the categories that will be accepted by the list on a separate worksheet.

Cells **A1:A3** contain the responses for **Gender** and Cells **B1:B3** are those for **Smoke**

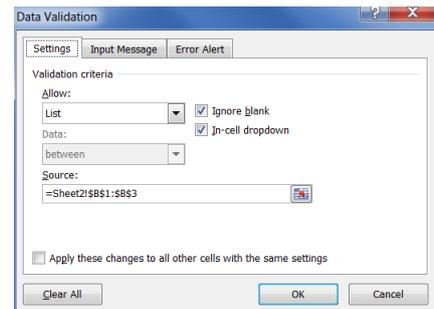
	A	B	C
1	Female	Yes	
2	Male	No	
3	Missing	Missing	
4			
5			

Select **Data Validation**

On the **Setting** tab select **Allow: List**

Click the select button  on the Source box.

A Data Validation dialog appears.



You can either enter the range of cells into this dialogue, or you can navigate around the workbook and highlight the cells that contain the options. Remember to click  to complete this action.

### Option 3 – Naming Cells

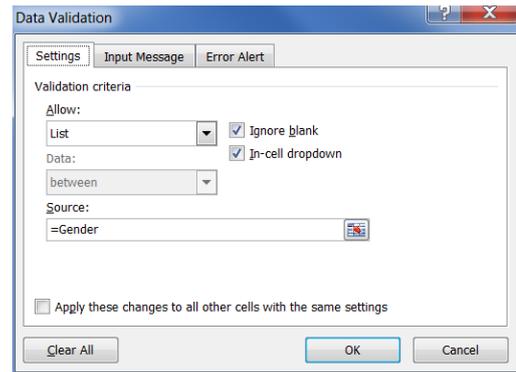
This is a variation on option 2, in which the area of the worksheet is named when setting up the list. Highlight the cells containing the categories and enter a name, e.g. Gender, in the **Name** box which is to the left of the formula bar.

Gender		A	B
1	Female	Yes	
2	Male	No	
3	Missing	Missing	
4			

Instead of entering a range of cells in the **Source**: the Name of these cells '**=Gender**' is entered.

*Note the use of the equal = sign.*

Named cells allow you to forget the precise location and range of cells in the workbook and can also be used in formulae.



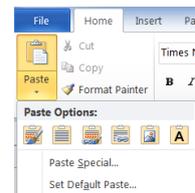
Which ever method is used items are entered into each cell using the dropdown list that is available when you select the cell.

	A	B	C	D	E
1	Id	Gender	Age	Smoke	Height (m)
2		1 Male	21	No	1.73
3		2 Missing	20	No	1.68
4		3 Female	21	No	1.63
5		4			
6		Female			
7		Male			
		Missing			

## Copying Data to and from Word

Data can be copied from Excel to Word by selecting an area of the worksheet copying it and then pasting it into Word. Some people find it easier to set up a table in Excel and copy it into Word.

The reverse is also possible you can copy tables in Word into Excel.



## Correcting Mistakes - Undo & Redo

If you make a mistake when using Excel the **Undo** and **Redo** buttons  can be used to move backwards or forwards in your actions. The buttons are above the **File** tab. There are keyboard equivalents **Ctrl Z** (undo) and **Ctrl Y** (redo) to these buttons.

## Adjusting the Layout

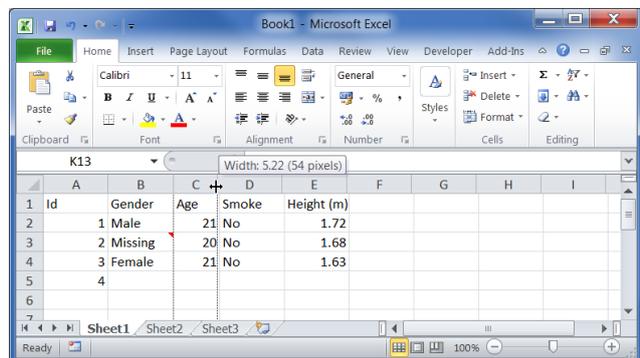
### Column Widths and Row Heights

If a column or row is too large or small, place the cursor over the column or row heading. It will change shaped to . Click and drag to make the column or row larger or smaller.

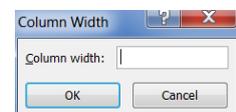
To control the width or height of adjacent columns/rows.

Highlight the column/row heading.

Select **Home** tab and in the **Cells** group and click the **Format**.



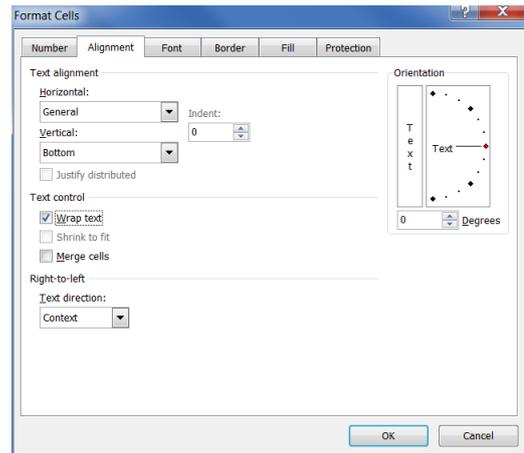
There are various width option; selecting **Column Width** displays a Width box where you can enter a value to be used on all the selected columns. Alternatively **Right click** over the columns and select **Column Width**.



## Wrapping Text

If text is too wide to fit into a column, either use:  
The **Format** button as described above,  
Or  
**Right click** on the cell and select **Format Cells**.  
Select the **Alignment** tab and tick the **Wrap Text**  
box.  
Click **OK**.

This tab also allows control of the text within a cell  
using the **Horizontal** and **Vertical** alignment  
options.



Text before

	C	D	E	F	G	H	I	J
Age	21	No	Height (m)	1.72				
						Text is too wide for this column		

And after Wrapping

	C	D	E	F	G	H	I
Age	21	No	Height (m)	1.72			
						Text is too wide for this column	

## Comments

If you want to add comments about a particular data item.  
Use **comments** rather than adding additional text into the  
cell containing the data. **Right click** on the cell and select  
**Insert Comment**. A comments box will be displayed into  
which you can enter your comment.

	A	B	C	D	E
1	Id	Gender	Age	Smoke	Height (m)
2		1 Male			72
3		2 Missing			68
4		3 Female			63
5		4			
6					

Each cell with a comment has a small **red** triangle in the top right hand corner. If you move  
the cursor over a cell with a comment, the comment is displayed. Comments do not interfere  
with the transfer of data to another package or the analysing of the data.