Excel Next Steps 2

Trust for London

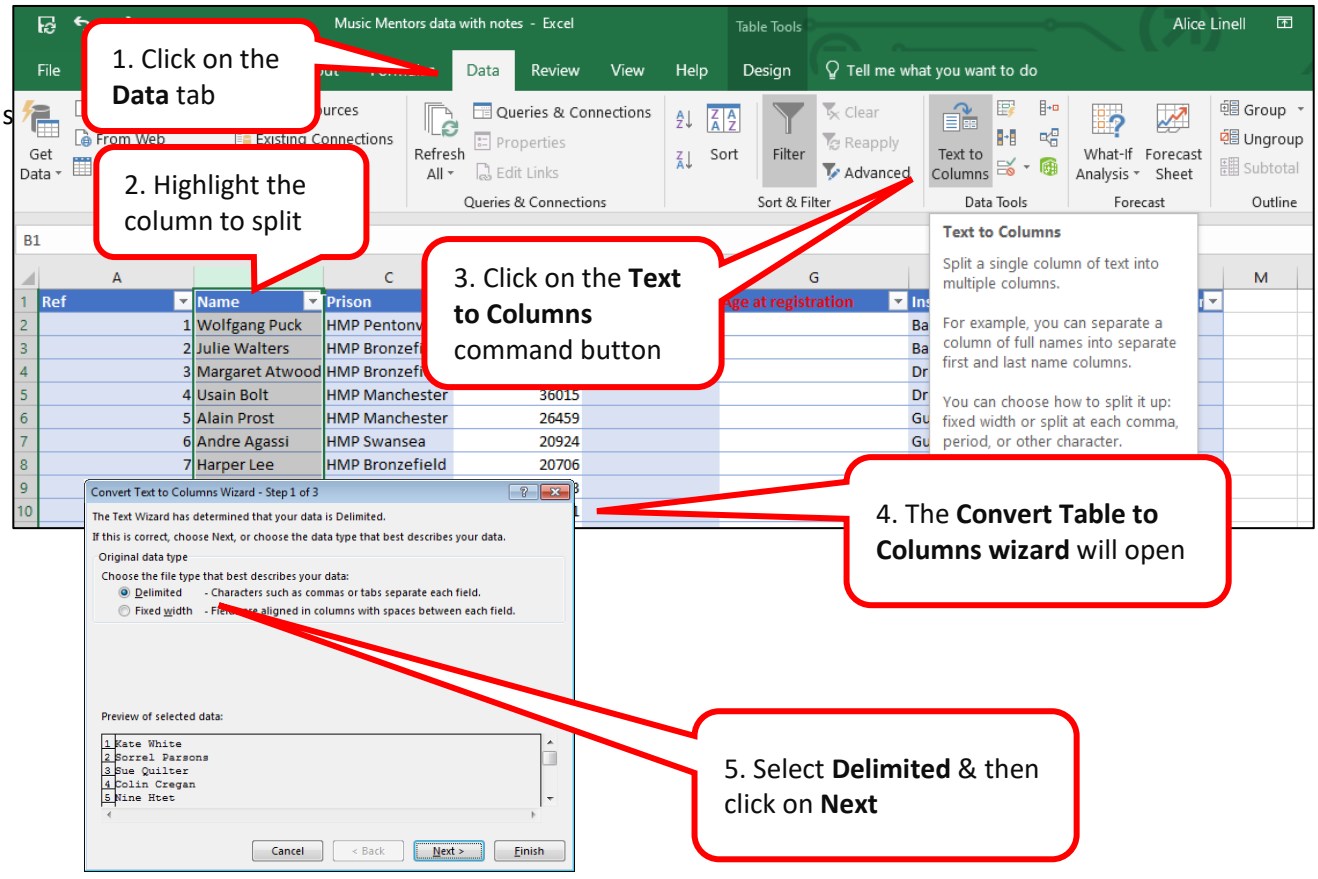
Tackling poverty and inequality

Contents

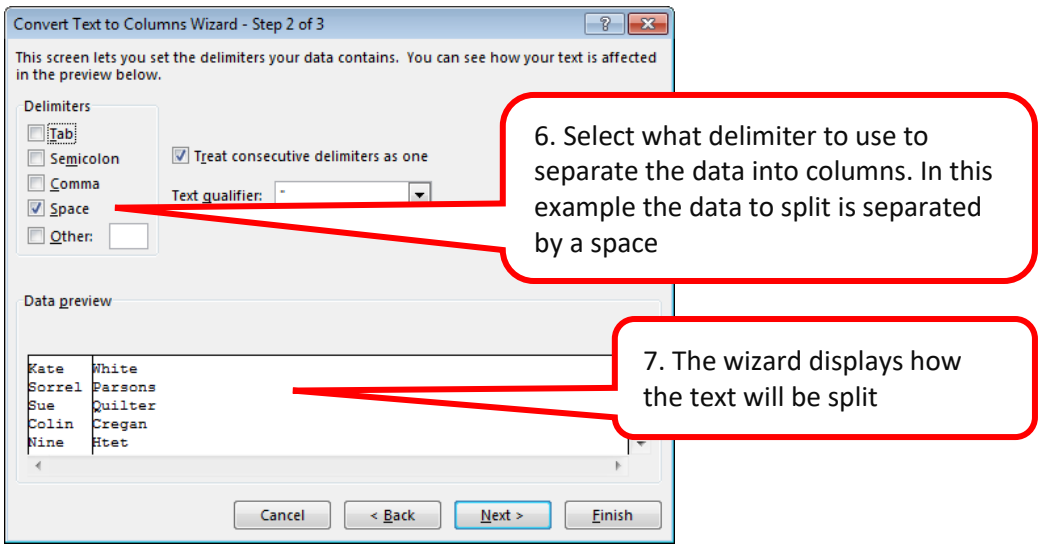
Splitting columns

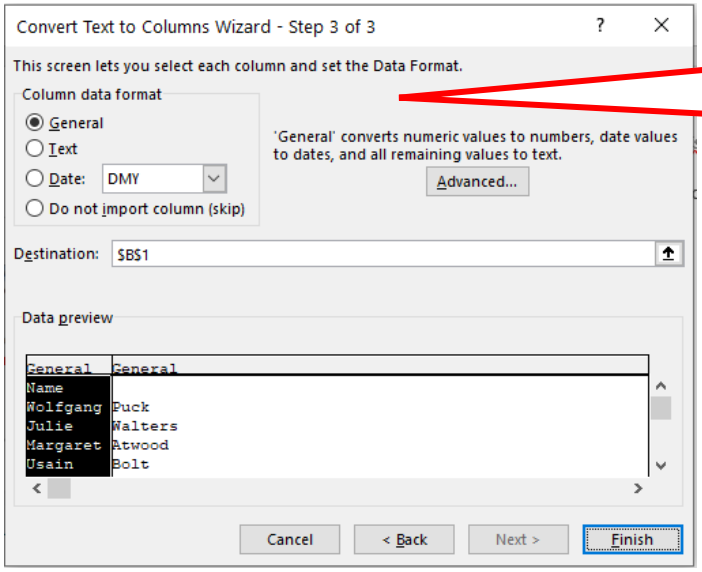
Often there is a need to break down data to make it easier to work with. For example, if you want to sort people in alphabetical order using their surname you will need to make sure their name is split into first name & surname columns.

Tip: Create a column to the right of the column you wish to split for the results.



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





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

Merging columns together (CONCAT)

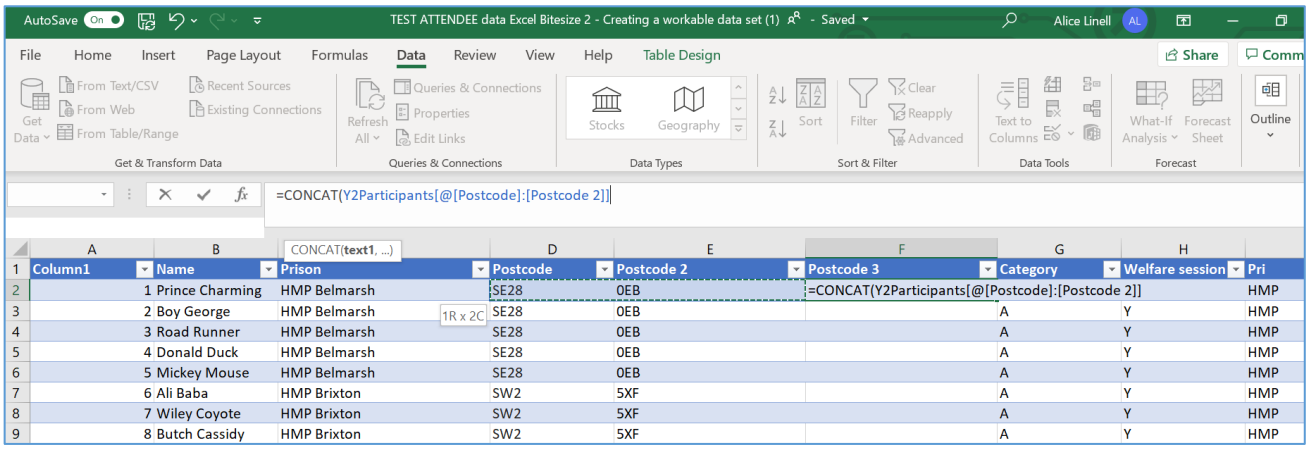
Excel has a built in function to merge text strings together. For example, if you have a first name column and a last name column but you want a Full name column where first and last name are joined together.

The function, when using a table, is as follows:

=CONCAT(Tablename[@[tablecolumnname1]:[tablecolumnname2]])

But Excel can build the formula for you:

1. Add an extra column in your table to the right of the two columns you are merging
2. Enter the = sign and start typing CONCAT
3. Select the CONCAT function suggested by Excel
4. Select the first cell in the 2 columns you want to join together.



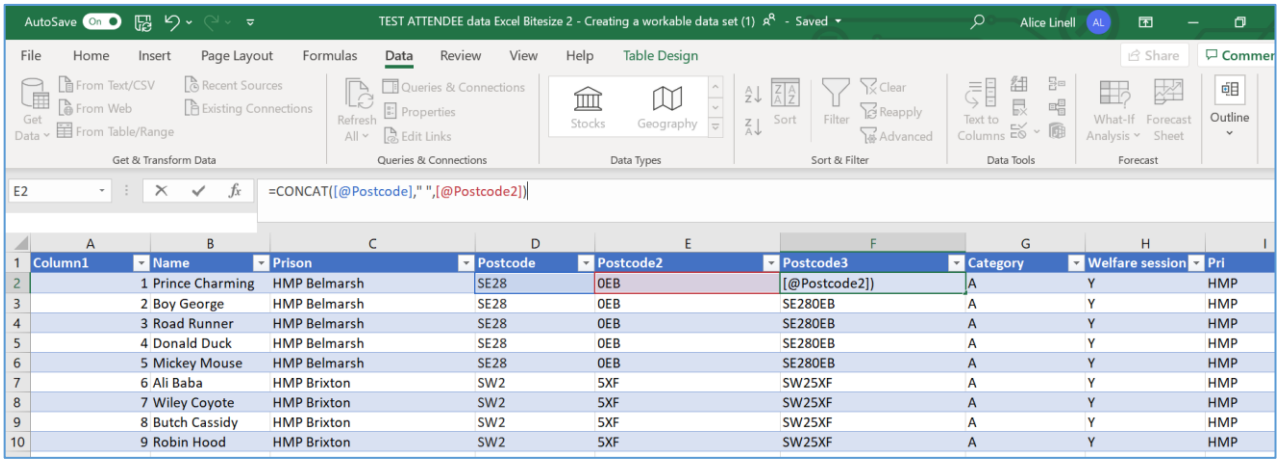
	A	B	C	D	E	F	G	H	
1	Column1	Name	Prison	Postcode	Postcode 2	Postcode 3	Category	Welfare session	Pri
2	1	Prince Charming	HMP Belmarsh	SE28	0EB	=CONCAT(Y2Participants[@[Postcode]:[Postcode 2]]			HMP
3	2	Boy George	HMP Belmarsh	SE28	0EB		A	Y	HMP
4	3	Road Runner	HMP Belmarsh	SE28	0EB		A	Y	HMP
5	4	Donald Duck	HMP Belmarsh	SE28	0EB		A	Y	HMP
6	5	Mickey Mouse	HMP Belmarsh	SE28	0EB		A	Y	HMP
7	6	Ali Baba	HMP Brixton	SW2	5XF		A	Y	HMP
8	7	Wiley Coyote	HMP Brixton	SW2	5XF		A	Y	HMP
9	8	Butch Cassidy	HMP Brixton	SW2	5XF		A	Y	HMP

If you want to add a space between the text you will need to use a slightly different technique:

5. Add an extra column in your table to the right of the two columns you are merging
6. Enter the = sign and start typing CONCAT
7. Select the CONCAT function suggested by Excel

8. Select the first cell you want to join, then add to the formula,” “, and then select the next cell you want to join together. See the screen print below.

=CONCAT([@tablecolumnname1]," ", [@ tablecolumnname2])



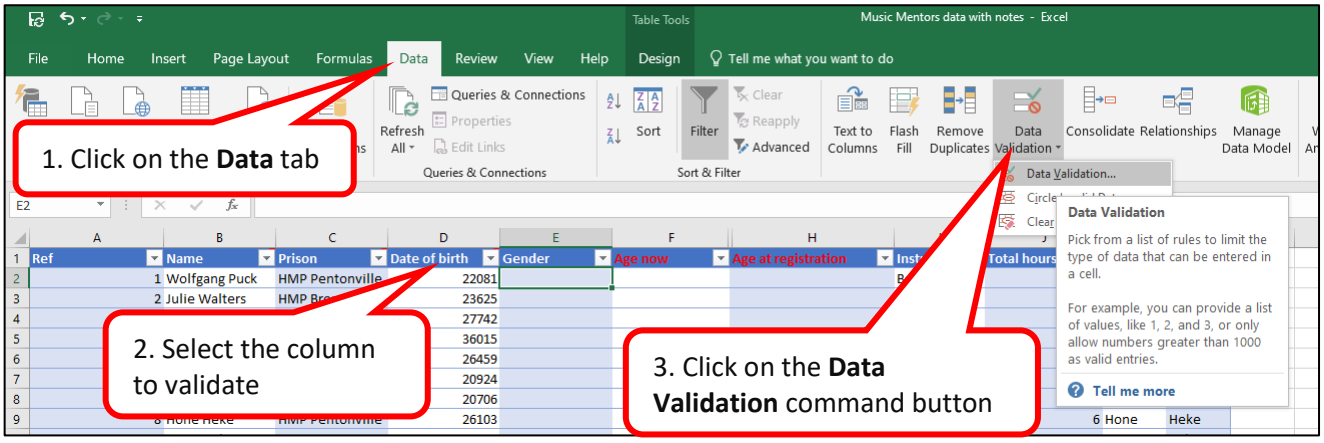
	A	B	C	D	E	F	G	H	I
1	Column1	Name	Prison	Postcode	Postcode2	Postcode3	Category	Welfare session	Pri
2	1	Prince Charming	HMP Belmarsh	SE28	0EB	[@Postcode2])	A	Y	HMP
3	2	Boy George	HMP Belmarsh	SE28	0EB	SE280EB	A	Y	HMP
4	3	Road Runner	HMP Belmarsh	SE28	0EB	SE280EB	A	Y	HMP
5	4	Donald Duck	HMP Belmarsh	SE28	0EB	SE280EB	A	Y	HMP
6	5	Mickey Mouse	HMP Belmarsh	SE28	0EB	SE280EB	A	Y	HMP
7	6	Ali Baba	HMP Brixton	SW2	5XF	SW25XF	A	Y	HMP
8	7	Wiley Coyote	HMP Brixton	SW2	5XF	SW25XF	A	Y	HMP
9	8	Butch Cassidy	HMP Brixton	SW2	5XF	SW25XF	A	Y	HMP
10	9	Robin Hood	HMP Brixton	SW2	5XF	SW25XF	A	Y	HMP

Data Validation

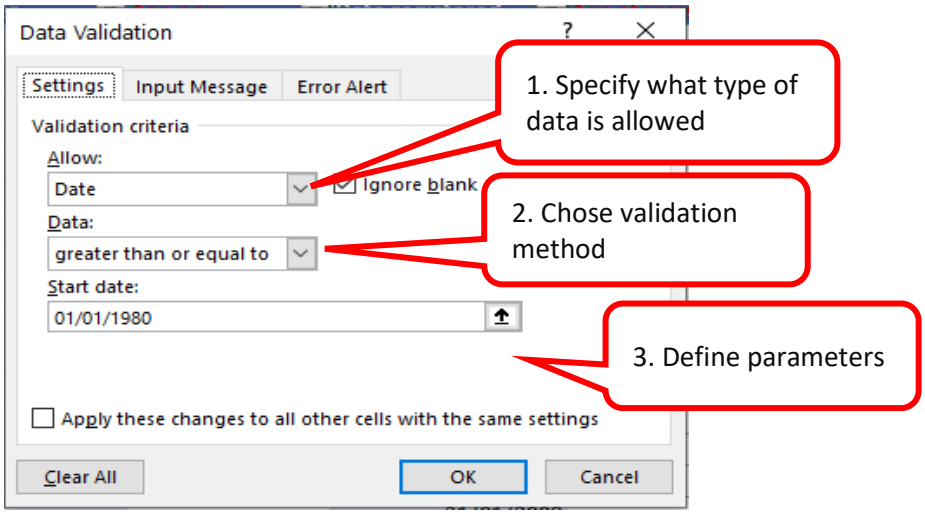
The Data Validation feature in Microsoft Excel controls what can be input into a cell to ensure accurate and consistent data. Here we’re

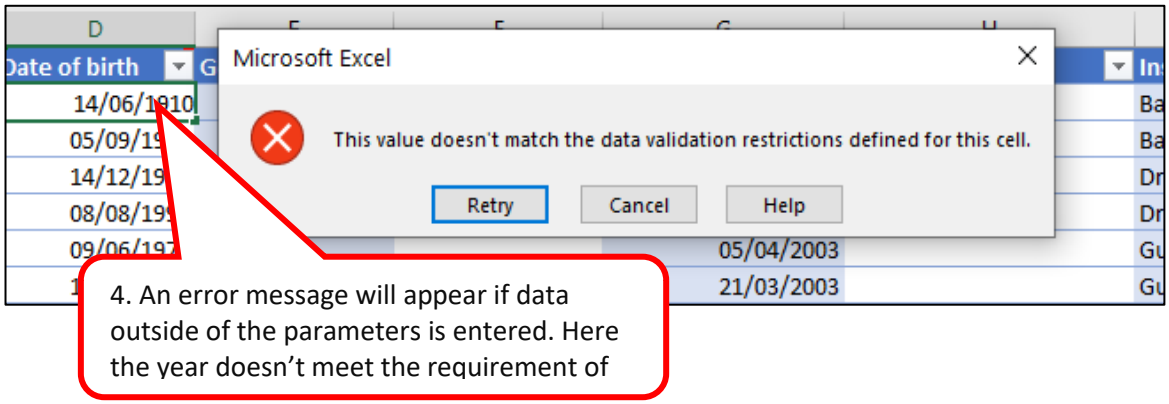
1. Ensure Correct data format
2. Limit data entry options to a list

Data Validation for data format

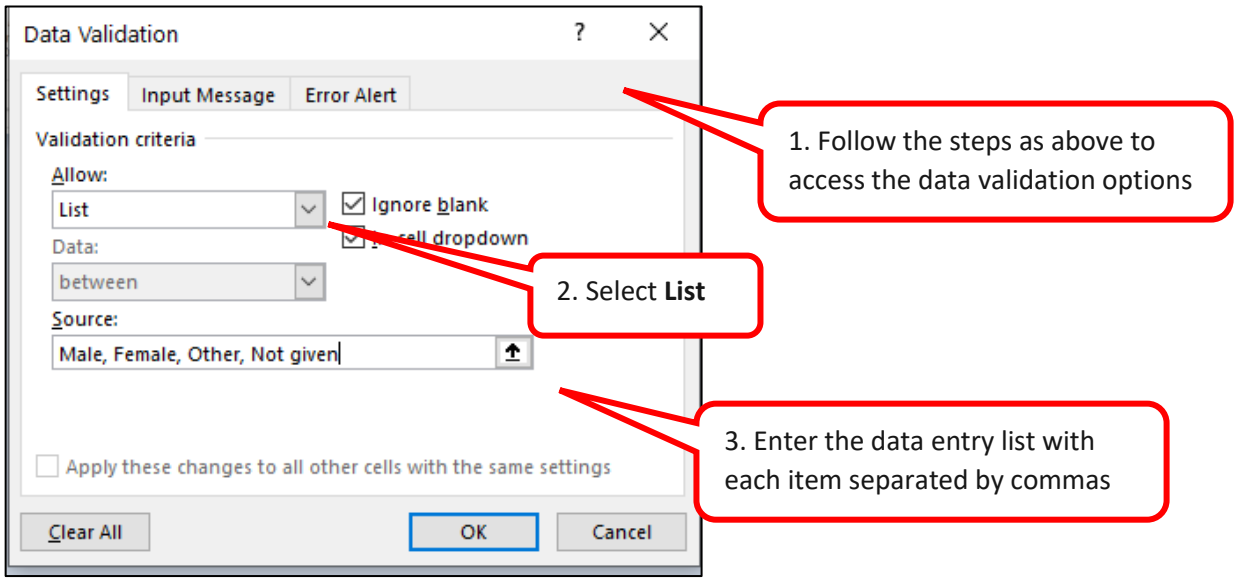


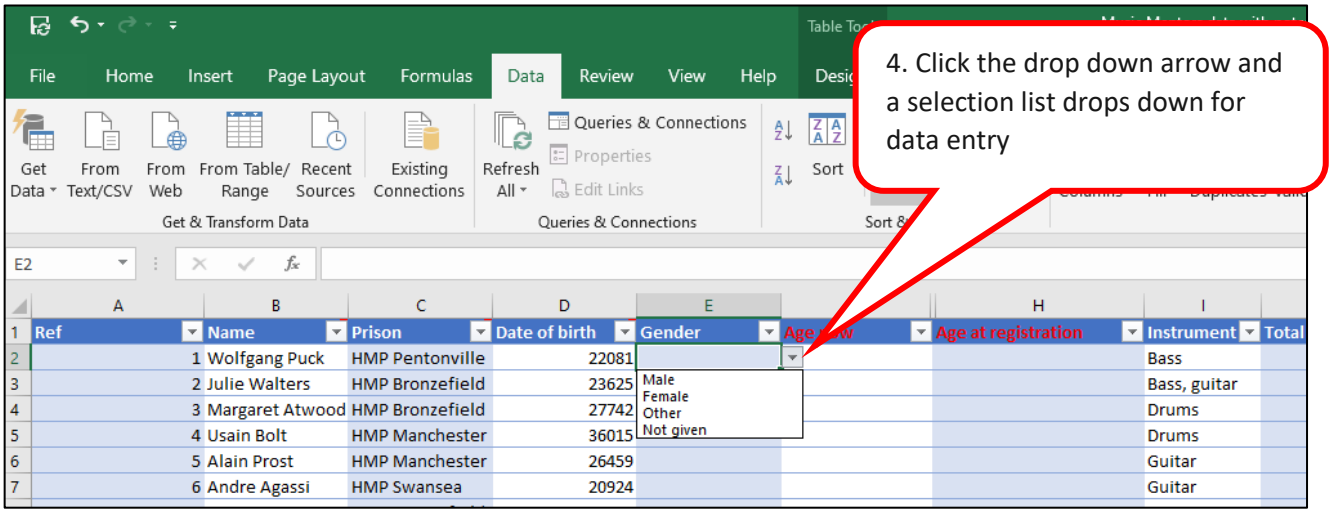
	A	B	C	D	E	F	H	J
1	Ref	Name	Prison	Date of birth	Gender	Age now	Age at registration	Total hours
2	1	Wolfgang Puck	HMP Pentonville	22081				
3	2	Julie Walters	HMP Bro	23625				
4				27742				
5				36015				
6				26459				
7				20924				
8				20706				
9	8	Hone Heke	HMP Pentonville	26103				6 Hone Heke



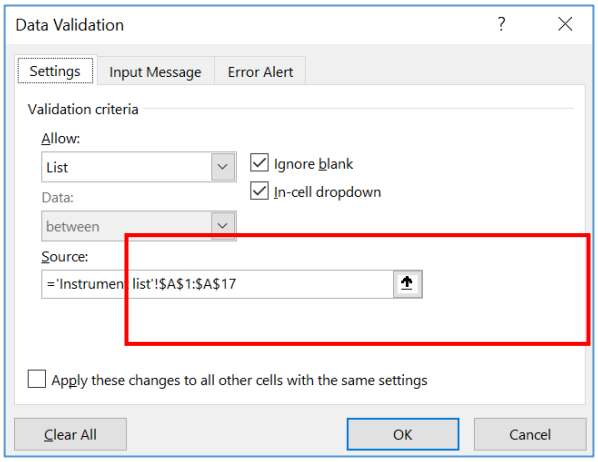


Data Validation with list options

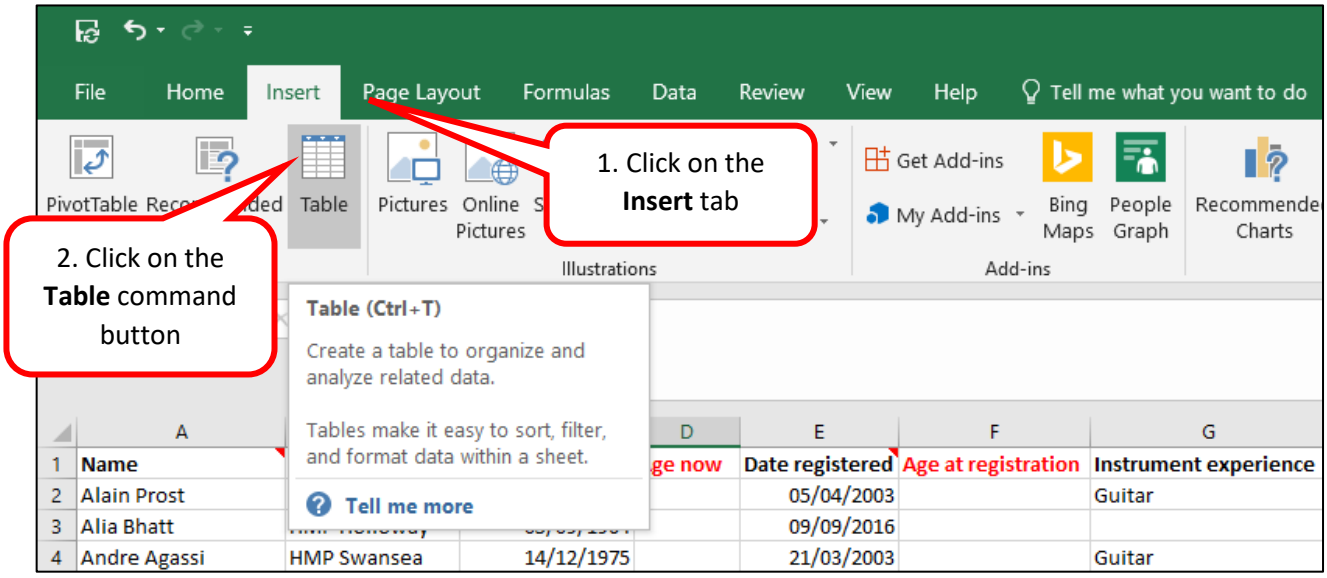




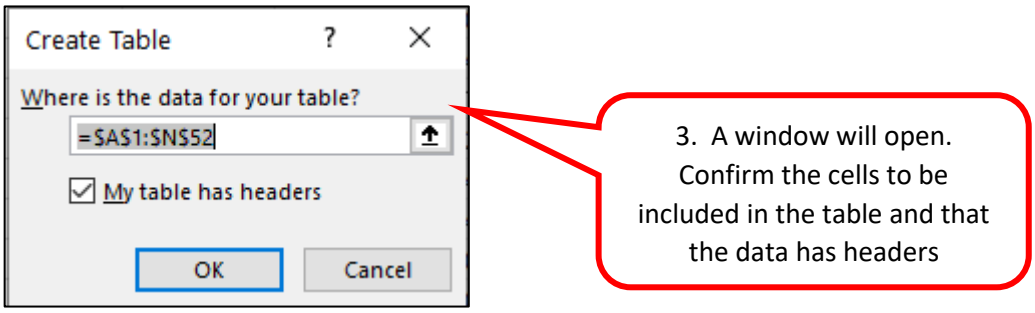
An alternative to typing the list in is to use source data you already have. For that you'll need to put the cell references of where the data is into the Source field. Where this is in another sheet – just move to this sheet and select the Column containing the list of options you want displayed.



Make your data into a table

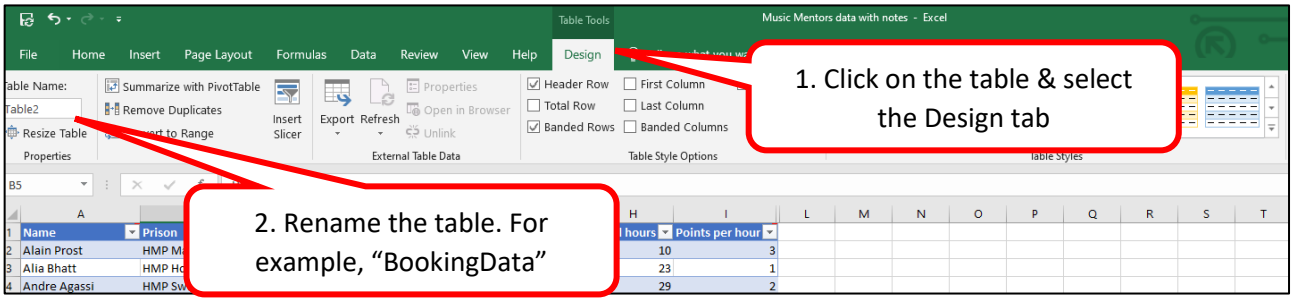


→ Alternative shortcut: Ctrl + T



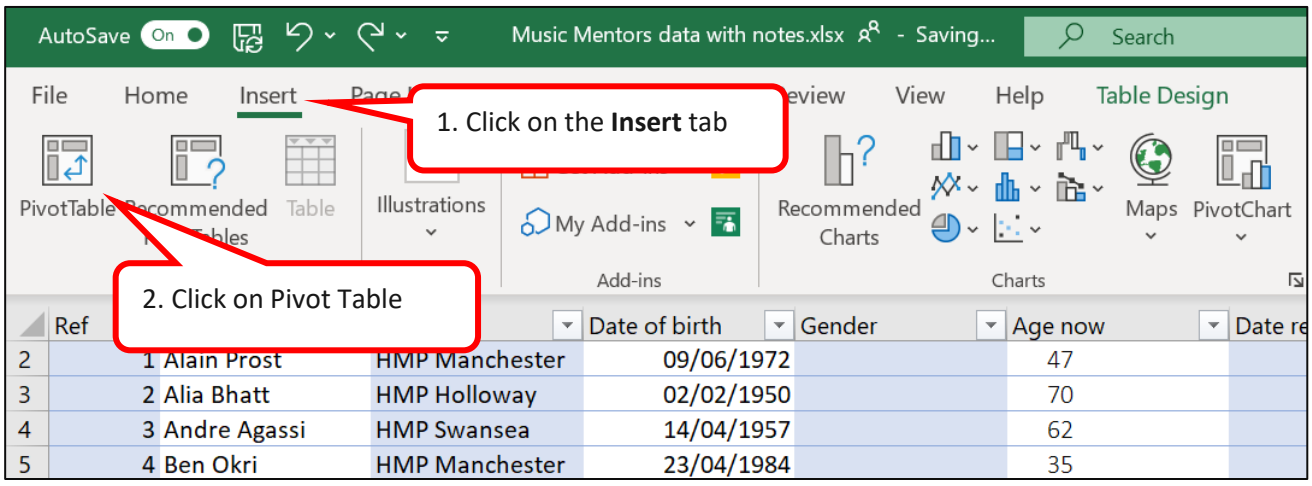
Name the table

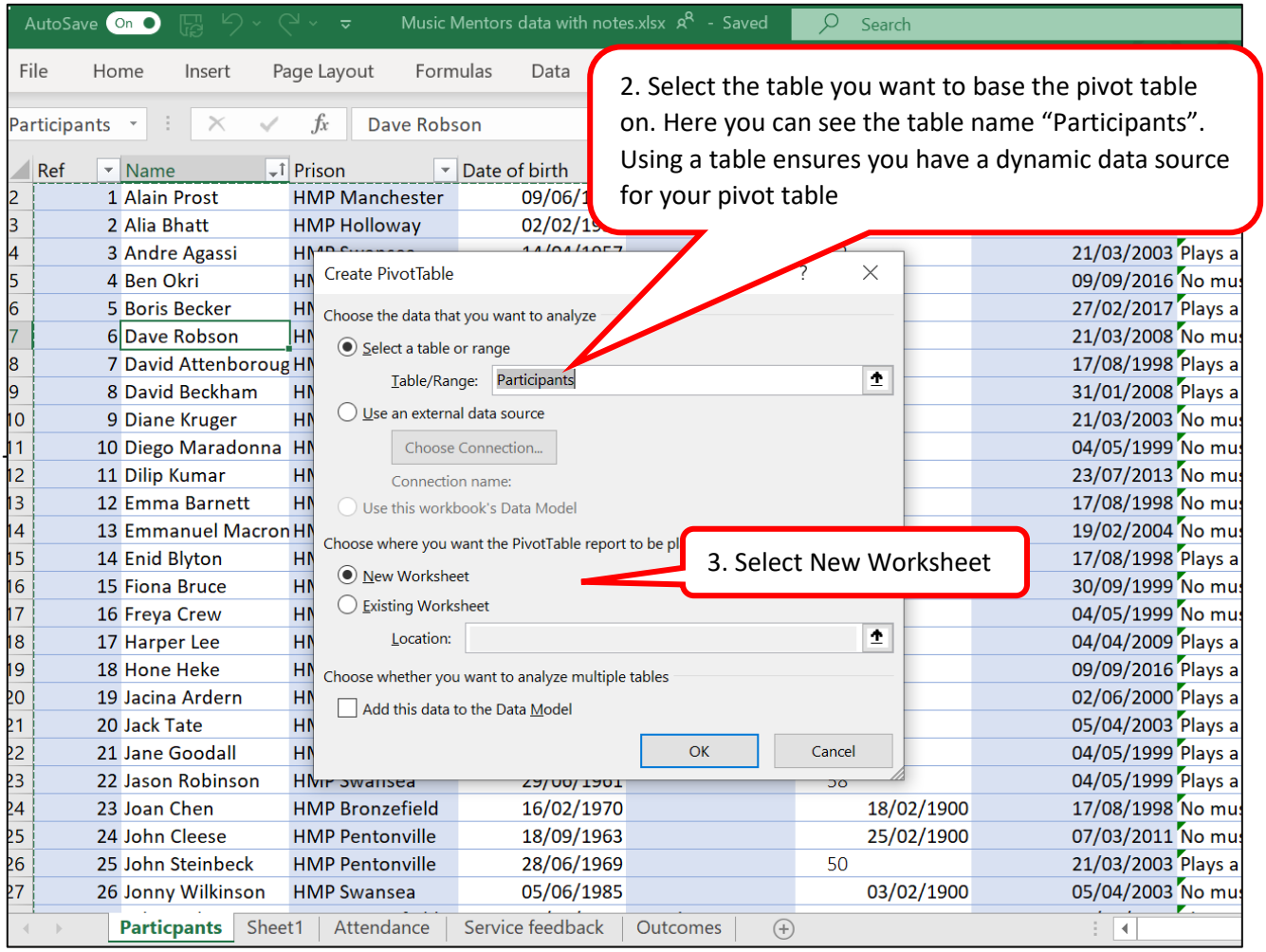
It is good practice to name the table as it makes life much easier later when working with formulas. Naming the formula is basically giving your data set a name which will enable you to recognise which data set you need to be working with.

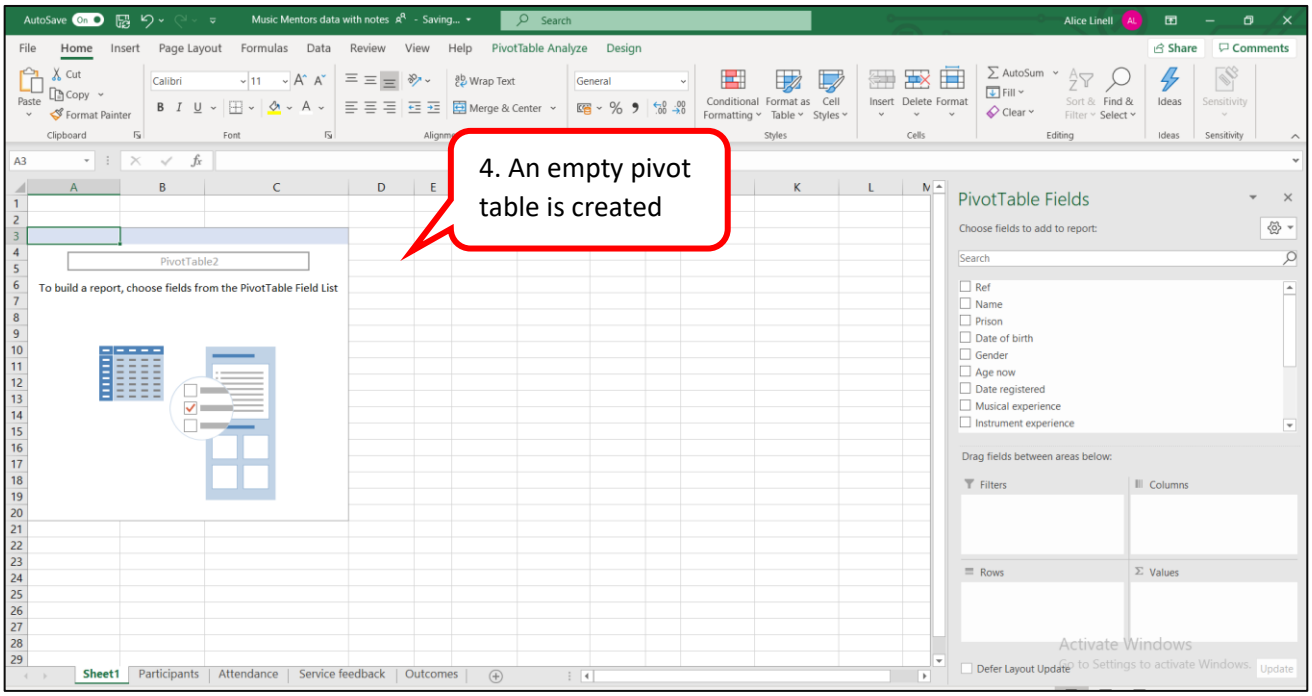


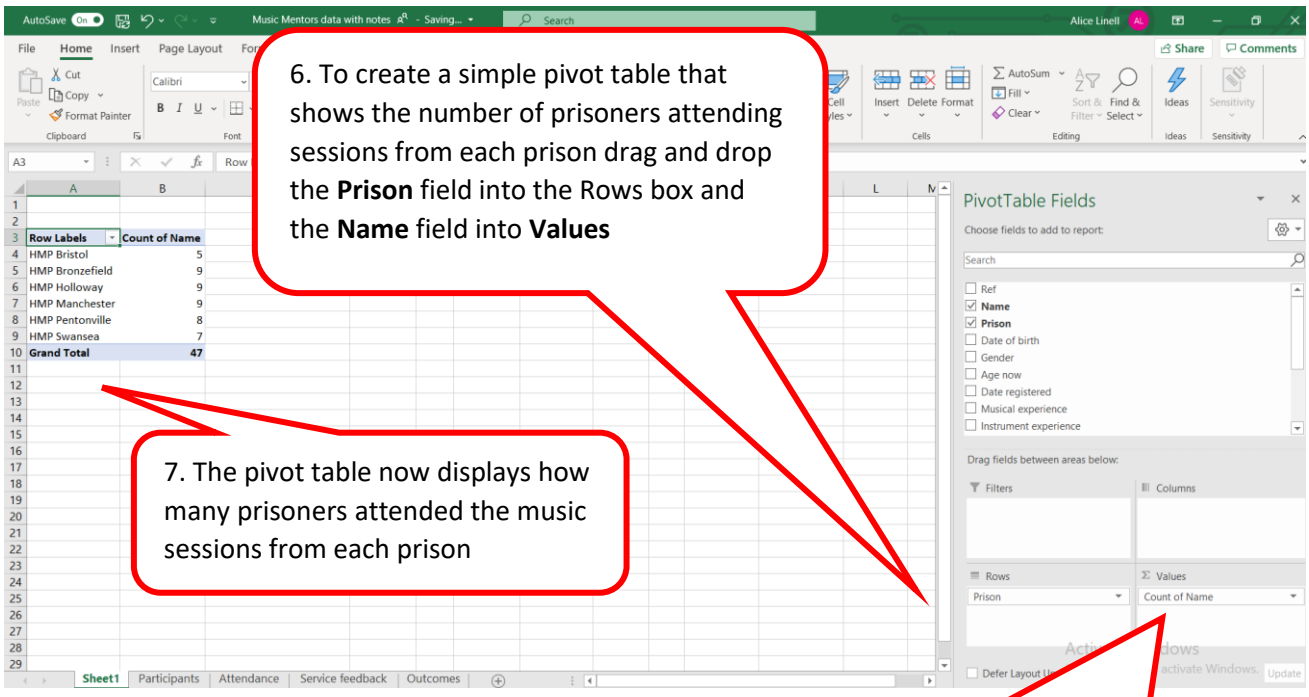
Pivot Tables

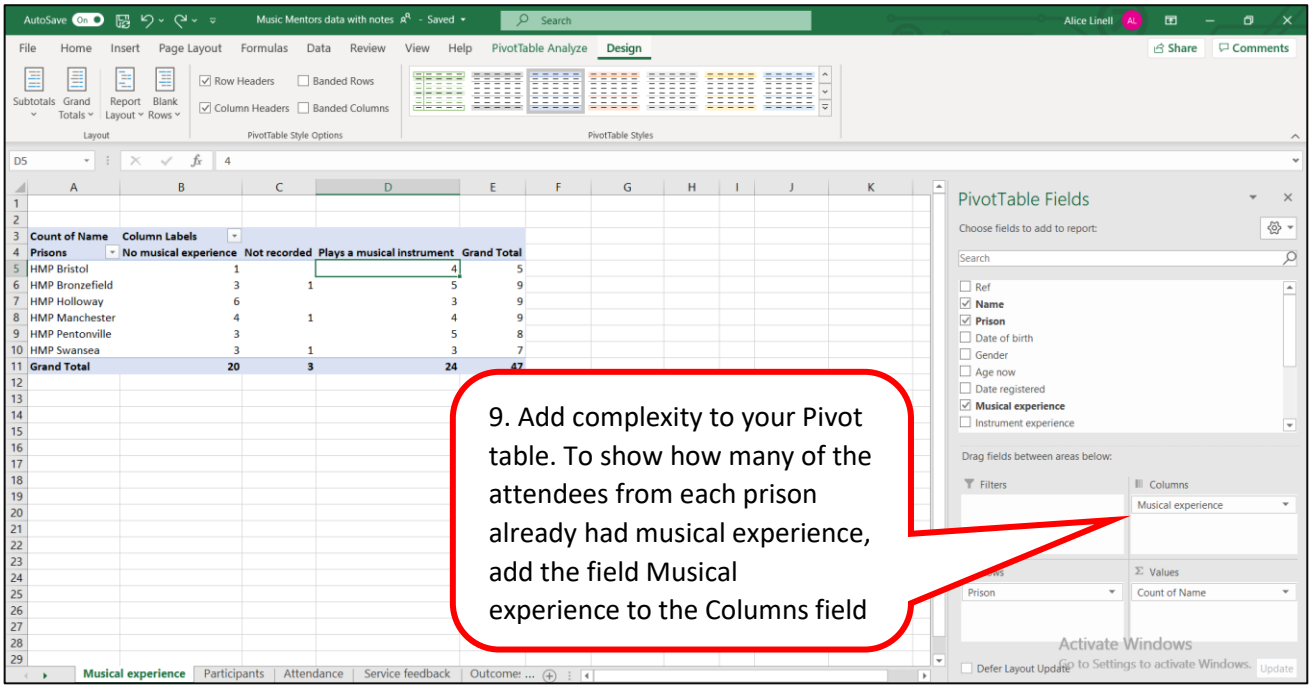
Creating a pivot table



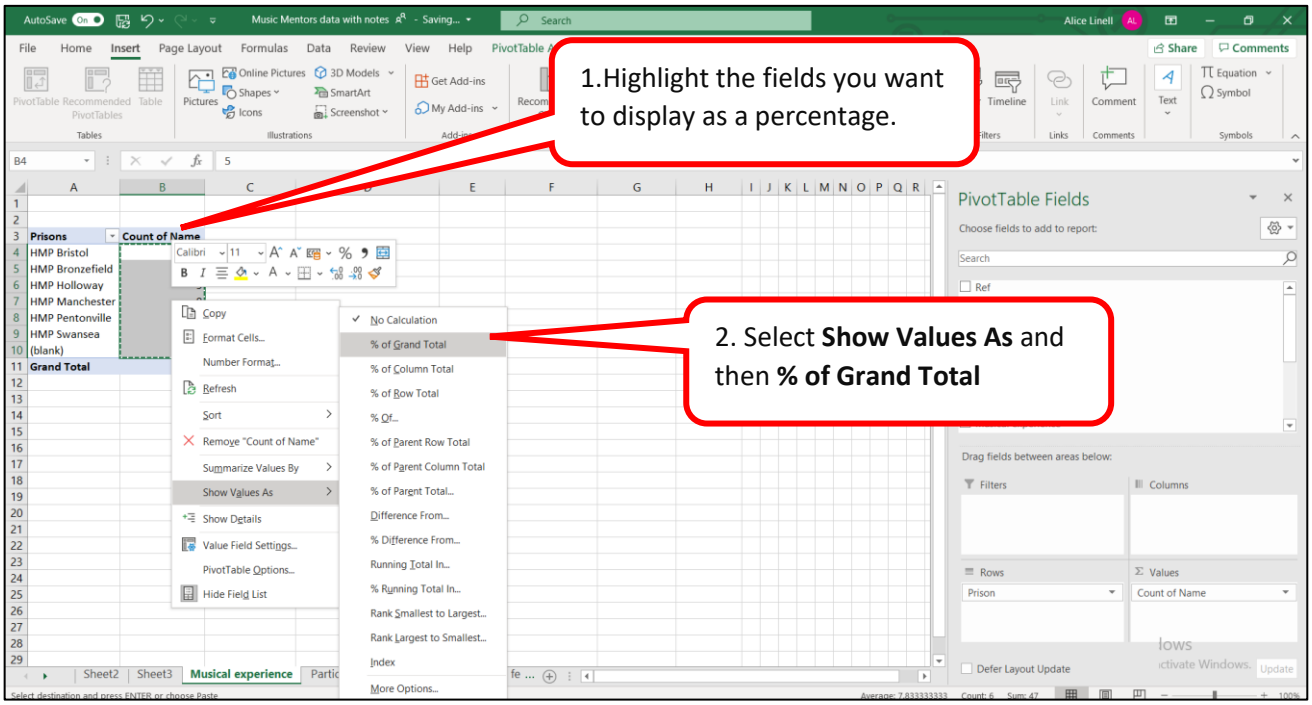


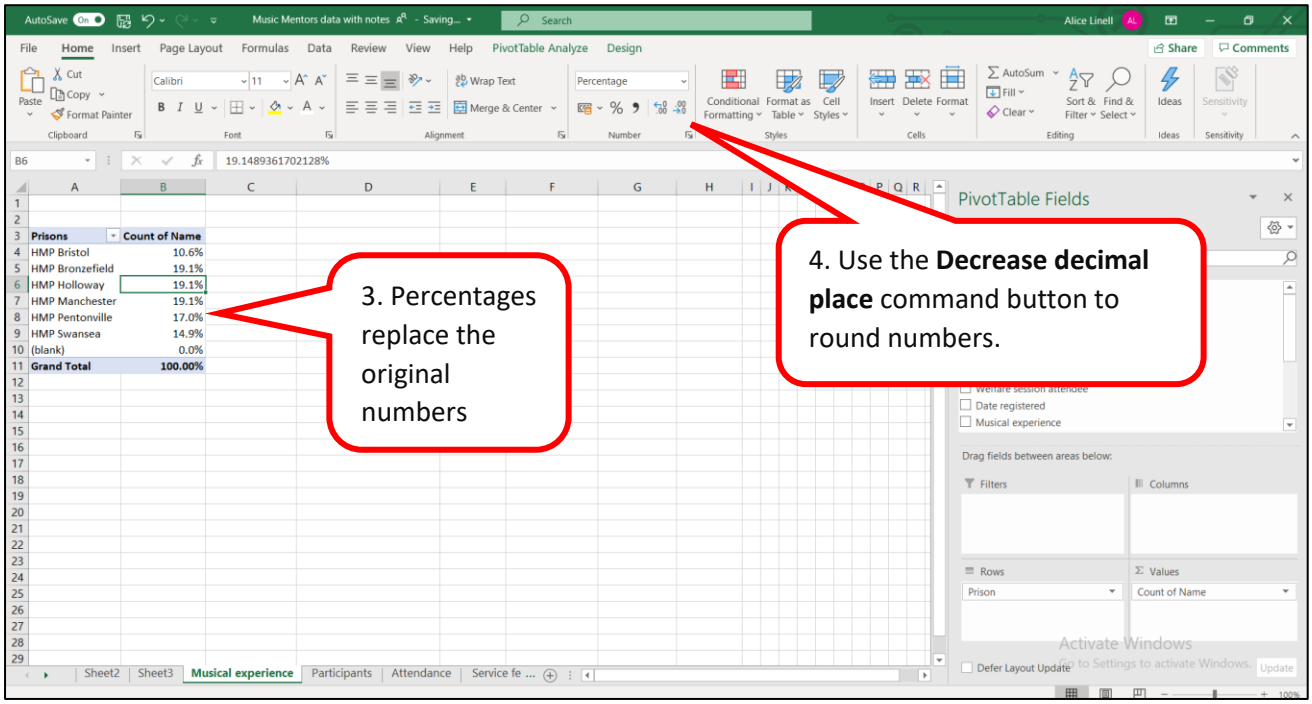

4. An empty pivot table is created
PivotTable2
To build a report, choose fields from the PivotTable Field List
PivotTable Fields
Choose fields to add to report:
Search
Ref
Name
Prison
Date of birth
Gender
Age now
Date registered
Musical experience
Instrument experience
Drag fields between areas below:
Filters
Columns
Rows
Values
Defer Layout Update
Update
Sheet1
Participants
Attendance
Service feedback
Outcomes


6. To create a simple pivot table that shows the number of prisoners attending sessions from each prison drag and drop the **Prison** field into the Rows box and the **Name** field into **Values**
7. The pivot table now displays how many prisoners attended the music sessions from each prison
8. As the name field is text the pivot table assumes you want to **Count** the number of records in the Name
Row Labels
Count of Name
HMP Bristol 5
HMP Bronzefield 9
HMP Holloway 9
HMP Manchester 9
HMP Pentonville 8
HMP Swansea 7
Grand Total 47
PivotTable Fields
Prison
Count of Name
Sheet1
Participants
Attendance
Service feedback
Outcomes



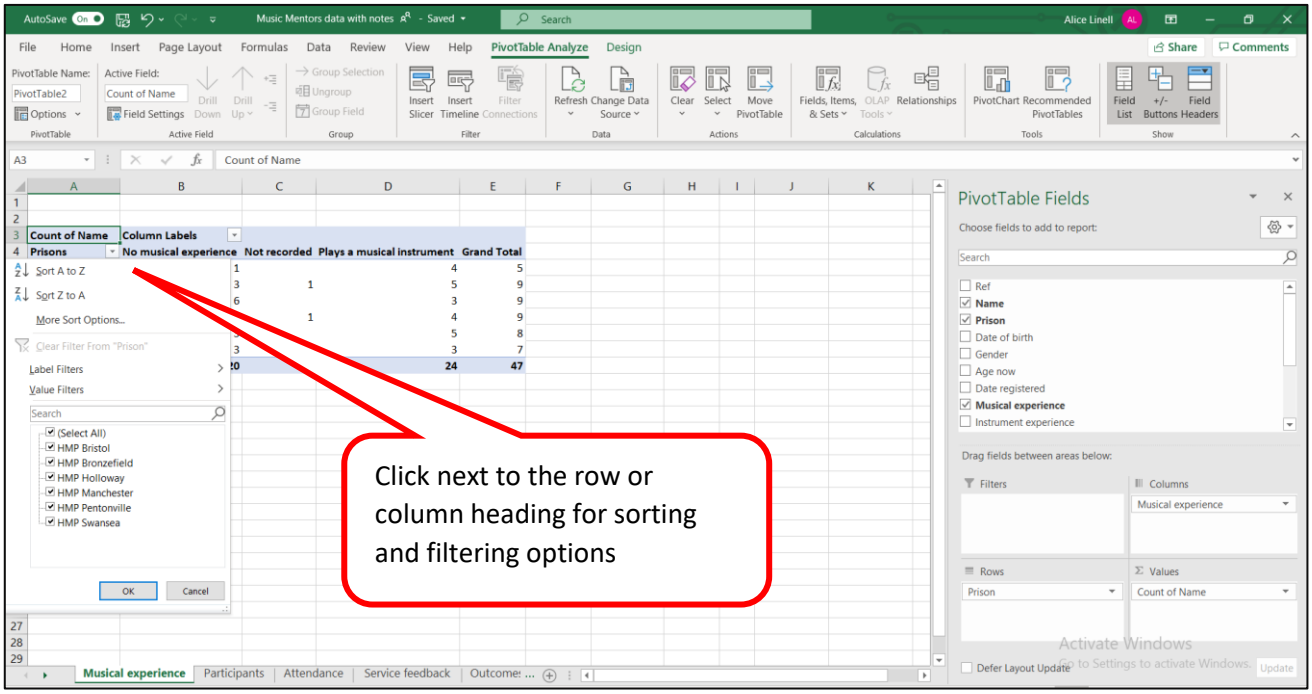
Field values



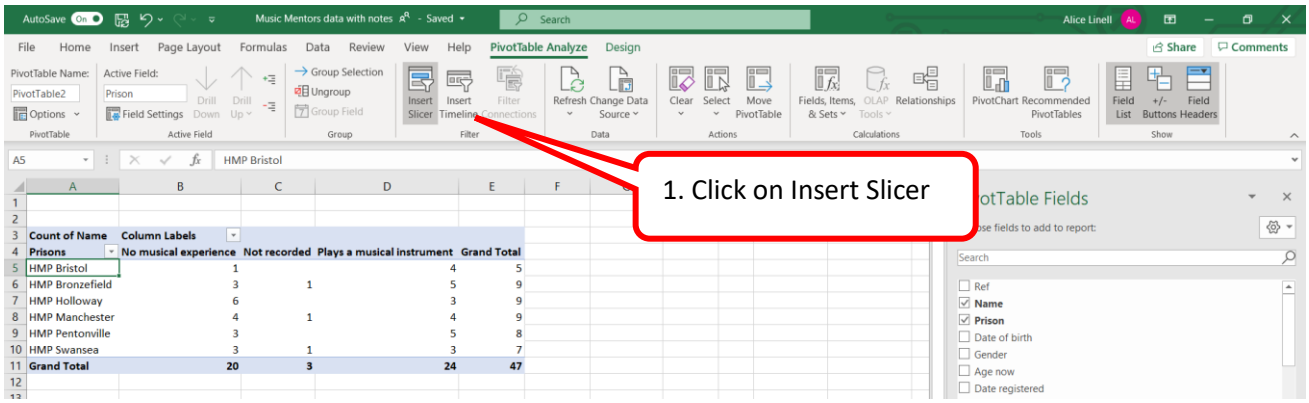


Sorting & Filtering a pivot table

Simple sorting and filtering work exactly the same as elsewhere in Excel.

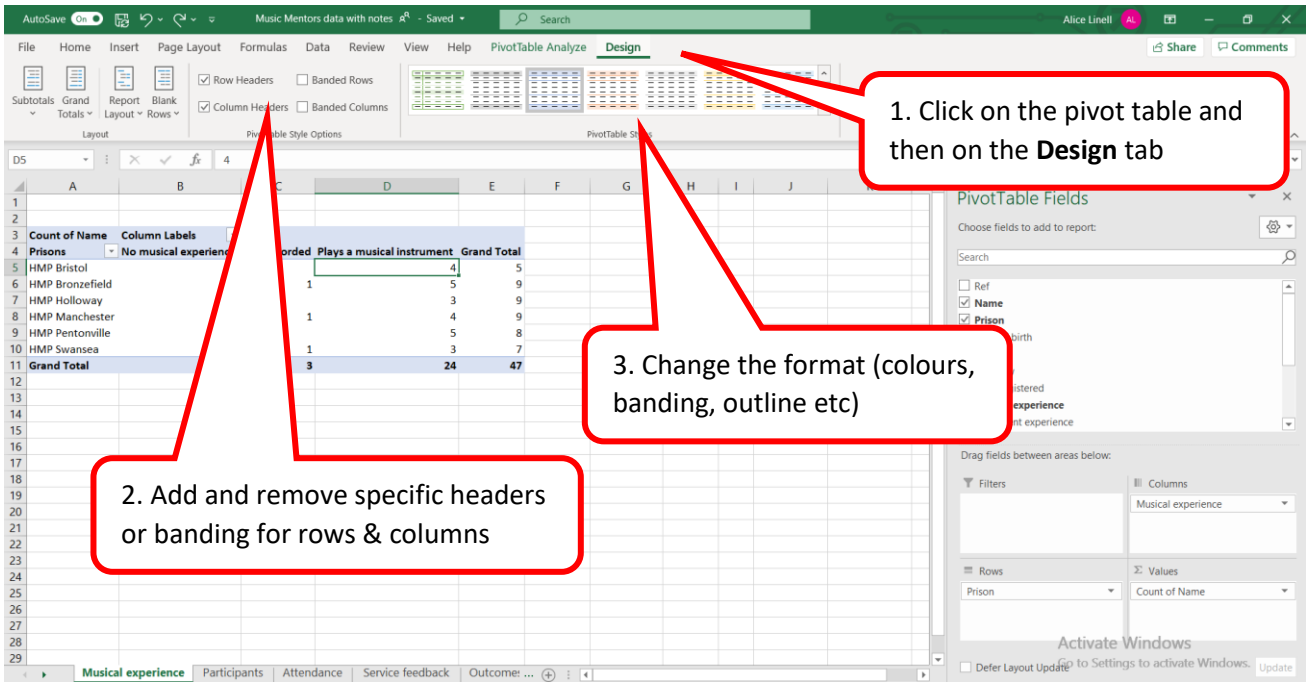


Add a Slicer to a pivot table



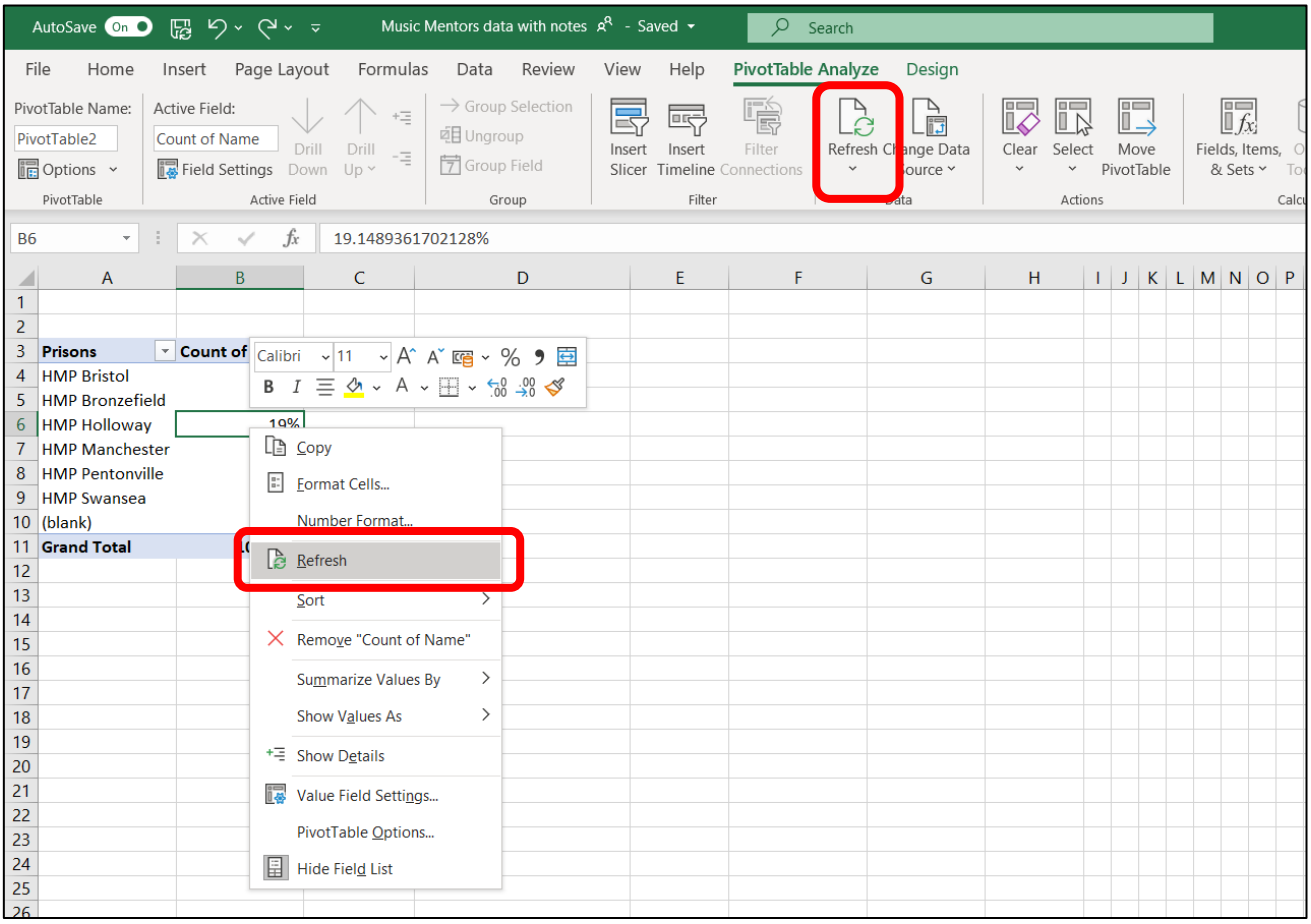
Formatting a pivot table

Like Tables, Pivot Tables can be formatted.



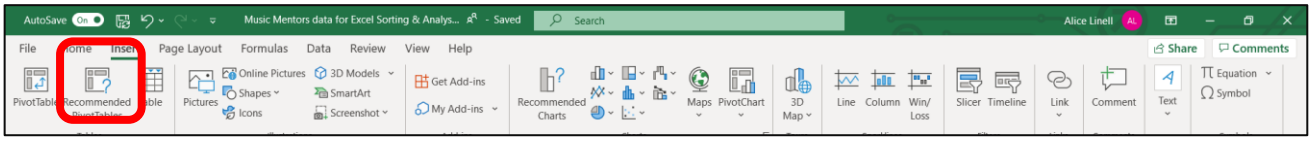
Refreshing data in a Pivot table

If you make changes to the data set being used to the pivot table, you might need to refresh the chart so that the changes are immediately reflected in the chart.



Recommended Pivot Tables

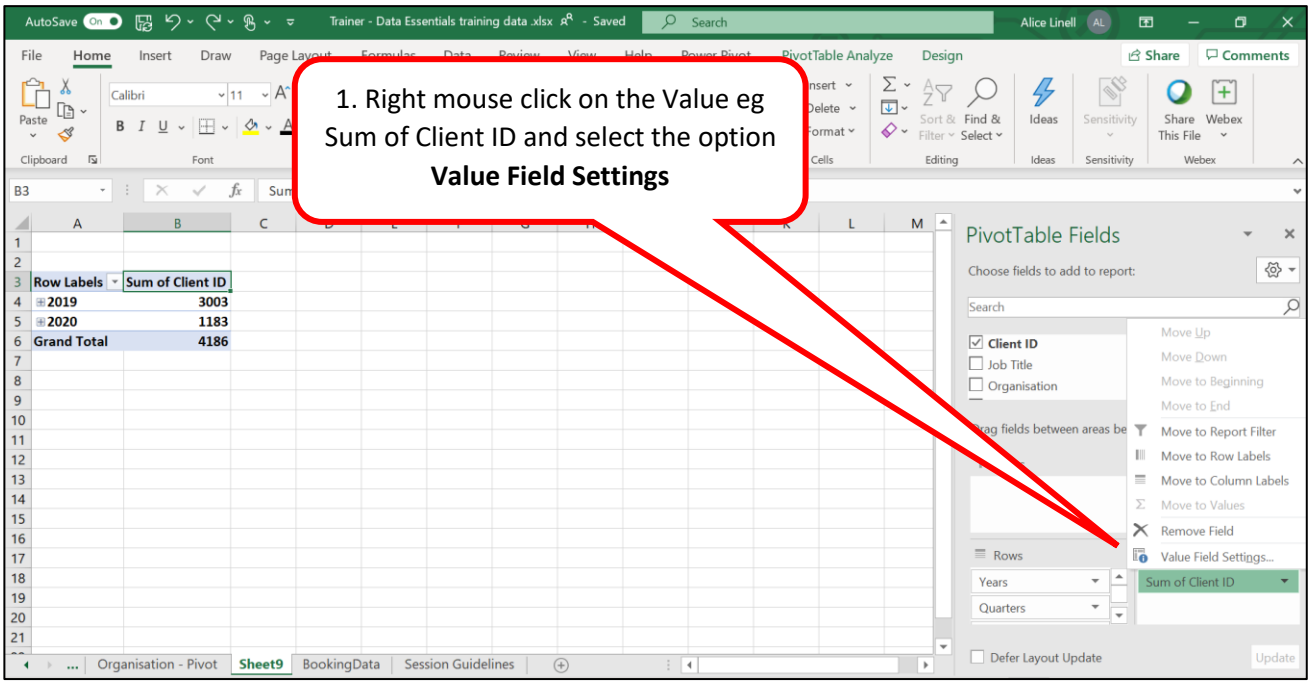
A short cut to creating pivot tables can be to use the recommended Pivot table function.



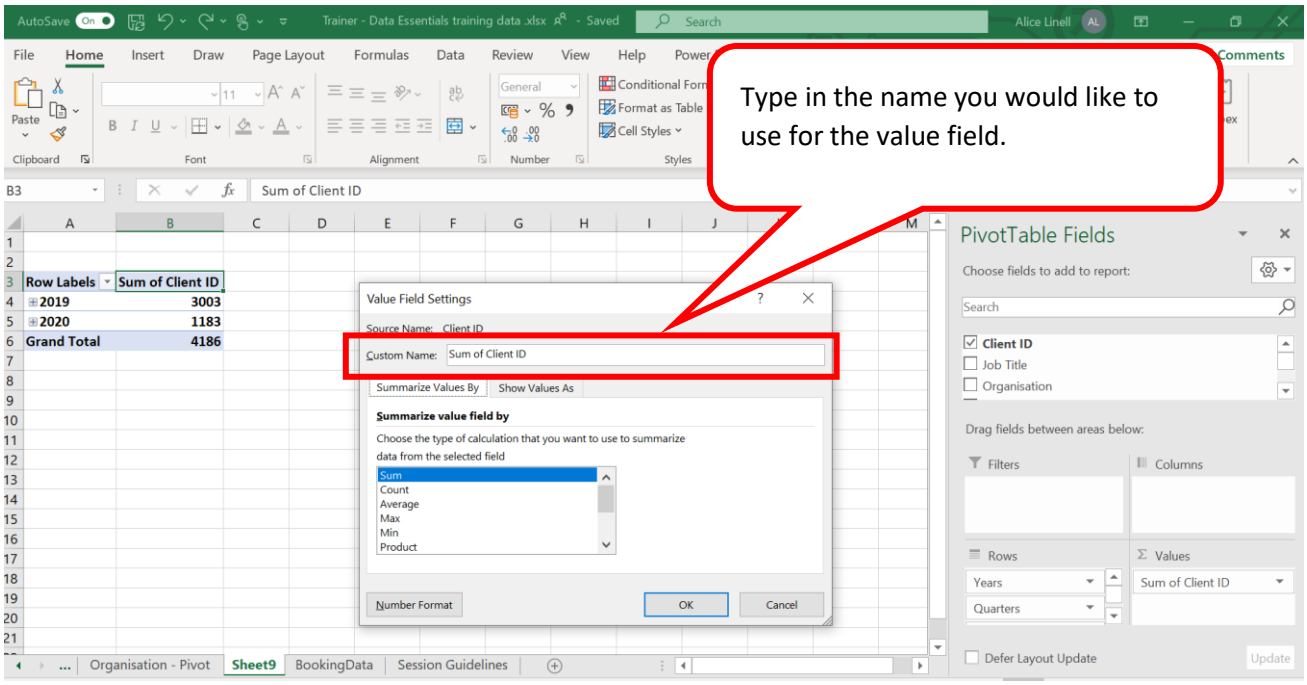
Changing value field settings

In pivot tables you can select different types of setting for the values portion of your Pivot table. You can:

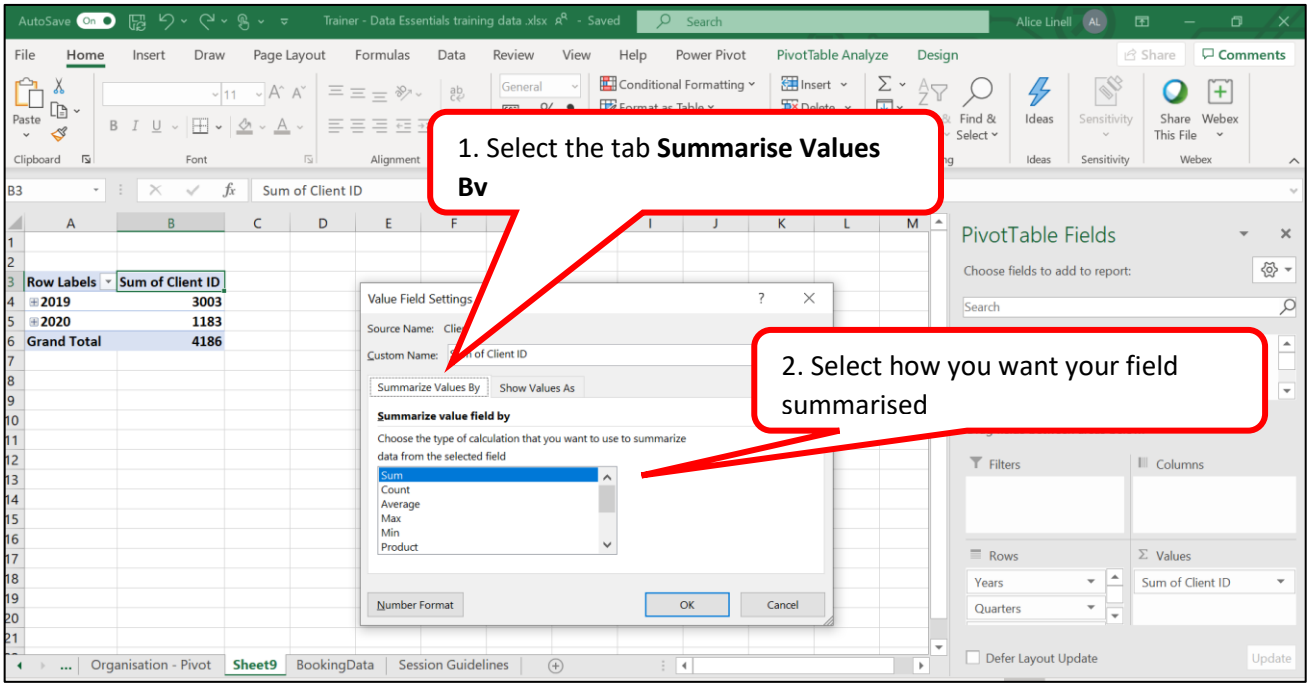
- Give the value set a custom (display) name
- Specify how you want to summarise values
- Specify how you want to display values



Custom value name



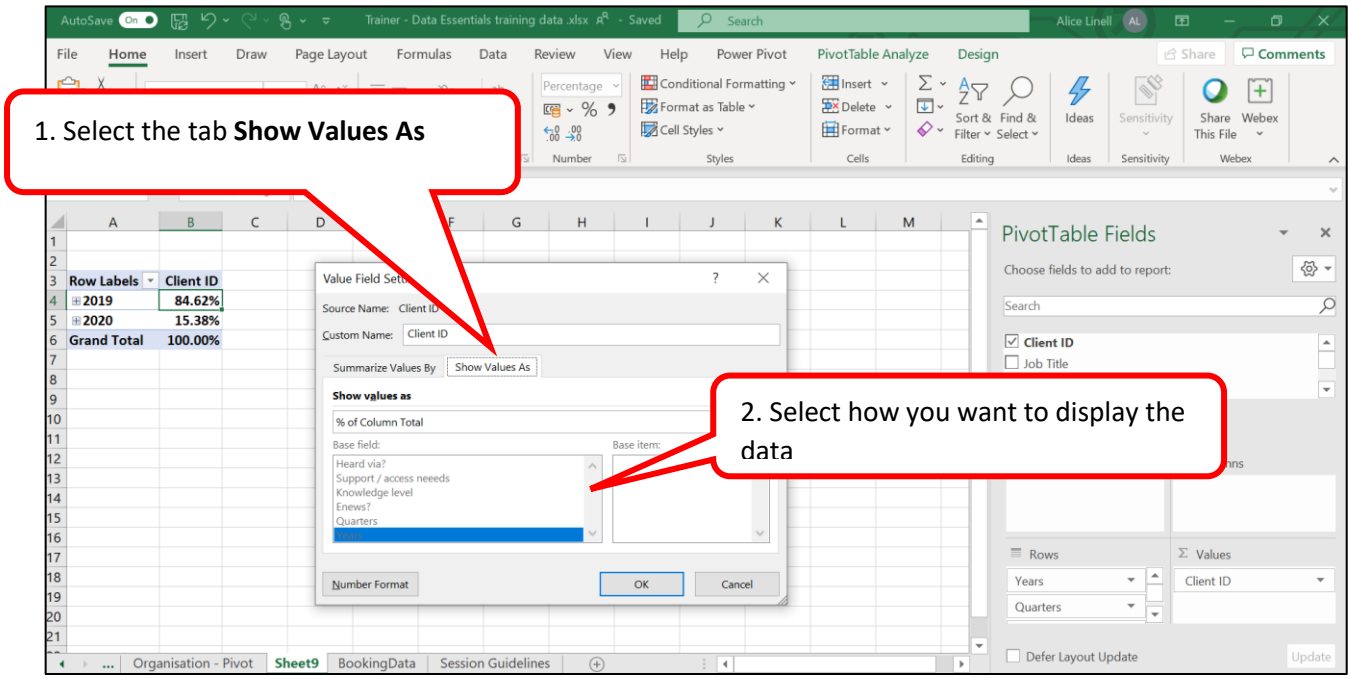
Summarise values by



Most common calculations used to summarise data:

Function	Summarizes
Sum	The sum of the values adds all the values in the selected data range. This is the default function for numeric values.
Count	The number of values. The Count summary function works the same as the COUNTA worksheet function. Count is the default function for values other than numbers.
Average	The average of the values. The average is the mean average of the numbers. To calculate: Excel adds up all the numbers, then divides by how many numbers there are. In other words it is the sum divided by the count.
Max	The largest value.
Min	The smallest value.
Product	The product of the values. The product is the result of multiplying the numbers eg the product of 2 and 3 is 6.

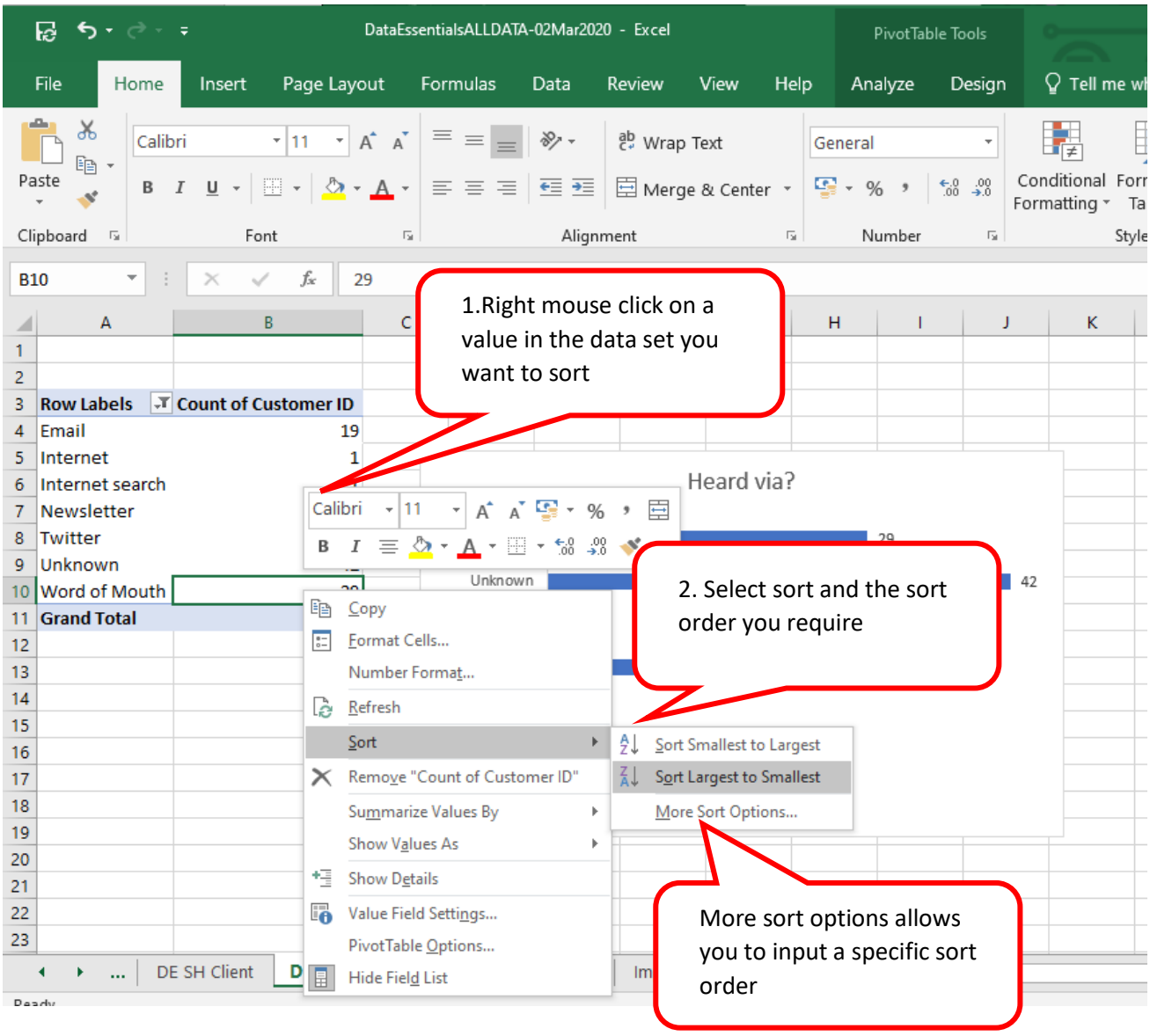
Show values As



Most common ways of displaying data:

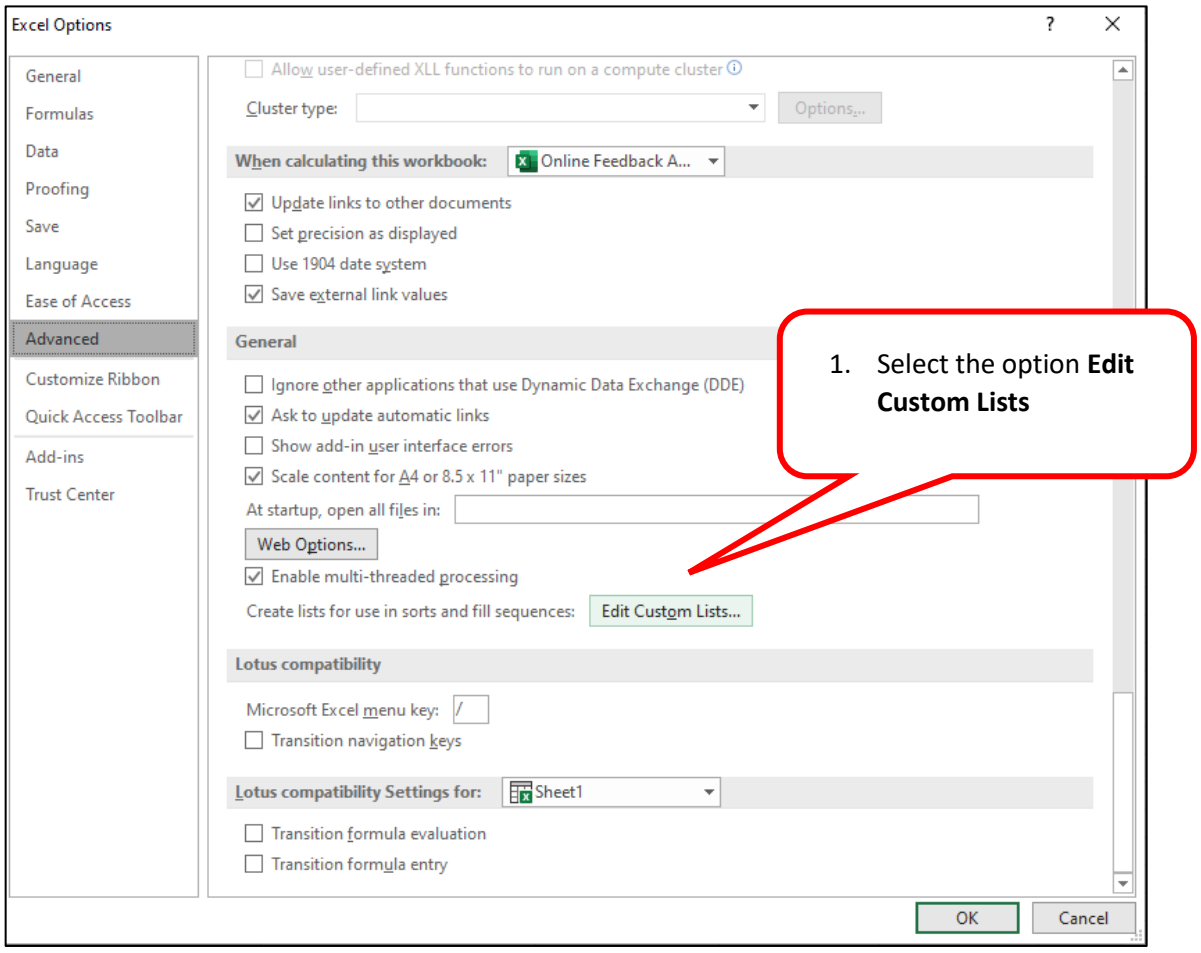
Use this calculation	To
No calculation	Turn off custom calculation.
% of Column Total	Display all the values in each column or series as a percentage of the total for the column or series.
% of Row Total	Display the value in each row or category as a percentage of the total for the row or category.
Rank smallest to largest	Display the rank of selected values in a specific field, listing the smallest item in the field as 1, and each larger value with a higher rank value. Create a new column for Rank if you want to show the specific amounts too.
Rank largest to smallest	Display the rank of selected values in a specific field, listing the largest item in the field as 1, and each smaller value with a higher rank value. Create a new column for Rank if you want to show the specific amounts too.

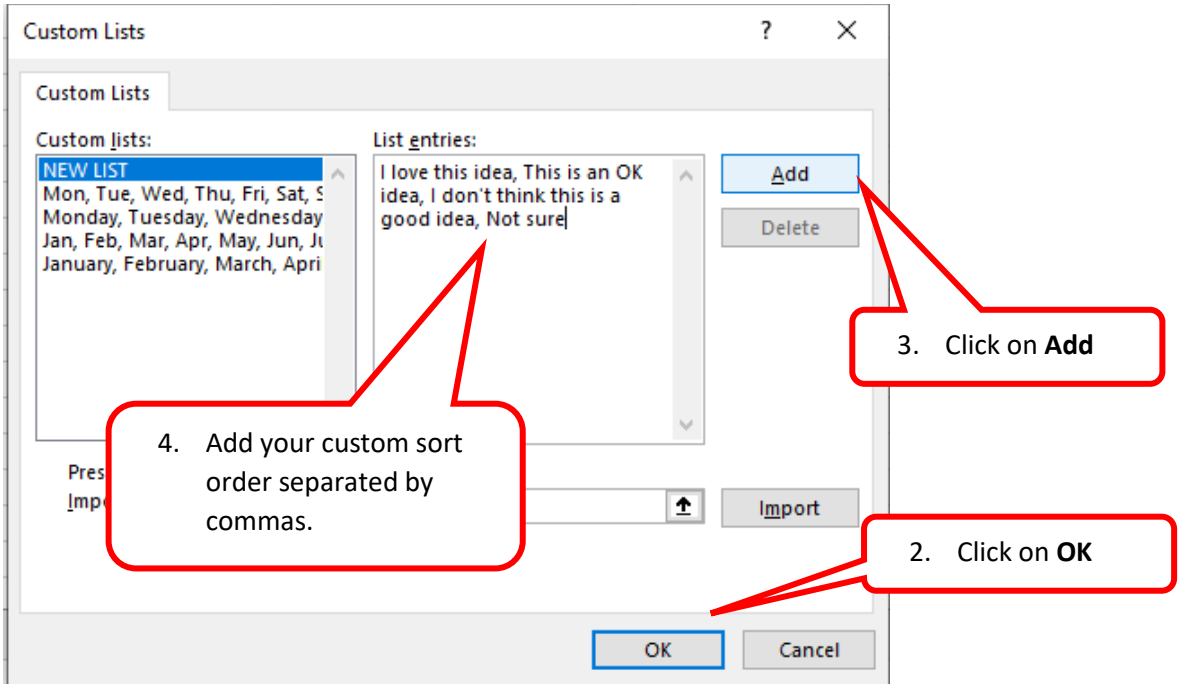
Changing the sort order



Custom sort order

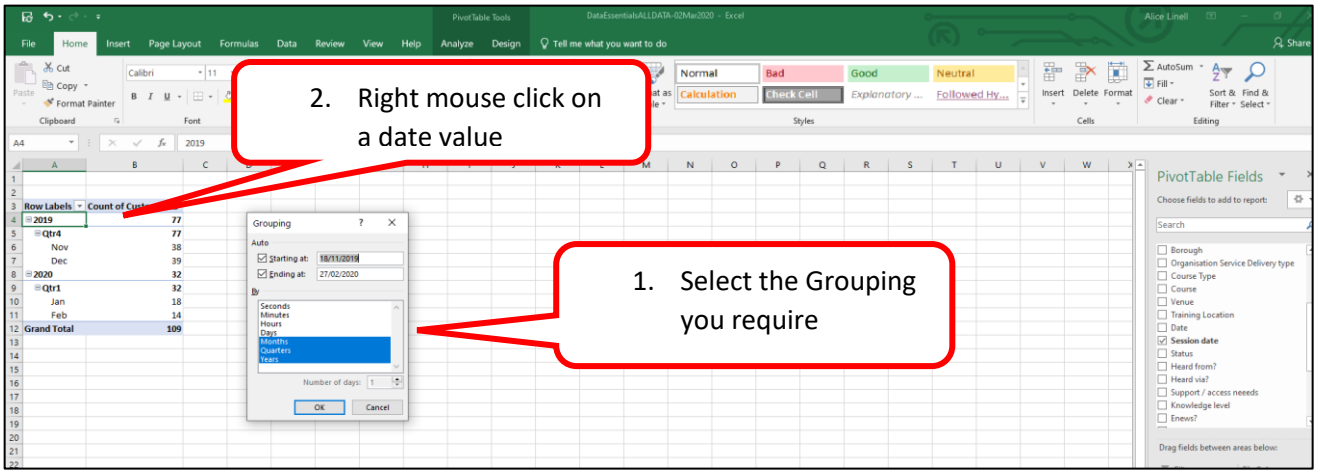
Go to File > Options > Advanced



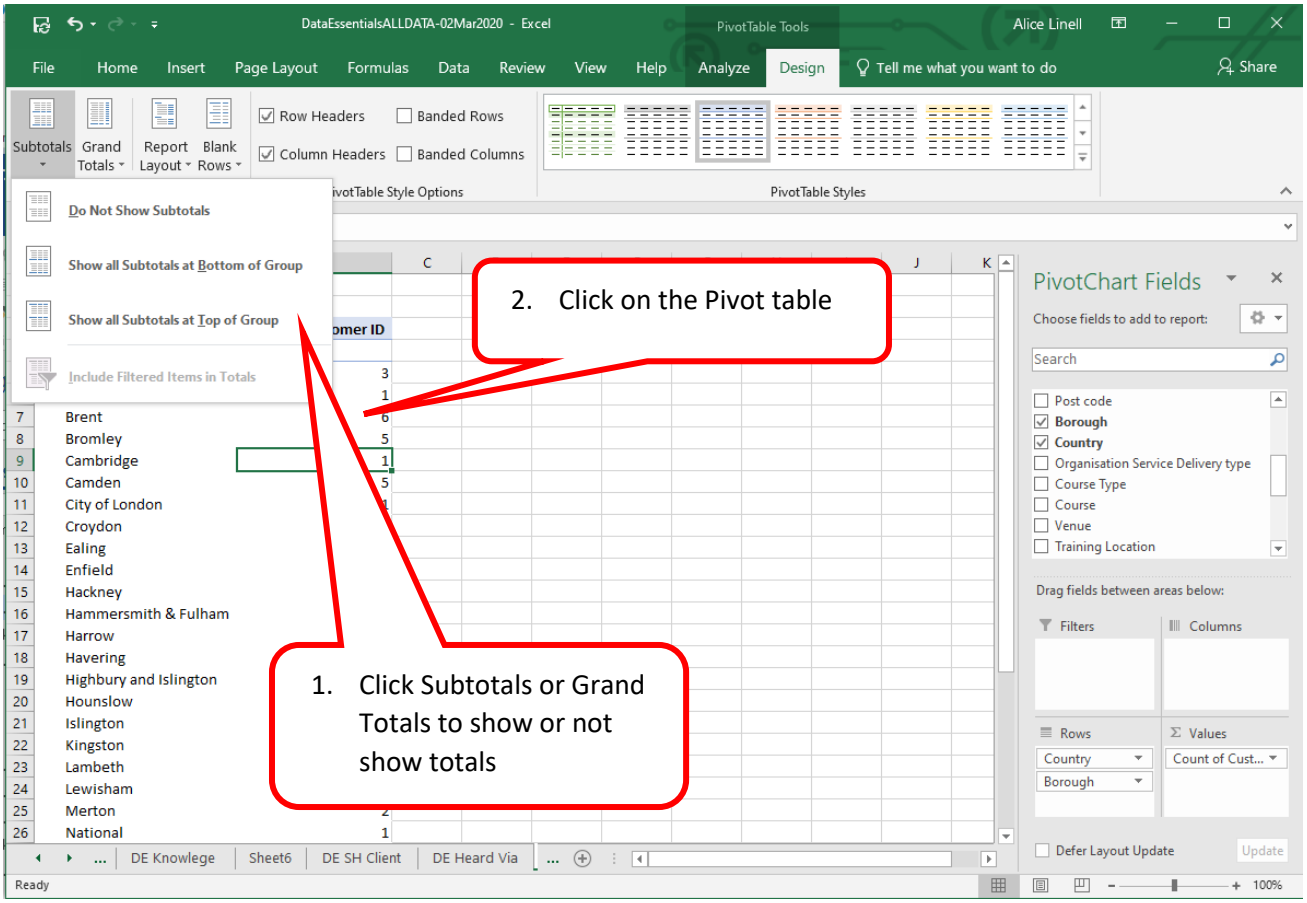


Grouping dates

In Excel 2016 and later versions, Excel automatically groups dates by months & quarters. If you are working with an Excel version prior to that or you want to change the automatic grouping you can manually group dates.

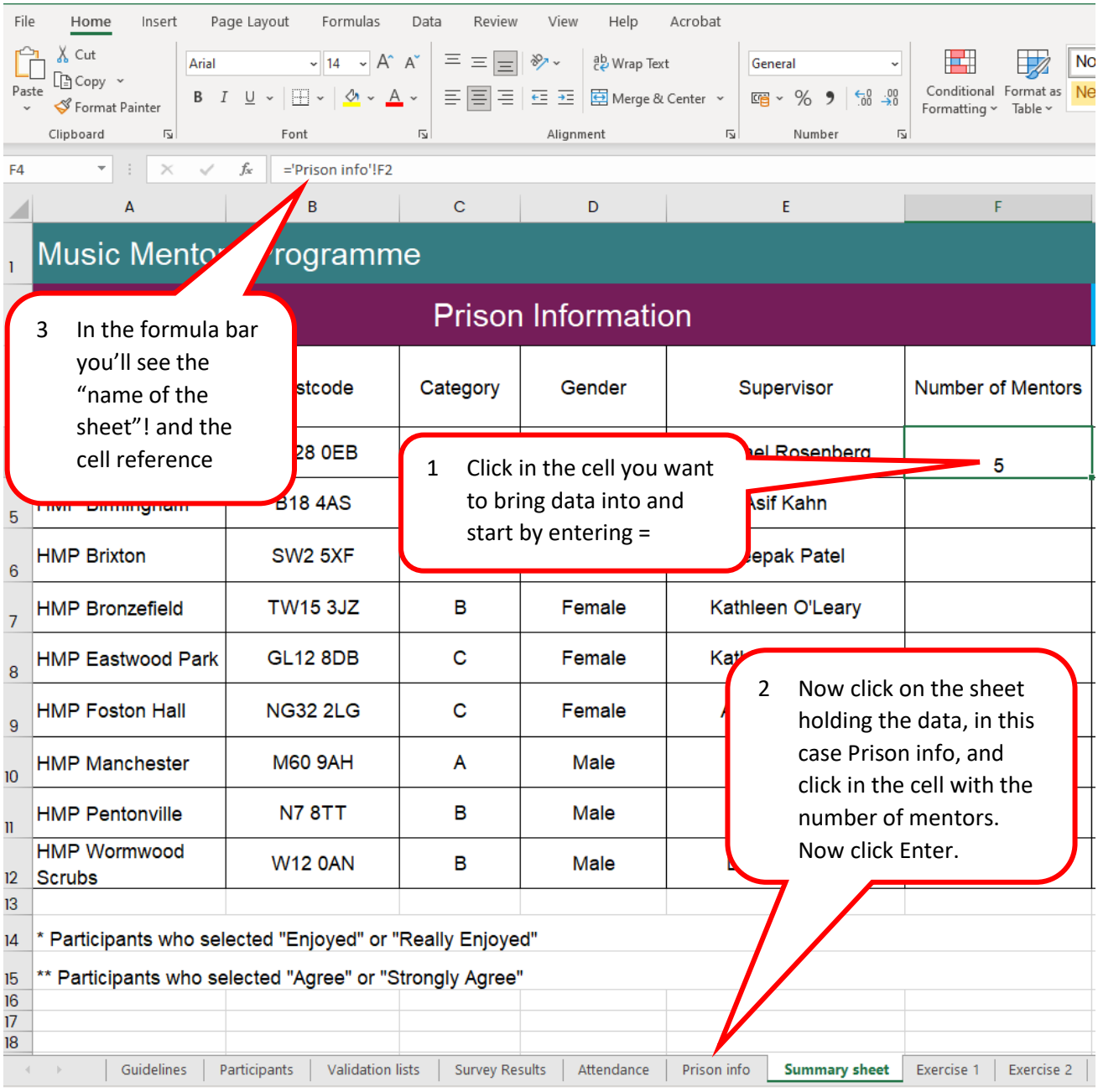


Sub totals and Grand totals



Summary sheets

In a summary sheet you can display data held in various other sheets in your workbook to see alongside each other. The data in the sheet will dynamically update if new data is added to the other sheets in question.



You can then copy down the formula as usual.