Introduction to Pivot Tables

Why:

Pivot tables are an important part of an Excel user's arsenal. They are easy to use and allow quick aggregation or summarisation of large amounts of data for analysis or reporting.

What is a Pivot Table?

A pivot table is a summary or aggregation of your data that allows you to report and explore trends. Pivot tables allow you to group your data together in different ways so you can draw helpful conclusions more easily.
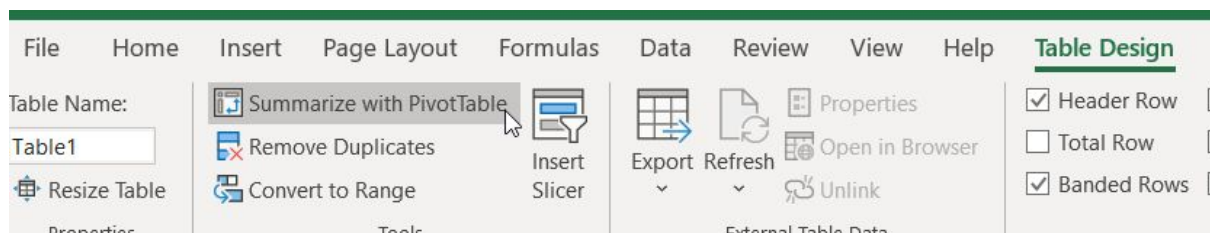
- "Pivot" refers to the fact you can rotate (or pivot) the data in the table in order to view it from a different perspective.
- Note that the table of data you're "pivoting" remains unchanged when you're using the pivot table. You're just reorganising the data so you can reveal useful information.

Creating a Pivot table:

There are 2 ways of creating a pivot table. Note: Generally you'll want your pivot table in a new worksheet.
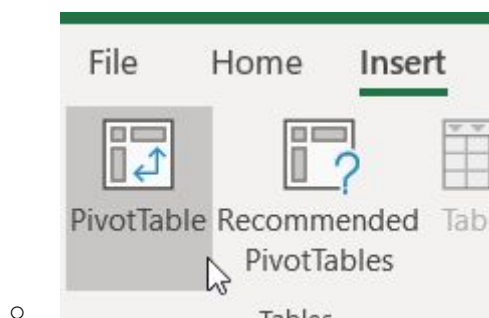
Method 1:

- With a cell in the table selected, go to Table Design > Summarise with Pivot Table


Method 2:

- Insert > Pivot Table.

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  - Select your Table or Range (tip: name your tables!)

○ Select 'New worksheet'

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Anatomy of a Pivot Table:

On the left we have our pivot table and on the right we have our Pivot Table fields. These have been pulled from our table's column headings - ID, salesperson, product_category etc. This is where we control what is or isn't displayed in the pivot table.

- **Filters:** Filters allow you to filter in or out the data displayed.
- **Columns:** Drag the field(s) you want to display as the **column headings** of your Pivot Table.
- **Rows:** Drag the field(s) you want to display as the **row headings** of your Pivot Table.
- **Values:** Drag the field you want to display as your **value** in your Pivot Table.

Example:

In the example below, showing a Sum of Sales per Product Category by Month, filtered by the salesperson Karyn Bellwood

- **Filter** - Salesperson
- **Columns** - Product_category
- **Rows** - Date
- **Values** - sales_amount

Changing the Value Field Settings:

You can use Pivot Tables to show much more than just Sum, by using the Value Field Settings.
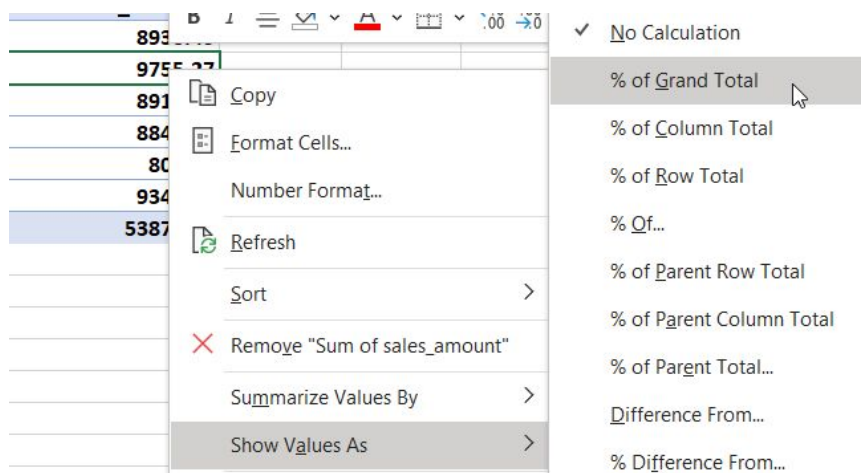

Here you have many different options to summarise the values by, such as Count or Average.
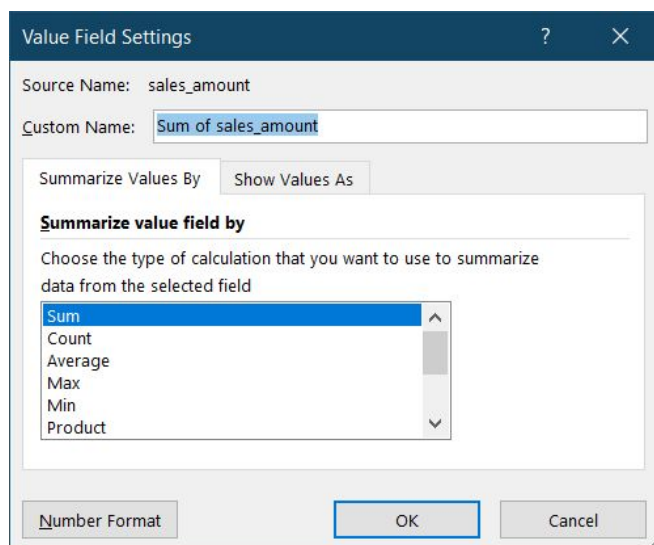
Show Values As:

You can also choose how to display your Values, like '% of grand total'. To do this, right click in the pivot table > show values as > % of grand total. Play around with this and the value field settings to see the many ways you can view your data.

Uses of pivot tables and Examples:

You can use pivot tables to quickly aggregate your data. The examples I went through in the lesson can be found below. (Using the workbook sales_data_start, found in the materials section of this lesson or here)

Total sales of different products

- Rows: product_category
- Values: Sum of sales_amount

Row Labels	Sum of sales_amount
Books	10322.15
Computers	6440.36
Electronics	16894.73
Movies	13494.63
Music	6727.99
Grand Total	53879.86

Filters

Columns

Rows: product_category

Values: Sum of sales_amount

Sales over time (per month)

- Rows: Date
- Values: Sum of sales_amount

Row Labels	Sum of sales_amount
⊞ Jan	8936.45
⊞ Feb	9755.27
⊞ Mar	8919.05
⊞ Apr	8840.32
⊞ May	8080.5
⊞ Jun	9348.27
Grand Total	53879.86

Filters

Columns

Rows: Months, date

Values: Sum of sales_amount

Average sales amount per product category

- Rows: product_category
- Values: Average of sales_amount (remember to change the value field settings)

Row Labels	Average of sales_amount
Books	106.41
Computers	102.23
Electronics	105.59
Movies	109.71
Music	118.03
Grand Total	107.76

Filters

Columns

Rows: product_category

Values: Average of sales_amou...

Product sales as a percentage of the total sales

- Rows: product_category
- Values: Sum of sales_amount

& change 'Show values as > % of grand total

Row Labels ▾	Sum of sales_amount
Books	19.16%
Computers	11.95%
Electronics	31.36%
Movies	25.05%
Music	12.49%
Grand Total	**100.00%**

▼ Filters		Ⅲ Columns	
≡ Rows		Σ Values	
product_category	▾	Sum of sales_amount	▾