

Excel Next Steps 1



Trust for London

Tackling poverty and inequality



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Managing data with tables

The advantages of an Excel table include all of the following:

- 1) **Quick Styles**
Add color, banded rows, and header styles with just one click to style your data.
- 2) **Table Names**
Give a table a name to make it easier to reference in other formulas.
- 3) **Cleaner Formulas**
Excel Formulas are much easier to read and write when working in tables.
- 4) **Auto Expand**
Add a new row or column to your data, and the Excel table automatically updates to include the new cells.
- 5) **Filters & Subtotals**
Automatically add filter buttons and subtotals that adapt as you filter your data.
- 6) **Dynamic Pivot tables**
If you use an Excel Table for the source data of your pivot table, the data range becomes "dynamic". A dynamic range will automatically expand and shrink the table as you add or remove data, so won't have to worry that the pivot table is missing the latest data. When you use a Table for your pivot table, the pivot table will always be in sync with your data.

1. Make your data into a table

1. Click on the **Insert** tab

2. Click on the **Table** command button

3. A window will open. Confirm the cells to be included in the table and that the data has headers

	D	E	F	G	
1	Name	Age now	Date registered	Age at registration	Instrument experience
2	Alain Prost		05/04/2003		Guitar
3	Alia Bhatt		09/09/2016		
4	Andre Agassi	HMP Swansea	14/12/1975	21/03/2003	Guitar

Create Table

Where is the data for your table?
=SAS1:SN\$52

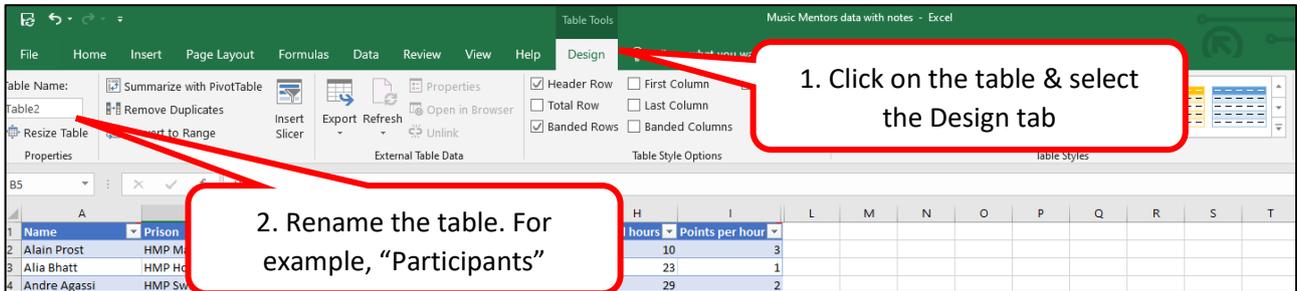
My table has headers

OK Cancel



2. Naming the table

It is good practice to name the table as it makes life much easier later when working with formulas. Naming the formula is basically giving your data set a name which will enable you to recognise which data set you need to be working with.



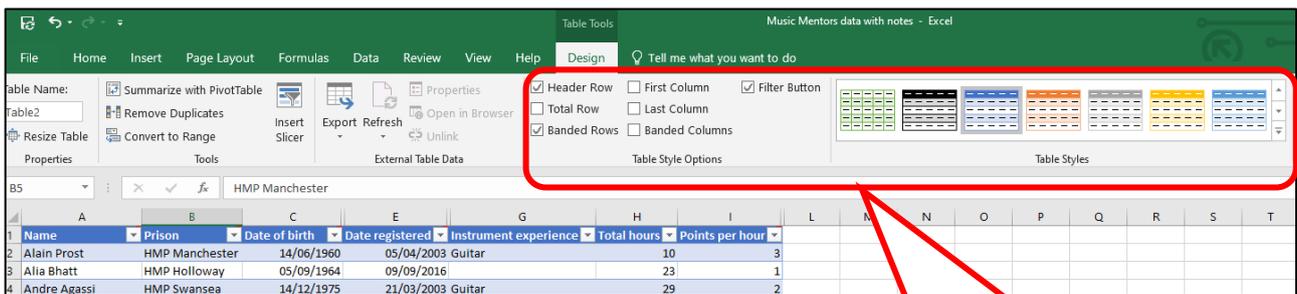
1. Click on the table & select the Design tab

2. Rename the table. For example, "Participants"

	H	I	L	M	N	O	P	Q	R	S	T
1	Name	Prison									
2	Alain Prost	HMP M	hours	Points per hour							
3	Alia Bhatt	HMP Hc	10	3							
4	Andre Agassi	HMP Sw	23	1							
			29	2							

3. Formatting the table

There are a number of table formatting options in Excel. The benefit of the table format is that it ensures each new column or row you add to your table will be automatically formatted in the same way.



1. Click on the table & select the Design tab

2. Rename the table. For example, "Participants"

	H	I	L	M	N	O	P	Q	R	S	T
1	Name	Prison	Date of birth	Date registered	Instrument experience	Total hours	Points per hour				
2	Alain Prost	HMP Manchester	14/06/1960	05/04/2003	Guitar	10	3				
3	Alia Bhatt	HMP Holloway	05/09/1964	09/09/2016		23	1				
4	Andre Agassi	HMP Swansea	14/12/1975	21/03/2003	Guitar	29	2				

Change the look and feel of your table with the formatting tools



4. Adding a Total column

1. Highlight the cells you want totalled, including the blank cell where the total will go

2. On the **Home** tab, click on **Sum**

Date	MM Supervisor	HMP Holloway	HMP Bristol	HMP Pentonville	HMP Bronzefield	HMP Manchester	HMP Swansea	Total mentors
Jan-17	Amina Hussain	3	4	4	5	2	5	
Feb-17	Amina Hussain	3	4	4	4	1	5	
Mar-17	Amina Hussain	4	3	4	4	3	7	
Mar-17	Amina Hussain	3	4	4	3	1	5	
Apr-17	Amina Hussain	4	6	5	4	3	5	
May-17	Asif Kahn	4	4	4	4	2	6	
Jun-17	Asif Kahn	3	4	4	4	1	5	
Jul-17	Asif Kahn	4	4	4	5	2	7	
Jul-17	Asif Kahn	4	4	4	4	1	5	
Jul-17	Asif Kahn	4	4	4	6	3	4	
Jul-17	Asif Kahn	4	4	4	3	3	5	
Jul-17	Asif Kahn	3	6	3	6	3	6	
Jul-17	Asif Kahn	4	4	4	4	1	5	
Jul-17	Asif Kahn	6	6	2	7	7	7	
Jul-17	Asif Kahn	4	4	4	4	1	5	
Jul-17	Asif Kahn	5	5	3	4	4	4	
Jul-17	Asif Kahn	5	3	3	5	5	5	
Jul-17	Asif Kahn	4	4	1	5	5	5	
Jul-17	Asif Kahn	4	4	4	6	5	4	
Jul-18	Rachel Rossi	3	4	4	4	1	5	
Aug-18	Rachel Rossi	4	6	3	3	4	6	
Sep-18	Rick Wilmot	3	7	5	3	3	7	
Oct-18	Rick Wilmot	4	6	6	6	2	6	
Nov-18	Michael Rosenberg	4	7	7	6	2	4	

5. Adding a Row Total

1. Highlight the columns you want totalled

2. On the **Table Design** tab, check the box **Total Row**

Date	MM Supervisor	HMP Holloway	HMP Bristol	HMP Pentonville	HMP Bronzefield	HMP Manchester	HMP Swansea	Total mentors
Mar-17	Amina Hussain	8	8	5	12	5	20	
Apr-17	Amina Hussain	7	9	11	14	5	16	
May-17	Asif Kahn	10	10	13	4	18		
Jun-17	Asif Kahn	10	8	3	12	3	19	
Jul-17	Asif Kahn	8	8	2	17	2	20	
Jul-17	Asif Kahn	8	6	5	5	5	12	
Jul-17	Asif Kahn	7	7	2	4	4	13	
Jul-17	Asif Kahn	8	8	4	8	3	16	
Jul-17	Asif Kahn	7	7	3	11	3	16	
Jul-17	Asif Kahn	11	12	12	9	9	16	
Jul-17	Asif Kahn	9	9	9	6	5	12	
Jul-17	Asif Kahn	6	5	5	12	5	17	
Jul-17	Asif Kahn	7	9	3	8	4	18	
Sep-18	Rick Wilmot	8	7	11	8	6	19	
Oct-18	Rick Wilmot	7	9	6	7	3	20	
Nov-18	Michael Rosenberg	8	7	7	9	4	13	
Dec-18	Michael Rosenberg	6	7	8	10	4	12	
Jan-19	Michael Rosenberg	7	9	5	15	9	14	
Feb-19	Michael Rosenberg	8	6	8	18	7	12	
Mar-19	Matthew Miller	7	5	3	12	6	11	
Apr-19	Matthew Miller	8	8	9	13	7	18	
May-19	Matthew Miller	6	7	10	16	6	10	
Jun-19	Matthew Miller	7	6	9	14	5	10	



Filtering

6. Filtering (Select & Deselect)

1. Click on the arrow next to the column header of the column you want to filter by

Name	Prison	Date of birth	Date registered	Instrument experience	Total hours	Points per hour
Sort A to Z		14/06/1960	05/04/2003	Guitar		10
Sort Z to A		05/09/1964	09/09/2016			23
Sort by Color		14/12/1975	21/03/2003	Guitar		29
Clear Filter From "Prison"		08/08/1998	09/09/2016			12
Filter by Color		09/06/1972	27/02/2017	Trumpet		7
Text Filters		14/04/1957	21/03/2008			30
Search		08/09/1956	17/08/1998	Piano, trumpet		25
<input checked="" type="checkbox"/> (Select All)		19/06/1971	31/01/2008	Piano		19
<input checked="" type="checkbox"/> HMP Bristol		29/06/1961	21/03/2003			2
<input checked="" type="checkbox"/> HMP Bronzefield						28
<input checked="" type="checkbox"/> HMP Holloway						3
<input checked="" type="checkbox"/> HMP Manchester						3
<input checked="" type="checkbox"/> HMP Pentonville		28/06/1969	17/08/1998			31
<input checked="" type="checkbox"/> HMP Swansea		09/09/1984	19/02/2004			9
		18/05/1961	17/08/1998	Guitar, Piano		22
		04/04/1979	30/09/1999			18
		04/04/1979	30/09/1999			18

2. Select the values you want to filter by

When you have applied the filter, look at the bottom of the sheet to see the total count of the filtered rows.

Ready 20 of 51 records found



7. Filtering (Text filters)

Excel has more advanced filtering options available via text filters:

1. Click on the arrow next to the column header of the column you want to filter by

2. Select Text Filters

Name	Prison	Date of birth	Date registered	Instrument experience	Total hours	Points per hour
Wolfgang Puck	HMP Pentonville	11/10/1982			1	1
Julie Walters	HMP Bronzefield	20/09/1973			9	2
Margaret Atwood	HMP Bronzefield	18/09/1963			8	2
Usain Bolt	HMP Manchester	21/07/1994			34	3
Alain Prost	HMP Manchester	14/06/1960			10	3
Andre Agassi					29	2
Harper Lee					23	2
Hone Heke						1
Jason Robinson	HMP Swansea	02/02/1950				2
Lionel Ritchie	HMP Bristol	08/12/1968				1
Lorna Williamson	HMP Holloway	10/04/1948				1
Serena Williams	HMP Holloway	31/01/1981				1
John Steinbeck	HMP Pentonville	16/02/1965				1
John Steinbeck	HMP Pentonville	16/02/1965				1
Enid Blyton	HMP Bronzefield	18/05/1961				2
Marcus Clarke	HMP Bristol	16/02/1970				1
David Beckham	HMP Pentonville	19/06/1971				1
Max Senski	HMP Swansea	08/03/1980				2
Jane Goodall	HMP Holloway	03/02/1951			36	1
Jane Goodall	HMP Holloway	03/02/1951			36	1
David Attenborough	HMP Bristol	08/09/1956			25	1
Jack Tate	HMP Manchester	14/10/1949			12	3

3. A Custom AutoFilter window will open.

4. Check the filter type

5. Enter the value you want to filter by

Name	Prison	Date of birth	Date registered	Instrument experience	Total hours	Points per hour
Wolfgang Puck	HMP Pentonville	11/10/1982	20/01/2002	Bass		1
Julie Walters	HMP Bronzefield	20/09/1973		Bass, guitar		9
Margaret Atwood	HMP Bronzefield	18/09/1963		Drums		8
Usain Bolt	HMP Manchester	21/07/1994		Drums		34
Alain Prost	HMP Manchester	14/06/1960		Guitar		10



8. Data Slicers

Slicers are visual filters. Using a slicer, you can filter your data (or pivot table or pivot chart) by clicking on the type of data you want.

1. Click on the Insert tab

2. Click on Slicer

Name	Prison	Date of birth	Date registered	Instrument experience	Total hours	Points per hour
Wolfgang Puck	HMP Pentonville	11/10/1982	20/01/2002	Bass	1	1
Julie Walters	HMP Bronzefield	20/09/1973	08/02/2012	Bass, guitar	9	2
Margaret Atwood	HMP Bronzefield	18/09/1963	07/06/2015	Drums	8	2
Usain Bolt	HMP Manchester	21/07/1994	05/05/2014	Drums	34	3

1. Insert Slicer window will open.

2. Select the column(s) you would like to use for

Name	Date of birth	Date registered	Instrument ex
Wolfgang Puck	11/10/1982	20/01/2002	Bass
Julie Walters			Bass, guitar
Margaret Atwood			Drums
Usain Bolt			Drums
A			Drums
A			Drums
H			Drums
Hone Heke			Drums
Jason Robinson			Drums
Lionel Ritchie			Drums
Lorna Williamson			Drums
Serena Williams			Drums
John Steinbeck			Drums, bass

Insert Slicers

- Name
- Prison
- Date of birth
- Age now
- Date registered
- Age at registration
- Instrument experience
- Total hours
- Points per hour
- Total points



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Prison

Name	Prison	Date of birth	Date registered	Instrument	Total hours	Points per hour
Wolfgang Puck	HMP Pentonville	11/10/1982				1
Julie Walters	HMP Bronzefield	20/09/1973				2
Margaret Atwood	HMP Bronzefield	18/09/1963				2
Usain Bolt	HMP Manchester	21/07/1994	05/05/2014	Drums		3
Alain Prost	HMP Manchester	14/06/1960	05/04/2003	Guitar		3
Andre Agassi	HMP Swansea	14/12/1975	21/03/2003	Guitar	29	2
Harper Lee	HMP Bronzefield	07/09/1949	04/04/2009	Guitar	23	2
Hone Heke	HMP Pentonville	27/04/1983	09/09/2016	Guitar	6	1
Jason Robinson	HMP Swansea	02/02/1950	04/05/1999	Guitar	11	2
Lionel Ritchie	HMP Bristol	08/12/1968	27/04/2007	Guitar	26	1
Lorna Williamson	HMP Holloway	10/04/1948	19/02/2004	Guitar	15	1
Serena Williams	HMP Holloway	31/01/1981	24/11/2005	Guitar	14	1
John Steinbeck	HMP Pentonville	16/02/1965	21/03/2003	Guitar, bass	6	1
John Steinbeck	HMP Pentonville	16/02/1965	21/03/2003	Guitar, bass	6	1

3. Drag and drop the slicer to the location you want

Prison

- HMP Bristol
- HMP Bronzefield
- HMP Holloway
- HMP Manchester
- HMP Pentonville
- HMP Swansea

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P27

Name	Prison	Date of birth	Date registered	Instrument experience	Total hours	Points per hour
Usain Bolt	HMP Manchester	21/07/1994	05/05/2014	Drums	34	3
Alain Prost	HMP Manchester	14/06/1960	05/04/2003	Guitar	10	3
Jack Tate	HMP Manchester	14/10/1949	05/04/2003	Saxophone	12	3
Raj Kapoor	HMP Manchester	27/01/1997	25/05/2015	Violin, Guitar	7	3
Ben Okri	HMP Manchester	08/08/1998	09/09/2016		12	3
Robert Hall	HMP Manchester	20/05/1988	01/08/1998		5	3
Roger Federer	HMP Manchester				10	3
Steven Yeun	HMP Manchester				1	3
Tim Marks	HMP Manchester				24	3

4. Select a single filter option to apply the filter

Prison

- HMP Bristol
- HMP Bronzefield
- HMP Holloway
- HMP Manchester**
- HMP Pentonville
- HMP Swansea

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A3 Julie Walters

Name	Prison	Date of birth	Date registered	Instrument	Total hours	Points per hour
Julie Walters	HMP Bronzefield	20/09/1973				2
Margaret Atwood	HMP Bronzefield	18/09/1963				2
Harper Lee	HMP Bronzefield	07/09/1949	04/04/2009	Guitar	23	2
Lorna Williamson	HMP Holloway	10/04/1948	19/02/2004	Guitar	15	1
Serena Williams	HMP Holloway	31/01/1981	24/11/2005	Guitar	14	1
Enid Blyton	HMP Bronzefield	18/09/1963				2
Jane Goodall	HMP Holloway	03/09/1967			36	1
Jane Goodall	HMP Holloway	03/09/1967			36	1
Jacina Ardern	HMP Bronzefield	12/11/1994			23	2
Alia Bhatt	HMP Holloway	05/08/1995			23	1
Diane Kruger	HMP Bronzefield	29/06/1961	21/03/2003		2	2
Emma Barnett	HMP Bronzefield	28/06/1969	17/08/1998		31	2
Fiona Bruce	HMP Holloway	04/04/1979	30/09/1999		18	1
Fiona Bruce	HMP Holloway	04/04/1979	30/09/1999		18	1
Freya Crew	HMP Bronzefield	13/08/1967	04/05/1999		5	2

5. To add more than one filter click on the **Multi-Select** button

6. Select multiple filter options to apply

Prison

- HMP Bristol
- HMP Bronzefield**
- HMP Holloway**
- HMP Manchester
- HMP Pentonville
- HMP Swansea



Conditional formatting

9. Highlight Cell Rules

The Highlight Cells Rules gives you lots of options for formatting your spreadsheet contents e.g. text colour, cell background fill colour etc, based on the values in the cells.

Excel Next Steps 1 TFL session data & exe... Saved

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Clipboard Font Alignment Number

Conditional Formatting Format as Table Cell Styles

Highlight Cells Rules >

- Greater Than...
- Less Than...
- Between...
- Equal To...
- Text that Contains...
- A Date Occurring...
- Duplicate Values...

Top/Bottom Rules >

Data Bars >

Color Scales >

Icon Sets >

New Rule...

Clear Rules >

Manage Rules...

More Rules...

11 Total attendance

	A	B	C	D	E
1	Date	MM Supervisor	HMP Holloway	HMP Bristol	HMP Pentonville
2	Jan-17	Amlina Hussain	8	7	6
3	Feb-17	Amlina Hussain	7	8	
4	Mar-17	Amlina Hussain	8		5
5	Mar-17	Amlina Hussain	8		5
6	Apr-17	Amlina Hussain			11
7	May-17	Asif Kahn			10
8	Jun-17	Asif Kahn			3
9	Jul-17	Asif Kahn	8	8	2
10	Aug-17	Asif Kahn	8	6	5

For example, select Less than

Less Than

Format cells that are LESS THAN:

48 with Light Red Fill with Dark Red Text

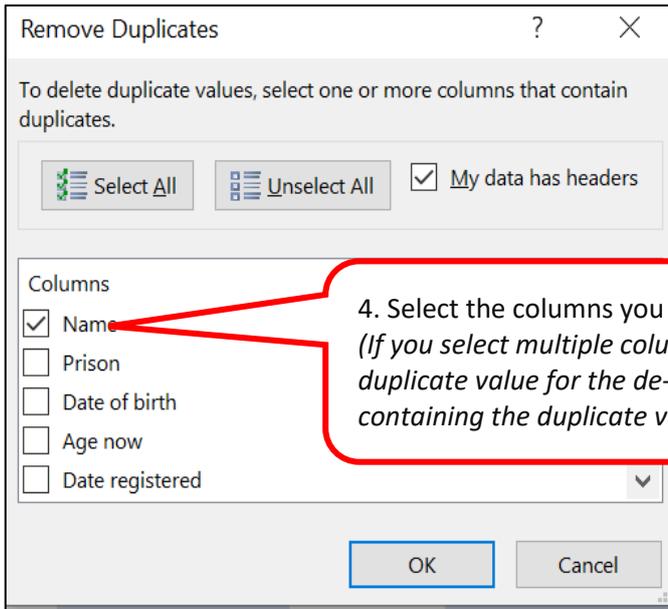
OK Cancel

Then add a value and choose what colour you'd like cells to be highlighted, where contents satisfy your criteria

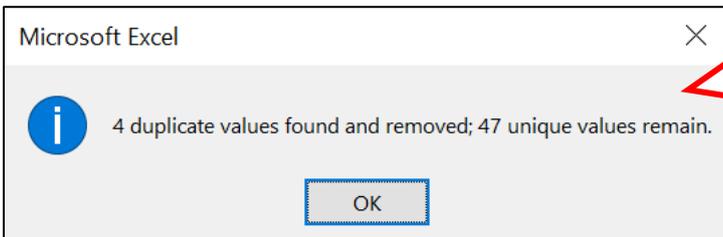
Here cells with values under 48 are highlighted in red

	A	B	C	D	E	F	G	H	I
1	Date	MM Supervisor	HMP Holloway	HMP Bristol	HMP Pentonville	HMP Bronzefield	HMP Manchester	HMP Swansea	Total attendance
2	Jan-17	Amlina Hussain	8	7	6	10	7	19	57
3	Feb-17	Amlina Hussain	7	8	5	12	5	20	57
4	Mar-17	Amlina Hussain	8	8	5	12	5	20	58
5	Mar-17	Amlina Hussain	8						58
6	Apr-17	Amlina Hussain	7						62
7	May-17	Asif Kahn	9						64
8	Jun-17	Asif Kahn	10						55
9	Jul-17	Asif Kahn	8						51
10	Aug-17	Asif Kahn	6	5	10	5	12		46
11			6	7	2		13		41
12			7	8	4				46
13			8	7	3		17		47
14			7	11	12		18		64
15			8	9	9		19		62





4. Select the columns you want to remove duplicates from. (If you select multiple columns, **all** columns must contain a duplicate value for the de-duplication to happen. The whole row containing the duplicate values will be deleted.)



5. The number of duplicates removed will be displayed in a window. If you realise you made a mistake, use the **Undo** button.

12. Colour scales

Colour scales give you automatic recolouring based on your range of values – with different options to suit what you are looking to highlight (i.e. is a low number good and so indicated by green or is it of concern and needs to be highlighted in red?)

	A	B	C	D	E		H	I	J
1	Date	MM Supervisor	HMP Holloway	HMP Bristol	HMP Pentonville	HMP I			
2	Jan-17	Amlna Hussaln	8	7	6		Swansea	Total attendance	
3	Feb-17	Amlna Hussaln	7	8	5		19	57	
4	Mar-17	Amlna Hussaln	8	8	5			57	
5	Mar-17	Amlna Hussaln	8	8	5			58	
6	Apr-17	Amlna Hussaln	7	9	11			58	
7	May-17	Aslf Kahn	9	10	10			62	
8	Jun-17	Aslf Kahn	10	8	3			64	
9	Jul-17	Aslf Kahn	8	8	2		19	55	
10	Aug-17	Aslf Kahn	8	6	5		20	51	
11	Sep-17	Aslf Kahn	6	7	2	10	5	12	46
12	Oct-17	Aslf Kahn	7	8	4	9	4	13	41
13	Nov-17	Jon Potter	8	7	3	9	3	16	46
14	Dec-17	Jon Potter	7	11	12	10	2	17	47
								18	64



You can also select More rules and precisely set what you need in terms of formatting based on contents of cells.

New Formatting Rule ? X

Select a Rule Type:

- ▶ Format all cells based on their values
- ▶ Format only cells that contain
- ▶ Format only top or bottom ranked values
- ▶ Format only values that are above or below average
- ▶ Format only unique or duplicate values
- ▶ Use a formula to determine which cells to format

Edit the Rule Description:

Format all cells based on their values:

Format Style: 3-Color Scale ▼

	Minimum	Midpoint	Maximum
Type:	Lowest Value ▼	Percentile ▼	Highest Value ▼
Value:	(Lowest value) ▲	50 ▲	(Highest value) ▲
Color:	 ▼	 ▼	 ▼
Preview:	<div style="width: 100%; height: 20px; background: linear-gradient(to right, red, yellow, green);"></div>		

OK Cancel



Splitting columns

Often there is a need to break down data to make it easier to work with. For example, if you want to sort people in alphabetical order using their surname you will need to make sure their name is split into first name & surname columns.

Tip: It's a good idea to first create a column to the right of the column you wish to split, for the second part of the column contents to move into.

The screenshot shows the Excel interface with the 'Data' tab selected. The 'Text to Columns' button is highlighted in the 'Data Tools' group. A callout box points to it with the text: "3. Click on the Text to Columns command button". Another callout points to the 'Name' column in the spreadsheet with the text: "2. Highlight the column to split". A third callout points to the 'Data' tab with the text: "1. Click on the Data tab". A fourth callout points to the 'Convert Text to Columns Wizard - Step 1 of 3' dialog box with the text: "4. The Convert Text to Columns wizard will open". The dialog box shows the 'Delimited' radio button selected. A fifth callout points to the 'Delimited' option with the text: "5. Select Delimited & then click on Next".

1. Click on the **Data** tab

2. Highlight the column to split

3. Click on the **Text to Columns** command button

4. The **Convert Text to Columns** wizard will open

5. Select **Delimited** & then click on **Next**

(A **Delimiter** is a blank space, comma, or other character or symbol that indicates the beginning or end of a character string, word, or data item)

The screenshot shows the 'Convert Text to Columns Wizard - Step 2 of 3' dialog box. The 'Delimiters' section has the 'Space' checkbox checked. A callout box points to it with the text: "6. Select what delimiter to use to separate the data into columns. In this example the data to split is separated by a space". The 'Data preview' section shows the text being split into two columns. A callout box points to the preview with the text: "7. The wizard displays how the text will be split".

6. Select what delimiter to use to separate the data into columns. In this example the data to split is separated by a space

7. The wizard displays how the text will be split



Convert Text to Columns Wizard - Step 3 of 3

This screen lets you select each column and set the Data Format.

Column data format

General
 Text
 Date: DMY
 Do not import column (skip)

General converts numeric values to numbers, date values to dates, and all remaining values to text.

Advanced...

Destination: SBS1

Data preview

General	General
Name	
Wolfgang	Puck
Julie	Walters
Margaret	Atwood
Usain	Bolt

Cancel < Back Next > Finish

8. Select the data format for each column. **General** automatically converts the column to the most appropriate format. You can override that now or later after the split

