

MICROSOFT EXCEL AND BUSINESS DATA ANALYSIS

for The Busy Professional



MICHAEL OLAFUSI

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eBook written and formatted by mike@urbizedge.com

Preface

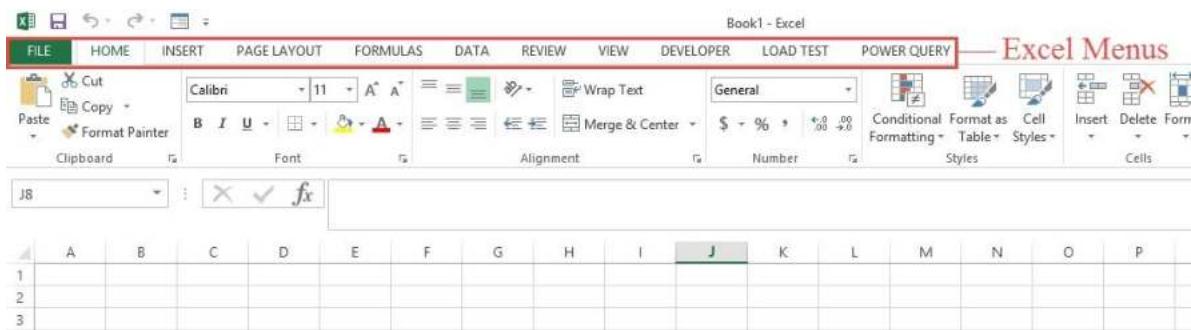
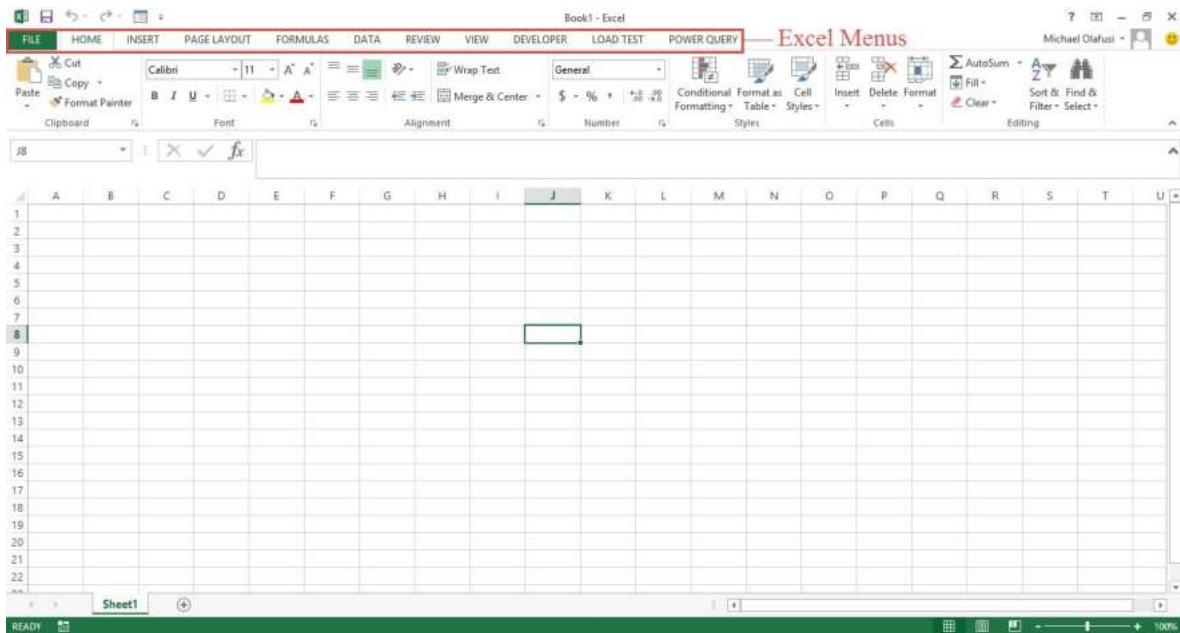
Microsoft Excel is the world's most used business intelligence tool. Its knowledge is even compulsory for an MBA degree and the business world depends greatly on it.

This book is aimed at making you very good in Microsoft Excel for business data analysis, teaching you with companion videos and practice files that can be access at www.urbizedge.com/about (bottom of the page). It's intended for Sales Managers, Financial Analysts, Business Analysts, Data Analysts, MIS Analysts, HR Executives and frequent Excel users.

It is written by Michael Olafusi a two time Microsoft Excel MVP (most valuable professional) and a full-time Microsoft Excel consultant. He is the founder of UrBizEdge, a business data analysis and Microsoft Excel consulting firm. He has trained hundreds of business professionals on Microsoft Excel and has used the experience gained from interacting with them both during such trainings and while consulting for companies to write this excellent guide for the busy professional who needs the improved work productivity Microsoft Excel provides.

If you feel any part of this book can be better improved or expanded, please send an email to mike@urbizedge.com

Microsoft Excel: It's more powerful and easier to use than you think!

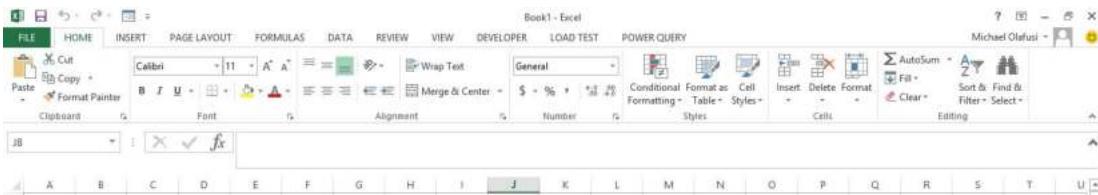


We've got Home menu, Insert menu, Page Layout menu, Formulas menu, Data menu, Review menu and View menu. Each of these menus will be discussed in practical terms.

The other menus — Developer menu, Load Test Menu and Power Query menu — are not displayed by default. I enabled them as I do a lot of programming and other advanced stuff in Excel which I need them for.

Home Menu

The home menu is Excel's most used menu. It has very straightforward sub-menus.



Clipboard: Allows you to copy, cut and paste in Excel

Font: Allows you to set font size, color, background color (fill) & turn on bold or italics or underline.

Alignment: Allows you to set the position of whatever you've typed (or copied) into Excel. It also allows you to set how it's written: horizontal, vertical or slanting.

Number: Allows you to set how a number is shown in Excel: regular number, currency, scientific, percentage, fraction...

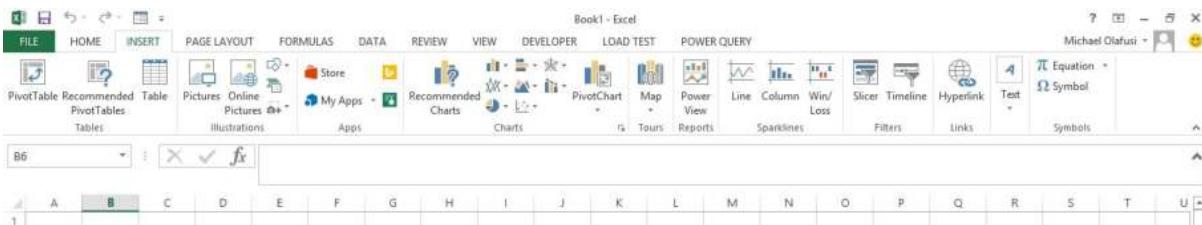
Styles: Allows you to set the format of an Excel cell based on the data it holds (conditional formatting). It also allows you to convert a selection of cells to table, and to set quick formats for a cell.

Cells: Allows you to insert new cells, delete cells and change cell format.

Editing: It houses the very useful Sort and filter tools. And also Find & Select, Find & Replace. There's also AutoSum which helps you sum all numbers in a selection.

Insert Menu

The Insert menu houses some of Excel's best tools.



Tables: Allows you to insert PivotTable, PivotChart and Table. Inserting a table in Excel allows for quick formatting, and better formulas (via named ranges). PivotTable and PivotChart will be discussed later.

Illustrations: Allows you to insert images and shapes.

Charts: Allows you to insert charts, which will be specially discussed later.

Tours: Houses Map which takes you straight to Power Map. Power Map is part of Microsoft's new Power BI. It enables you make geo-maps and create amazing data visualization tours.

Reports: Lets you access Power View, another Power BI tool. Power View allows to create a data model, loading up many different databases and creating analysis that cuts across all the databases, allowing you to see insights that are beyond a single database.

Sparklines: Allows you to insert charts that fit into one Excel cell. They make some reports beautiful and easy to read.

Filter: Allows you to filter out field values you are not interested in.

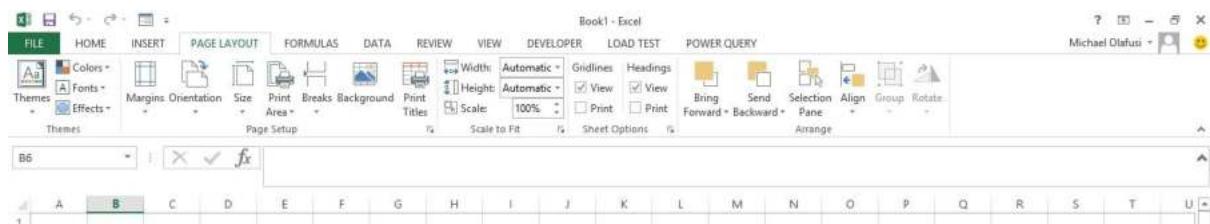
Links: Allows you point a cell content to a website or an email address.

Text: Allows you to insert texts and objects (pretty much anything, including a PDF document)

Symbols: Allows you to type out equations and special symbols.

Page Layout Menu

The Page Layout menu does just that: setting up your Excel document's page look and for printing.



Themes: It's not often used; it sets the look of the Excel window itself.

Page Setup: It allows you to set how the page comes out when printed. Most used are the Orientation (to set as Portrait or Landscape) and Print Area (to select on the cells you want to print).

Scale to Fit: It allows you to set how much is printed per page. Most frequent use is to force Excel to print on one page, or fit all the fields (columns) on one page width.

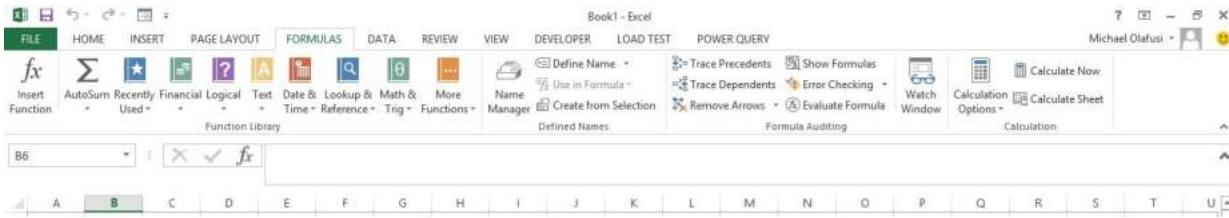
Sheet Options: You wouldn't want to change the default. It allows you set whether Excel gridlines be printed or not, and headings too. Default is no/off (unticked).

Arrange: It lets you rearrange overlapping objects (shapes, images, textboxes...). Or

align them.

Formulas Menu

The Formulas menu gives you access to Excel's built-in formulas.



Function Library: It has the formulas grouped by category. Once you have an idea of what you want done, it helps you locate the formula to use. It's good to look through it once in a while to have an idea of the out-of-the-box analysis Excel can do.

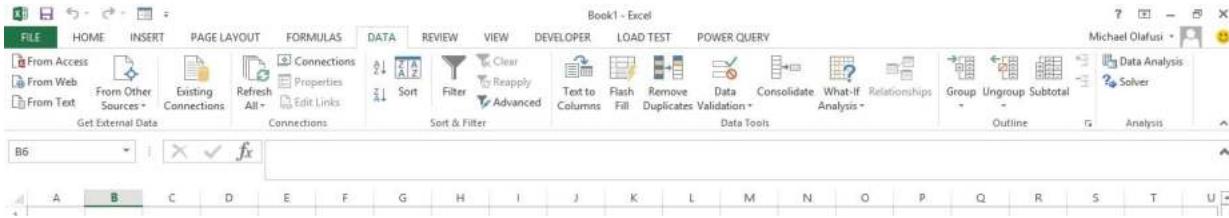
Defined Names: Lets you name a cell or selection of cells. Can be very useful when analyzing a big database or building a model.

Formula Auditing: Allows you to check for errors in your formulas, trace formula cells and see how your final result is being calculated.

Calculation: Allows you to set when the formulas in your Excel sheet are calculated: automatic (whenever a cell value changes) or manual (at first entry and when you force them to be recalculated).

Data Menu

The Data menu allows you to work with external data and do basic data formatting.



Get External Data: It allows you to import or link to an external data file (non-Excel file). You'll use it whenever you have a data in text file and need it worked on in Excel.

Connections: Allows you to make changes to the connections/links to an external data file. Or force a refresh of the connections to capture changes made in the external data file since last connection.

Sort & Filter: Allows you to sort data and do some filtering too. Filter allows you to specify values to display.

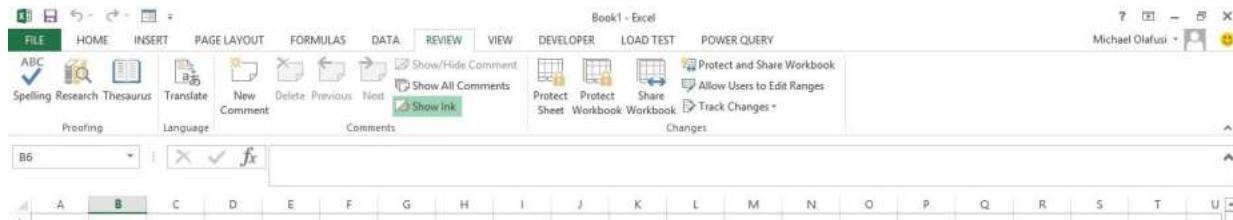
Data Tools: Allows you do very basic data analysis. Especially removing duplicate entries, and splitting one field into several (text-to-columns). Example is splitting full name into first name and last name.

Outline: Allows you to group (and hide) several rows. Useful for large data reports with few categories; helps to group categories.

Analysis: This is only visible after you enable Data Analysis add-in or Solver add-in. It allows you access a large collection of statistical analysis tools and modelling.

Review Menu

The Review menu is for spell checks, commenting and setting access restrictions.



Proofing: Allows you to carry out spell checks and word meaning checks.

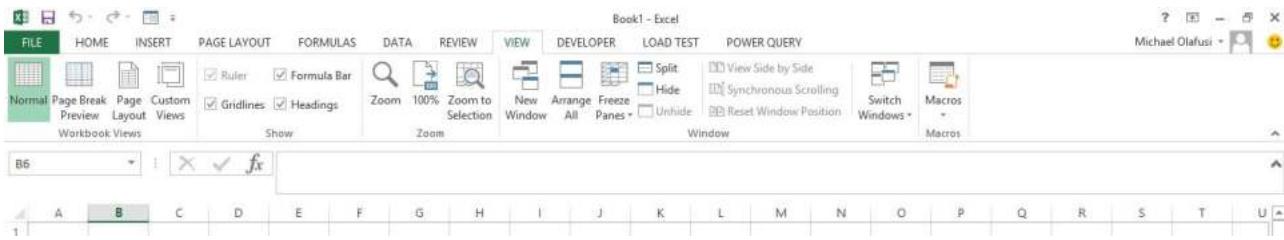
Language: Allows you to translate the Excel file content from one language to another.

Comments: Allows you to include comments in an Excel sheet, view all comments at once or delete comments.

Changes: Allows you to set access restrictions and track changes to the Excel file. Also allows you to share the file.

View Menu

The View menu allows you to change the window layout of the Excel document. It doesn't change anything in the actual document, just the way it's displayed.



Workbook views: Allows you to set how the workbook (Excel file) is displayed.

Show: Controls what non-printing details are shown: Gridlines, Headings, Formula bar and Ruler. The one you'll be interested most in is Gridlines. If you want your Excel sheet to look more like a Word file, untick the Gridlines. That's what's done to every Excel sheet you see that has no Gridlines.

Zoom: Does what it says: sets zoom.

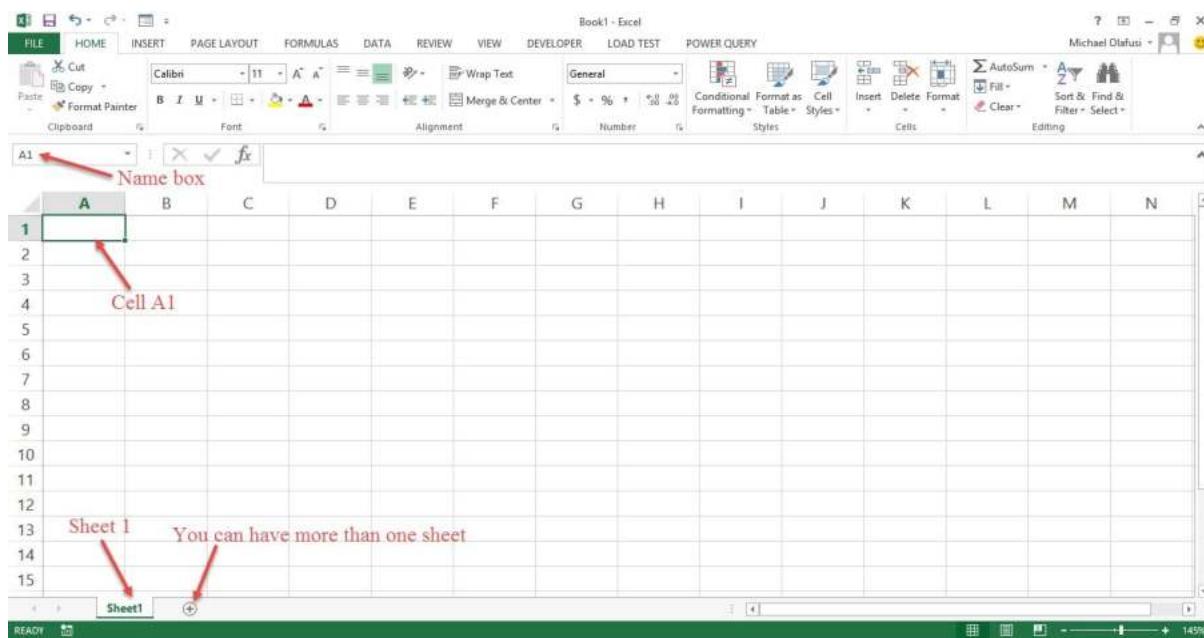
Window: Allows you to freeze headers so when you scroll they will never be out of view. And also allows you to split the Excel sheet display, so you can compare two different parts of the sheet.

Macros: Allows you to see the macros programmed in the Excel file (if there's any macro in it). Shows only when the developer menu is enabled.

How Excel Handles What You Type

In Excel, you type into small rectangular boxes called cells. I would be referring to everything you type or copy into Excel cells as Data.

Every cell has an address, because each cell is an intersection of a row and a column. The cell selected in the image below, is addressed as cell A1. It is the intersection of column A and row 1. A collection of millions of these cells make an Excel sheet. And an Excel file (also referred to as Excel workbook) is a collection of one or more Excel sheets.



Sometimes, what you type into a cell takes more space than the cell has. Don't worry, just expand the column width by dragging the right border of the column header.

Like this:

| | | | |
|---|--------------------------|---|---|
| | A | B | C |
| 1 | United States of America | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |

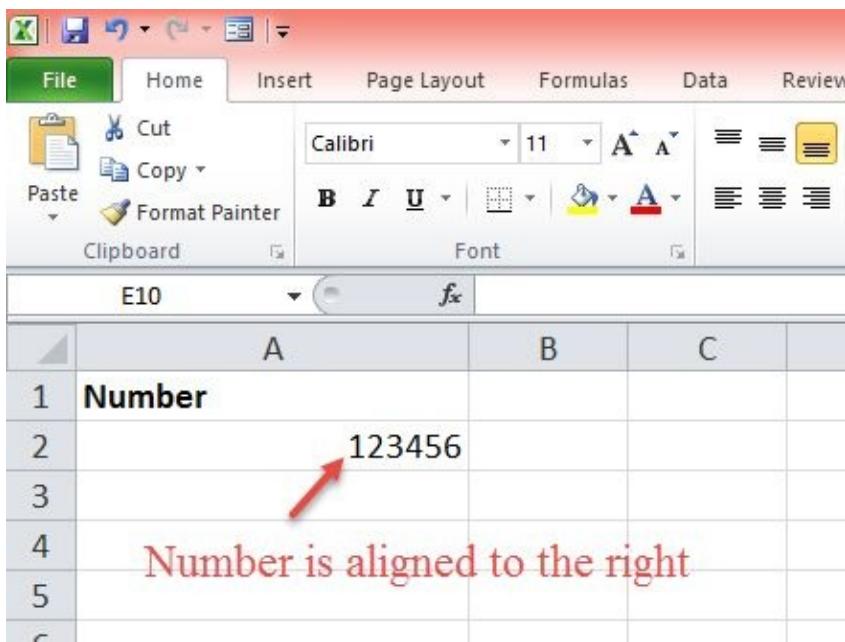
Different Data Types in Excel

Excel recognizes 4 different data types: Text, Number, Boolean & Formula. Anything you type into Excel will fall under one of these.

Text: Whenever you type alphabets, or a mix of alphabets and numbers into Excel (without proceeding with =), everything is recognized as text. By default, Excel aligns text to the left of the cell.

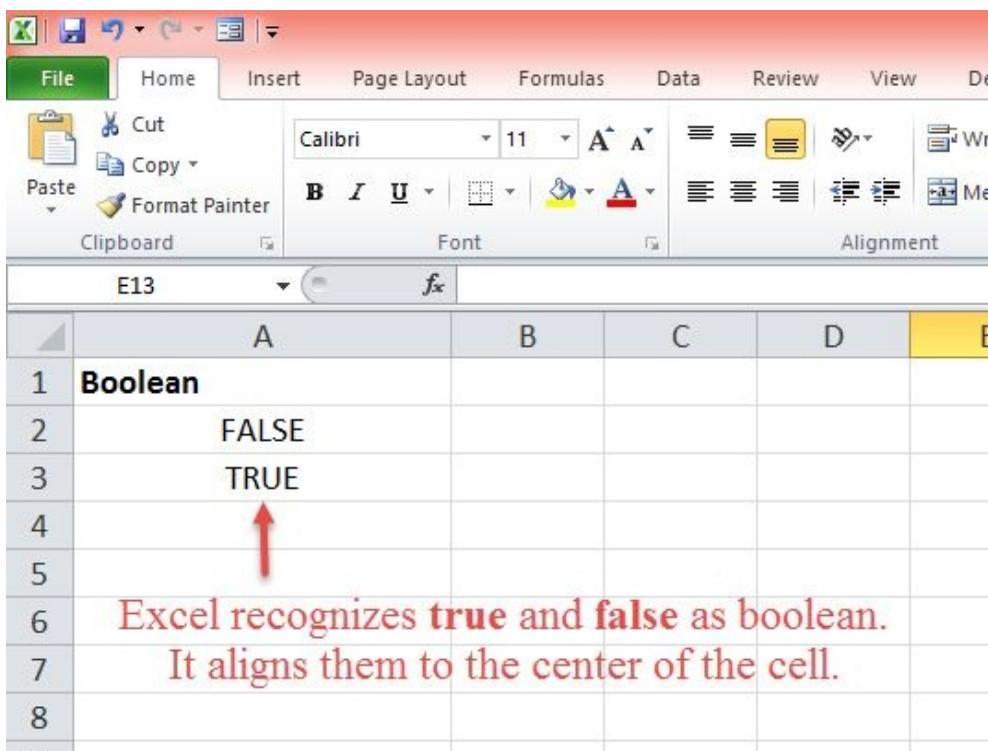
| | A | B | C |
|---|---------|---|---|
| 1 | Text | | |
| 2 | Michael | | |
| 3 | | | |
| 4 | | | |

Number: If all you type into a cell are digits, they are recognized as Number by Excel. By default, Excel aligns number to the right.



A screenshot of the Microsoft Excel interface. The ribbon at the top shows tabs for File, Home, Insert, Page Layout, Formulas, Data, and Review. The Home tab is selected. The ribbon has a red arrow pointing to the 'Font' section. Below the ribbon is a toolbar with icons for Cut, Copy, Paste, Format Painter, and Clipboard. The font section shows 'Calibri' and '11'. The alignment section shows 'Right' alignment. The address bar shows 'E10'. The worksheet area has rows 1 through 5. Row 1 contains 'Number'. Row 2 contains the number '123456', which is aligned to the right. A red arrow points to this cell. Row 4 contains the text 'Number is aligned to the right'.

Boolean: FALSE and TRUE are Boolean entries. You'll hardly use them. They are used for setting up complex formulas. By default, whenever you type false or true in a cell, Excel will put it in upper case and align it to the center.



A screenshot of the Microsoft Excel interface. The ribbon at the top shows tabs for File, Home, Insert, Page Layout, Formulas, Data, Review, View, and Design. The Home tab is selected. The ribbon has a red arrow pointing to the 'Font' section. Below the ribbon is a toolbar with icons for Cut, Copy, Paste, Format Painter, and Clipboard. The font section shows 'Calibri' and '11'. The alignment section shows 'Center' alignment. The address bar shows 'E13'. The worksheet area has rows 1 through 8. Row 1 contains 'Boolean'. Row 2 contains 'FALSE'. Row 3 contains 'TRUE'. Both 'FALSE' and 'TRUE' are in uppercase and centered in their respective cells. A red arrow points to the word 'TRUE'. Row 6 contains the text 'Excel recognizes true and false as boolean.' Row 7 contains the text 'It aligns them to the center of the cell.'

Formula: Once you begin a cell entry with =, Excel treats everything you type after as a formula.

A screenshot of Microsoft Excel's user interface. The ribbon at the top has 'File' selected. The 'Home' tab is active, showing the 'Clipboard' group with options like Cut, Copy, Paste, and Format Painter. Below the ribbon is the formula bar with 'VLOOKUP' and the formula '=47+57'. The main area shows a table with columns A, B, C, and D. Row 1 contains 'Formula' in cell A1. Row 2 contains '=47+57' in cell A2, which is highlighted with a red arrow pointing to it. The text below the table explains that starting a cell entry with '=' makes it a formula.

VLOOKUP

=47+57

| | A | B | C | D |
|---|--|---|---|---|
| 1 | Formula | | | |
| 2 | =47+57 | | | |
| 3 | | | | |
| 4 | Whenever you begin a cell entry with = | | | |
| 5 | Excel treats it as a formula. You can do | | | |
| 6 | mathematical calculations and other | | | |
| 7 | computations right after the = | | | |
| 8 | | | | |

As a recap, see the image below.

A screenshot of Microsoft Excel showing a table with four columns: A, B, C, and D. The rows are labeled 1 through 6. Column A contains 'Text' in row 1 and 'Michael' in row 2. Column B contains 'Number' in row 1 and '12345' in row 2. Column C contains 'Boolean' in row 1 and 'FALSE' in row 2. Column D contains the formula '=45+57' in row 2. The formula bar shows 'C12' and 'fx'. The ribbon at the top shows 'Book2 - Microsoft' and the 'Developer' tab is selected. The 'Font' and 'Alignment' tabs in the ribbon are also visible.

| | A | B | C | D |
|---|---------|--------|---------|---------|
| 1 | Text | Number | Boolean | Formula |
| 2 | Michael | 12345 | FALSE | =45+57 |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |

The practical importance of this is that if you receive a sales report in Excel and the numbers are aligned to left instead of right you should be concerned. There are three reasons this can happen and two of those reasons will cause some of your mathematical formulas to not work correctly. You wouldn't want to do an incorrect analysis, so it's best to check why the numbers are aligned to the left and not to the right as expected.

1. It could be that the author forced the numbers to align to the left. To find out if that's the reason, check the alignment under Home menu.

The screenshot shows the Microsoft Excel ribbon with the 'Home' tab selected. In the 'Font' section, the font is set to 'Calibri' at size '11'. The 'Alignment' section shows various options: 'Wrap Text' is checked, while 'Merge & Center' is not. A red arrow points to the center alignment icon. The cell B2 is selected, containing the value '12345'. The formula bar above shows 'B2' and '12345'. The worksheet has columns A, B, and C, and rows 1 through 5. Row 1 contains 'Number' in cell B1. Row 2 contains '12345' in cell B2. Rows 3 through 5 are empty.

2. It could be that the author forced the number to be treated as text by setting the cell format to text

The screenshot shows the Microsoft Excel ribbon with the 'Home' tab selected. In the 'Font' section, the font is set to 'Calibri' at size '11'. The 'Number' section of the ribbon shows a dropdown menu with 'Text' selected. A red arrow points to this selection. The cell B2 is selected, containing the value '12345', which is aligned to the left. The formula bar above shows 'B2' and '12345'. The worksheet has columns A, B, C, and D, and rows 1 through 4. Row 1 contains 'Number' in cell B1. Row 2 contains '12345' in cell B2. Rows 3 and 4 are empty.

3. It could be that the author preceded the number with a single apostrophe (' before typing the number. This is a trick savvy users use to force Excel to keep the zeros at the beginning of your phone number or bank account number. Unfortunately, it forces Excel to treat the cell entry as a text and align it to the left.

The screenshot shows a Microsoft Excel spreadsheet titled "Book2 - Microsoft Excel". The ribbon at the top is visible with tabs like File, Home, Insert, Page Layout, Formulas, Data, Review, View, and Developer. The Home tab is selected. The formula bar shows the cell reference "B2" and the value "'08089382423". The main area contains a table with four columns (A, B, C, D) and four rows (1, 2, 3, 4). Row 1 has "Number" in cell B1. Row 2 has "08089382423" in cell B2. A red arrow points from the text "Notice the ' before the phone number" to the apostrophe in the formula bar.

| | A | B | C | D |
|---|--|-------------|---|---|
| 1 | Notice the ' before the phone number | Number | | |
| 2 | | 08089382423 | | |
| 3 | | | | |
| 4 | | | | |

Out of these three ways of making a number show as aligned to the left, only the first one leaves the number intact. The other ways transform the number to text and will give you issues when you include them in calculations that normally would work on numbers.

Now you have an idea of how useful an understanding of the default ways Excel treat the different data types can be in your day to day use of Excel.

Data Consistency, starting with the end in view

Excel is different from every other Microsoft Office program you use. Most of the documents, reports and analysis you do with Excel will be used some day in the future for another report or analysis.

To become an expert in Excel, you have to always work with the end in mind. You have to create your Excel documents in such a way that you can easily use them for some bigger reports in the future. And there are some general rules I'll recommend you work with to achieve this.

1. Always use a compact table structure for entering your core data in Excel. This means using the minimum number of rows and minimum number of columns. Example of a compact table and non-compact table is shown below:

| | 7 columns | | | | | | |
|----|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | Monthly Revenue from Clients | | | | | | |
| 3 | Clients | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
| 4 | Mobil | ₦ 4,129,000 | ₦ 3,695,000 | ₦ 2,770,000 | ₦ 4,520,000 | ₦ 2,223,000 | ₦ 3,929,000 |
| 5 | Nestle | ₦ 1,688,000 | ₦ 3,300,000 | ₦ 4,880,000 | ₦ 3,730,000 | ₦ 2,046,000 | ₦ 2,326,000 |
| 6 | NBC | ₦ 3,701,000 | ₦ 4,361,000 | ₦ 4,254,000 | ₦ 4,550,000 | ₦ 4,834,000 | ₦ 3,116,000 |
| 7 | Exp Nigeria | ₦ 2,587,000 | ₦ 4,198,000 | ₦ 2,146,000 | ₦ 1,062,000 | ₦ 2,341,000 | ₦ 4,713,000 |
| 8 | Insight Nigeria | ₦ 2,408,000 | ₦ 4,759,000 | ₦ 1,300,000 | ₦ 4,426,000 | ₦ 3,521,000 | ₦ 3,171,000 |
| 9 | Radisson Blu | ₦ 2,485,000 | ₦ 2,025,000 | ₦ 1,603,000 | ₦ 3,089,000 | ₦ 2,841,000 | ₦ 3,156,000 |
| 10 | Guinness | ₦ 2,703,000 | ₦ 1,888,000 | ₦ 1,360,000 | ₦ 1,664,000 | ₦ 1,097,000 | ₦ 4,920,000 |
| 11 | Chevron | ₦ 3,516,000 | ₦ 2,988,000 | ₦ 4,788,000 | ₦ 2,425,000 | ₦ 4,689,000 | ₦ 4,080,000 |
| 12 | Etisalat | ₦ 4,475,000 | ₦ 3,459,000 | ₦ 2,701,000 | ₦ 2,058,000 | ₦ 3,562,000 | ₦ 3,096,000 |
| 13 | Dangote | ₦ 1,457,000 | ₦ 3,241,000 | ₦ 4,441,000 | ₦ 1,544,000 | ₦ 3,749,000 | ₦ 3,544,000 |
| 14 | Dana Group | ₦ 2,984,000 | ₦ 1,882,000 | ₦ 2,898,000 | ₦ 4,618,000 | ₦ 2,372,000 | ₦ 3,723,000 |
| 15 | LaFarge | ₦ 2,111,000 | ₦ 3,293,000 | ₦ 1,427,000 | ₦ 3,953,000 | ₦ 1,616,000 | ₦ 2,885,000 |
| 16 | NB | ₦ 3,396,000 | ₦ 4,148,000 | ₦ 4,569,000 | ₦ 3,893,000 | ₦ 3,871,000 | ₦ 3,045,000 |
| 17 | MTN | ₦ 4,410,000 | ₦ 2,391,000 | ₦ 4,180,000 | ₦ 3,788,000 | ₦ 2,669,000 | ₦ 4,262,000 |
| 18 | Monacom | ₦ 4,190,000 | ₦ 2,228,000 | ₦ 4,615,000 | ₦ 2,756,000 | ₦ 3,123,000 | ₦ 1,464,000 |
| 19 | ARM | ₦ 4,536,000 | ₦ 1,412,000 | ₦ 4,313,000 | ₦ 1,130,000 | ₦ 3,700,000 | ₦ 3,196,000 |
| 20 | C & I | ₦ 1,655,000 | ₦ 3,942,000 | ₦ 4,727,000 | ₦ 2,763,000 | ₦ 3,987,000 | ₦ 2,621,000 |
| 21 | Total | ₦ 52,431,000 | ₦ 53,210,000 | ₦ 56,972,000 | ₦ 51,969,000 | ₦ 52,241,000 | ₦ 57,247,000 |
| 22 | | | | | | | |

Same table but not compact, shown below.

8 Columns

| Monthly Revenue from Clients | | | | | | |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Clients | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
| Mobil | ₦ 4,129,000 | ₦ 3,695,000 | ₦ 2,770,000 | ₦ 4,520,000 | ₦ 2,223,000 | ₦ 3,929,000 |
| Nestle | ₦ 1,688,000 | ₦ 3,300,000 | ₦ 4,880,000 | ₦ 3,730,000 | ₦ 2,046,000 | ₦ 2,326,000 |
| NBC | ₦ 3,701,000 | ₦ 4,361,000 | ₦ 4,254,000 | ₦ 4,550,000 | ₦ 4,834,000 | ₦ 3,116,000 |
| Exp Nigeria | ₦ 2,587,000 | ₦ 4,198,000 | ₦ 2,146,000 | ₦ 1,062,000 | ₦ 2,341,000 | ₦ 4,713,000 |
| Insight Nigeria | ₦ 2,408,000 | ₦ 4,759,000 | ₦ 1,300,000 | ₦ 4,426,000 | ₦ 3,521,000 | ₦ 3,171,000 |
| Radisson Blu | ₦ 2,485,000 | ₦ 2,025,000 | ₦ 1,603,000 | ₦ 3,089,000 | ₦ 2,841,000 | ₦ 3,156,000 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Guinness | ₦ 2,703,000 | ₦ 1,888,000 | ₦ 1,360,000 | ₦ 1,664,000 | ₦ 1,097,000 | ₦ 4,920,000 |
| Chevron | ₦ 3,516,000 | ₦ 2,988,000 | ₦ 4,788,000 | ₦ 2,425,000 | ₦ 4,689,000 | ₦ 4,080,000 |
| Etisalat | ₦ 4,475,000 | ₦ 3,459,000 | ₦ 2,701,000 | ₦ 2,058,000 | ₦ 3,562,000 | ₦ 3,096,000 |
| Dangote | ₦ 1,457,000 | ₦ 3,241,000 | ₦ 4,441,000 | ₦ 1,544,000 | ₦ 3,749,000 | ₦ 3,544,000 |
| Dana Group | ₦ 2,984,000 | ₦ 1,882,000 | ₦ 2,898,000 | ₦ 4,618,000 | ₦ 2,372,000 | ₦ 3,723,000 |
| LaFarge | ₦ 2,111,000 | ₦ 3,293,000 | ₦ 1,427,000 | ₦ 3,953,000 | ₦ 1,616,000 | ₦ 2,885,000 |
| NB | ₦ 3,396,000 | ₦ 4,148,000 | ₦ 4,569,000 | ₦ 3,893,000 | ₦ 3,871,000 | ₦ 3,045,000 |
| MTN | ₦ 4,410,000 | ₦ 2,391,000 | ₦ 4,180,000 | ₦ 3,788,000 | ₦ 2,669,000 | ₦ 4,262,000 |
| Monocom | ₦ 4,190,000 | ₦ 2,228,000 | ₦ 4,615,000 | ₦ 2,756,000 | ₦ 3,123,000 | ₦ 1,464,000 |
| ARM | ₦ 4,536,000 | ₦ 1,412,000 | ₦ 4,313,000 | ₦ 1,130,000 | ₦ 3,700,000 | ₦ 3,196,000 |
| C & I | ₦ 1,655,000 | ₦ 3,942,000 | ₦ 4,727,000 | ₦ 2,763,000 | ₦ 3,987,000 | ₦ 2,621,000 |
| Total | ₦ 52,431,000 | ₦ 53,210,000 | ₦ 56,972,000 | ₦ 51,969,000 | ₦ 52,241,000 | ₦ 57,247,000 |

In the non-compact table example, you can delete rows 37 and 38 without deleting any data in the table.

2. Use descriptive names for your column headers and row headers.

Be as descriptive as possible in naming the fields in your table, make it easy for anyone who will view your table to understand the information it convenes.

Below is a table with field names that are descriptive enough for anyone to understand the information the table convenes.

| | A | B | C | D | E | F | G |
|----|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1 | Monthly Revenue from Clients | | | | | | |
| 2 | Clients | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
| 3 | Mobil | ₦ 4,129,000 | ₦ 3,695,000 | ₦ 2,770,000 | ₦ 4,520,000 | ₦ 2,223,000 | ₦ 3,929,000 |
| 4 | Nestle | ₦ 1,688,000 | ₦ 3,300,000 | ₦ 4,880,000 | ₦ 3,730,000 | ₦ 2,046,000 | ₦ 2,326,000 |
| 5 | NBC | ₦ 3,701,000 | ₦ 4,361,000 | ₦ 4,254,000 | ₦ 4,550,000 | ₦ 4,834,000 | ₦ 3,116,000 |
| 6 | Exp Nigeria | ₦ 2,587,000 | ₦ 4,198,000 | ₦ 2,146,000 | ₦ 1,062,000 | ₦ 2,341,000 | ₦ 4,713,000 |
| 7 | Insight Nigeria | ₦ 2,408,000 | ₦ 4,759,000 | ₦ 1,300,000 | ₦ 4,426,000 | ₦ 3,521,000 | ₦ 3,171,000 |
| 8 | Radisson Blu | ₦ 2,485,000 | ₦ 2,025,000 | ₦ 1,603,000 | ₦ 3,089,000 | ₦ 2,841,000 | ₦ 3,156,000 |
| 9 | Guinness | ₦ 2,703,000 | ₦ 1,888,000 | ₦ 1,360,000 | ₦ 1,664,000 | ₦ 1,097,000 | ₦ 4,920,000 |
| 10 | Chevron | ₦ 3,516,000 | ₦ 2,988,000 | ₦ 4,788,000 | ₦ 2,425,000 | ₦ 4,689,000 | ₦ 4,080,000 |
| 11 | Etisalat | ₦ 4,475,000 | ₦ 3,459,000 | ₦ 2,701,000 | ₦ 2,058,000 | ₦ 3,562,000 | ₦ 3,096,000 |
| 12 | Dangote | ₦ 1,457,000 | ₦ 3,241,000 | ₦ 4,441,000 | ₦ 1,544,000 | ₦ 3,749,000 | ₦ 3,544,000 |
| 13 | Dana Group | ₦ 2,984,000 | ₦ 1,882,000 | ₦ 2,898,000 | ₦ 4,618,000 | ₦ 2,372,000 | ₦ 3,723,000 |
| 14 | LaFarge | ₦ 2,111,000 | ₦ 3,293,000 | ₦ 1,427,000 | ₦ 3,953,000 | ₦ 1,616,000 | ₦ 2,885,000 |
| 15 | NB | ₦ 3,396,000 | ₦ 4,148,000 | ₦ 4,569,000 | ₦ 3,893,000 | ₦ 3,871,000 | ₦ 3,045,000 |
| 16 | MTN | ₦ 4,410,000 | ₦ 2,391,000 | ₦ 4,180,000 | ₦ 3,788,000 | ₦ 2,669,000 | ₦ 4,262,000 |
| 17 | Monacom | ₦ 4,190,000 | ₦ 2,228,000 | ₦ 4,615,000 | ₦ 2,756,000 | ₦ 3,123,000 | ₦ 1,464,000 |
| 18 | ARM | ₦ 4,536,000 | ₦ 1,412,000 | ₦ 4,313,000 | ₦ 1,130,000 | ₦ 3,700,000 | ₦ 3,196,000 |
| 19 | C & I | ₦ 1,655,000 | ₦ 3,942,000 | ₦ 4,727,000 | ₦ 2,763,000 | ₦ 3,987,000 | ₦ 2,621,000 |
| 20 | | | | | | | |

Below is a table that has headers that are not descriptive enough. It's hard to figure out the specific information in the table. Is it a table of revenue or expense? Are the companies clients or suppliers? What year do the months represent — January 2014 or January 2015? Whomever you send this report to will call you back for a detailed explanation of what you intended to report.

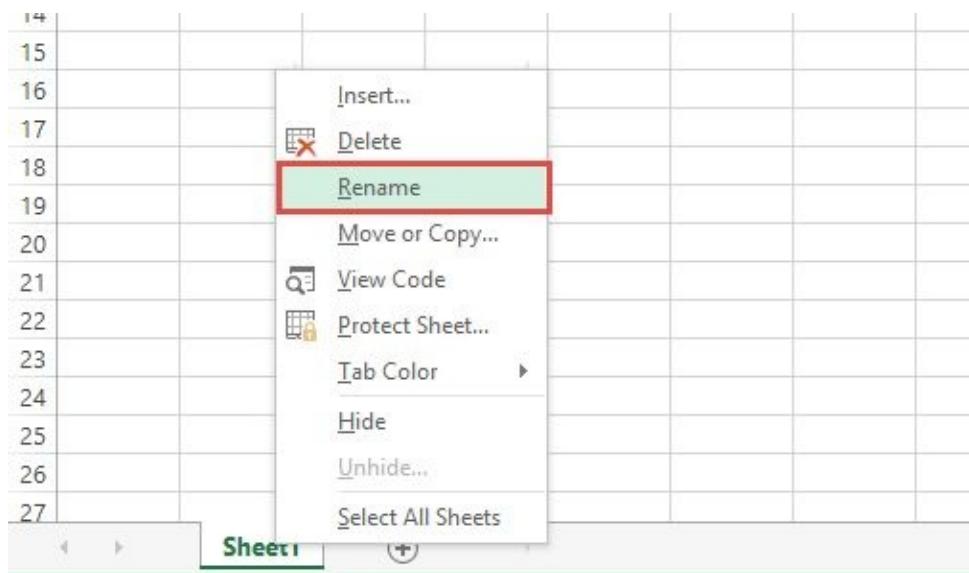
| Some Data | | | | | | |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Companies | January | February | March | April | May | June |
| Mobil | ₦ 4,129,000 | ₦ 3,695,000 | ₦ 2,770,000 | ₦ 4,520,000 | ₦ 2,223,000 | ₦ 3,929,000 |
| Nestle | ₦ 1,688,000 | ₦ 3,300,000 | ₦ 4,880,000 | ₦ 3,730,000 | ₦ 2,046,000 | ₦ 2,326,000 |
| NBC | ₦ 3,701,000 | ₦ 4,361,000 | ₦ 4,254,000 | ₦ 4,550,000 | ₦ 4,834,000 | ₦ 3,116,000 |
| Exp Nigeria | ₦ 2,587,000 | ₦ 4,198,000 | ₦ 2,146,000 | ₦ 1,062,000 | ₦ 2,341,000 | ₦ 4,713,000 |
| Insight Nigeria | ₦ 2,408,000 | ₦ 4,759,000 | ₦ 1,300,000 | ₦ 4,426,000 | ₦ 3,521,000 | ₦ 3,171,000 |
| Radisson Blu | ₦ 2,485,000 | ₦ 2,025,000 | ₦ 1,603,000 | ₦ 3,089,000 | ₦ 2,841,000 | ₦ 3,156,000 |
| Guinness | ₦ 2,703,000 | ₦ 1,888,000 | ₦ 1,360,000 | ₦ 1,664,000 | ₦ 1,097,000 | ₦ 4,920,000 |
| Chevron | ₦ 3,516,000 | ₦ 2,988,000 | ₦ 4,788,000 | ₦ 2,425,000 | ₦ 4,689,000 | ₦ 4,080,000 |
| Etisalat | ₦ 4,475,000 | ₦ 3,459,000 | ₦ 2,701,000 | ₦ 2,058,000 | ₦ 3,562,000 | ₦ 3,096,000 |
| Dangote | ₦ 1,457,000 | ₦ 3,241,000 | ₦ 4,441,000 | ₦ 1,544,000 | ₦ 3,749,000 | ₦ 3,544,000 |
| Dana Group | ₦ 2,984,000 | ₦ 1,882,000 | ₦ 2,898,000 | ₦ 4,618,000 | ₦ 2,372,000 | ₦ 3,723,000 |
| LaFarge | ₦ 2,111,000 | ₦ 3,293,000 | ₦ 1,427,000 | ₦ 3,953,000 | ₦ 1,616,000 | ₦ 2,885,000 |
| NB | ₦ 3,396,000 | ₦ 4,148,000 | ₦ 4,569,000 | ₦ 3,893,000 | ₦ 3,871,000 | ₦ 3,045,000 |
| MTN | ₦ 4,410,000 | ₦ 2,391,000 | ₦ 4,180,000 | ₦ 3,788,000 | ₦ 2,669,000 | ₦ 4,262,000 |
| Monacom | ₦ 4,190,000 | ₦ 2,228,000 | ₦ 4,615,000 | ₦ 2,756,000 | ₦ 3,123,000 | ₦ 1,464,000 |
| ARM | ₦ 4,536,000 | ₦ 1,412,000 | ₦ 4,313,000 | ₦ 1,130,000 | ₦ 3,700,000 | ₦ 3,196,000 |
| C & I | ₦ 1,655,000 | ₦ 3,942,000 | ₦ 4,727,000 | ₦ 2,763,000 | ₦ 3,987,000 | ₦ 2,621,000 |

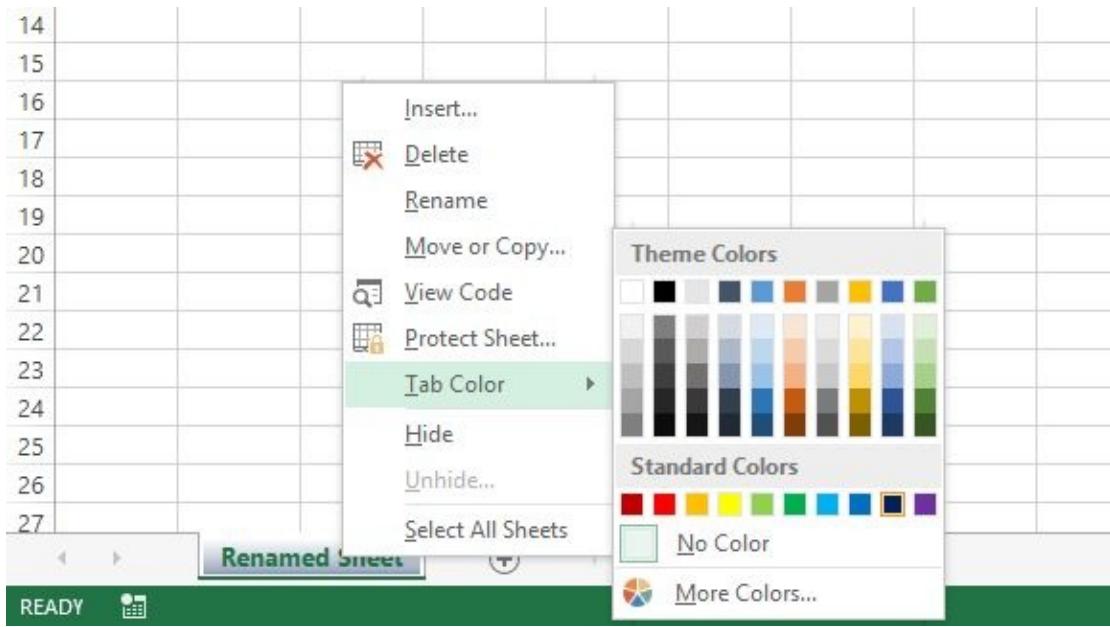
3. Name your Excel sheets

Don't just go ahead with the default names — Sheet1, Sheet2, ... — rename the sheets to reflect the contents of the sheet. This makes your work better organized and future use more convenient.



To rename a sheet, right click on the sheet name (the default names are Sheet1, Sheet2, ...) and select rename. And as you see above, you can change the color from the default too.





4. Also use descriptive names when renaming the Excel sheets.

| Day | Actual | Target | Variance | Forecast | Total |
|-----|-------------|--------------------|--------------------|--------------------|--------------|
| 13 | Rivers | ₦ 4,860,256,800.00 | ₦ 4,459,705,200.00 | ₦ 2,423,028,900.00 | ₦ 4,148,808, |
| 14 | Anambra | ₦ 1,511,863,500.00 | ₦ 3,015,652,900.00 | ₦ 2,159,322,900.00 | ₦ 4,060,131, |
| 15 | Enugu | ₦ 2,609,372,800.00 | ₦ 4,581,716,900.00 | ₦ 1,409,979,200.00 | ₦ 1,990,646, |
| 16 | Benue | ₦ 1,387,315,500.00 | ₦ 3,627,716,800.00 | ₦ 602,469,700.00 | ₦ 4,501,134, |
| 17 | Borno | ₦ 1,616,065,000.00 | ₦ 4,166,988,100.00 | ₦ 2,361,614,200.00 | ₦ 4,908,244, |
| 18 | Gombe | ₦ 2,201,453,200.00 | ₦ 2,523,019,700.00 | ₦ 620,111,300.00 | ₦ 1,885,641, |
| 19 | Katsina | ₦ 1,293,838,700.00 | ₦ 2,648,689,500.00 | ₦ 3,589,421,500.00 | ₦ 638,877, |
| 20 | Kaduna | ₦ 2,599,773,900.00 | ₦ 3,835,345,400.00 | ₦ 3,938,598,800.00 | ₦ 1,224,849, |
| 21 | Cross River | ₦ 1,971,834,600.00 | ₦ 4,779,952,700.00 | ₦ 2,416,592,600.00 | ₦ 1,814,142, |
| 22 | Kwara | ₦ 1,496,830,100.00 | ₦ 912,176,400.00 | ₦ 3,915,338,600.00 | ₦ 1,305,529, |
| 23 | Niger | ₦ 4,592,318,900.00 | ₦ 1,826,747,300.00 | ₦ 3,002,387,100.00 | ₦ 3,219,870, |
| 24 | Akwa Ibom | ₦ 1,691,712,500.00 | ₦ 2,202,014,900.00 | ₦ 824,782,800.00 | ₦ 4,927,386, |
| 25 | Plateau | ₦ 2,371,220,000.00 | ₦ 4,894,816,200.00 | ₦ 4,527,323,100.00 | ₦ 4,471,653, |
| 26 | Taraba | ₦ 785,603,400.00 | ₦ 3,244,525,900.00 | ₦ 531,248,900.00 | ₦ 2,475,480, |
| 27 | Zamfara | ₦ 1,522,067,500.00 | ₦ 755,627,100.00 | ₦ 1,767,284,700.00 | ₦ 1,500,000 |

5. Avoid putting too many tables in one Excel sheet. Best to keep just related tables in the same sheet if you must put more than one table in the sheet. It makes naming the sheet easy and straightforward.

6. Use same naming conventions and table structure across all similar Excel files, especially weekly, monthly and yearly reports of the same data.

7. Don't use CAPS excessively. It makes your reports very unprofessional.

Building Datasheets that can easily scale

Occasionally, you will have to work on a table whose data grows continually. We can refer to such tables as datatables. All tables hold data and can technically be referred to as a datatable, but in this book we will refer to all tables as just tables and limit the term datatable to only tables that grow perpetually.

An example of such a table is an Employee Record table. As long as the company exists the table will keep growing and even if the company aims to not have over a 100 employees, there will always be old employees leaving and new ones taken to replace them. And they all have to be captured in the employee record table, no employee's record is deleted when he leaves, there's only a field added to capture his resignation.

There are some peculiar ways of treating a datatable.

1. Have only one datatable on a sheet. Since a datatable is a table you expect to grow over time, having only one on a sheet lets you have access to all the rows and the columns in the Excel sheet.

| | A | B | C | D | E | F | |
|----|-----------------------------------|-----------|-------------|-----|-----------------|--------------|------------------|
| 1 | UrBizEdge Employees Biodata Table | | | | | | |
| 2 | First Name | Last Name | Employee ID | Sex | Employment Date | Phone Number | Contact Address |
| 3 | Michael | Olafusi | 1000001 | M | 21-Oct-13 | 08089382423 | 21, Adigun Alabi |
| 4 | John | Abiola | 1000002 | M | 1-Apr-14 | 08080810251 | 21, Adigun Alabi |
| 5 | Mary | Eze | 1000003 | F | 1-Apr-14 | 08080810252 | 21, Adigun Alabi |
| 6 | Segun | Owolabi | 1000004 | M | 1-Apr-14 | 08080810253 | 21, Adigun Alabi |
| 7 | Tolu | Owoeye | 1000005 | F | 1-Apr-14 | 08080810254 | 21, Adigun Alabi |
| 8 | Uche | Nnamdi | 1000006 | M | 1-Apr-14 | 08080810255 | 21, Adigun Alabi |
| 9 | David | Aluko | 1000007 | M | 1-May-14 | 08080810256 | 21, Adigun Alabi |
| 10 | Lekan | Bello | 1000008 | M | 1-May-14 | 08080810257 | 21, Adigun Alabi |
| 11 | Luke | Tsangi | 1000009 | M | 1-May-14 | 08080810258 | 21, Adigun Alabi |

2. Start a datatable as close to cell A1 as possible. Again, this is to afford you the maximum space in the sheet for your growing table.
3. Avoid meaningless gaps in the datatable. Make it as compact as possible.
4. Arrange the fields such that the most important or basic fields come first. For example, in an Employee record table, name should come before contact address.

5. Have a field for every meaningful chunk of data. It is better to have separate fields for first name and last name than have one field hold both.

6. Avoid merging cells in a datatable. It is better to repeat cell entries than merge the cells. Merged cells aren't formula friendly.

And as a bonus, avoid hiding rows and columns in the datatable. This will save you a lot of future headaches.

Sorting

Sorting is one of the most frequent task we do in Excel. Sorting lets you re-arrange data in alphabetical order, lowest to highest, highest to lowest, and even by cell color.

We are used to having data arranged in a particular order — A to Z, January to December, 1 to 10, and so on.

Below is an example of a table that has its records haphazardly arranged. The states are not arranged alphabetically and the months are not in the natural order.

| | A | B | C | D | E | F | G |
|----|---|--------------------|---------------------|--------------------|--------------------|---------------------|--------------------|
| 1 | Internally Generated Revenue of States in Nigeria | | | | | | |
| 2 | State | Feb-14 | Jun-14 | Jan-14 | Mar-14 | May-14 | Apr-14 |
| 3 | Imo | ₦ 2,521,764,800.00 | ₦ 2,922,241,900.00 | ₦ 2,591,742,600.00 | ₦ 2,013,994,900.00 | ₦ 3,014,428,300.00 | ₦ 4,994,515,700.00 |
| 4 | Abia | ₦ 821,123,500.00 | ₦ 4,544,916,100.00 | ₦ 1,297,498,300.00 | ₦ 1,175,454,800.00 | ₦ 2,265,644,000.00 | ₦ 967,327,400.00 |
| 5 | Lagos | ₦ 7,319,183,000.00 | ₦ 22,681,984,500.00 | ₦ 6,239,473,500.00 | ₦ 6,211,689,500.00 | ₦ 11,610,307,000.00 | ₦ 3,351,178,500.00 |
| 6 | Kano | ₦ 2,021,735,600.00 | ₦ 530,613,400.00 | ₦ 2,981,980,300.00 | ₦ 3,016,518,600.00 | ₦ 2,387,291,000.00 | ₦ 4,411,651,000.00 |
| 7 | Ondo | ₦ 1,690,422,800.00 | ₦ 4,925,747,700.00 | ₦ 716,222,900.00 | ₦ 4,362,953,800.00 | ₦ 4,300,936,900.00 | ₦ 977,876,300.00 |
| 8 | Kogi | ₦ 2,734,189,600.00 | ₦ 2,825,512,800.00 | ₦ 2,812,863,300.00 | ₦ 2,306,601,300.00 | ₦ 2,104,687,400.00 | ₦ 867,264,000.00 |
| 9 | Benue | ₦ 3,864,832,700.00 | ₦ 3,212,451,900.00 | ₦ 3,479,649,000.00 | ₦ 2,458,711,700.00 | ₦ 2,700,421,800.00 | ₦ 4,801,142,000.00 |
| 10 | FCT | ₦ 2,063,317,300.00 | ₦ 2,520,202,900.00 | ₦ 3,199,223,200.00 | ₦ 1,829,381,400.00 | ₦ 4,980,777,000.00 | ₦ 3,704,640,600.00 |
| 11 | Ogun | ₦ 2,586,000,100.00 | ₦ 3,200,451,900.00 | ₦ 3,434,714,900.00 | ₦ 3,907,557,600.00 | ₦ 2,265,022,600.00 | ₦ 1,642,410,200.00 |
| 12 | Bayelsa | ₦ 2,035,499,300.00 | ₦ 1,754,855,100.00 | ₦ 1,218,646,400.00 | ₦ 3,596,177,500.00 | ₦ 4,856,865,900.00 | ₦ 3,958,333,500.00 |
| 13 | Rivers | ₦ 4,860,256,800.00 | ₦ 4,459,705,200.00 | ₦ 2,423,028,900.00 | ₦ 4,148,808,900.00 | ₦ 4,882,684,300.00 | ₦ 859,719,700.00 |
| 14 | Anambra | ₦ 1,511,863,500.00 | ₦ 3,015,652,900.00 | ₦ 2,159,322,900.00 | ₦ 4,060,131,900.00 | ₦ 2,439,308,800.00 | ₦ 1,843,665,900.00 |
| 15 | Enugu | ₦ 2,609,372,800.00 | ₦ 4,581,716,900.00 | ₦ 1,409,979,200.00 | ₦ 1,990,646,300.00 | ₦ 1,893,090,400.00 | ₦ 3,219,650,200.00 |
| 16 | Benue | ₦ 1,387,315,500.00 | ₦ 3,627,716,800.00 | ₦ 602,469,700.00 | ₦ 4,501,134,600.00 | ₦ 1,687,978,600.00 | ₦ 2,728,902,800.00 |
| 17 | Borno | ₦ 1,616,065,000.00 | ₦ 4,166,988,100.00 | ₦ 2,361,614,200.00 | ₦ 4,908,244,600.00 | ₦ 581,980,000.00 | ₦ 4,216,846,800.00 |
| 18 | Gombe | ₦ 2,201,453,200.00 | ₦ 2,523,019,700.00 | ₦ 620,111,300.00 | ₦ 1,885,641,400.00 | ₦ 2,551,023,100.00 | ₦ 4,146,024,300.00 |
| 19 | Katsina | ₦ 1,293,838,700.00 | ₦ 2,648,689,500.00 | ₦ 3,589,421,500.00 | ₦ 638,877,300.00 | ₦ 1,025,989,500.00 | ₦ 2,969,721,400.00 |
| 20 | Kaduna | ₦ 2,599,773,900.00 | ₦ 3,835,345,400.00 | ₦ 3,938,598,800.00 | ₦ 1,224,849,400.00 | ₦ 450,931,500.00 | ₦ 1,662,248,400.00 |
| 21 | Cross River | ₦ 1,971,834,600.00 | ₦ 4,779,952,700.00 | ₦ 2,416,592,600.00 | ₦ 1,814,142,400.00 | ₦ 745,327,000.00 | ₦ 4,658,487,000.00 |
| 22 | Kwara | ₦ 1,496,830,100.00 | ₦ 912,176,400.00 | ₦ 3,915,338,600.00 | ₦ 1,305,529,900.00 | ₦ 2,214,504,600.00 | ₦ 4,919,941,300.00 |
| 23 | Niger | ₦ 4,592,318,900.00 | ₦ 1,826,747,300.00 | ₦ 3,002,387,100.00 | ₦ 3,219,870,900.00 | ₦ 3,979,805,300.00 | ₦ 1,086,334,400.00 |
| 24 | Akwa Ibom | ₦ 1,691,712,500.00 | ₦ 2,202,014,900.00 | ₦ 824,782,800.00 | ₦ 4,927,386,500.00 | ₦ 2,966,925,400.00 | ₦ 2,187,626,200.00 |
| 25 | Plateau | ₦ 2,371,220,000.00 | ₦ 4,894,816,200.00 | ₦ 4,527,323,100.00 | ₦ 4,471,653,300.00 | ₦ 3,593,441,000.00 | ₦ 932,778,800.00 |
| 26 | Taraba | ₦ 785,603,400.00 | ₦ 3,244,525,900.00 | ₦ 531,248,900.00 | ₦ 2,475,480,400.00 | ₦ 1,389,495,200.00 | ₦ 878,820,400.00 |
| 27 | Zamfara | ₦ 1,502,057,600.00 | ₦ 755,527,100.00 | ₦ 4,767,284,200.00 | ₦ 4,500,005,600.00 | ₦ 2,250,176,000.00 | ₦ 1,208,237,500.00 |

First, let's have the data sorted by State alphabetically

Below are the recommended steps to sorting a table. Select the table, go to the Home menu and click on Sort & Filter.

Sorting.xlsx - Excel

Average: 27660615 Count: 252 Sum: 5.9746E+11

READY 100% Go back

The sorting dialog box comes up.

Sort

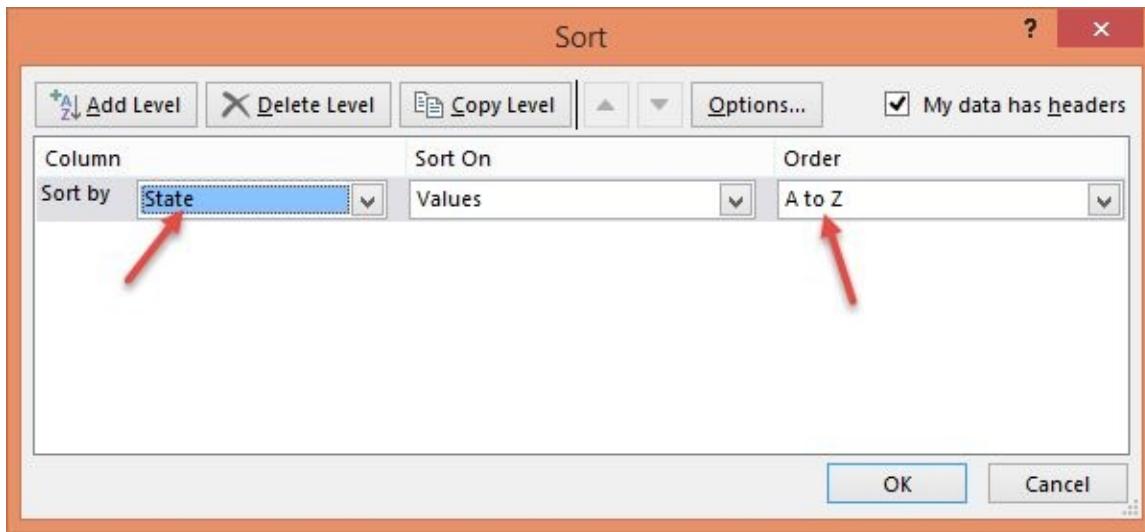
Add Level Delete Level Copy Level Options... My data has headers

Sort by Values Order A to Z

OK Cancel

This dialog box allows you to add more than the default one level of sorting.

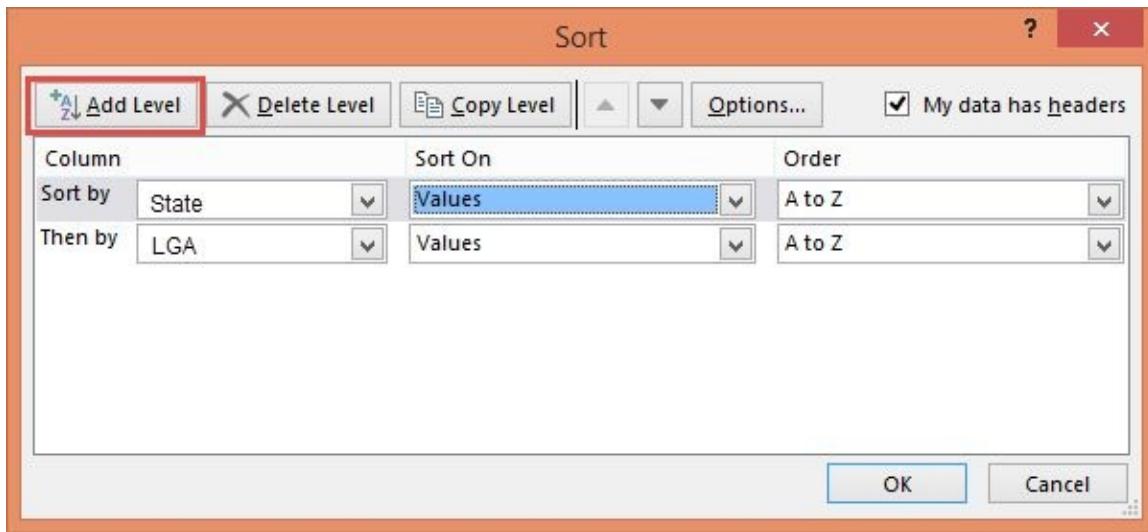
Select “State” in the Sort by box and A to Z in the Order box.



The result is shown below.

| | A | B | C | D | E | F | G |
|----|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1 | Internally Generated Revenue of States in Nigeria | | | | | | |
| 2 | State | Feb-14 | Jun-14 | Jan-14 | Mar-14 | May-14 | Apr-14 |
| 3 | Abia | ₦ 821,123,500.00 | ₦ 4,544,916,100.00 | ₦ 1,297,498,300.00 | ₦ 1,175,454,800.00 | ₦ 2,265,644,000.00 | ₦ 967,327,400.00 |
| 4 | Adamawa | ₦ 4,317,641,300.00 | ₦ 1,973,059,900.00 | ₦ 4,022,792,500.00 | ₦ 1,627,470,600.00 | ₦ 3,493,691,500.00 | ₦ 1,023,694,700.00 |
| 5 | Akwa Ibom | ₦ 1,691,712,500.00 | ₦ 2,202,014,900.00 | ₦ 824,782,800.00 | ₦ 4,927,386,500.00 | ₦ 2,966,925,400.00 | ₦ 2,187,626,200.00 |
| 6 | Anambra | ₦ 1,511,863,500.00 | ₦ 3,015,652,900.00 | ₦ 2,159,322,900.00 | ₦ 4,060,131,900.00 | ₦ 2,439,308,800.00 | ₦ 1,843,665,900.00 |
| 7 | Bauchi | ₦ 3,059,451,100.00 | ₦ 3,000,312,200.00 | ₦ 764,748,600.00 | ₦ 2,879,985,600.00 | ₦ 2,609,030,900.00 | ₦ 3,032,115,500.00 |
| 8 | Bayelsa | ₦ 2,035,499,300.00 | ₦ 1,754,855,100.00 | ₦ 1,218,646,400.00 | ₦ 3,596,177,500.00 | ₦ 4,856,865,900.00 | ₦ 3,958,333,500.00 |
| 9 | Benue | ₦ 3,864,832,700.00 | ₦ 3,212,451,900.00 | ₦ 3,479,649,000.00 | ₦ 2,458,711,700.00 | ₦ 2,700,421,800.00 | ₦ 4,801,142,000.00 |
| 10 | Benue | ₦ 1,387,315,500.00 | ₦ 3,627,716,800.00 | ₦ 602,469,700.00 | ₦ 4,501,134,600.00 | ₦ 1,687,978,600.00 | ₦ 2,728,902,800.00 |
| 11 | Borno | ₦ 1,616,065,000.00 | ₦ 4,166,988,100.00 | ₦ 2,361,614,200.00 | ₦ 4,908,244,600.00 | ₦ 581,980,000.00 | ₦ 4,216,846,800.00 |
| 12 | Cross River | ₦ 1,971,834,600.00 | ₦ 4,779,952,700.00 | ₦ 2,416,592,600.00 | ₦ 1,814,142,400.00 | ₦ 745,327,000.00 | ₦ 4,658,487,000.00 |
| 13 | Delta | ₦ 2,382,209,500.00 | ₦ 2,363,220,900.00 | ₦ 4,755,914,300.00 | ₦ 3,361,514,600.00 | ₦ 4,671,269,900.00 | ₦ 2,060,298,000.00 |
| 14 | Ebonyi | ₦ 3,233,069,500.00 | ₦ 713,048,500.00 | ₦ 3,547,140,000.00 | ₦ 4,883,253,900.00 | ₦ 2,926,053,500.00 | ₦ 1,060,164,800.00 |
| 15 | Edo | ₦ 781,461,300.00 | ₦ 2,900,705,900.00 | ₦ 2,663,501,000.00 | ₦ 462,661,800.00 | ₦ 3,256,011,600.00 | ₦ 543,085,200.00 |
| 16 | Ekiti | ₦ 4,128,943,600.00 | ₦ 4,040,341,600.00 | ₦ 1,816,087,900.00 | ₦ 1,512,170,300.00 | ₦ 3,340,038,100.00 | ₦ 2,592,908,100.00 |
| 17 | Enugu | ₦ 2,609,372,800.00 | ₦ 4,581,716,900.00 | ₦ 1,409,979,200.00 | ₦ 1,990,646,300.00 | ₦ 1,893,090,400.00 | ₦ 3,219,650,200.00 |
| 18 | FCT | ₦ 2,063,317,300.00 | ₦ 2,520,202,900.00 | ₦ 3,199,223,200.00 | ₦ 1,829,381,400.00 | ₦ 4,980,777,000.00 | ₦ 3,704,640,600.00 |
| 19 | Gombe | ₦ 2,201,453,200.00 | ₦ 2,523,019,700.00 | ₦ 620,111,300.00 | ₦ 1,885,641,400.00 | ₦ 2,551,023,100.00 | ₦ 4,146,024,300.00 |
| 20 | Imo | ₦ 2,521,764,800.00 | ₦ 2,922,241,900.00 | ₦ 2,591,742,600.00 | ₦ 2,013,994,900.00 | ₦ 3,014,428,300.00 | ₦ 4,994,515,700.00 |
| 21 | Jigawa | ₦ 1,573,445,100.00 | ₦ 2,311,559,800.00 | ₦ 3,550,126,700.00 | ₦ 3,756,243,200.00 | ₦ 1,417,963,700.00 | ₦ 3,092,703,100.00 |
| 22 | Kaduna | ₦ 2,599,773,900.00 | ₦ 3,835,345,400.00 | ₦ 3,938,598,800.00 | ₦ 1,224,849,400.00 | ₦ 450,931,500.00 | ₦ 1,662,248,400.00 |

You can add an extra level of sorting in the sorting dialog box. This would be useful in sorting tables like a national population census table. You might want to sort first by state (from Abia to Zamfara) and then an extra level of sorting by Local Government Areas. So you'll have a setting similar to the one below



Next is to sort the months in the natural order we are used to — Jan to Dec. This will require a type of sorting called “Left to Right” as against the one we just did, called “Top to Bottom”.

So to get this done, we select the table starting from the first month to the last month. We will leave the state field out because we want it to remain in the position it is.

| Internally Generated Revenue of States in Nigeria | | | | | | |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|--|
| Feb-14 | Jun-14 | Jan-14 | Mar-14 | May-14 | Apr-14 | |
| ₦ 821,123,500.00 | ₦ 4,544,916,100.00 | ₦ 1,297,498,300.00 | ₦ 1,175,454,800.00 | ₦ 2,265,644,000.00 | ₦ 967,327,400.00 | |
| ₦ 4,317,641,300.00 | ₦ 1,973,059,900.00 | ₦ 4,022,792,500.00 | ₦ 1,627,470,600.00 | ₦ 3,493,691,500.00 | ₦ 1,023,694,700.00 | |
| ₦ 1,691,712,500.00 | ₦ 2,202,014,900.00 | ₦ 824,782,800.00 | ₦ 4,927,386,500.00 | ₦ 2,966,925,400.00 | ₦ 2,187,626,200.00 | |
| ₦ 1,511,863,500.00 | ₦ 3,015,652,900.00 | ₦ 2,159,322,900.00 | ₦ 4,060,131,900.00 | ₦ 2,439,308,800.00 | ₦ 1,843,665,900.00 | |
| ₦ 3,059,451,100.00 | ₦ 3,000,31: | | | | | |
| ₦ 2,035,499,300.00 | ₦ 1,754,85: | | | | | |
| ₦ 3,864,832,700.00 | ₦ 3,212,45: | | | | | |
| ₦ 1,387,315,500.00 | ₦ 3,627,71: | | | | | |
| ₦ 1,616,065,000.00 | ₦ 4,166,98: | | | | | |
| ₦ 1,971,834,600.00 | ₦ 4,779,95: | | | | | |
| ₦ 2,382,209,500.00 | ₦ 2,363,22: | | | | | |
| ₦ 3,233,069,500.00 | ₦ 713,04: | | | | | |
| ₦ 781,461,300.00 | ₦ 2,900,70: | | | | | |
| ₦ 4,128,943,600.00 | ₦ 4,040,34: | | | | | |
| ₦ 2,609,372,800.00 | ₦ 4,581,71: | | | | | |
| ₦ 2,063,317,300.00 | ₦ 2,520,20: | | | | | |
| ₦ 2,201,453,200.00 | ₦ 2,523,01: | | | | | |
| ₦ 2,521,764,800.00 | ₦ 2,922,24: | | | | | |
| ₦ 1,573,445,100.00 | ₦ 2,311,559,800.00 | ₦ 3,550,126,700.00 | ₦ 3,756,243,200.00 | ₦ 1,417,963,700.00 | ₦ 3,092,703,100.00 | |
| ₦ 2,599,773,900.00 | ₦ 3,835,345,400.00 | ₦ 3,938,598,800.00 | ₦ 1,224,849,400.00 | ₦ 450,931,500.00 | ₦ 1,662,248,400.00 | |

Sort Options Dialog Box (highlighted with a red box):

- 1: Shows the 'Sort Options' dialog box with the 'Sort left to right' radio button selected.
- 2: Points to the 'OK' button in the 'Sort Options' dialog box.
- 3: Points to the 'OK' button in the main 'Sort' dialog box.

Then select the row the months are on (Row 2) and set the order to **Oldest to Newest**.

| | A | B | C | D | E | F | G | H |
|----|-------------|---|--------------------|--------------------|--------------------|--------------------|--------------------|---|
| 1 | | Internally Generated Revenue of States in Nigeria | | | | | | |
| 2 | State | Feb-14 | Jun-14 | Jan-14 | Mar-14 | May-14 | Apr-14 | |
| 3 | Abia | ₦ 821,123,500.00 | ₦ 4,544,916,100.00 | ₦ 1,297,498,300.00 | ₦ 1,175,454,800.00 | ₦ 2,265,644,000.00 | ₦ 967,327,400.00 | |
| 4 | Adamawa | ₦ 4,317,641,300.00 | ₦ 1,973,059,900.00 | ₦ 4,022,792,500.00 | ₦ 1,627,470,600.00 | ₦ 3,493,691,500.00 | ₦ 1,023,694,700.00 | |
| 5 | Akwa Ibom | ₦ 1,691,712,500.00 | ₦ 2,202,014,900.00 | ₦ 824,782,800.00 | ₦ 4,927,386,500.00 | ₦ 2,966,925,400.00 | ₦ 2,187,626,200.00 | |
| 6 | Anambra | ₦ 1,511,863,500.00 | ₦ 3,015,652,900.00 | ₦ 2,159,322,900.00 | ₦ 4,060,131,900.00 | ₦ 2,439,308,800.00 | ₦ 1,843,665,900.00 | |
| 7 | Bauchi | ₦ 3,059,451,100.00 | ₦ 3,000,312,000.00 | | | | | |
| 8 | Bayelsa | ₦ 2,035,499,300.00 | ₦ 1,754,850,000.00 | | | | | |
| 9 | Benue | ₦ 3,864,832,700.00 | ₦ 3,212,451,000.00 | | | | | |
| 10 | Benue | ₦ 1,387,315,500.00 | ₦ 3,627,716,000.00 | | | | | |
| 11 | Borno | ₦ 1,616,065,000.00 | ₦ 4,166,988,100.00 | | | | | |
| 12 | Cross River | ₦ 1,971,834,600.00 | ₦ 4,779,952,700.00 | | | | | |
| 13 | Delta | ₦ 2,382,209,500.00 | ₦ 2,363,220,900.00 | | | | | |
| 14 | Ebonyi | ₦ 3,233,069,500.00 | ₦ 713,048,500.00 | | | | | |
| 15 | Edo | ₦ 781,461,300.00 | ₦ 2,900,705,900.00 | | | | | |
| 16 | Ekiti | ₦ 4,128,943,600.00 | ₦ 4,040,341,600.00 | | | | | |
| 17 | Enugu | ₦ 2,609,372,800.00 | ₦ 4,581,716,000.00 | | | | | |
| 18 | FCT | ₦ 2,063,317,300.00 | ₦ 2,520,202,900.00 | | | | | |
| 19 | Gombe | ₦ 2,201,453,200.00 | ₦ 2,523,012,000.00 | | | | | |
| 20 | Imo | ₦ 2,521,764,800.00 | ₦ 2,922,241,900.00 | | | | | |
| 21 | Jigawa | ₦ 1,573,445,100.00 | ₦ 2,311,559,800.00 | ₦ 3,550,126,700.00 | ₦ 3,756,243,200.00 | ₦ 1,417,963,700.00 | ₦ 3,092,703,100.00 | |
| 22 | Kaduna | ₦ 2,599,773,900.00 | ₦ 3,835,345,400.00 | ₦ 3,938,598,800.00 | ₦ 1,224,849,400.00 | ₦ 450,931,500.00 | ₦ 1,662,248,400.00 | |

Below is the result.

| | A | B | C | D | E | F | G | |
|----|-------------|---|--------------------|--------------------|--------------------|--------------------|--------------------|--|
| 1 | | Internally Generated Revenue of States in Nigeria | | | | | | |
| 2 | State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | |
| 3 | Abia | ₦ 1,297,498,300.00 | ₦ 821,123,500.00 | ₦ 1,175,454,800.00 | ₦ 967,327,400.00 | ₦ 2,265,644,000.00 | ₦ 4,544,916,100.00 | |
| 4 | Adamawa | ₦ 4,022,792,500.00 | ₦ 4,317,641,300.00 | ₦ 1,627,470,600.00 | ₦ 1,023,694,700.00 | ₦ 3,493,691,500.00 | ₦ 1,973,059,900.00 | |
| 5 | Akwa Ibom | ₦ 824,782,800.00 | ₦ 1,691,712,500.00 | ₦ 4,927,386,500.00 | ₦ 2,187,626,200.00 | ₦ 2,966,925,400.00 | ₦ 2,202,014,900.00 | |
| 6 | Anambra | ₦ 2,159,322,900.00 | ₦ 1,511,863,500.00 | ₦ 4,060,131,900.00 | ₦ 1,843,665,900.00 | ₦ 2,439,308,800.00 | ₦ 3,015,652,900.00 | |
| 7 | Bauchi | ₦ 764,748,600.00 | ₦ 3,059,451,100.00 | ₦ 2,879,985,600.00 | ₦ 3,032,115,500.00 | ₦ 2,609,030,900.00 | ₦ 3,000,312,200.00 | |
| 8 | Bayelsa | ₦ 1,218,646,400.00 | ₦ 2,035,499,300.00 | ₦ 3,596,177,500.00 | ₦ 3,958,333,500.00 | ₦ 4,856,865,900.00 | ₦ 1,754,855,100.00 | |
| 9 | Benue | ₦ 3,479,649,000.00 | ₦ 3,864,832,700.00 | ₦ 2,458,711,700.00 | ₦ 4,801,142,000.00 | ₦ 2,700,421,800.00 | ₦ 3,212,451,900.00 | |
| 10 | Benue | ₦ 602,469,700.00 | ₦ 1,387,315,500.00 | ₦ 4,501,134,600.00 | ₦ 2,728,902,800.00 | ₦ 1,687,978,600.00 | ₦ 3,627,716,800.00 | |
| 11 | Borno | ₦ 2,361,614,200.00 | ₦ 1,616,065,000.00 | ₦ 4,216,846,800.00 | ₦ 581,980,000.00 | ₦ 4,166,988,100.00 | | |
| 12 | Cross River | ₦ 2,416,592,600.00 | ₦ 1,971,834,600.00 | ₦ 1,814,142,400.00 | ₦ 4,658,487,000.00 | ₦ 745,327,000.00 | ₦ 4,779,952,700.00 | |
| 13 | Delta | ₦ 4,755,914,300.00 | ₦ 2,382,209,500.00 | ₦ 3,361,514,600.00 | ₦ 2,060,298,000.00 | ₦ 4,671,269,900.00 | ₦ 2,363,220,900.00 | |
| 14 | Ebonyi | ₦ 3,547,140,000.00 | ₦ 3,233,069,500.00 | ₦ 4,883,253,900.00 | ₦ 1,060,164,800.00 | ₦ 2,926,053,500.00 | ₦ 713,048,500.00 | |
| 15 | Edo | ₦ 2,663,501,000.00 | ₦ 781,461,300.00 | ₦ 462,661,800.00 | ₦ 543,085,200.00 | ₦ 3,256,011,600.00 | ₦ 2,900,705,900.00 | |
| 16 | Ekiti | ₦ 1,816,087,900.00 | ₦ 4,128,943,600.00 | ₦ 1,512,170,300.00 | ₦ 2,592,908,100.00 | ₦ 3,340,038,100.00 | ₦ 4,040,341,600.00 | |
| 17 | Enugu | ₦ 1,409,979,200.00 | ₦ 2,609,372,800.00 | ₦ 1,990,646,300.00 | ₦ 3,219,650,200.00 | ₦ 1,893,090,400.00 | ₦ 4,581,716,900.00 | |
| 18 | FCT | ₦ 3,199,223,200.00 | ₦ 2,063,317,300.00 | ₦ 1,829,381,400.00 | ₦ 3,704,640,600.00 | ₦ 4,980,777,000.00 | ₦ 2,520,202,900.00 | |
| 19 | Gombe | ₦ 620,111,300.00 | ₦ 2,201,453,200.00 | ₦ 1,885,641,400.00 | ₦ 4,146,024,300.00 | ₦ 2,551,023,100.00 | ₦ 2,523,019,700.00 | |
| 20 | Imo | ₦ 2,591,742,600.00 | ₦ 2,521,764,800.00 | ₦ 2,013,994,900.00 | ₦ 4,994,515,700.00 | ₦ 3,014,428,300.00 | ₦ 2,922,241,900.00 | |
| 21 | Jigawa | ₦ 3,550,126,700.00 | ₦ 1,573,445,100.00 | ₦ 3,756,243,200.00 | ₦ 3,092,703,100.00 | ₦ 1,417,963,700.00 | ₦ 2,311,559,800.00 | |
| 22 | Kaduna | ₦ 3,938,598,800.00 | ₦ 2,599,773,900.00 | ₦ 1,224,849,400.00 | ₦ 1,662,248,400.00 | ₦ 450,931,500.00 | ₦ 3,835,345,400.00 | |

Video 4 Next Sheet

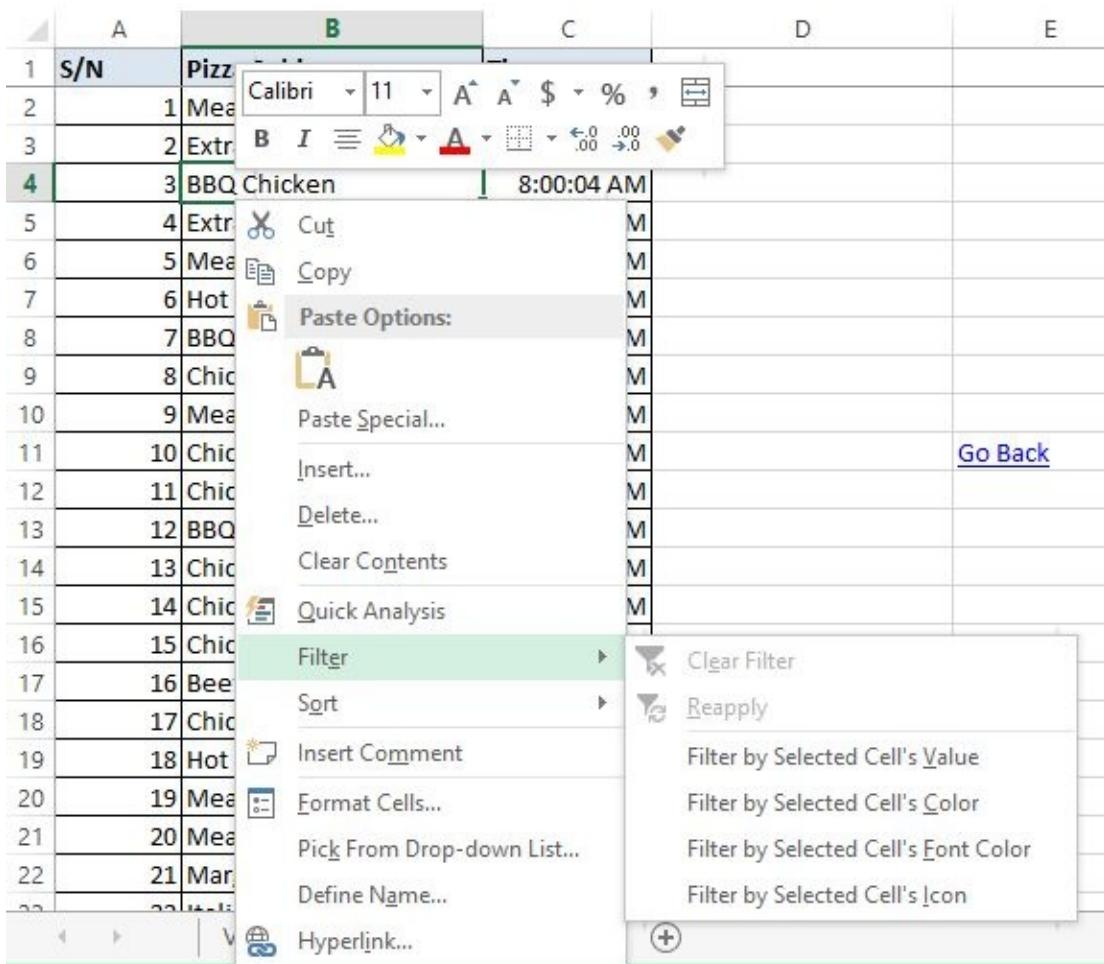
READY

Filtering

Filter is one of the Excel power user's most used tool. It allows you selectively choose what you want to view in a table and hide the rest.

It is very easy to access and can be accessed from three different places in Excel.

By right clicking and selecting Filter.



From the Home menu, clicking on Sort & Filter at the right.

Filtering.xlsx - Excel

The screenshot shows the Microsoft Excel ribbon with the 'DATA' tab selected. In the 'Sort & Filter' group, the 'Filter' icon is highlighted with a green background. The main area of the screen displays a table with columns 'S/N', 'Pizza Sold', and 'Time'. The second row, containing the values '2' and 'Extravaganza', is currently selected.

| S/N | Pizza Sold | Time |
|-----|------------------|------------|
| 1 | Meatzaa | 8:00:01 AM |
| 2 | Extravaganza | 8:00:02 AM |
| 3 | BBQ Chicken | 8:00:04 AM |
| 4 | Extravaganza | 8:00:07 AM |
| 5 | Meatzaa | 8:00:08 AM |
| 6 | Hot Veggie | 8:00:14 AM |
| 7 | BBQ Philly Steak | 8:00:20 AM |
| 8 | Chicken Feast | 8:00:20 AM |
| 9 | Meatzaa | 8:00:22 AM |
| 10 | Chicken Suya | 8:00:25 AM |
| 11 | Chicken Legend | 8:00:26 AM |
| 12 | BBQ Philly Steak | 8:00:27 AM |
| 13 | Chicken Suya | 8:00:29 AM |
| 14 | Chicken Feast | 8:00:33 AM |
| 15 | Chicken Feast | 8:00:33 AM |
| 16 | Beef Suya | 8:00:34 AM |
| 17 | Chicken Feast | 8:00:35 AM |
| 18 | Hot Veggie | 8:00:35 AM |
| 19 | Meatzaa | 8:00:35 AM |
| 20 | Meatzaa | 8:00:36 AM |
| 21 | Margarita | 8:00:37 AM |

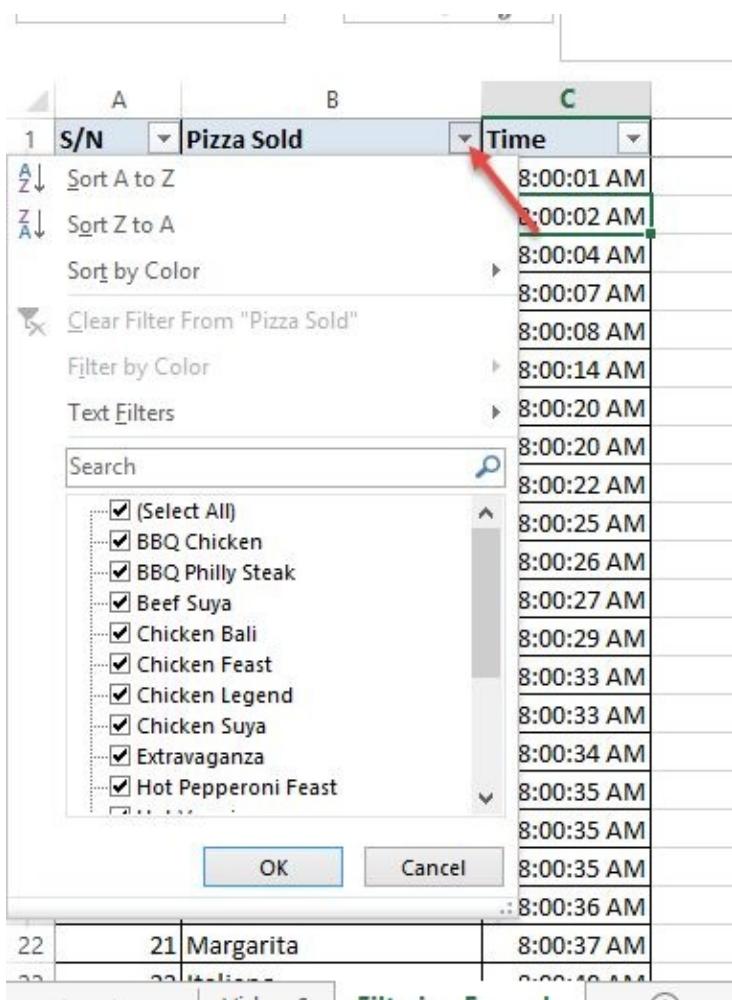
From the Data menu.

Filtering.xlsx

The screenshot shows the Microsoft Excel ribbon with the 'DATA' tab selected. In the 'Sort & Filter' group, the 'Filter' icon is highlighted with a green background. The main area of the screen displays the same table as the previous screenshot, with the second row selected. A 'Go Back' link is visible in the bottom right corner of the table area.

| S/N | Pizza Sold | Time |
|-----|------------------|------------|
| 1 | Meatzaa | 8:00:01 AM |
| 2 | Extravaganza | 8:00:02 AM |
| 3 | BBQ Chicken | 8:00:04 AM |
| 4 | Extravaganza | 8:00:07 AM |
| 5 | Meatzaa | 8:00:08 AM |
| 6 | Hot Veggie | 8:00:14 AM |
| 7 | BBQ Philly Steak | 8:00:20 AM |
| 8 | Chicken Feast | 8:00:20 AM |
| 9 | Meatzaa | 8:00:22 AM |
| 10 | Chicken Suya | 8:00:25 AM |
| 11 | Chicken Legend | 8:00:26 AM |
| 12 | BBQ Philly Steak | 8:00:27 AM |
| 13 | Chicken Suya | 8:00:29 AM |
| 14 | Chicken Feast | 8:00:33 AM |
| 15 | Chicken Feast | 8:00:33 AM |
| 16 | Beef Suya | 8:00:34 AM |
| 17 | Chicken Feast | 8:00:35 AM |
| 18 | Hot Veggie | 8:00:35 AM |
| 19 | Meatzaa | 8:00:35 AM |
| 20 | Meatzaa | 8:00:36 AM |
| 21 | Margarita | 8:00:37 AM |

Once you've turned on the Filter tool by clicking on it, you will see a dropdown box beside the headers of the table.



Clicking on the dropdown box shows you all the unique items in that field and you can select the ones you want to view (hiding the rest). By default, all items are selected so you will have to unselect the ones you don't want to see.

In the screenshot below, all the pizza items were unselected except the BBQ Chicken (meaning only BBQ Chicken was selected).

The screenshot shows a Microsoft Excel spreadsheet with the following data:

| S/N | Pizza Sold | Time |
|-----|-------------|------------|
| 1 | BBQ Chicken | 8:00:04 AM |
| 4 | BBQ Chicken | 8:01:34 AM |
| 51 | BBQ Chicken | 8:02:06 AM |
| 72 | BBQ Chicken | 8:02:13 AM |
| 75 | BBQ Chicken | 8:02:37 AM |
| 84 | BBQ Chicken | 8:02:49 AM |
| 92 | BBQ Chicken | 8:05:23 AM |
| 169 | BBQ Chicken | 8:05:34 AM |
| 177 | BBQ Chicken | 8:05:39 AM |
| 182 | BBQ Chicken | 8:05:40 AM |
| 183 | BBQ Chicken | 8:06:01 AM |
| 197 | BBQ Chicken | 8:06:03 AM |
| 199 | BBQ Chicken | 8:06:22 AM |
| 206 | BBQ Chicken | 8:06:40 AM |
| 214 | BBQ Chicken | 8:06:46 AM |
| 216 | BBQ Chicken | 8:07:07 AM |
| 232 | BBQ Chicken | 8:07:28 AM |
| 243 | BBQ Chicken | 8:08:31 AM |
| 267 | BBQ Chicken | 8:08:45 AM |
| 276 | BBQ Chicken | 8:08:45 AM |
| 277 | BBQ Chicken | 8:09:55 AM |
| 317 | BBQ Chicken | |

Notice the blue row numbers, it is Excel's way of visually hinting you that some rows have been hidden as they did not contain the items we want to view.

Filtering is that simple and straight forward.

Data Cleaning

A lot of times the data you are given to work on in Excel is not in a format usable for you and need some cleaning before you can go ahead with the analysis you intended doing on it. In most cases you have to manually clean the data and fix whatever issues it has one by one before progressing with the original analysis you intended to do on the data.

Fortunately, Excel has some nifty tools to help you automate some of this data cleaning process. The most common ones are,

- Removing duplicates, and
- Text to Columns

Then we'll cover a special tool that can help you do a quick categorization of your data: Subtotal. Finally we'll cover Data Validation, an ingenious tool for reducing data entry errors in your Excel files.

Removing Duplicates.

Occasionally, you will have a table and you'll want to remove duplicate entries. If it were a sales transaction table, you might want to remove the duplicate sales entries. In the example below, it is a table of items (Pizzas) and we want to remove the duplicate entries leaving only unique entries.

1 Pizza Sold

2 Meatzaa

3 Extravaganza

4 BBQ Chicken

5 Hot Veggie

6 BBQ Philly Steak

7 Meatzaa

8 Extravaganza

9 BBQ Chicken

10 Beef Suya

11 Margarita

12 Italiano

13 Pepperoni Suya

14 Veggie Supreme

15 Pepperoni Suya

16 Veggie Supreme

17 Hot Pepperoni Feast

As illustrated above, you select the entire records first and then go to Data menu, click on Remove Duplicates. You will get a confirmatory dialog box. Click on OK.

1 Pizza Sold

2 Meatzaa

3 Extravaganza

4 BBQ Chicken

5 Hot Veggie

6 BBQ Philly Steak

7 Meatzaa

8 Extravaganza

9 BBQ Chicken

10 Beef Suya

11 Margarita

12 Italiano

13 Pepperoni Suya

14 Veggie Supreme

15 Pepperoni Suya

16 Veggie Supreme

17 Hot Pepperoni Feast

You'll see a result showing the number of duplicate values that were found and the number of unique values found. Basically, what Remove Duplicates does is it leaves one

record of each item and removes all the extra record for that item that it finds.

The screenshot shows a Microsoft Excel spreadsheet titled "Data Cleaning.xls". The Data ribbon tab is selected. In the Connections group, the "Sort & Filter" section is visible. Below the ribbon, there are standard Excel buttons for file operations. The main area displays a table with column headers A through H. Column A contains the following data:

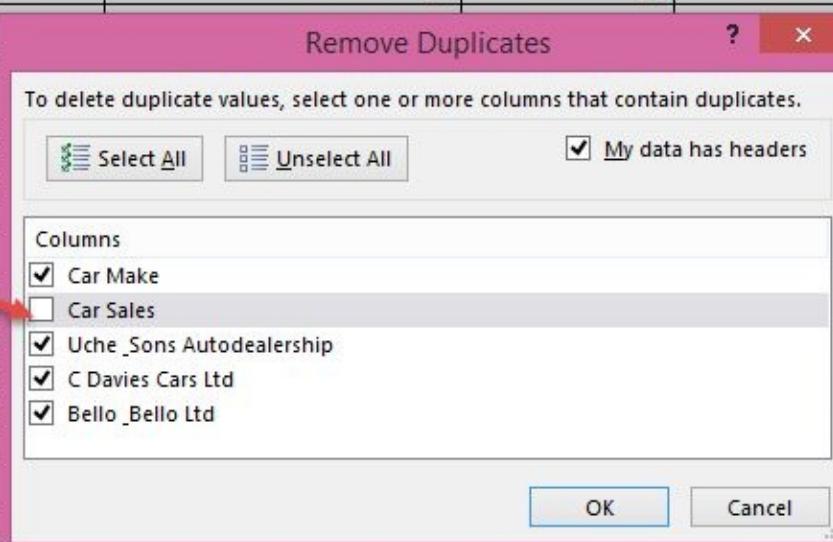
| | A | B | C | D | E | F | G | H |
|----|---------------------|---|---|---|---|---|---|---|
| 1 | Pizza Sold | | | | | | | |
| 2 | Meatzaa | | | | | | | |
| 3 | Extravaganza | | | | | | | |
| 4 | BBQ Chicken | | | | | | | |
| 5 | Hot Veggie | | | | | | | |
| 6 | BBQ Philly Steak | | | | | | | |
| 7 | Beef Suya | | | | | | | |
| 8 | Margarita | | | | | | | |
| 9 | Italiano | | | | | | | |
| 10 | Pepperoni Suya | | | | | | | |
| 11 | Veggie Supreme | | | | | | | |
| 12 | Hot Pepperoni Feast | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |

A message box from Microsoft Excel is displayed, stating: "5 duplicate values found and removed; 11 unique values remain." with an "OK" button. Below the message box, there is a link: "Was this information helpful?"

When you select a table with more than one field entry, the Remove Duplicates remove only the entries that have same value in all the fields as a previous entry except you specify which fields to exclude in the search for duplicates.

In the screenshot below, we excluded Car Sales from the fields to include in the search for duplicates. So rows that have the same entries in all the other fields will be deleted except one.

| A | B | C | D | E | F |
|----|----------|-----------|----------------------------|-------------------|-------------------|
| 1 | Car Make | Car Sales | Uche & Sons Autodealership | C Davies Cars Ltd | Bello & Bello Ltd |
| 2 | France | Bugatti | | 25 | 25 |
| 3 | France | Peugeot | | 20 | 5 |
| 4 | France | Renault | | 24 | 24 |
| 5 | Germany | BMW | | | 33 |
| 6 | Germany | Porsche | | | 14 |
| 7 | Germany | Audi | | | 13 |
| 8 | Germany | Volksw | | | 11 |
| 9 | Germany | Merced | | | 34 |
| 10 | Germany | Opel | | | 11 |
| 11 | India | Tata | | | 7 |
| 12 | India | Ashok | | | 13 |
| 13 | India | Mahind | | | 15 |
| 14 | Italy | Maserat | | | 9 |
| 15 | Italy | Lambor | | | 27 |
| 16 | Japan | Toyota | | | 10 |
| 17 | Japan | Honda | | | 12 |
| 18 | Japan | Honda | | | 34 |
| 19 | Japan | Mazda | 22 | 5 | 25 |
| 20 | Japan | Nissan | 11 | 36 | 6 |
| 21 | Japan | Isuzu | 44 | 15 | 34 |
| 22 | Japan | Infiniti | 8 | 18 | 28 |
| 23 | | | 24 | 20 | 24 |



Text to Columns

There will be times you will have data you would prefer split across multiple columns squeezed into one column. This happens a lot when you copy data from an external source into Excel or you open an exported data from other business software like CRMs and ERPs.

Excel's Text to Columns tool is the magic tool for splitting such data entries into multiple columns provided there is a recognizable character separating each field or they have fixed lengths per field. Below is a simple example for splitting a full name in one column to first Name column and last Name field column.

The screenshot shows the 'Convert Text to Columns Wizard - Step 1 of 3' dialog box. The 'Delimited' option is selected under 'Original data type'. The preview area shows the data correctly split into two columns. The 'Next >' button is highlighted with a red arrow.

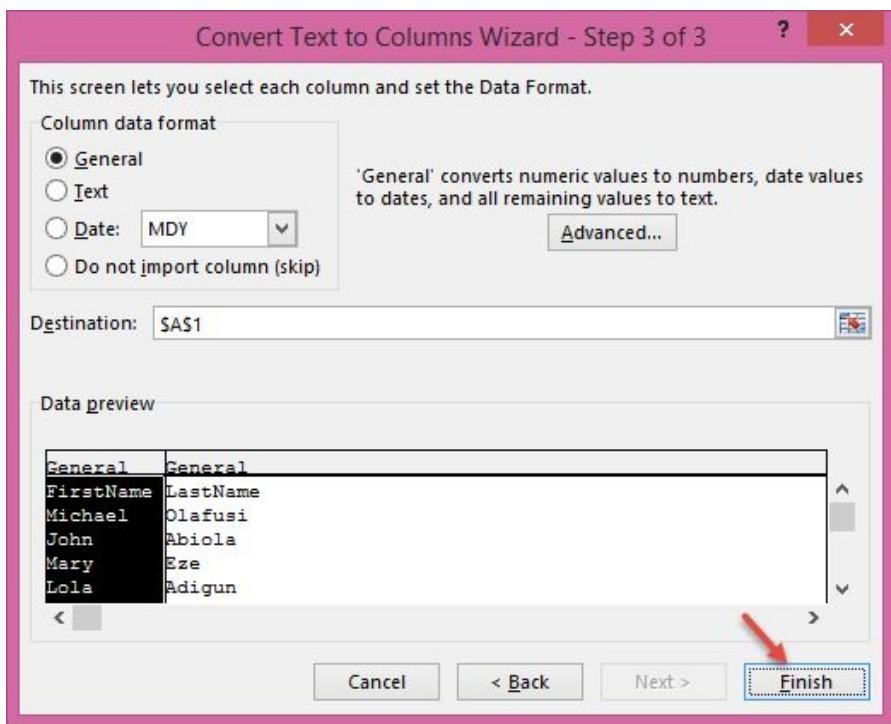
| Index | Value |
|-------|--------------------|
| 1 | FirstName LastName |
| 2 | Michael Olafusi |
| 3 | John Abiola |
| 4 | Mary Eze |
| 5 | Lola Adigun |
| 6 | Segun Owolabi |
| 7 | Tolu Owoeye |
| 8 | Uche Nnamdi |
| 9 | David Aluko |
| 10 | Lekan Bello |
| 11 | Luke Tsangi |

Delimited is the option to specify that there is a recognizable character separating each field. In this example, there is a space separating every first name from the last name.

This screenshot shows the 'Convert Text to Columns Wizard - Step 2 of 3' dialog box. The 'Space' delimiter is selected. The data preview shows the names correctly split into two columns. The 'Next >' button is highlighted with a red arrow.

| Index | Value |
|-------|--------------------|
| 1 | FirstName LastName |
| 2 | Michael Olafusi |
| 3 | John Abiola |
| 4 | Mary Eze |
| 5 | Lola Adigun |

Notice how Excel shows a line between the first names and the last names once you select the appropriate delimiter (space, in this case). Click on Next and Finish.



Below is the result. Just as desired.

| | A | B | C |
|----|-----------|----------|---|
| 1 | FirstName | LastName | |
| 2 | Michael | Olafusi | |
| 3 | John | Abiola | |
| 4 | Mary | Eze | |
| 5 | Lola | Adigun | |
| 6 | Segun | Owolabi | |
| 7 | Tolu | Owoeye | |
| 8 | Uche | Nnamdi | |
| 9 | David | Aluko | |
| 10 | Lekan | Bello | |
| 11 | Luke | Tsangi | |
| 12 | | | |

Subtotal

Subtotal is a secret tool for doing a quick analysis of a table in Excel. It breaks the data down by categories and creates grouping that shows you different levels of details.

It is also very easy to use.

Below is an example where we'll use it.

| | A | B | C | D | E |
|----|-------------|---------------|----------------------------|-------------------|-------------------|
| 1 | Car Make | Car Sales | Uche & Sons Autodealership | C Davies Cars Ltd | Bello & Bello Ltd |
| 2 | France | Bugatti | 25 | 25 | 33 |
| 3 | France | Peugeot | 20 | 5 | 25 |
| 4 | France | Renault | 24 | 24 | 31 |
| 5 | Germany | BMW | 20 | 6 | 33 |
| 6 | Germany | Porsche | 27 | 45 | 14 |
| 7 | Germany | Audi | 28 | 43 | 43 |
| 8 | Germany | Volkswagen | 16 | 43 | 11 |
| 9 | Germany | Mercedes-Benz | 23 | 45 | 34 |
| 10 | Germany | Opel | 24 | 16 | 41 |
| 11 | India | Tata | 41 | 29 | 7 |
| 12 | India | Ashok Leyland | 41 | 19 | 13 |
| 13 | India | Mahindra | 34 | 27 | 15 |
| 14 | Italy | Maserati | 13 | 22 | 9 |
| 15 | Italy | Lamborghini | 31 | 26 | 27 |
| 16 | Japan | Toyota | 30 | 24 | 40 |
| 17 | Japan | Honda | 11 | 42 | 12 |
| 18 | Japan | Honda | 36 | 31 | 34 |
| 19 | Japan | Mazda | 22 | 5 | 25 |
| 20 | Japan | Nissan | 11 | 36 | 6 |
| 21 | Japan | Isuzu | 44 | 15 | 34 |
| 22 | Japan | Infiniti | 8 | 18 | 28 |
| 23 | Japan | Datsun | 31 | 18 | 11 |
| 24 | Japan | Subaru | 24 | 7 | 20 |
| 25 | Japan | Suzuki | 13 | 29 | 43 |
| 26 | Japan | Scion | 26 | 18 | 36 |
| 27 | South Korea | Hyundai | 32 | 28 | 40 |

It is a market research data table showing the different car make sold in three different auto dealerships.

We can apply a subtotal to this to see some interesting analysis.

The screenshot shows a Microsoft Excel spreadsheet titled "Data Clearing.xlsx - Excel". The Data ribbon tab is selected. In the Data Tools group, the "Subtotal" button is highlighted with a red arrow and labeled '2'. The "Outline" button is also highlighted with a red arrow and labeled '3'. A red circle labeled '1' is placed on the "Subtotal" dialog box, which is open over the spreadsheet. The dialog box shows the following settings:

- At each change in: Car Make
- Use function: Sum
- Add subtotal to: (checkboxes checked for) Car Make, Car Sales, Uche & Sons Autodealership, C Davies Cars Ltd, Bello & Bello Ltd
- Replace current subtotals (checkbox checked)
- Page break between groups (checkbox unchecked)
- Summary below data (checkbox checked)

Select the table, go to Data menu and click on Subtotal. In the dialog box that comes up, in the “Add subtotal to” section tick all the fields that have numeric values (except you don’t want to see a numeric analysis of them).

Once you click on OK, you get a result that looks like the following —

3 levels of categorization

| 1 | 2 | 3 | Car Make | Car Sales | Uche & Sons Autodealership | C Davies Cars Ltd | Bello & Bello Ltd |
|----|----|----|----------|---------------|----------------------------|-------------------|-------------------|
| 1 | 2 | 3 | France | Bugatti | | 25 | 25 |
| 4 | 5 | 6 | France | Peugeot | | 20 | 5 |
| 7 | 8 | 9 | France | Renault | | 24 | 24 |
| 10 | 11 | 12 | Germany | BMW | | 20 | 6 |
| 13 | 14 | 15 | Germany | Porsche | | 27 | 45 |
| 16 | 17 | 18 | Germany | Audi | | 28 | 43 |
| 19 | 20 | 21 | Germany | Volkswagen | | 16 | 43 |
| 22 | 23 | 24 | Germany | Mercedes-Benz | | 23 | 45 |
| 25 | 26 | 27 | Germany | Opel | | 24 | 16 |
| 28 | 29 | 30 | India | Tata | | 41 | 29 |
| 31 | 32 | 33 | India | Ashok Leyland | | 41 | 19 |
| 34 | 35 | 36 | India | Mahindra | | 34 | 27 |
| 37 | 38 | 39 | Italy | Maserati | | 13 | 9 |
| 40 | 41 | 42 | Italy | Lamborghini | | 31 | 26 |
| 43 | 44 | 45 | Japan | Toyota | | 30 | 24 |
| 46 | 47 | 48 | Japan | Honda | | 11 | 42 |
| 49 | 50 | 51 | Japan | Honda | | 36 | 31 |
| 52 | 53 | 54 | Japan | Mazda | | 22 | 5 |
| 55 | 56 | 57 | Japan | Nissan | | 11 | 36 |
| 58 | 59 | 60 | Japan | Isuzu | | 44 | 15 |
| 61 | 62 | 63 | Japan | Infiniti | | 8 | 18 |
| 64 | 65 | 66 | Japan | Datsun | | 31 | 18 |

Level 1:

Screenshot of Microsoft Excel showing a data table with three levels of hierarchy. The table has columns A through F. Row 1 contains the header: Car Make, Car Sales, Uche & Sons Autodealership, C Davies Cars Ltd, Bello & Bello Ltd. Row 54 contains the Grand Total: 1124, 1165, 1104. Rows 55 through 59 are blank. Row 60 is highlighted in green and contains the value 60. The row numbers 1, 2, and 3 are highlighted in red in the top-left corner of the table area.

| | A | B | C | D | E | F |
|----|-------------|-----------|----------------------------|-------------------|-------------------|---|
| 1 | Car Make | Car Sales | Uche & Sons Autodealership | C Davies Cars Ltd | Bello & Bello Ltd | |
| 54 | Grand Total | | 1124 | 1165 | 1104 | |
| 55 | | | | | | |
| 56 | | | | | | |
| 57 | | | | | | |
| 58 | | | | | | |
| 59 | | | | | | |
| 60 | | | | | | |
| 61 | | | | | | |
| 62 | | | | | | |

Level 2:

Screenshot of Microsoft Excel showing a data table with three levels of hierarchy. The table has columns A through F. Row 1 contains the header: Car Make, Car Sales, Uche & Sons Autodealership, C Davies Cars Ltd, Bello & Bello Ltd. Rows 5 through 46 contain country totals: France Total (69, 54, 89), Germany Total (138, 198, 176), India Total (116, 75, 35), Italy Total (44, 48, 36), Japan Total (256, 243, 289), South Korea Total (60, 69, 53), Sweden Total (39, 53, 34), UK Total (251, 243, 228), US Total (151, 182, 164). Row 54 contains the Grand Total: 1124, 1165, 1104. Rows 55 through 57 are blank. The row numbers 1, 2, and 3 are highlighted in red in the top-left corner of the table area.

| | A | B | C | D | E | F |
|----|-------------------|-----------|----------------------------|-------------------|-------------------|---|
| 1 | Car Make | Car Sales | Uche & Sons Autodealership | C Davies Cars Ltd | Bello & Bello Ltd | |
| 5 | France Total | | 69 | 54 | 89 | |
| 12 | Germany Total | | 138 | 198 | 176 | |
| 16 | India Total | | 116 | 75 | 35 | |
| 19 | Italy Total | | 44 | 48 | 36 | |
| 31 | Japan Total | | 256 | 243 | 289 | |
| 34 | South Korea Total | | 60 | 69 | 53 | |
| 37 | Sweden Total | | 39 | 53 | 34 | |
| 46 | UK Total | | 251 | 243 | 228 | |
| 53 | US Total | | 151 | 182 | 164 | |
| 54 | Grand Total | | 1124 | 1165 | 1104 | |
| 55 | | | | | | |
| 56 | | | | | | |
| 57 | | | | | | |

Level 3:

File Home Insert Page Layout Formulas Data Review View Developer Load

From Access From Web From Text From Other Sources Existing Connections Refresh All Connections

A Z Z A Clear Reapply Advanced Sort Filter Sort & Filter Text to Columns Flash Fill

G60

Car Make **Car Sales** **Uche & Sons Autodealership** **C Davies Cars Ltd** **Bello & Bello Ltd**

| | A | B | C | D | E |
|----|----------------------|---------------|----------------------------|-------------------|-------------------|
| 1 | Car Make | Car Sales | Uche & Sons Autodealership | C Davies Cars Ltd | Bello & Bello Ltd |
| 2 | France | Bugatti | | 25 | 25 |
| 3 | France | Peugeot | | 20 | 5 |
| 4 | France | Renault | | 24 | 24 |
| 5 | France Total | | | 69 | 54 |
| 6 | Germany | BMW | | 20 | 6 |
| 7 | Germany | Porsche | | 27 | 45 |
| 8 | Germany | Audi | | 28 | 43 |
| 9 | Germany | Volkswagen | | 16 | 43 |
| 10 | Germany | Mercedes-Benz | | 23 | 45 |
| 11 | Germany | Opel | | 24 | 16 |
| 12 | Germany Total | | | 138 | 198 |
| 13 | India | Tata | | 41 | 29 |
| 14 | India | Ashok Leyland | | 41 | 19 |
| 15 | India | Mahindra | | 34 | 27 |
| 16 | India Total | | | 116 | 75 |
| 17 | Italy | Maserati | | 13 | 22 |
| 18 | Italy | Lamborghini | | 31 | 26 |
| 19 | Italy Total | | | 44 | 48 |
| 20 | Japan | Toyota | | 30 | 24 |
| 21 | Japan | Honda | | 11 | 42 |
| 22 | Japan | Honda | | 36 | 31 |

And the best part is that you can remove the subtotal and have your original table data back just as it was before. To remove is as easy as clicking the Subtotal again and clicking on Remove All.

The screenshot shows a Microsoft Excel interface with the following details:

- Top Ribbon:** FILE, HOME, INSERT, PAGE LAYOUT, FORMULAS, DATA (selected), REVIEW, VIEW, DEVELOPER, LOAD TEST, POWER QUERY.
- Subtab Buttons:** Connections, Sort, Filter, Advanced, Text to Columns, Flash Fill, Remove Duplicates, Data Validation, Consolidate, What-If Analysis, Relationships, Group, Ungroup, Subtotal, Outline.
- Table Data:** A table with columns A through M. The first few rows show data for France, Germany, and India, followed by subtotal rows for each country.
- Subtotal Dialog Box:** A modal window titled "Subtotal" is open, showing the following settings:
 - At each change in: Car Make
 - Use function: Sum
 - Add subtotal to:
 - Car Make
 - Car Sales
 - Uche & Sons Autodealership** (checkbox checked)
 - C Davies Cars Ltd
 - Bello & Bello Ltd
 - Replace current subtotals:
 - Page break between groups:
 - Summary below data:
- Annotations:** Red numbers 1, 2, and 3 are placed on the ribbon tabs, the "Subtotal" dialog box, and the "Remove All" button respectively.

See the result below. All the level 1, 2 & 3 groupings gone.

| | A | B | C | D | E |
|----|-------------|---------------|----------------------------|-------------------|-------------------|
| 1 | Car Make | Car Sales | Uche & Sons Autodealership | C Davies Cars Ltd | Bello & Bello Ltd |
| 2 | France | Bugatti | 25 | 25 | 33 |
| 3 | France | Peugeot | 20 | 5 | 25 |
| 4 | France | Renault | 24 | 24 | 31 |
| 5 | Germany | BMW | 20 | 6 | 33 |
| 6 | Germany | Porsche | 27 | 45 | 14 |
| 7 | Germany | Audi | 28 | 43 | 43 |
| 8 | Germany | Volkswagen | 16 | 43 | 11 |
| 9 | Germany | Mercedes-Benz | 23 | 45 | 34 |
| 10 | Germany | Opel | 24 | 16 | 41 |
| 11 | India | Tata | 41 | 29 | 7 |
| 12 | India | Ashok Leyland | 41 | 19 | 13 |
| 13 | India | Mahindra | 34 | 27 | 15 |
| 14 | Italy | Maserati | 13 | 22 | 9 |
| 15 | Italy | Lamborghini | 31 | 26 | 27 |
| 16 | Japan | Toyota | 30 | 24 | 40 |
| 17 | Japan | Honda | 11 | 42 | 12 |
| 18 | Japan | Honda | 36 | 31 | 34 |
| 19 | Japan | Mazda | 22 | 5 | 25 |
| 20 | Japan | Nissan | 11 | 36 | 6 |
| 21 | Japan | Isuzu | 44 | 15 | 34 |
| 22 | Japan | Infiniti | 8 | 18 | 28 |
| 23 | Japan | Datsun | 31 | 18 | 11 |
| 24 | Japan | Subaru | 24 | 7 | 20 |
| 25 | Japan | Suzuki | 13 | 29 | 43 |
| 26 | Japan | Scion | 26 | 18 | 36 |
| 27 | South Korea | Hyundai | 32 | 28 | 40 |

Data Validation

This is another secret but powerful tool in Excel. It helps you put in place some error check mechanism and can be used by a skilled Excel user to make powerful Excel dashboards.

Let's see some of the common uses of it.

The table below is an Employee records table. In it we want to force people to enter just departments specified at the left of the table. In fact, we want them to have the easy option of seeing a pre-populated dropdown list and pick a department from the list options.

| | A | B | C | D | E | F | G | H |
|---|------------|-----------|-------------|------------|---|---|---|---------------|
| 1 | First Name | Last Name | Employee ID | Department | | | | List of Depts |
| 2 | Mary | Porter | 1000058 | | | | | HR |
| 3 | Joseph | Saliu | 1000588 | | | | | Finance |
| 4 | Kenneth | Lenny | 1000588 | | | | | IT |
| 5 | Lekan | Jakes | 1000589 | | | | | Operations |
| 6 | Gabriel | Matthew | 1000590 | | | | | Marketing |
| 7 | | | | | | | | |
| 8 | | | | | | | | |

We select the cells we want to give this functionality, go to Data menu and click on Data Validation (sometimes twice).

The screenshot shows the 'Data Validation' dialog box open over the Excel spreadsheet. The 'Settings' tab is selected. In the 'Validation criteria' section, the 'Allow' dropdown is set to 'Any value' (highlighted by a red box and step 4). The 'Ignore blank' checkbox is checked. There is a 'Go back' link at the bottom left of the dialog. The ribbon tabs are FILE, HOME, INSERT, PAGE LAYOUT, FORMULAS, DATA, REVIEW, and VIEW. The 'DATA' tab is highlighted.

You'll see that there are many options to pick between.

1. **Any Value.** This is the default and it is same as not having any data validation. The user can enter any value into the cell.
2. **Whole Number.** This forces the user to enter only numeric values that are whole numbers. If the user enters a text or decimal entry he'll get an error. This might be applicable in an invoice sheet, for the cells that hold the order quantity if you don't sell fraction of your products.
3. **Decimal.** This forces the user to enter a whole number or decimal entry. A whole number is same as a decimal with zeros after the decimal point. This might be great in a financial model sheet, to hold values of growth assumption, exchange rates and risk premiums.
4. **List.** This is the one we are most interested in. It enables us to limit the cell entries to a list of options. We will use this in the example under review.
5. **Date.** This forces the user to enter a valid date entry.
6. **Time.** This forces the user to enter a valid time entry.
7. **Text Length.** This allows the user to enter any value as long as the character length is not more than the specified value here. It is good for fields that hold phone numbers, maybe you want to limit the entry to the +2348123456789 14 characters long entry format.
8. **Custom.** Just as the name specifies, you want to limit the cell entry to something less conventional and not covered by the other options.

In this example we are going to use the List option. So let's select it.

Get External Data | Connections | Sort & Filter

D2 : fx

| | A | B | C | D | E | F | G | H |
|---|------------|-----------|-------------|------------|---|---|---------------|---|
| 1 | First Name | Last Name | Employee ID | Department | | | List of Depts | |
| 2 | Mary | Porter | 1000058 | | | | HR | |
| 3 | Joseph | SalIU | 1000588 | | | | Finance | |
| 4 | Kenneth | Lenny | 1000588 | | | | IT | |
| 5 | Lekan | Jakes | 1000589 | | | | Operations | |
| 6 | Gabriel | Matthew | 1000590 | | | | Marketing | |

Data Validation ? x

Settings Input Message Error Alert

Validation criteria

Allow: List Ignore blank In-cell dropdown

Data: between

Source:

Apply these changes to all other cells with the same settings

Clear All OK Cancel

1 2

Go back

Once you click the icon on the far right corner of the Source box, select entries to limit the users to. In this case we have typed out the list options in cells G2:G6, holding the different departments.

Get External Data | Connections | Sort & Filter

D2 : fx G2:G6

| | A | B | C | D | E | F | G |
|---|------------|-----------|-------------|------------|---|---|---------------|
| 1 | First Name | Last Name | Employee ID | Department | | | List of Depts |
| 2 | Mary | Porter | 1000058 | G2:G6 | | | HR |
| 3 | Joseph | SalIU | 1000588 | | | | Finance |
| 4 | Kenneth | Lenny | 1000588 | | | | IT |
| 5 | Lekan | Jakes | 1000589 | | | | Operations |
| 6 | Gabriel | Matthew | 1000590 | | | | Marketing |

Data Validation ? x

=G\$2:\$G\$6

Go back

D2 : X ✓ fx G2:G6

| | A | B | C | D | E | F | G | H | I |
|---|------------|-----------|-------------|------------|---|---|---------------|---|---|
| 1 | First Name | Last Name | Employee ID | Department | | | List of Depts | | |
| 2 | Mary | Porter | 1000058 | G2:G6 | | | HR | | |
| 3 | Joseph | Saliu | 1000588 | | | | Finance | | |
| 4 | Kenneth | Lenny | 1000588 | | | | IT | | |
| 5 | Lekan | Jakes | 1000589 | | | | Operations | | |
| 6 | Gabriel | Matthew | 1000590 | | | | Marketing | | |

Data Validation ? x

Settings Input Message Error Alert

Validation criteria

Allow:

List Ignore blank In-cell dropdown

Data: between

Source: =G\$2:G\$6

Apply these changes to all other cells with the same settings

Go back

And it's done.

The user is forced to choose between the options in the list. He even sees a dropdown arrow that expands to a dropdown lists the moment he tries to fill the cell.

| | A | B | C | D | E |
|---|------------|-----------|-------------|------------|---|
| 1 | First Name | Last Name | Employee ID | Department | |
| 2 | Mary | Porter | 1000058 | HR | |
| 3 | Joseph | Saliu | 1000588 | Finance | |
| 4 | Kenneth | Lenny | 1000588 | IT | |
| 5 | Lekan | Jakes | 1000589 | Operations | |
| 6 | Gabriel | Matthew | 1000590 | Marketing | |

And that is how Data Validation works. When used creatively it can save you from the stress of making corrections to forms people filled and can be used in conjunction with

formulas like VLOOKUP to make a dynamic report and dashboards.

Data Formatting

There are some quick tips in Excel that would turn a bland looking data into a nice looking one. One of the best tip is to apply a table formatting to the data.

An example, is taking a table like the one below and turning it in a well formatted one.

| | A | B | C | D | E | F | G |
|----|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1 | State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
| 2 | Abia | ₦ 1,297,498,300 | ₦ 821,123,500 | ₦ 1,175,454,800 | ₦ 967,327,400 | ₦ 2,265,644,000 | ₦ 4,544,916,100 |
| 3 | Adamawa | ₦ 4,022,792,500 | ₦ 4,317,641,300 | ₦ 1,627,470,600 | ₦ 1,023,694,700 | ₦ 3,493,691,500 | ₦ 1,973,059,900 |
| 4 | Akwa Ibom | ₦ 824,782,800 | ₦ 1,691,712,500 | ₦ 4,927,386,500 | ₦ 2,187,626,200 | ₦ 2,966,925,400 | ₦ 2,202,014,900 |
| 5 | Anambra | ₦ 2,159,322,900 | ₦ 1,511,863,500 | ₦ 4,060,131,900 | ₦ 1,843,665,900 | ₦ 2,439,308,800 | ₦ 3,015,652,900 |
| 6 | Bauchi | ₦ 764,748,600 | ₦ 3,059,451,100 | ₦ 2,879,985,600 | ₦ 3,032,115,500 | ₦ 2,609,030,900 | ₦ 3,000,312,200 |
| 7 | Bayelsa | ₦ 1,218,646,400 | ₦ 2,035,499,300 | ₦ 3,596,177,500 | ₦ 3,958,333,500 | ₦ 4,856,865,900 | ₦ 1,754,855,100 |
| 8 | Benue | ₦ 3,479,649,000 | ₦ 3,864,832,700 | ₦ 2,458,711,700 | ₦ 4,801,142,000 | ₦ 2,700,421,800 | ₦ 3,212,451,900 |
| 9 | Benue | ₦ 602,469,700 | ₦ 1,387,315,500 | ₦ 4,501,134,600 | ₦ 2,728,902,800 | ₦ 1,687,978,600 | ₦ 3,627,716,800 |
| 10 | Borno | ₦ 2,361,614,200 | ₦ 1,616,065,000 | ₦ 4,908,244,600 | ₦ 4,216,846,800 | ₦ 581,980,000 | ₦ 4,166,988,100 |
| 11 | Cross River | ₦ 2,416,592,600 | ₦ 1,971,834,600 | ₦ 1,814,142,400 | ₦ 4,658,487,000 | ₦ 745,327,000 | ₦ 4,779,952,700 |
| 12 | Delta | ₦ 4,755,914,300 | ₦ 2,382,209,500 | ₦ 3,361,514,600 | ₦ 2,060,298,000 | ₦ 4,658,487,000 | ₦ 2,363,220,900 |
| 13 | Ebonyi | ₦ 3,547,140,000 | ₦ 3,233,069,500 | ₦ 4,883,253,900 | ₦ 1,060,164,800 | ₦ 2,926,053,500 | ₦ 713,048,500 |
| 14 | Edo | ₦ 2,663,501,000 | ₦ 781,461,300 | ₦ 462,661,800 | ₦ 543,085,200 | ₦ 3,256,011,600 | ₦ 2,900,705,900 |
| 15 | Ekiti | ₦ 1,816,087,900 | ₦ 4,128,943,600 | ₦ 1,512,170,300 | ₦ 2,592,908,100 | ₦ 3,340,038,100 | ₦ 4,040,341,600 |
| 16 | Enugu | ₦ 1,409,979,200 | ₦ 2,609,372,800 | ₦ 1,990,646,300 | ₦ 3,219,650,200 | ₦ 1,893,090,400 | ₦ 4,581,716,900 |
| 17 | FCT | ₦ 3,199,223,200 | ₦ 2,063,317,300 | ₦ 1,829,381,400 | ₦ 3,704,640,600 | ₦ 4,980,777,000 | ₦ 2,520,202,900 |
| 18 | Gombe | ₦ 620,111,300 | ₦ 2,201,453,200 | ₦ 1,885,641,400 | ₦ 4,146,024,300 | ₦ 2,551,023,100 | ₦ 2,523,019,700 |
| 19 | Imo | ₦ 2,591,742,600 | ₦ 2,521,764,800 | ₦ 2,013,994,900 | ₦ 4,994,515,700 | ₦ 3,014,428,300 | ₦ 2,922,241,900 |
| 20 | Jigawa | ₦ 3,550,126,700 | ₦ 1,573,445,100 | ₦ 3,756,243,200 | ₦ 3,092,703,100 | ₦ 1,417,963,700 | ₦ 2,311,559,800 |
| 21 | Kaduna | ₦ 3,938,598,800 | ₦ 2,599,773,900 | ₦ 1,224,849,400 | ₦ 1,662,248,400 | ₦ 450,931,500 | ₦ 3,835,345,400 |
| 22 | Kano | ₦ 2,981,980,300 | ₦ 2,021,735,600 | ₦ 3,016,518,600 | ₦ 4,411,651,000 | ₦ 2,387,291,000 | ₦ 530,613,400 |
| 23 | Katsina | ₦ 2,500,421,500 | ₦ 1,202,820,700 | ₦ 620,977,200 | ₦ 2,060,721,400 | ₦ 1,625,000,500 | ₦ 2,540,600,500 |

Select the data and go to Home menu, Format as Table. Choose a color theme.

The screenshot shows the Microsoft Excel ribbon at the top with the 'Home' tab selected. In the center, there's a 'Format as Table' dialog box. At the bottom of this dialog box, there are three color themes: 'Light', 'Medium', and 'Dark'. The 'Light' theme is currently selected, showing a grid of color swatches for rows and columns. The main area of the screen displays a table of data from 'Sheet1' with columns labeled A through G and rows numbered 1 to 23. The data represents monthly financial figures for various states in Nigeria.

| A | B | C | D | E | F | G |
|-------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
| State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
| Abia | ₦ 1,297,498,300 | ₦ 821,123,500 | ₦ 1,175,454,800 | ₦ 967,327,400 | ₦ 2,265,644,000 | ₦ 4,544,916,100 |
| Adamawa | ₦ 4,022,792,500 | ₦ 4,317,641,300 | ₦ 1,627,470,600 | ₦ 1,023,694,700 | ₦ 3,493,691,500 | ₦ 1,973,059,900 |
| Akwa Ibom | ₦ 824,782,800 | ₦ 1,691,712,500 | ₦ 4,927,386,500 | ₦ 2,187,626,200 | ₦ 2,966,925,400 | ₦ 2,202,014,900 |
| Anambra | ₦ 2,159,322,900 | ₦ 1,511,863,500 | ₦ 4,060,131,900 | ₦ 1,843,665,900 | ₦ 2,439,308,800 | ₦ 3,015,652,900 |
| Bauchi | ₦ 764,748,600 | ₦ 3,059,451,100 | ₦ 2,879,985,600 | ₦ 3,032,115,500 | ₦ 2,609,030,900 | ₦ 3,000,312,200 |
| Bayelsa | ₦ 1,218,646,400 | ₦ 2,035,499,300 | ₦ 3,596,177,500 | ₦ 3,958,333,500 | ₦ 4,856,865,900 | ₦ 1,754,855,100 |
| Benue | ₦ 3,479,649,000 | ₦ 3,864,832,700 | ₦ 2,458,711,700 | ₦ 4,801,142,000 | ₦ 2,700,421,800 | ₦ 3,212,451,900 |
| Benue | ₦ 602,469,700 | ₦ 1,387,315,500 | ₦ 4,501,134,600 | ₦ 2,728,902,800 | ₦ 1,687,978,600 | ₦ 3,627,716,800 |
| Borno | ₦ 2,361,614,200 | ₦ 1,616,065,000 | ₦ 4,908,244,600 | ₦ 4,216,846,800 | ₦ 581,980,000 | ₦ 4,166,988,100 |
| Cross River | ₦ 2,416,592,600 | ₦ 1,971,834,600 | ₦ 1,814,142,400 | ₦ 4,658,487,000 | ₦ 745,327,000 | ₦ 4,779,952,700 |
| Delta | ₦ 4,755,914,300 | ₦ 2,382,209,500 | ₦ 3,361,514,600 | ₦ 2,060,298,000 | ₦ 4,671,269,900 | ₦ 2,363,220,900 |
| Ebonyi | ₦ 3,547,140,000 | ₦ 3,233,069,500 | ₦ 4,883,253,900 | ₦ 1,060,164,800 | ₦ 2,926,053,500 | ₦ 713,048,500 |
| Edo | ₦ 2,663,501,000 | ₦ 781,461,300 | ₦ 462,661,800 | ₦ 543,085,200 | ₦ 3,256,011,600 | ₦ 2,900,705,900 |
| Ekiti | ₦ 1,816,087,900 | ₦ 4,128,943,600 | ₦ 1,512,170,300 | ₦ 2,592,908,100 | ₦ 3,340,038,100 | ₦ 4,040,341,600 |
| Enugu | ₦ 1,409,979,200 | ₦ 2,609,372,800 | ₦ 1,990,646,300 | ₦ 3,219,650,200 | ₦ 1,893,090,400 | ₦ 4,581,716,900 |
| FCT | ₦ 3,199,223,200 | ₦ 2,063,317,300 | ₦ 1,829,381,400 | ₦ 3,704,640,600 | ₦ 4,980,777,000 | ₦ 2,520,202,900 |
| Gombe | ₦ 620,111,300 | ₦ 2,201,453,200 | ₦ 1,885,641,400 | ₦ 4,146,024,300 | ₦ 2,551,023,100 | ₦ 2,523,019,700 |
| Imo | ₦ 2,591,742,600 | ₦ 2,521,764,800 | ₦ 2,013,994,900 | ₦ 4,994,515,700 | ₦ 3,014,428,300 | ₦ 2,922,241,900 |
| Jigawa | ₦ 3,550,126,700 | ₦ 1,573,445,100 | ₦ 3,756,243,200 | ₦ 3,092,703,100 | ₦ 1,417,963,700 | ₦ 2,311,559,800 |
| Kaduna | ₦ 3,938,598,800 | ₦ 2,599,773,900 | ₦ 1,224,849,400 | ₦ 1,662,248,400 | ₦ 450,931,500 | ₦ 3,835,345,400 |
| Kano | ₦ 2,981,980,300 | ₦ 2,021,735,600 | ₦ 3,016,518,600 | ₦ 4,411,651,000 | ₦ 2,387,291,000 | ₦ 530,613,400 |
| Katsina | ₦ 3,589,421,500 | ₦ 1,293,838,700 | ₦ 638,877,300 | ₦ 2,969,721,400 | ₦ 1,025,989,500 | ₦ 2,648,689,500 |
| Kebbi | ₦ 1,684,273,500 | ₦ 4,790,202,900 | ₦ 991,721,500 | ₦ 4,897,014,100 | ₦ 4,131,210,900 | ₦ 3,990,418,100 |
| Kogi | ₦ 2,812,863,300 | ₦ 2,734,189,600 | ₦ 2,306,601,300 | ₦ 867,264,000 | ₦ 2,104,687,400 | ₦ 2,825,512,800 |
| Kwara | ₦ 3,915,338,600 | ₦ 1,496,830,100 | ₦ 1,305,529,900 | ₦ 4,919,941,300 | ₦ 2,214,504,600 | ₦ 912,176,400 |
| Lagos | ₦ 6,239,473,500 | ₦ 7,319,183,000 | ₦ 6,211,689,500 | ₦ 3,351,178,500 | ₦ 11,610,307,000 | ₦ 22,681,984,500 |

If you want to email the Excel file to a colleague, you can copy the table and paste in Outlook and you'll have the beautiful looking table in the body of the email. Your colleague will have no excuse to give regarding not seeing or acting on the data.

Untitled - Message (HTML)

File Message Insert Options Format Text Review Developer Adobe PDF

From: michael@olafusimichael.com
To: john@colleague.com
Cc:
Bcc:
Subject: The Analyzed Data for your action

Dear John,

Please find below the data we analyzed.

| State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Abia | ₦ 1,297,498,300 | ₦ 821,123,500 | ₦ 1,175,454,800 | ₦ 967,327,400 | ₦ 2,265,644,000 | ₦ 4,544,916,100 |
| Adamawa | ₦ 4,022,792,500 | ₦ 4,317,641,300 | ₦ 1,627,470,600 | ₦ 1,023,694,700 | ₦ 3,493,691,500 | ₦ 1,973,059,900 |
| Akwa Ibom | ₦ 824,782,800 | ₦ 1,691,712,500 | ₦ 4,927,386,500 | ₦ 2,187,626,200 | ₦ 2,966,925,400 | ₦ 2,202,014,900 |
| Anambra | ₦ 2,159,322,900 | ₦ 1,511,863,500 | ₦ 4,060,131,900 | ₦ 1,843,665,900 | ₦ 2,439,308,800 | ₦ 3,015,652,900 |
| Bauchi | ₦ 764,748,600 | ₦ 3,059,451,100 | ₦ 2,879,985,600 | ₦ 3,032,115,500 | ₦ 2,609,030,900 | ₦ 3,000,312,200 |
| Bayelsa | ₦ 1,218,646,400 | ₦ 2,035,499,300 | ₦ 3,596,177,500 | ₦ 3,958,333,500 | ₦ 4,856,865,900 | ₦ 1,754,855,100 |
| Benue | ₦ 3,479,649,000 | ₦ 3,864,832,700 | ₦ 2,458,711,700 | ₦ 4,801,142,000 | ₦ 2,700,421,800 | ₦ 3,212,451,900 |
| Benue | ₦ 602,469,700 | ₦ 1,387,315,500 | ₦ 4,501,134,600 | ₦ 2,728,902,800 | ₦ 1,687,978,600 | ₦ 3,627,716,800 |
| Borno | ₦ 2,361,614,200 | ₦ 1,616,065,000 | ₦ 4,908,244,600 | ₦ 4,216,846,800 | ₦ 581,980,000 | ₦ 4,166,988,100 |
| Cross River | ₦ 2,416,592,600 | ₦ 1,971,834,600 | ₦ 1,814,142,400 | ₦ 4,658,487,000 | ₦ 745,327,000 | ₦ 4,779,952,700 |
| Delta | ₦ 4,755,914,300 | ₦ 2,382,209,500 | ₦ 3,361,514,600 | ₦ 2,060,298,000 | ₦ 4,671,269,900 | ₦ 2,363,220,900 |
| Ebonyi | ₦ 3,547,140,000 | ₦ 3,233,069,500 | ₦ 4,883,253,900 | ₦ 1,060,164,800 | ₦ 2,926,053,500 | ₦ 713,048,500 |
| Edo | ₦ 2,663,501,000 | ₦ 781,461,300 | ₦ 462,661,800 | ₦ 543,085,200 | ₦ 3,256,011,600 | ₦ 2,900,705,900 |
| Ekiti | ₦ 1,816,087,900 | ₦ 4,128,943,600 | ₦ 1,512,170,300 | ₦ 2,592,908,100 | ₦ 3,340,038,100 | ₦ 4,040,341,600 |

So what if you needed to print it for your boss.

Here's what you get from Print Preview.

| State | Jan-14 | Feb-14 | Mar-14 | Apr-14 |
|-------------|------------------|------------------|-------------------|------------------|
| Aba | ₦ 1,297,498,300 | ₦ 821,123,300 | ₦ 1,173,434,800 | ₦ 967,327,400 |
| Adamawa | ₦ 4,023,792,500 | ₦ 4,317,641,300 | ₦ 1,627,470,800 | ₦ 1,023,684,700 |
| Akwa Ibom | ₦ 824,782,800 | ₦ 1,691,712,500 | ₦ 4,927,386,500 | ₦ 2,187,526,200 |
| Anambra | ₦ 2,159,312,900 | ₦ 1,511,863,300 | ₦ 4,080,131,900 | ₦ 1,843,663,900 |
| Bauchi | ₦ 764,748,600 | ₦ 3,059,431,100 | ₦ 2,879,985,600 | ₦ 3,082,113,300 |
| Bayelsa | ₦ 1,218,646,400 | ₦ 2,035,498,300 | ₦ 3,396,377,500 | ₦ 3,958,333,500 |
| Benue | ₦ 3,479,648,000 | ₦ 3,864,832,700 | ₦ 2,438,711,700 | ₦ 4,801,142,000 |
| Benue | ₦ 602,469,700 | ₦ 1,387,315,500 | ₦ 4,301,134,600 | ₦ 2,728,902,800 |
| Borno | ₦ 2,361,614,200 | ₦ 1,616,065,000 | ₦ 4,908,244,600 | ₦ 4,216,846,800 |
| Cross River | ₦ 2,416,592,600 | ₦ 1,971,834,600 | ₦ 1,814,142,400 | ₦ 4,638,487,000 |
| Delta | ₦ 4,755,914,300 | ₦ 2,382,209,300 | ₦ 3,361,514,800 | ₦ 2,060,288,000 |
| Ebonyi | ₦ 3,547,140,000 | ₦ 3,233,069,500 | ₦ 4,883,231,900 | ₦ 1,060,164,800 |
| Edo | ₦ 2,663,501,000 | ₦ 781,461,300 | ₦ 462,661,800 | ₦ 343,085,200 |
| Ekiti | ₦ 1,816,087,900 | ₦ 4,128,943,600 | ₦ 1,512,170,300 | ₦ 2,592,908,100 |
| Enugu | ₦ 1,408,879,200 | ₦ 2,608,372,800 | ₦ 1,980,646,200 | ₦ 3,219,650,200 |
| FCT | ₦ 3,189,223,200 | ₦ 2,068,317,300 | ₦ 1,828,381,400 | ₦ 3,704,840,600 |
| Gombe | ₦ 620,111,300 | ₦ 2,201,453,200 | ₦ 1,885,641,400 | ₦ 4,146,024,300 |
| Imo | ₦ 2,591,742,600 | ₦ 2,521,764,800 | ₦ 2,013,994,900 | ₦ 4,994,515,700 |
| Jigawa | ₦ 3,550,126,700 | ₦ 1,578,445,100 | ₦ 3,756,243,200 | ₦ 3,082,703,100 |
| Kaduna | ₦ 3,938,598,800 | ₦ 2,599,773,800 | ₦ 1,124,848,400 | ₦ 1,661,248,400 |
| Kano | ₦ 2,981,980,300 | ₦ 2,021,735,600 | ₦ 3,016,318,800 | ₦ 4,411,651,000 |
| Katsina | ₦ 3,589,421,300 | ₦ 1,298,838,700 | ₦ 638,377,300 | ₦ 2,969,721,400 |
| Keppi | ₦ 1,684,278,300 | ₦ 4,790,202,900 | ₦ 991,721,500 | ₦ 4,897,014,100 |
| Kogi | ₦ 2,812,863,300 | ₦ 2,734,189,600 | ₦ 2,306,801,300 | ₦ 867,264,000 |
| Kwara | ₦ 3,915,338,600 | ₦ 1,495,830,100 | ₦ 1,305,529,900 | ₦ 4,919,941,300 |
| Lagos | ₦ 6,239,473,300 | ₦ 7,318,183,000 | ₦ 6,211,889,500 | ₦ 3,351,178,300 |
| Nasarawa | ₦ 450,732,700 | ₦ 4,852,085,900 | ₦ 1,411,838,300 | ₦ 743,233,200 |
| Niger | ₦ 3,002,387,100 | ₦ 4,592,318,800 | ₦ 3,219,870,900 | ₦ 1,086,334,400 |
| Ogun | ₦ 3,434,714,800 | ₦ 2,586,000,100 | ₦ 3,907,257,800 | ₦ 1,642,410,200 |
| Ondo | ₦ 716,222,900 | ₦ 1,690,422,800 | ₦ 4,362,933,800 | ₦ 977,876,300 |
| Plateau | ₦ 4,527,323,200 | ₦ 2,371,220,000 | ₦ 4,471,833,300 | ₦ 932,778,800 |
| Rivers | ₦ 2,423,028,900 | ₦ 4,860,226,800 | ₦ 4,148,808,900 | ₦ 859,719,700 |
| Taraba | ₦ 531,248,900 | ₦ 785,603,400 | ₦ 2,475,480,400 | ₦ 878,820,400 |
| Yobe | ₦ 2,187,894,400 | ₦ 2,500,320,500 | ₦ 3,487,311,100 | ₦ 829,030,800 |
| Zamfara | ₦ 4,767,284,200 | ₦ 1,622,967,600 | ₦ 4,309,006,600 | ₦ 1,308,237,500 |
| Total | ₦ 90,504,729,800 | ₦ 91,889,335,800 | ₦ 101,344,816,300 | ₦ 87,169,591,800 |

| May-14 | Jun-14 |
|-------------------|-------------------|
| ₦ 2,265,644,000 | ₦ 4,544,916,100 |
| ₦ 5,493,691,500 | ₦ 1,973,059,900 |
| ₦ 2,966,925,400 | ₦ 2,202,014,900 |
| ₦ 2,439,308,800 | ₦ 3,013,652,900 |
| ₦ 2,809,030,900 | ₦ 3,000,312,200 |
| ₦ 4,856,865,900 | ₦ 1,754,855,100 |
| ₦ 2,700,421,800 | ₦ 3,212,431,900 |
| ₦ 1,687,978,600 | ₦ 3,627,716,800 |
| ₦ 381,980,000 | ₦ 4,166,988,100 |
| ₦ 745,327,000 | ₦ 4,779,852,700 |
| ₦ 4,671,285,900 | ₦ 2,363,220,900 |
| ₦ 2,926,051,500 | ₦ 713,048,500 |
| ₦ 3,256,011,600 | ₦ 2,900,709,900 |
| ₦ 3,340,038,100 | ₦ 4,040,941,600 |
| ₦ 1,883,090,400 | ₦ 4,381,716,900 |
| ₦ 4,880,777,000 | ₦ 2,520,202,900 |
| ₦ 2,551,023,100 | ₦ 2,523,019,700 |
| ₦ 3,014,428,300 | ₦ 2,922,241,900 |
| ₦ 1,417,965,700 | ₦ 2,311,559,800 |
| ₦ 450,931,500 | ₦ 3,835,345,400 |
| ₦ 2,387,281,000 | ₦ 530,613,400 |
| ₦ 1,025,989,500 | ₦ 2,648,689,500 |
| ₦ 4,131,210,900 | ₦ 3,980,418,300 |
| ₦ 2,104,687,400 | ₦ 2,823,512,800 |
| ₦ 2,214,504,600 | ₦ 912,176,400 |
| ₦ 11,610,307,000 | ₦ 22,681,984,500 |
| ₦ 492,081,500 | ₦ 1,310,892,700 |
| ₦ 3,979,805,300 | ₦ 1,826,747,300 |
| ₦ 2,265,022,600 | ₦ 3,200,431,900 |
| ₦ 4,300,938,900 | ₦ 4,925,747,700 |
| ₦ 3,993,441,000 | ₦ 4,884,816,200 |
| ₦ 4,882,684,300 | ₦ 4,439,705,200 |
| ₦ 1,389,485,200 | ₦ 3,244,525,900 |
| ₦ 3,799,677,800 | ₦ 2,986,053,000 |
| ₦ 3,350,176,900 | ₦ 756,637,100 |
| ₦ 104,376,072,900 | ₦ 112,184,285,800 |

So how can you make Excel print this table on just one page?

Very Easy.

Go to Page Layout menu, and under the Scale to Fit section, set the Width and Height to 1 page.

Book1.xlsx - Excel

The screenshot shows the Microsoft Excel ribbon with the 'PAGE LAYOUT' tab selected. In the 'Themes' group, there is a 'Orientation' icon with a red arrow pointing to it. Below the ribbon, the formula bar shows 'K5'. The main area displays a table with data from January to June 2014 across 22 rows, representing different states. The table has columns for State, Jan-14, Feb-14, Mar-14, Apr-14, May-14, and Jun-14. The data is in Naira (₦) format.

| State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1 Abia | ₦ 1,297,498,300 | ₦ 821,123,500 | ₦ 1,175,454,800 | ₦ 967,327,400 | ₦ 2,265,644,000 | ₦ 4,544,916,100 |
| 2 Adamawa | ₦ 4,022,792,500 | ₦ 4,317,641,300 | ₦ 1,627,470,600 | ₦ 1,023,654,700 | ₦ 3,493,691,500 | ₦ 1,973,059,900 |
| 3 Akwa Ibom | ₦ 824,782,800 | ₦ 1,691,712,500 | ₦ 4,927,386,500 | ₦ 2,187,626,200 | ₦ 2,966,925,400 | ₦ 2,202,014,900 |
| 5 Anambra | ₦ 2,159,322,900 | ₦ 1,511,863,500 | ₦ 4,060,131,900 | ₦ 1,843,665,900 | ₦ 2,439,308,800 | ₦ 3,015,652,900 |
| 6 Bauchi | ₦ 764,748,600 | ₦ 3,059,451,100 | ₦ 2,879,985,600 | ₦ 3,032,115,500 | ₦ 2,609,030,900 | ₦ 3,000,312,200 |
| 7 Bayelsa | ₦ 1,218,646,400 | ₦ 2,035,499,300 | ₦ 3,596,177,500 | ₦ 3,958,333,500 | ₦ 4,856,865,900 | ₦ 1,754,855,100 |
| 8 Benue | ₦ 3,479,649,000 | ₦ 3,864,832,700 | ₦ 2,458,711,700 | ₦ 4,801,142,000 | ₦ 2,700,421,800 | ₦ 3,212,451,900 |
| 9 Benue | ₦ 602,469,700 | ₦ 1,387,315,500 | ₦ 4,501,134,600 | ₦ 2,728,902,800 | ₦ 1,687,978,600 | ₦ 3,627,716,800 |
| 10 Borno | ₦ 2,361,614,200 | ₦ 1,616,065,000 | ₦ 4,908,244,600 | ₦ 4,216,846,800 | ₦ 581,980,000 | ₦ 4,166,988,100 |
| 11 Cross River | ₦ 2,416,592,600 | ₦ 1,971,834,600 | ₦ 1,814,142,400 | ₦ 4,658,487,000 | ₦ 745,327,000 | ₦ 4,779,952,700 |
| 12 Delta | ₦ 4,755,914,300 | ₦ 2,382,209,500 | ₦ 3,361,514,600 | ₦ 2,060,298,000 | ₦ 4,671,269,900 | ₦ 2,363,220,900 |
| 13 Ebonyi | ₦ 3,547,140,000 | ₦ 3,233,069,500 | ₦ 4,883,253,900 | ₦ 1,060,164,800 | ₦ 2,926,053,500 | ₦ 713,048,500 |
| 14 Edo | ₦ 2,663,501,000 | ₦ 781,461,300 | ₦ 462,661,800 | ₦ 543,085,200 | ₦ 3,256,011,600 | ₦ 2,900,705,900 |
| 15 Ekiti | ₦ 1,816,087,900 | ₦ 4,128,943,600 | ₦ 1,512,170,300 | ₦ 2,592,908,100 | ₦ 3,340,038,100 | ₦ 4,040,341,600 |
| 16 Enugu | ₦ 1,409,979,200 | ₦ 2,609,372,800 | ₦ 1,990,646,300 | ₦ 3,219,650,200 | ₦ 1,893,090,400 | ₦ 4,581,716,900 |
| 17 FCT | ₦ 3,199,223,200 | ₦ 2,063,317,300 | ₦ 1,829,381,400 | ₦ 3,704,640,600 | ₦ 4,980,777,000 | ₦ 2,520,202,900 |
| 18 Gombe | ₦ 620,111,300 | ₦ 2,201,453,200 | ₦ 1,885,641,400 | ₦ 4,146,024,300 | ₦ 2,551,023,100 | ₦ 2,523,019,700 |
| 19 Imo | ₦ 2,591,742,600 | ₦ 2,521,764,800 | ₦ 2,013,994,900 | ₦ 4,994,515,700 | ₦ 3,014,428,300 | ₦ 2,922,241,900 |
| 20 Jigawa | ₦ 3,550,126,700 | ₦ 1,573,445,100 | ₦ 3,756,243,200 | ₦ 3,092,703,100 | ₦ 1,417,963,700 | ₦ 2,311,559,800 |
| 21 Kaduna | ₦ 3,938,598,800 | ₦ 2,599,773,900 | ₦ 1,224,849,400 | ₦ 1,662,248,400 | ₦ 450,931,500 | ₦ 3,835,345,400 |
| 22 Kano | ₦ 2,981,980,300 | ₦ 2,021,735,600 | ₦ 3,016,518,600 | ₦ 4,411,651,000 | ₦ 2,387,291,000 | ₦ 530,613,400 |

So let's see the result.

| Date | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
|-------------|----------------|-----------------|------------------|-----------------|-----------------|-----------------|
| Aba | ₦129,482,000 | ₦211,223,000 | ₦1,275,454,000 | ₦987,227,400 | ₦1,265,644,000 | ₦4,544,916,200 |
| Adamawa | ₦402,911,000 | ₦4,217,612,000 | ₦1,267,747,000 | ₦1,013,694,700 | ₦1,491,691,500 | ₦1,972,059,400 |
| Akwa Ibom | ₦12,479,400 | ₦1,051,713,000 | ₦4,307,246,000 | ₦1,187,656,000 | ₦1,268,945,400 | ₦4,202,014,400 |
| Anambra | ₦115,221,000 | ₦1,511,261,000 | ₦4,050,121,000 | ₦1,943,655,000 | ₦1,439,208,000 | ₦3,015,651,000 |
| Bauchi | ₦76,474,000 | ₦2,059,451,000 | ₦2,999,955,000 | ₦3,021,115,000 | ₦1,609,030,000 | ₦3,000,211,200 |
| Bayelsa | ₦128,564,000 | ₦1,255,499,000 | ₦2,561,777,000 | ₦1,258,223,500 | ₦4,255,261,000 | ₦1,754,451,200 |
| Benue | ₦145,569,000 | ₦3,054,821,700 | ₦1,458,711,700 | ₦4,801,142,000 | ₦2,703,421,000 | ₦3,211,451,800 |
| Enugu | ₦67,449,700 | ₦1,367,215,000 | ₦4,301,124,000 | ₦1,728,501,000 | ₦1,687,978,000 | ₦3,677,714,400 |
| Borno | ₦120,654,000 | ₦1,658,055,000 | ₦4,908,244,000 | ₦4,216,846,000 | ₦581,980,000 | ₦4,166,568,200 |
| Cross River | ₦141,561,000 | ₦1,971,245,000 | ₦1,841,411,000 | ₦4,658,487,000 | ₦743,227,000 | ₦4,779,251,700 |
| Delta | ₦475,304,000 | ₦2,307,209,500 | ₦3,261,514,000 | ₦2,080,298,000 | ₦4,671,126,000 | ₦3,268,220,400 |
| Ebonyi | ₦157,160,000 | ₦2,231,056,500 | ₦4,065,151,000 | ₦1,065,164,000 | ₦1,215,051,500 | ₦711,046,500 |
| Edo | ₦165,531,000 | ₦761,461,000 | ₦451,661,000 | ₦549,085,000 | ₦2,258,601,000 | ₦3,001,703,900 |
| Edo | ₦121,057,900 | ₦4,128,943,000 | ₦1,511,700,000 | ₦1,591,208,000 | ₦2,240,084,000 | ₦4,042,241,800 |
| Enugu | ₦145,979,200 | ₦2,859,273,000 | ₦1,965,546,000 | ₦2,119,650,000 | ₦1,693,090,400 | ₦3,561,718,900 |
| FCT | ₦110,221,200 | ₦1,053,217,300 | ₦1,259,291,400 | ₦1,704,840,000 | ₦4,980,777,000 | ₦1,510,201,900 |
| Gombe | ₦150,111,300 | ₦2,201,453,000 | ₦1,885,641,000 | ₦4,148,014,000 | ₦2,551,023,000 | ₦1,512,201,900 |
| Jigawa | ₦150,761,000 | ₦1,511,764,000 | ₦2,013,994,000 | ₦4,994,515,700 | ₦2,014,423,000 | ₦1,921,241,800 |
| Jigawa | ₦350,126,700 | ₦1,972,445,000 | ₦2,155,243,000 | ₦2,092,703,000 | ₦1,417,968,700 | ₦2,311,559,400 |
| Kaduna | ₦122,558,000 | ₦1,565,773,000 | ₦1,24,249,400 | ₦1,661,249,400 | ₦4,459,930,000 | ₦2,255,245,400 |
| Kano | ₦192,989,000 | ₦2,031,723,000 | ₦2,035,518,000 | ₦4,411,651,000 | ₦2,267,291,000 | ₦532,659,400 |
| Katsina | ₦158,411,000 | ₦1,261,298,700 | ₦634,277,000 | ₦2,969,711,000 | ₦1,015,999,500 | ₦1,646,659,500 |
| Kebbi | ₦159,273,500 | ₦4,760,201,000 | ₦991,721,500 | ₦4,297,704,000 | ₦4,131,210,900 | ₦2,992,418,200 |
| Kogi | ₦121,261,300 | ₦1,754,189,000 | ₦2,205,601,000 | ₦587,764,000 | ₦2,104,687,400 | ₦1,215,511,800 |
| Kosrae | ₦125,298,000 | ₦1,466,620,100 | ₦1,205,539,000 | ₦4,219,941,000 | ₦2,214,450,400 | ₦911,176,400 |
| Lagos | ₦120,473,000 | ₦729,181,000 | ₦6,211,686,500 | ₦2,251,179,500 | ₦11,612,200,000 | ₦2,681,998,500 |
| Nasarawa | ₦450,732,700 | ₦4,261,056,500 | ₦1,451,288,000 | ₦743,222,300 | ₦492,000,000 | ₦1,210,693,700 |
| Niger | ₦102,367,100 | ₦4,591,218,000 | ₦2,159,270,000 | ₦1,082,234,400 | ₦2,579,205,000 | ₦1,212,574,200 |
| Ogun | ₦249,744,900 | ₦3,986,000,100 | ₦2,907,557,000 | ₦1,642,410,000 | ₦2,265,021,600 | ₦2,200,451,800 |
| Ondo | ₦16,221,900 | ₦1,650,471,000 | ₦4,261,253,000 | ₦577,276,000 | ₦4,200,926,000 | ₦4,215,747,700 |
| Panasonic | ₦457,223,100 | ₦2,271,220,000 | ₦4,471,653,000 | ₦932,778,000 | ₦2,592,441,000 | ₦4,864,814,200 |
| Rivers | ₦142,038,000 | ₦4,265,256,000 | ₦4,148,209,000 | ₦255,719,700 | ₦4,281,684,000 | ₦4,459,701,200 |
| Taraba | ₦51,124,900 | ₦792,603,400 | ₦2,475,480,000 | ₦576,220,400 | ₦1,268,495,000 | ₦2,244,525,900 |
| Yobe | ₦117,364,400 | ₦1,203,210,500 | ₦2,467,511,000 | ₦529,030,000 | ₦2,799,671,000 | ₦1,986,051,000 |
| Zamfara | ₦475,284,200 | ₦1,621,267,600 | ₦4,329,006,800 | ₦1,203,227,500 | ₦2,250,176,900 | ₦756,627,100 |
| Total | ₦2,524,729,800 | ₦61,020,235,500 | ₦10,1244,816,200 | ₦27,169,591,200 | ₦10,276,071,200 | ₦11,194,265,800 |

Goal achieved! But it could have looked better if it had used more space, the space below. So we need to try out one more setting and see if it will give us a better result. We will set the Orientation to Landscape.

Book1.xlsx - Excel

| State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
|-------------|------------------|------------------|-------------------|------------------|-------------------|-------------------|
| Abia | ₦ 1,297,498,300 | ₦ 821,123,500 | ₦ 1,175,454,800 | ₦ 967,327,400 | ₦ 2,265,644,000 | ₦ 4,544,916,100 |
| Adamawa | ₦ 4,022,792,500 | ₦ 4,317,641,300 | ₦ 1,627,470,600 | ₦ 1,023,694,700 | ₦ 3,493,691,500 | ₦ 1,973,059,900 |
| Akwa Ibom | ₦ 824,782,800 | ₦ 1,691,712,500 | ₦ 4,927,386,500 | ₦ 2,187,626,200 | ₦ 2,966,925,400 | ₦ 2,202,014,900 |
| Anambra | ₦ 2,159,322,900 | ₦ 1,511,863,500 | ₦ 4,060,131,900 | ₦ 1,843,665,900 | ₦ 2,439,308,800 | ₦ 3,015,652,900 |
| Bauchi | ₦ 764,748,600 | ₦ 3,059,451,100 | ₦ 2,879,985,600 | ₦ 3,032,115,500 | ₦ 2,609,030,900 | ₦ 3,000,312,200 |
| Bayelsa | ₦ 1,218,646,400 | ₦ 2,035,499,300 | ₦ 3,596,177,500 | ₦ 3,958,333,500 | ₦ 4,856,865,900 | ₦ 1,754,855,100 |
| Benue | ₦ 3,479,649,000 | ₦ 3,864,832,700 | ₦ 2,458,711,700 | ₦ 4,801,142,000 | ₦ 2,700,421,800 | ₦ 3,212,451,900 |
| Benue | ₦ 602,469,700 | ₦ 1,387,315,500 | ₦ 4,501,134,600 | ₦ 2,728,902,800 | ₦ 1,687,978,600 | ₦ 3,627,716,800 |
| Borno | ₦ 2,361,614,200 | ₦ 1,616,065,000 | ₦ 4,908,244,600 | ₦ 4,216,846,800 | ₦ 581,980,000 | ₦ 4,166,988,100 |
| Cross River | ₦ 2,416,592,600 | ₦ 1,971,834,600 | ₦ 1,814,142,400 | ₦ 4,658,487,000 | ₦ 745,327,000 | ₦ 4,779,952,700 |
| Delta | ₦ 4,755,914,300 | ₦ 2,382,209,500 | ₦ 3,361,514,600 | ₦ 2,060,298,000 | ₦ 4,671,269,900 | ₦ 2,363,220,900 |
| Ebonyi | ₦ 3,547,140,000 | ₦ 3,233,069,500 | ₦ 4,883,253,900 | ₦ 1,060,164,800 | ₦ 2,926,053,500 | ₦ 713,048,500 |
| Edo | ₦ 2,663,501,000 | ₦ 781,461,300 | ₦ 462,661,800 | ₦ 543,085,200 | ₦ 3,256,011,600 | ₦ 2,900,705,900 |
| Ekiti | ₦ 1,816,087,900 | ₦ 4,128,943,600 | ₦ 1,512,170,300 | ₦ 2,592,908,100 | ₦ 3,340,038,100 | ₦ 4,040,341,600 |
| Enugu | ₦ 1,409,979,200 | ₦ 2,609,372,800 | ₦ 1,990,646,300 | ₦ 3,219,650,200 | ₦ 1,893,090,400 | ₦ 4,581,716,900 |
| FCT | ₦ 3,199,223,200 | ₦ 2,063,317,300 | ₦ 1,829,381,400 | ₦ 3,704,640,600 | ₦ 4,980,777,000 | ₦ 2,520,202,900 |
| Gombe | ₦ 620,111,300 | ₦ 2,201,453,200 | ₦ 1,885,641,400 | ₦ 4,146,024,300 | ₦ 2,551,023,100 | ₦ 2,523,019,700 |
| Imo | ₦ 2,591,742,600 | ₦ 2,521,764,800 | ₦ 2,013,994,900 | ₦ 4,994,515,700 | ₦ 3,014,428,300 | ₦ 2,922,241,900 |
| Jigawa | ₦ 3,550,126,700 | ₦ 1,573,445,100 | ₦ 3,756,243,200 | ₦ 3,092,703,100 | ₦ 1,417,963,700 | ₦ 2,311,559,800 |
| Kaduna | ₦ 3,938,598,800 | ₦ 2,599,773,900 | ₦ 1,224,849,400 | ₦ 1,662,248,400 | ₦ 450,931,500 | ₦ 3,835,345,400 |
| Kano | ₦ 2,981,980,300 | ₦ 2,021,735,600 | ₦ 3,016,518,600 | ₦ 4,411,651,000 | ₦ 2,387,291,000 | ₦ 530,613,400 |
| Total | ₦ 90,504,729,800 | ₦ 91,889,335,900 | ₦ 101,344,816,300 | ₦ 87,169,591,800 | ₦ 104,376,072,900 | ₦ 122,184,295,800 |

Let's view the result.

| State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
|-------------|------------------|------------------|-------------------|------------------|-------------------|-------------------|
| Abia | ₦ 1,297,498,300 | ₦ 821,123,500 | ₦ 1,175,454,800 | ₦ 967,327,400 | ₦ 2,265,644,000 | ₦ 4,544,916,100 |
| Adamawa | ₦ 4,022,792,500 | ₦ 4,317,641,300 | ₦ 1,627,470,600 | ₦ 1,023,694,700 | ₦ 3,493,691,500 | ₦ 1,973,059,900 |
| Akwa Ibom | ₦ 824,782,800 | ₦ 1,691,712,500 | ₦ 4,927,386,500 | ₦ 2,187,626,200 | ₦ 2,966,925,400 | ₦ 2,202,014,900 |
| Anambra | ₦ 2,159,322,900 | ₦ 1,511,863,500 | ₦ 4,060,131,900 | ₦ 1,843,665,900 | ₦ 2,439,308,800 | ₦ 3,015,652,900 |
| Bauchi | ₦ 764,748,600 | ₦ 3,059,451,100 | ₦ 2,879,985,600 | ₦ 3,032,115,500 | ₦ 2,609,030,900 | ₦ 3,000,312,200 |
| Bayelsa | ₦ 1,218,646,400 | ₦ 2,035,499,300 | ₦ 3,596,177,500 | ₦ 3,958,333,500 | ₦ 4,856,865,900 | ₦ 1,754,855,100 |
| Benue | ₦ 3,479,649,000 | ₦ 3,864,832,700 | ₦ 2,458,711,700 | ₦ 4,801,142,000 | ₦ 2,700,421,800 | ₦ 3,212,451,900 |
| Benue | ₦ 602,469,700 | ₦ 1,387,315,500 | ₦ 4,501,134,600 | ₦ 2,728,902,800 | ₦ 1,687,978,600 | ₦ 3,627,716,800 |
| Borno | ₦ 2,361,614,200 | ₦ 1,616,065,000 | ₦ 4,908,244,600 | ₦ 4,216,846,800 | ₦ 581,980,000 | ₦ 4,166,988,100 |
| Cross River | ₦ 2,416,592,600 | ₦ 1,971,834,600 | ₦ 1,814,142,400 | ₦ 4,658,487,000 | ₦ 745,327,000 | ₦ 4,779,952,700 |
| Delta | ₦ 4,755,914,300 | ₦ 2,382,209,500 | ₦ 3,361,514,600 | ₦ 2,060,298,000 | ₦ 4,671,269,900 | ₦ 2,363,220,900 |
| Ebonyi | ₦ 3,547,140,000 | ₦ 3,233,069,500 | ₦ 4,883,253,900 | ₦ 1,060,164,800 | ₦ 2,926,053,500 | ₦ 713,048,500 |
| Edo | ₦ 2,663,501,000 | ₦ 781,461,300 | ₦ 462,661,800 | ₦ 543,085,200 | ₦ 3,256,011,600 | ₦ 2,900,705,900 |
| Ekiti | ₦ 1,816,087,900 | ₦ 4,128,943,600 | ₦ 1,512,170,300 | ₦ 2,592,908,100 | ₦ 3,340,038,100 | ₦ 4,040,341,600 |
| Enugu | ₦ 1,409,979,200 | ₦ 2,609,372,800 | ₦ 1,990,646,300 | ₦ 3,219,650,200 | ₦ 1,893,090,400 | ₦ 4,581,716,900 |
| FCT | ₦ 3,199,223,200 | ₦ 2,063,317,300 | ₦ 1,829,381,400 | ₦ 3,704,640,600 | ₦ 4,980,777,000 | ₦ 2,520,202,900 |
| Gombe | ₦ 620,111,300 | ₦ 2,201,453,200 | ₦ 1,885,641,400 | ₦ 4,146,024,300 | ₦ 2,551,023,100 | ₦ 2,523,019,700 |
| Imo | ₦ 2,591,742,600 | ₦ 2,521,764,800 | ₦ 2,013,994,900 | ₦ 4,994,515,700 | ₦ 3,014,428,300 | ₦ 2,922,241,900 |
| Jigawa | ₦ 3,550,126,700 | ₦ 1,573,445,100 | ₦ 3,756,243,200 | ₦ 3,092,703,100 | ₦ 1,417,963,700 | ₦ 2,311,559,800 |
| Kaduna | ₦ 3,938,598,800 | ₦ 2,599,773,900 | ₦ 1,224,849,400 | ₦ 1,662,248,400 | ₦ 450,931,500 | ₦ 3,835,345,400 |
| Kano | ₦ 2,981,980,300 | ₦ 2,021,735,600 | ₦ 3,016,518,600 | ₦ 4,411,651,000 | ₦ 2,387,291,000 | ₦ 530,613,400 |
| Katsina | ₦ 3,589,421,500 | ₦ 1,293,838,700 | ₦ 638,877,500 | ₦ 2,969,721,400 | ₦ 1,025,989,500 | ₦ 2,648,689,500 |
| Kebbi | ₦ 1,684,273,500 | ₦ 4,790,302,900 | ₦ 991,721,500 | ₦ 4,897,014,100 | ₦ 4,131,210,900 | ₦ 3,990,418,100 |
| Kogi | ₦ 2,812,863,300 | ₦ 2,734,189,600 | ₦ 2,306,601,300 | ₦ 867,264,000 | ₦ 2,104,687,400 | ₦ 2,825,512,800 |
| Kwara | ₦ 3,915,338,600 | ₦ 1,496,839,100 | ₦ 1,305,529,900 | ₦ 4,919,941,300 | ₦ 2,214,504,600 | ₦ 912,176,400 |
| Lagos | ₦ 6,239,473,500 | ₦ 7,319,183,000 | ₦ 6,211,689,500 | ₦ 3,351,178,500 | ₦ 11,610,307,000 | ₦ 22,681,984,500 |
| Nasarawa | ₦ 450,752,700 | ₦ 4,852,095,900 | ₦ 1,411,839,200 | ₦ 743,233,200 | ₦ 492,081,500 | ₦ 1,310,892,700 |
| Niger | ₦ 3,002,987,100 | ₦ 4,592,318,900 | ₦ 5,219,870,900 | ₦ 1,086,354,400 | ₦ 3,979,805,500 | ₦ 1,826,747,500 |
| Ogun | ₦ 3,434,714,900 | ₦ 2,586,000,100 | ₦ 5,907,557,600 | ₦ 1,642,410,200 | ₦ 2,265,022,600 | ₦ 3,200,451,900 |
| Ondo | ₦ 716,222,900 | ₦ 1,690,421,800 | ₦ 4,362,953,800 | ₦ 977,876,300 | ₦ 4,300,936,900 | ₦ 4,925,747,700 |
| Plateau | ₦ 4,527,523,100 | ₦ 2,371,220,000 | ₦ 4,471,653,300 | ₦ 952,778,800 | ₦ 3,593,441,000 | ₦ 4,894,816,200 |
| Rivers | ₦ 1,423,028,900 | ₦ 4,860,256,800 | ₦ 4,148,803,900 | ₦ 859,719,700 | ₦ 4,882,684,500 | ₦ 4,459,705,200 |
| Taraba | ₦ 531,248,900 | ₦ 785,603,400 | ₦ 2,475,480,400 | ₦ 878,820,400 | ₦ 1,389,495,200 | ₦ 3,244,525,900 |
| Yobe | ₦ 2,187,894,400 | ₦ 2,500,320,500 | ₦ 5,497,511,100 | ₦ 829,050,800 | ₦ 3,799,677,800 | ₦ 2,986,053,000 |
| Zamfara | ₦ 4,767,284,200 | ₦ 1,621,967,600 | ₦ 4,509,006,600 | ₦ 1,308,237,500 | ₦ 3,350,176,900 | ₦ 756,657,100 |
| Total | ₦ 90,504,729,800 | ₦ 91,889,335,900 | ₦ 101,344,816,300 | ₦ 87,169,591,800 | ₦ 104,376,072,900 | ₦ 122,184,295,800 |

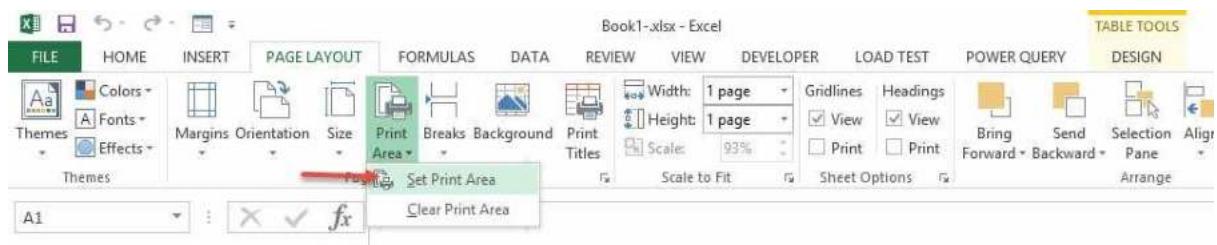
Bravo! This is much better!

What if the boss wanted just January to May data and not the entire table?

Also very easy.

Highlight the table from the beginning up to May, leaving out June. So we are highlighting just what we want to print.

Under same Page Layout, Click on Print Area, and select Set Print Area.



The screenshot shows the Microsoft Excel ribbon with the 'PAGE LAYOUT' tab selected. In the 'Print' section of the ribbon, the 'Print Area' dropdown is open, and the option 'Set Print Area' is highlighted with a red arrow. Below the ribbon, a portion of a table is visible, spanning columns A through F. The table has a header row and several data rows. The data starts in column A and ends in column F, which corresponds to the 'May-14' column in the table headers. The 'Print Area' dropdown also includes options like 'Width: 1 page', 'Height: 1 page', and 'Scale: 93%'. The status bar at the bottom right shows the number '4'.

| State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Abia | ₦ 1,297,498,300 | ₦ 821,123,500 | ₦ 1,175,454,800 | ₦ 967,327,400 | ₦ 2,265,694,000 | ₦ 4,544,916,100 |
| Adamawa | ₦ 4,022,792,500 | ₦ 4,317,641,300 | ₦ 1,627,470,600 | ₦ 1,023,694,700 | ₦ 3,493,691,500 | ₦ 1,973,059,900 |
| Akwa Ibom | ₦ 824,782,800 | ₦ 1,691,712,500 | ₦ 4,927,386,500 | ₦ 2,187,626,200 | ₦ 2,966,925,400 | ₦ 2,202,014,900 |
| Anambra | ₦ 2,159,322,900 | ₦ 1,511,863,500 | ₦ 4,060,131,900 | ₦ 1,843,665,900 | ₦ 2,439,308,800 | ₦ 3,015,652,900 |
| Bauchi | ₦ 764,748,600 | ₦ 3,059,451,100 | ₦ 2,879,985,600 | ₦ 3,032,115,500 | ₦ 2,609,030,900 | ₦ 3,000,312,200 |
| Bayelsa | ₦ 1,218,646,400 | ₦ 2,035,499,300 | ₦ 3,596,177,500 | ₦ 3,958,333,500 | ₦ 4,856,865,900 | ₦ 1,754,855,100 |
| Benue | ₦ 3,479,649,000 | ₦ 3,864,832,700 | ₦ 2,458,711,700 | ₦ 4,801,142,000 | ₦ 2,700,421,800 | ₦ 3,212,451,900 |
| Benue | ₦ 602,469,700 | ₦ 1,387,315,500 | ₦ 4,501,134,600 | ₦ 2,728,902,800 | ₦ 1,687,978,600 | ₦ 3,627,716,800 |
| Borno | ₦ 2,361,614,200 | ₦ 1,616,065,000 | ₦ 4,908,244,600 | ₦ 4,216,846,800 | ₦ 581,980,000 | ₦ 4,166,988,100 |
| Cross River | ₦ 2,416,592,600 | ₦ 1,971,834,600 | ₦ 1,814,142,400 | ₦ 4,658,487,000 | ₦ 745,327,000 | ₦ 4,779,952,700 |
| Delta | ₦ 4,755,914,300 | ₦ 2,382,209,500 | ₦ 3,361,514,600 | ₦ 2,060,298,000 | ₦ 4,671,269,900 | ₦ 2,363,220,900 |
| Ebonyi | ₦ 3,547,140,000 | ₦ 3,233,069,500 | ₦ 4,883,253,900 | ₦ 1,060,164,800 | ₦ 2,926,053,500 | ₦ 713,048,500 |
| Edo | ₦ 2,663,501,000 | ₦ 781,461,300 | ₦ 462,661,800 | ₦ 543,085,200 | ₦ 3,256,011,600 | ₦ 2,900,705,900 |
| Ekiti | ₦ 1,816,087,900 | ₦ 4,128,943,600 | ₦ 1,512,170,300 | ₦ 2,592,908,100 | ₦ 3,340,038,100 | ₦ 4,040,341,600 |
| Enugu | ₦ 1,409,979,200 | ₦ 2,609,372,800 | ₦ 1,990,646,300 | ₦ 3,219,650,200 | ₦ 1,893,090,400 | ₦ 4,581,716,900 |
| FCT | ₦ 3,199,223,200 | ₦ 2,063,317,300 | ₦ 1,829,381,400 | ₦ 3,704,640,600 | ₦ 4,980,777,000 | ₦ 2,520,202,900 |
| Gombe | ₦ 620,111,300 | ₦ 2,201,453,200 | ₦ 1,885,641,400 | ₦ 4,146,024,300 | ₦ 2,551,023,100 | ₦ 2,523,019,700 |
| Imo | ₦ 2,591,742,600 | ₦ 2,521,764,800 | ₦ 2,013,994,900 | ₦ 4,994,515,700 | ₦ 3,014,428,300 | ₦ 2,922,241,900 |
| Jigawa | ₦ 3,550,126,700 | ₦ 1,573,445,100 | ₦ 3,756,243,200 | ₦ 3,092,703,100 | ₦ 1,417,963,700 | ₦ 2,311,559,800 |
| Kaduna | ₦ 3,938,598,800 | ₦ 2,599,773,900 | ₦ 1,224,849,400 | ₦ 1,662,248,400 | ₦ 450,931,500 | ₦ 3,835,345,400 |
| Kano | ₦ 2,981,980,300 | ₦ 2,021,735,600 | ₦ 3,016,518,600 | ₦ 4,411,651,000 | ₦ 2,387,291,000 | ₦ 530,613,400 |
| Katsina | ₦ 2,590,421,500 | ₦ 1,323,020,300 | ₦ 1,620,073,300 | ₦ 1,060,721,100 | ₦ 1,015,000,500 | ₦ 2,540,600,500 |

And that's it! So let's see the result.

| State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 |
|-------------|------------------|------------------|-------------------|------------------|-------------------|
| Abia | ₦ 1,297,486,300 | ₦ 821,123,500 | ₦ 1,175,454,800 | ₦ 967,327,400 | ₦ 2,265,644,000 |
| Adamawa | ₦ 4,022,792,500 | ₦ 1,627,641,300 | ₦ 4,927,386,500 | ₦ 2,187,626,200 | ₦ 2,966,925,400 |
| Akwa Ibom | ₦ 324,782,800 | ₦ 1,681,712,500 | ₦ 4,060,131,900 | ₦ 1,843,665,900 | ₦ 2,439,308,800 |
| Anambra | ₦ 2,159,322,900 | ₦ 1,511,863,500 | ₦ 2,879,985,600 | ₦ 3,082,115,900 | ₦ 2,609,030,900 |
| Bauchi | ₦ 764,748,600 | ₦ 3,059,451,100 | ₦ 3,596,177,500 | ₦ 3,958,333,900 | ₦ 4,856,865,900 |
| Bayelsa | ₦ 1,218,646,400 | ₦ 2,085,499,300 | ₦ 3,233,068,900 | ₦ 1,060,164,800 | ₦ 2,926,055,500 |
| Benue | ₦ 3,479,649,000 | ₦ 3,864,832,700 | ₦ 2,458,711,700 | ₦ 4,801,142,000 | ₦ 2,700,421,800 |
| Benue | ₦ 602,469,700 | ₦ 1,387,315,500 | ₦ 4,501,134,600 | ₦ 2,728,902,800 | ₦ 1,687,978,600 |
| Borno | ₦ 2,361,614,200 | ₦ 1,616,065,000 | ₦ 4,908,244,600 | ₦ 4,216,846,800 | ₦ 581,980,000 |
| Cross River | ₦ 2,416,592,600 | ₦ 1,971,834,600 | ₦ 1,814,142,400 | ₦ 4,658,487,000 | ₦ 745,327,000 |
| Delta | ₦ 4,755,914,300 | ₦ 2,382,209,300 | ₦ 3,361,514,600 | ₦ 2,060,298,000 | ₦ 4,671,126,900 |
| Ebonyi | ₦ 3,547,140,000 | ₦ 3,233,068,900 | ₦ 4,883,253,900 | ₦ 1,060,164,800 | ₦ 2,926,055,500 |
| Edo | ₦ 2,665,501,000 | ₦ 781,461,300 | ₦ 462,361,800 | ₦ 543,085,200 | ₦ 3,256,011,600 |
| Ekiti | ₦ 1,816,087,900 | ₦ 4,128,943,600 | ₦ 1,512,170,300 | ₦ 2,392,908,100 | ₦ 3,340,038,100 |
| Enugu | ₦ 1,406,979,200 | ₦ 2,609,372,800 | ₦ 1,990,646,300 | ₦ 3,219,650,200 | ₦ 1,893,090,400 |
| FCT | ₦ 5,199,223,200 | ₦ 2,063,317,300 | ₦ 1,829,381,400 | ₦ 3,704,640,600 | ₦ 4,980,777,000 |
| Gombe | ₦ 620,111,300 | ₦ 2,201,453,200 | ₦ 1,885,641,400 | ₦ 4,146,024,300 | ₦ 2,551,023,100 |
| Imo | ₦ 2,591,742,600 | ₦ 2,521,764,800 | ₦ 2,013,994,900 | ₦ 4,964,515,700 | ₦ 3,014,428,300 |
| Jigawa | ₦ 3,350,126,700 | ₦ 1,573,445,100 | ₦ 3,756,243,200 | ₦ 3,092,703,100 | ₦ 1,417,965,700 |
| Kaduna | ₦ 3,938,598,800 | ₦ 2,599,773,900 | ₦ 1,224,849,400 | ₦ 1,662,248,400 | ₦ 450,931,500 |
| Kano | ₦ 2,981,980,300 | ₦ 2,021,735,600 | ₦ 3,016,518,600 | ₦ 4,411,651,000 | ₦ 2,387,296,000 |
| Katsina | ₦ 3,589,421,500 | ₦ 1,293,838,700 | ₦ 638,877,300 | ₦ 2,969,721,400 | ₦ 1,025,989,500 |
| Kebbi | ₦ 1,684,273,500 | ₦ 4,790,202,900 | ₦ 991,721,500 | ₦ 4,897,014,100 | ₦ 4,131,210,900 |
| Kogi | ₦ 2,812,863,300 | ₦ 2,734,189,600 | ₦ 2,306,601,300 | ₦ 867,264,000 | ₦ 2,104,687,400 |
| Kwara | ₦ 3,915,338,600 | ₦ 1,486,830,100 | ₦ 1,305,529,900 | ₦ 4,919,941,300 | ₦ 2,214,504,600 |
| Lagos | ₦ 6,239,473,500 | ₦ 7,319,183,000 | ₦ 6,211,689,500 | ₦ 3,351,178,500 | ₦ 11,616,307,000 |
| Nasarawa | ₦ 450,732,700 | ₦ 4,852,095,900 | ₦ 1,411,888,200 | ₦ 743,233,200 | ₦ 492,081,500 |
| Niger | ₦ 3,002,387,100 | ₦ 4,592,318,900 | ₦ 3,218,870,900 | ₦ 1,086,334,400 | ₦ 3,978,805,300 |
| Ogun | ₦ 3,434,714,900 | ₦ 2,585,000,100 | ₦ 5,907,357,600 | ₦ 1,642,410,200 | ₦ 2,265,022,600 |
| Ondo | ₦ 716,222,900 | ₦ 1,690,422,800 | ₦ 4,362,953,800 | ₦ 977,876,300 | ₦ 4,300,936,900 |
| Plateau | ₦ 4,527,323,100 | ₦ 2,371,220,000 | ₦ 4,471,653,300 | ₦ 932,778,800 | ₦ 3,593,441,000 |
| Rivers | ₦ 2,423,028,900 | ₦ 4,860,256,800 | ₦ 4,148,808,900 | ₦ 859,719,700 | ₦ 4,882,684,300 |
| Taraba | ₦ 531,248,900 | ₦ 785,603,400 | ₦ 2,475,480,400 | ₦ 878,820,400 | ₦ 1,389,495,200 |
| Yobe | ₦ 2,187,894,400 | ₦ 2,500,320,500 | ₦ 3,497,511,100 | ₦ 829,030,800 | ₦ 3,799,677,800 |
| Zamfara | ₦ 4,767,284,200 | ₦ 1,622,987,600 | ₦ 4,509,006,600 | ₦ 1,308,237,500 | ₦ 3,350,176,900 |
| Total | ₦ 90,504,729,800 | ₦ 91,889,335,900 | ₦ 101,344,816,300 | ₦ 87,169,591,800 | ₦ 104,376,072,900 |

There we have it, no June data included!

One more big tip.

What if you have a big table that will print onto many pages but you want the header to repeat on the first row of every page?

Below is a sample.

| S/N | Pizza Sold | Price | Quantity | Amount Sold | Time |
|-----|---------------------|-----------|----------|-------------|------------|
| 1 | Meatza | #2,000.00 | 5 | #10,000.00 | 8:00:01 AM |
| 2 | Extravaganza | #2,000.00 | 4 | #8,000.00 | 8:00:02 AM |
| 3 | BBQ Chicken | #4,000.00 | 3 | #12,000.00 | 8:00:04 AM |
| 4 | Extravaganza | #2,000.00 | 1 | #2,000.00 | 8:00:07 AM |
| 5 | Meatza | #2,000.00 | 4 | #8,000.00 | 8:00:08 AM |
| 6 | Hot Veggie | #4,000.00 | 2 | #8,000.00 | 8:00:14 AM |
| 7 | BBQ Philly Steak | #4,000.00 | 3 | #12,000.00 | 8:00:20 AM |
| 8 | Chicken Feast | #2,000.00 | 1 | #2,000.00 | 8:00:20 AM |
| 9 | Meatza | #2,000.00 | 3 | #6,000.00 | 8:00:22 AM |
| 10 | Chicken Suya | #4,000.00 | 5 | #20,000.00 | 8:00:25 AM |
| 11 | Chicken Legend | #2,000.00 | 3 | #10,000.00 | 8:00:28 AM |
| 12 | BBQ Philly Steak | #4,000.00 | 4 | #16,000.00 | 8:00:27 AM |
| 13 | Chicken Suya | #4,000.00 | 2 | #8,000.00 | 8:00:29 AM |
| 14 | Chicken Feast | #2,000.00 | 3 | #10,000.00 | 8:00:33 AM |
| 15 | Chicken Feast | #2,000.00 | 4 | #8,000.00 | 8:00:33 AM |
| 16 | Beef Suya | #3,000.00 | 5 | #15,000.00 | 8:00:34 AM |
| 17 | Chicken Feast | #2,000.00 | 3 | #10,000.00 | 8:00:35 AM |
| 18 | Hot Veggie | #4,000.00 | 3 | #12,000.00 | 8:00:39 AM |
| 19 | Meatza | #2,000.00 | 3 | #10,000.00 | 8:00:39 AM |
| 20 | Meatza | #2,000.00 | 2 | #4,000.00 | 8:00:39 AM |
| 21 | Margarita | #4,000.00 | 3 | #12,000.00 | 8:00:37 AM |
| 22 | Italiano | #3,000.00 | 3 | #15,000.00 | 8:00:40 AM |
| 23 | Hot Veggie | #4,000.00 | 2 | #8,000.00 | 8:00:42 AM |
| 24 | Pepperoni Suya | #3,000.00 | 3 | #9,000.00 | 8:00:43 AM |
| 25 | Veggie Supreme | #3,000.00 | 5 | #15,000.00 | 8:00:48 AM |
| 26 | Hot Pepperoni Feast | #4,000.00 | 3 | #12,000.00 | 8:00:49 AM |
| 27 | Chicken Legend | #2,000.00 | 4 | #8,000.00 | 8:00:49 AM |
| 28 | BBQ Philly Steak | #4,000.00 | 1 | #4,000.00 | 8:00:52 AM |
| 29 | Hot Pepperoni Feast | #4,000.00 | 2 | #8,000.00 | 8:00:56 AM |
| 30 | Chicken Balli | #2,000.00 | 4 | #8,000.00 | 8:00:56 AM |
| 31 | Chicken Feast | #2,000.00 | 3 | #6,000.00 | 8:00:57 AM |
| 32 | Veggie Supreme | #3,000.00 | 2 | #6,000.00 | 8:00:57 AM |
| 33 | Extravaganza | #2,000.00 | 4 | #8,000.00 | 8:01:00 AM |
| 34 | Pepperoni Suya | #3,000.00 | 4 | #12,000.00 | 8:01:01 AM |
| 35 | Veggie Supreme | #3,000.00 | 2 | #6,000.00 | 8:01:02 AM |
| 36 | Extravaganza | #2,000.00 | 2 | #4,000.00 | 8:01:08 AM |
| 37 | Italiano | #3,000.00 | 2 | #6,000.00 | 8:01:14 AM |
| 38 | BBQ Philly Steak | #4,000.00 | 2 | #8,000.00 | 8:01:15 AM |
| 39 | Pepperoni Feast | #4,000.00 | 5 | #20,000.00 | 8:01:16 AM |
| 40 | Chicken Balli | #2,000.00 | 4 | #8,000.00 | 8:01:17 AM |
| 41 | Pepperoni Suya | #3,000.00 | 2 | #6,000.00 | 8:01:18 AM |
| 42 | BBQ Philly Steak | #4,000.00 | 3 | #12,000.00 | 8:01:20 AM |
| 43 | Chicken Balli | #2,000.00 | 3 | #6,000.00 | 8:01:21 AM |
| 44 | Italiano | #3,000.00 | 3 | #15,000.00 | 8:01:22 AM |
| 45 | BBQ Philly Steak | #4,000.00 | 4 | #16,000.00 | 8:01:26 AM |
| 46 | Hot Pepperoni Feast | #4,000.00 | 3 | #12,000.00 | 8:01:28 AM |

| | | | | | |
|----|------------------|-----------|---|------------|-----------|
| 47 | Chicken Legend | #2,000.00 | 2 | #4,000.00 | 8:01:31AM |
| 48 | Chicken Ball | #2,000.00 | 2 | #4,000.00 | 8:01:32AM |
| 49 | BBQ Philly Steak | #4,000.00 | 1 | #4,000.00 | 8:01:34AM |
| 50 | BBQ Chicken | #4,000.00 | 4 | #16,000.00 | 8:01:34AM |
| 51 | Pepperoni Feast | #4,000.00 | 4 | #16,000.00 | 8:01:35AM |
| 52 | BBQ Philly Steak | #4,000.00 | 1 | #4,000.00 | 8:01:36AM |
| 53 | BBQ Philly Steak | #4,000.00 | 4 | #16,000.00 | 8:01:36AM |
| 54 | Pepperoni Suya | #3,000.00 | 2 | #6,000.00 | 8:01:37AM |
| 55 | Veggie Supreme | #3,000.00 | 5 | #15,000.00 | 8:01:37AM |
| 56 | Chicken Suya | #4,000.00 | 3 | #20,000.00 | 8:01:39AM |
| 57 | Margarita | #4,000.00 | 4 | #16,000.00 | 8:01:43AM |
| 58 | Chicken Ball | #2,000.00 | 5 | #10,000.00 | 8:01:44AM |
| 59 | Meatzaa | #2,000.00 | 5 | #10,000.00 | 8:01:44AM |
| 60 | BBQ Philly Steak | #4,000.00 | 3 | #12,000.00 | 8:01:46AM |
| 61 | Pepperoni Suya | #3,000.00 | 3 | #15,000.00 | 8:01:48AM |
| 62 | Chicken Feast | #2,000.00 | 5 | #10,000.00 | 8:01:49AM |
| 63 | Chicken Feast | #2,000.00 | 4 | #8,000.00 | 8:01:52AM |
| 64 | Chicken Suya | #4,000.00 | 2 | #8,000.00 | 8:01:54AM |
| 65 | Chicken Legend | #2,000.00 | 3 | #6,000.00 | 8:01:55AM |
| 66 | Chicken Feast | #2,000.00 | 4 | #8,000.00 | 8:01:56AM |
| 67 | Chicken Ball | #2,000.00 | 1 | #2,000.00 | 8:02:03AM |
| 68 | Pepperoni Suya | #3,000.00 | 1 | #3,000.00 | 8:02:03AM |
| 69 | Pepperoni Feast | #4,000.00 | 3 | #12,000.00 | 8:02:04AM |
| 70 | Beef Suya | #3,000.00 | 3 | #9,000.00 | 8:02:05AM |
| 71 | BBQ Chicken | #4,000.00 | 1 | #4,000.00 | 8:02:06AM |
| 72 | Pepperoni Feast | #4,000.00 | 3 | #12,000.00 | 8:02:10AM |
| 73 | Pepperoni Feast | #4,000.00 | 5 | #20,000.00 | 8:02:13AM |
| 74 | BBQ Chicken | #4,000.00 | 2 | #8,000.00 | 8:02:13AM |
| 75 | Extravaganza | #2,000.00 | 5 | #10,000.00 | 8:02:18AM |
| 76 | Chicken Legend | #2,000.00 | 1 | #2,000.00 | 8:02:18AM |
| 77 | Pepperoni Suya | #3,000.00 | 2 | #6,000.00 | 8:02:22AM |
| 78 | Hot Veggie | #4,000.00 | 2 | #8,000.00 | 8:02:22AM |
| 79 | Extravaganza | #2,000.00 | 3 | #6,000.00 | 8:02:30AM |
| 80 | Chicken Suya | #4,000.00 | 3 | #12,000.00 | 8:02:31AM |
| 81 | Pepperoni Feast | #4,000.00 | 3 | #20,000.00 | 8:02:35AM |
| 82 | Pepperoni Feast | #4,000.00 | 3 | #12,000.00 | 8:02:36AM |
| 83 | BBQ Chicken | #4,000.00 | 3 | #12,000.00 | 8:02:37AM |
| 84 | BBQ Philly Steak | #4,000.00 | 4 | #16,000.00 | 8:02:38AM |
| 85 | Hot Veggie | #4,000.00 | 3 | #20,000.00 | 8:02:38AM |
| 86 | Chicken Ball | #2,000.00 | 1 | #2,000.00 | 8:02:42AM |
| 87 | Beef Suya | #3,000.00 | 2 | #6,000.00 | 8:02:44AM |
| 88 | BBQ Philly Steak | #4,000.00 | 2 | #8,000.00 | 8:02:46AM |
| 89 | Veggie Supreme | #3,000.00 | 4 | #12,000.00 | 8:02:47AM |
| 90 | Chicken Suya | #4,000.00 | 1 | #4,000.00 | 8:02:47AM |
| 91 | BBQ Chicken | #4,000.00 | 3 | #20,000.00 | 8:02:49AM |
| 92 | BBQ Philly Steak | #4,000.00 | 4 | #16,000.00 | 8:02:50AM |
| 93 | Meatzaa | #2,000.00 | 5 | #10,000.00 | 8:02:50AM |

Notice that the page two has no header to help you identify what the fields are.

So here's how to fix that.

Still at Page Layout menu, click on the small icon at the bottom right corner of the Sheet Options section.

Pivot table, Pivot Chart and PowerPivot.xlsx - Excel

FILE **HOME** **INSERT** **PAGE LAYOUT** **FORMULAS** **DATA** **REVIEW** **VIEW** **DEVELOPER** **LOAD TEST** **POWER**

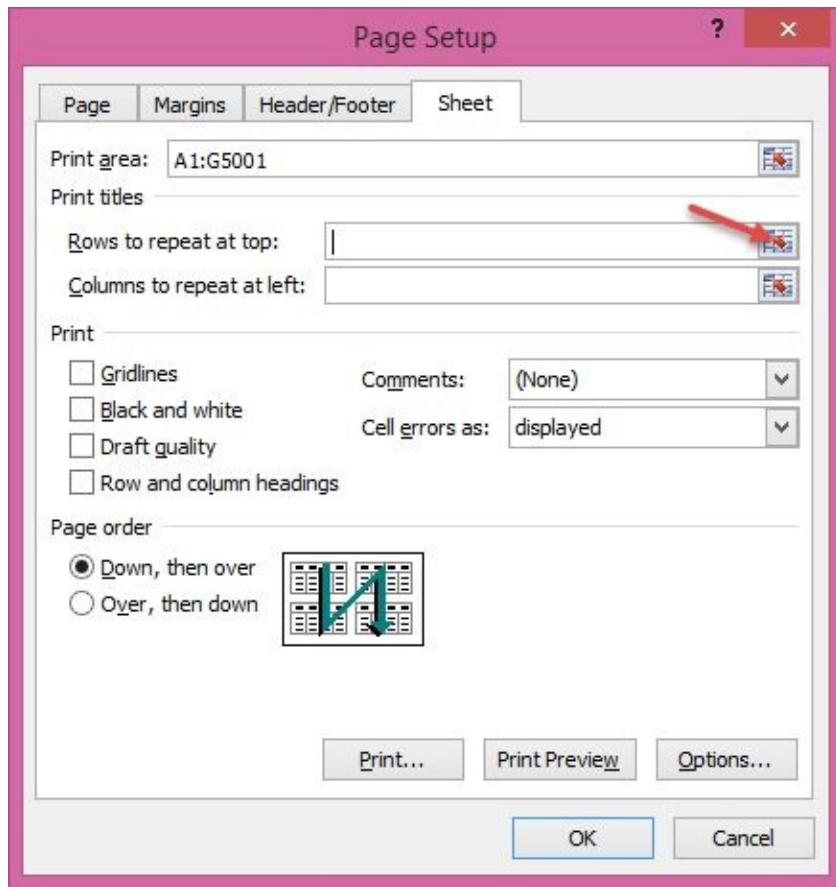
Themes **Colors** **Fonts** **Effects** **Margins** **Orientation** **Size** **Print** **Breaks** **Background** **Print Titles** **Width: Automatic** **Height: Automatic** **Scale: 100%**

Gridlines **Headings** **View** **Print** **Bring Forward**

Sheet Options

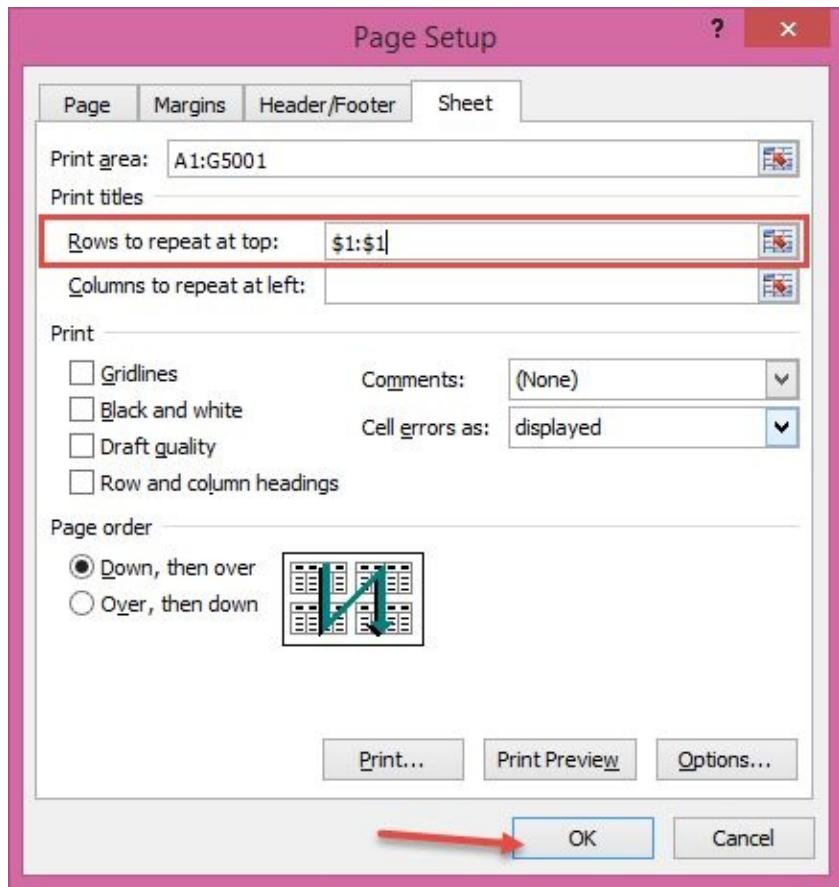
| | A | B | C | D | E | F | G | H |
|----|-----|------------------|------------|----------|-------------|------------|---------------|---|
| 1 | S/N | Pizza Sold | Price | Quantity | Amount Sold | Time | Time Range | |
| 2 | 1 | Meatzaa | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:01 AM | Before 9:00am | |
| 3 | 2 | Extravaganza | ₦ 2,000.00 | 4 | ₦ 8,000.00 | 8:00:02 AM | Before 9:00am | |
| 4 | 3 | BBQ Chicken | ₦ 4,000.00 | 5 | ₦ 20,000.00 | 8:00:04 AM | Before 9:00am | |
| 5 | 4 | Extravaganza | ₦ 2,000.00 | 1 | ₦ 2,000.00 | 8:00:07 AM | Before 9:00am | |
| 6 | 5 | Meatzaa | ₦ 2,000.00 | 4 | ₦ 8,000.00 | 8:00:08 AM | Before 9:00am | |
| 7 | 6 | Hot Veggie | ₦ 4,000.00 | 2 | ₦ 8,000.00 | 8:00:14 AM | Before 9:00am | |
| 8 | 7 | BBQ Philly Steak | ₦ 4,000.00 | 5 | ₦ 20,000.00 | 8:00:20 AM | Before 9:00am | |
| 9 | 8 | Chicken Feast | ₦ 2,000.00 | 1 | ₦ 2,000.00 | 8:00:20 AM | Before 9:00am | |
| 10 | 9 | Meatzaa | ₦ 2,000.00 | 3 | ₦ 6,000.00 | 8:00:22 AM | Before 9:00am | |
| 11 | 10 | Chicken Suya | ₦ 4,000.00 | 5 | ₦ 20,000.00 | 8:00:25 AM | Before 9:00am | |
| 12 | 11 | Chicken Legend | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:26 AM | Before 9:00am | |
| 13 | 12 | BBQ Philly Steak | ₦ 4,000.00 | 4 | ₦ 16,000.00 | 8:00:27 AM | Before 9:00am | |
| 14 | 13 | Chicken Suya | ₦ 4,000.00 | 2 | ₦ 8,000.00 | 8:00:29 AM | Before 9:00am | |
| 15 | 14 | Chicken Feast | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:33 AM | Before 9:00am | |
| 16 | 15 | Chicken Feast | ₦ 2,000.00 | 4 | ₦ 8,000.00 | 8:00:33 AM | Before 9:00am | |
| 17 | 16 | Beef Suya | ₦ 3,000.00 | 5 | ₦ 15,000.00 | 8:00:34 AM | Before 9:00am | |
| 18 | 17 | Chicken Feast | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:35 AM | Before 9:00am | |
| 19 | 18 | Hot Veggie | ₦ 4,000.00 | 5 | ₦ 20,000.00 | 8:00:35 AM | Before 9:00am | |
| 20 | 19 | Meatzaa | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:35 AM | Before 9:00am | |
| 21 | 20 | Meatzaa | ₦ 2,000.00 | 2 | ₦ 4,000.00 | 8:00:36 AM | Before 9:00am | |
| 22 | 21 | Margarita | ₦ 4,000.00 | 3 | ₦ 12,000.00 | 8:00:37 AM | Before 9:00am | |
| | | Total | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:40 AM | Before 9:00am | |

In the dialog box that comes up, set the **Rows to repeat at top**



Select Row 1 that has the headers.

| S/N | Pizza Sold | Price | Quantity | Amount Sold | Time | Time Range |
|-----|------------------|------------|----------|-------------|------------|--------------|
| 1 | Meatzaa | | | | | |
| 2 | Extravaganza | | | | | |
| 3 | BBQ Chicken | | | | | |
| 4 | Extravaganza | ₦ 2,000.00 | 1 | ₦ 2,000.00 | 8:00:07 AM | After 9:00am |
| 5 | Meatzaa | ₦ 2,000.00 | 4 | ₦ 8,000.00 | 8:00:08 AM | After 9:00am |
| 6 | Hot Veggie | ₦ 4,000.00 | 2 | ₦ 8,000.00 | 8:00:14 AM | After 9:00am |
| 7 | BBQ Philly Steak | ₦ 4,000.00 | 5 | ₦ 20,000.00 | 8:00:20 AM | After 9:00am |
| 8 | Chicken Feast | ₦ 2,000.00 | 1 | ₦ 2,000.00 | 8:00:20 AM | After 9:00am |
| 9 | Meatzaa | ₦ 2,000.00 | 3 | ₦ 6,000.00 | 8:00:22 AM | After 9:00am |



And that is all!

So let's see the result.

| S/N | Pizza Sold | Price | Quantity | Amount Sold | Time |
|-----|---------------------|------------|----------|-------------|------------|
| 1 | Meatzaa | # 2,000.00 | 5 | # 10,000.00 | 8:00:01 AM |
| 2 | Extravaganza | # 2,000.00 | 4 | # 8,000.00 | 8:00:02 AM |
| 3 | BBQ.Chicken | # 4,000.00 | 5 | # 20,000.00 | 8:00:04 AM |
| 4 | Extravaganza | # 2,000.00 | 1 | # 2,000.00 | 8:00:07 AM |
| 5 | Meatzaa | # 2,000.00 | 4 | # 8,000.00 | 8:00:08 AM |
| 6 | Hot Veggie | # 4,000.00 | 2 | # 8,000.00 | 8:00:14 AM |
| 7 | BBQ.Philly Steak | # 4,000.00 | 5 | # 20,000.00 | 8:00:20 AM |
| 8 | Chicken Feast | # 2,000.00 | 1 | # 2,000.00 | 8:00:20 AM |
| 9 | Meatzaa | # 2,000.00 | 3 | # 6,000.00 | 8:00:22 AM |
| 10 | Chicken Suya | # 4,000.00 | 5 | # 20,000.00 | 8:00:25 AM |
| 11 | Chicken Legend | # 2,000.00 | 5 | # 10,000.00 | 8:00:26 AM |
| 12 | BBQ.Philly Steak | # 4,000.00 | 4 | # 16,000.00 | 8:00:27 AM |
| 13 | Chicken Suya | # 4,000.00 | 2 | # 8,000.00 | 8:00:29 AM |
| 14 | Chicken Feast | # 2,000.00 | 5 | # 10,000.00 | 8:00:33 AM |
| 15 | Chicken Feast | # 2,000.00 | 4 | # 8,000.00 | 8:00:33 AM |
| 16 | Beef Suya | # 3,000.00 | 5 | # 15,000.00 | 8:00:34 AM |
| 17 | Chicken Feast | # 2,000.00 | 5 | # 10,000.00 | 8:00:35 AM |
| 18 | Hot Veggie | # 4,000.00 | 5 | # 20,000.00 | 8:00:35 AM |
| 19 | Meatzaa | # 2,000.00 | 5 | # 10,000.00 | 8:00:35 AM |
| 20 | Meatzaa | # 2,000.00 | 2 | # 4,000.00 | 8:00:36 AM |
| 21 | Margarita | # 4,000.00 | 3 | # 12,000.00 | 8:00:37 AM |
| 22 | Italiano | # 3,000.00 | 5 | # 15,000.00 | 8:00:40 AM |
| 23 | Hot Veggie | # 4,000.00 | 2 | # 8,000.00 | 8:00:45 AM |
| 24 | Pepperoni Suya | # 3,000.00 | 3 | # 9,000.00 | 8:00:45 AM |
| 25 | Veggie Supreme | # 3,000.00 | 5 | # 15,000.00 | 8:00:48 AM |
| 26 | Hot Pepperoni Feast | # 4,000.00 | 3 | # 12,000.00 | 8:00:49 AM |
| 27 | Chicken Legend | # 2,000.00 | 4 | # 8,000.00 | 8:00:49 AM |
| 28 | BBQ.Philly Steak | # 4,000.00 | 1 | # 4,000.00 | 8:00:52 AM |
| 29 | Hot Pepperoni Feast | # 4,000.00 | 2 | # 8,000.00 | 8:00:56 AM |
| 30 | Chicken Bali | # 2,000.00 | 4 | # 8,000.00 | 8:00:56 AM |
| 31 | Chicken Feast | # 2,000.00 | 3 | # 6,000.00 | 8:00:57 AM |
| 32 | Veggie Supreme | # 3,000.00 | 2 | # 6,000.00 | 8:00:57 AM |
| 33 | Extravaganza | # 2,000.00 | 4 | # 8,000.00 | 8:01:00 AM |
| 34 | Pepperoni Suya | # 3,000.00 | 4 | # 12,000.00 | 8:01:01 AM |
| 35 | Veggie Supreme | # 3,000.00 | 2 | # 6,000.00 | 8:01:02 AM |
| 36 | Extravaganza | # 2,000.00 | 2 | # 4,000.00 | 8:01:08 AM |
| 37 | Italiano | # 3,000.00 | 2 | # 6,000.00 | 8:01:14 AM |
| 38 | BBQ.Philly Steak | # 4,000.00 | 2 | # 8,000.00 | 8:01:16 AM |
| 39 | Pepperoni Feast | # 4,000.00 | 5 | # 20,000.00 | 8:01:16 AM |
| 40 | Chicken Bali | # 2,000.00 | 4 | # 8,000.00 | 8:01:17 AM |
| 41 | Pepperoni Suya | # 3,000.00 | 2 | # 6,000.00 | 8:01:18 AM |
| 42 | BBQ.Philly Steak | # 4,000.00 | 5 | # 20,000.00 | 8:01:20 AM |
| 43 | Chicken Bali | # 2,000.00 | 3 | # 6,000.00 | 8:01:21 AM |
| 44 | Italiano | # 3,000.00 | 5 | # 15,000.00 | 8:01:22 AM |
| 45 | BBQ.Philly Steak | # 4,000.00 | 4 | # 16,000.00 | 8:01:26 AM |
| 46 | Hot Pepperoni Feast | # 4,000.00 | 5 | # 20,000.00 | 8:01:28 AM |

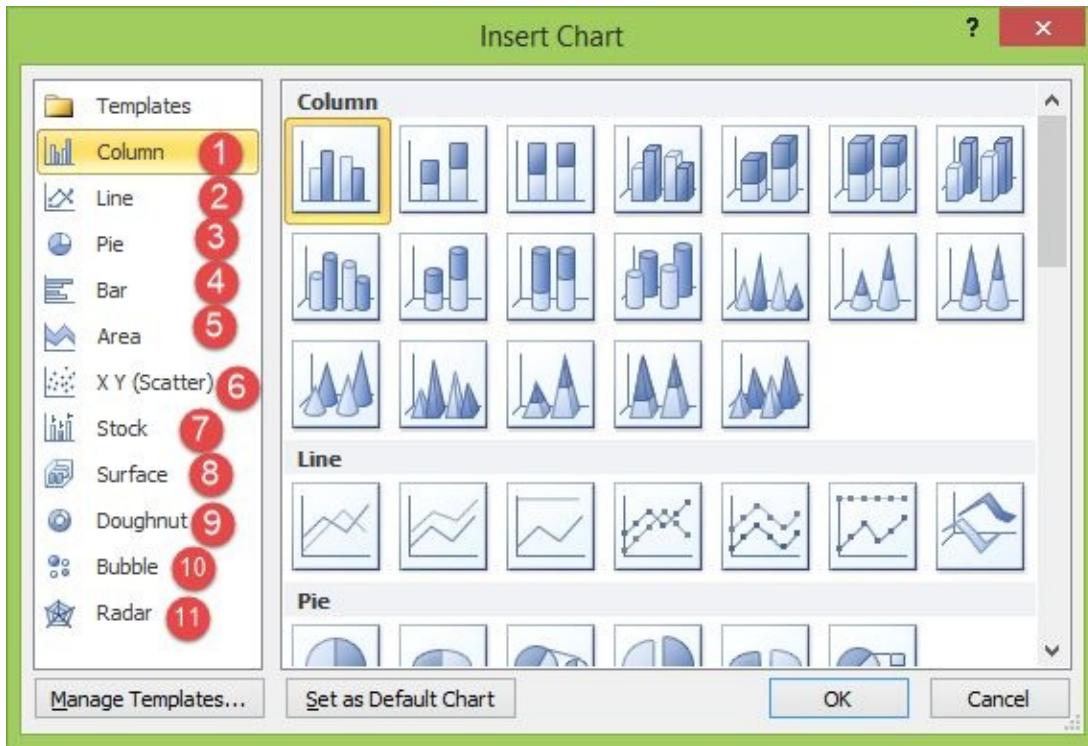
| S/N | Pizza Sold | Price | Quantity | Amount Sold | Time |
|-----|------------------|------------|----------|-------------|-----------|
| 47 | Chicken Legend | # 2,000.00 | 2 | # 4,000.00 | B01:31 AM |
| 48 | Chicken Balli | # 2,000.00 | 2 | # 4,000.00 | B01:32 AM |
| 49 | BBQ.Philly Steak | # 4,000.00 | 1 | # 4,000.00 | B01:34 AM |
| 50 | BBQ.Chicken | # 4,000.00 | 4 | # 16,000.00 | B01:34 AM |
| 51 | Pepperoni Feast | # 4,000.00 | 4 | # 16,000.00 | B01:35 AM |
| 52 | BBQ.Philly Steak | # 4,000.00 | 1 | # 4,000.00 | B01:36 AM |
| 53 | BBQ.Philly Steak | # 4,000.00 | 4 | # 16,000.00 | B01:36 AM |
| 54 | Pepperoni Suya | # 3,000.00 | 2 | # 6,000.00 | B01:37 AM |
| 55 | Veggie Supreme | # 3,000.00 | 5 | # 15,000.00 | B01:37 AM |
| 56 | Chicken Suya | # 4,000.00 | 5 | # 20,000.00 | B01:39 AM |
| 57 | Margarita | # 4,000.00 | 4 | # 16,000.00 | B01:43 AM |
| 58 | Chicken Balli | # 2,000.00 | 5 | # 10,000.00 | B01:44 AM |
| 59 | Meatzaa | # 2,000.00 | 5 | # 10,000.00 | B01:44 AM |
| 60 | BBQ.Philly Steak | # 4,000.00 | 3 | # 12,000.00 | B01:46 AM |
| 61 | Pepperoni Suya | # 3,000.00 | 5 | # 15,000.00 | B01:48 AM |
| 62 | Chicken Feast | # 2,000.00 | 5 | # 10,000.00 | B01:49 AM |
| 63 | Chicken Feast | # 2,000.00 | 4 | # 8,000.00 | B01:52 AM |
| 64 | Chicken Suya | # 4,000.00 | 2 | # 8,000.00 | B01:54 AM |
| 65 | Chicken Legend | # 2,000.00 | 3 | # 6,000.00 | B01:55 AM |
| 66 | Chicken Feast | # 2,000.00 | 4 | # 8,000.00 | B01:56 AM |
| 67 | Chicken Balli | # 2,000.00 | 1 | # 2,000.00 | B02:05 AM |
| 68 | Pepperoni Suya | # 3,000.00 | 1 | # 3,000.00 | B02:08 AM |
| 69 | Pepperoni Feast | # 4,000.00 | 3 | # 12,000.00 | B02:04 AM |
| 70 | BeefSuya | # 3,000.00 | 3 | # 9,000.00 | B02:05 AM |
| 71 | BBQ.Chicken | # 4,000.00 | 1 | # 4,000.00 | B02:06 AM |
| 72 | Pepperoni Feast | # 4,000.00 | 3 | # 12,000.00 | B02:10 AM |
| 73 | Pepperoni Feast | # 4,000.00 | 5 | # 20,000.00 | B02:13 AM |
| 74 | BBQ.Chicken | # 4,000.00 | 2 | # 8,000.00 | B02:13 AM |
| 75 | Extravaganza | # 2,000.00 | 5 | # 10,000.00 | B02:18 AM |
| 76 | Chicken Legend | # 2,000.00 | 1 | # 2,000.00 | B02:18 AM |
| 77 | Pepperoni Suya | # 3,000.00 | 2 | # 6,000.00 | B02:22 AM |
| 78 | Hot Veggie | # 4,000.00 | 2 | # 8,000.00 | B02:22 AM |
| 79 | Extravaganza | # 2,000.00 | 3 | # 6,000.00 | B02:30 AM |
| 80 | Chicken Suya | # 4,000.00 | 3 | # 12,000.00 | B02:31 AM |
| 81 | Pepperoni Feast | # 4,000.00 | 5 | # 20,000.00 | B02:35 AM |
| 82 | Pepperoni Feast | # 4,000.00 | 3 | # 12,000.00 | B02:36 AM |
| 83 | BBQ.Chicken | # 4,000.00 | 3 | # 12,000.00 | B02:37 AM |
| 84 | BBQ.Philly Steak | # 4,000.00 | 4 | # 16,000.00 | B02:38 AM |
| 85 | Hot Veggie | # 4,000.00 | 5 | # 20,000.00 | B02:38 AM |
| 86 | Chicken Balli | # 2,000.00 | 1 | # 2,000.00 | B02:42 AM |
| 87 | BeefSuya | # 3,000.00 | 2 | # 6,000.00 | B02:44 AM |
| 88 | BBQ.Philly Steak | # 4,000.00 | 2 | # 8,000.00 | B02:45 AM |
| 89 | Veggie Supreme | # 3,000.00 | 4 | # 12,000.00 | B02:47 AM |
| 90 | Chicken Suya | # 4,000.00 | 1 | # 4,000.00 | B02:47 AM |
| 91 | BBQ.Chicken | # 4,000.00 | 5 | # 20,000.00 | B02:49 AM |
| 92 | BBQ.Philly Steak | # 4,000.00 | 4 | # 16,000.00 | B02:50 AM |

Done.

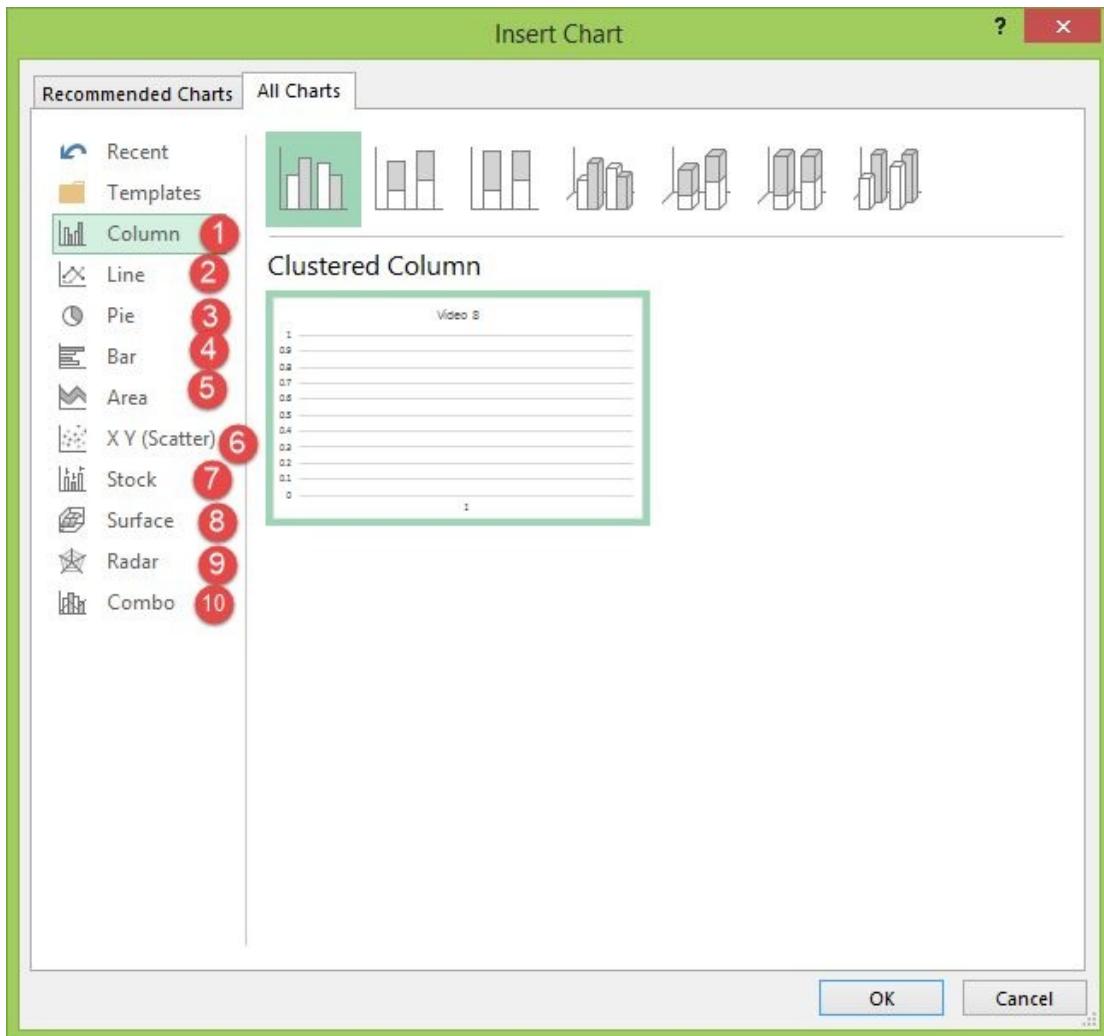
So these are the basic ways you format your data for printing.

Charts

Excel 2010 has 11 main chart types.



Excel 2013 and Excel 2016 have 10 main chart types. Actually, 9 If you take combo chart as a combination of two or more other chart types.



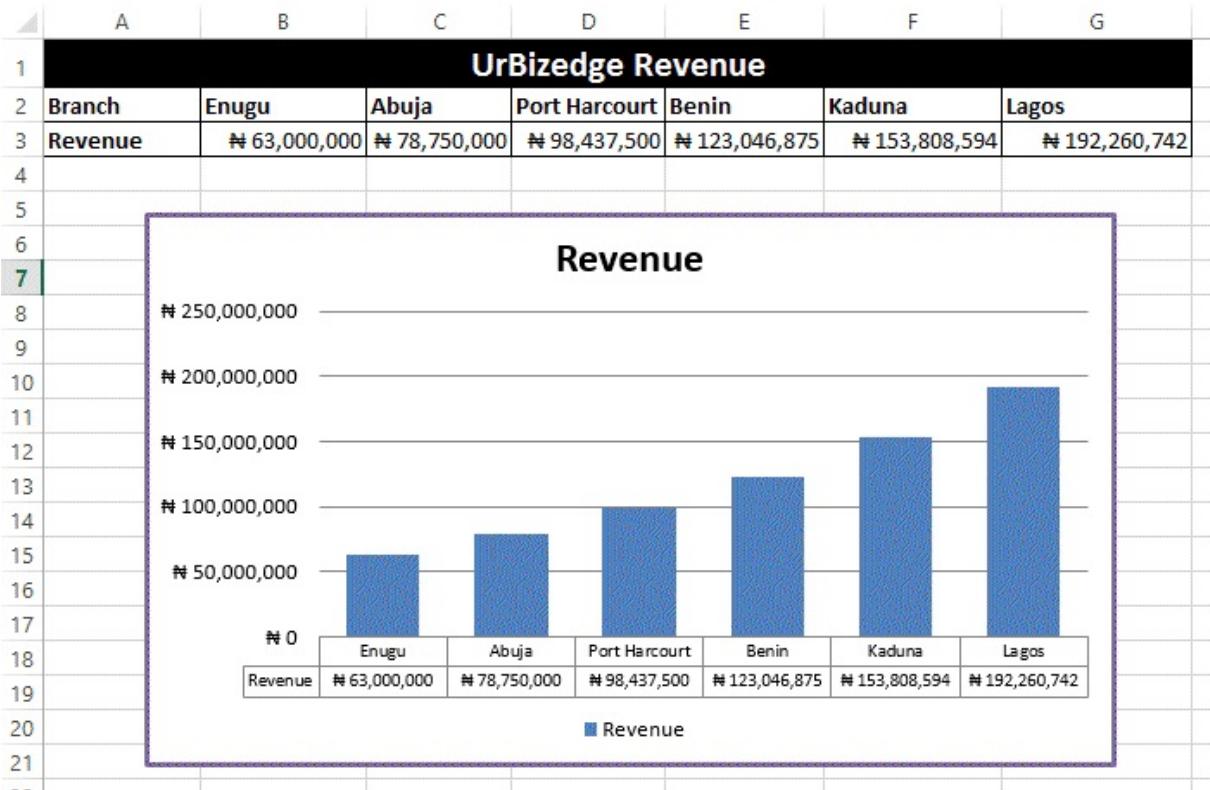
But in all you will end up using majorly,

1. Column chart
2. Line chart
3. Pie chart, and
4. Bar chart.

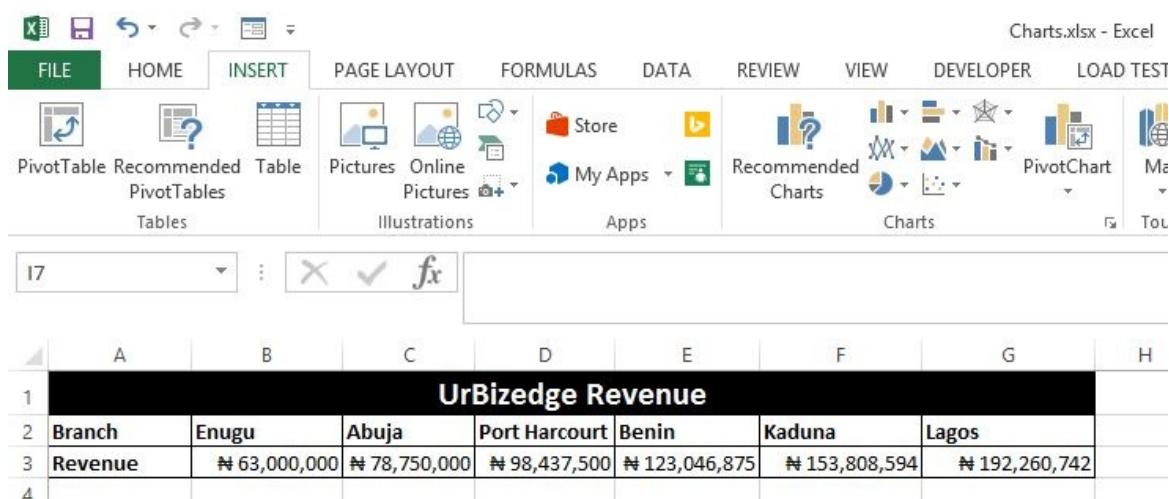
So let's focus on these four charts.

Column Chart and when to use it.

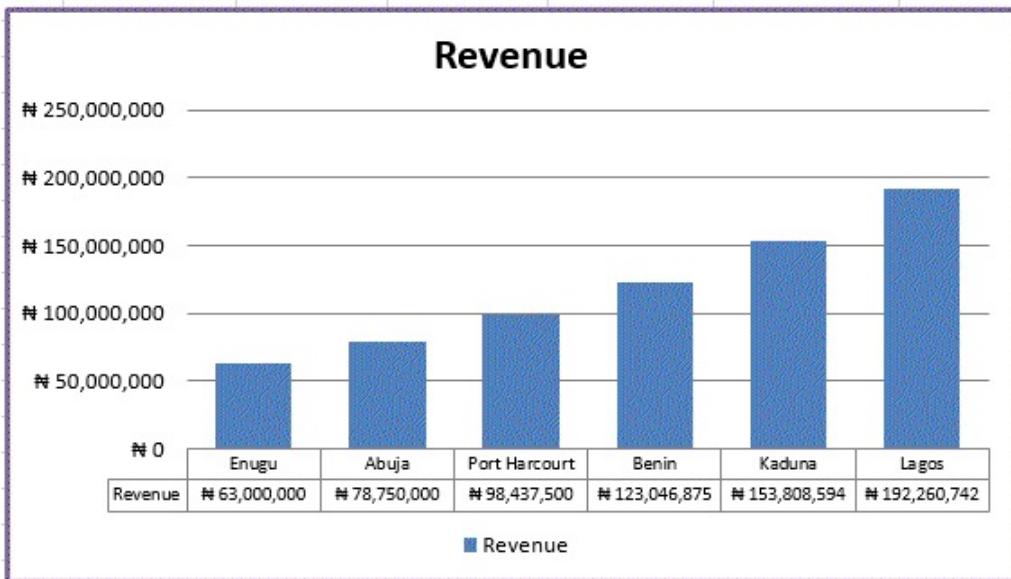
Column chart is used to visualize data across different categories. An example is revenue across the four different branches of a company.



So how do you turn a boring data like this:

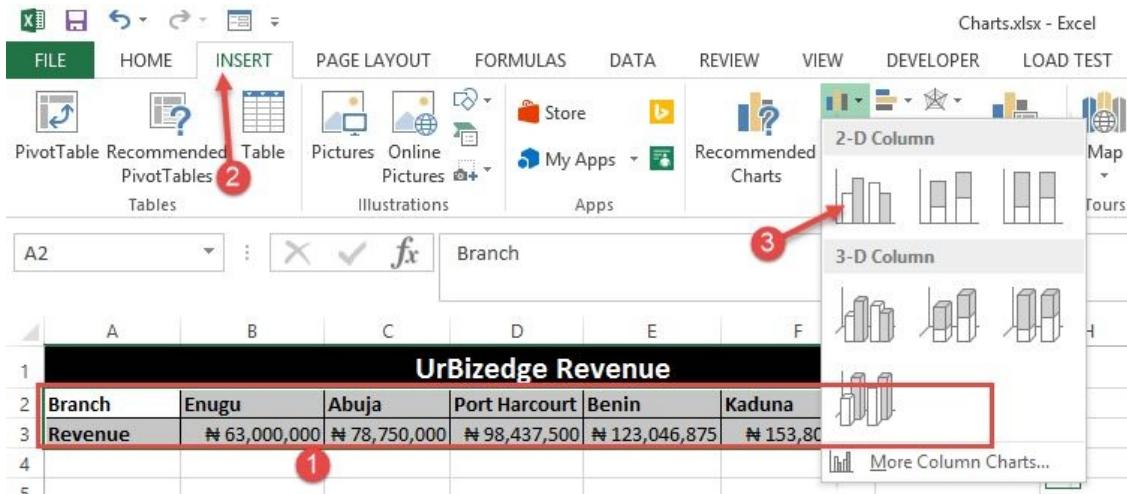


Into a beautiful insightful chart like this:

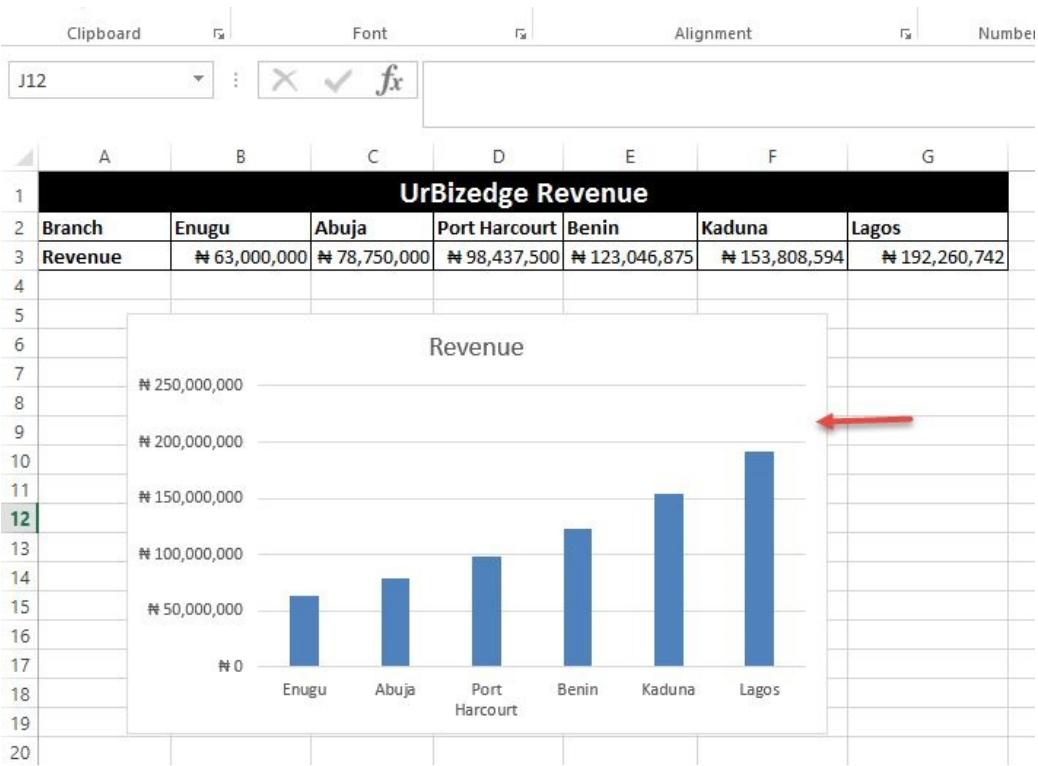


It is very easy.

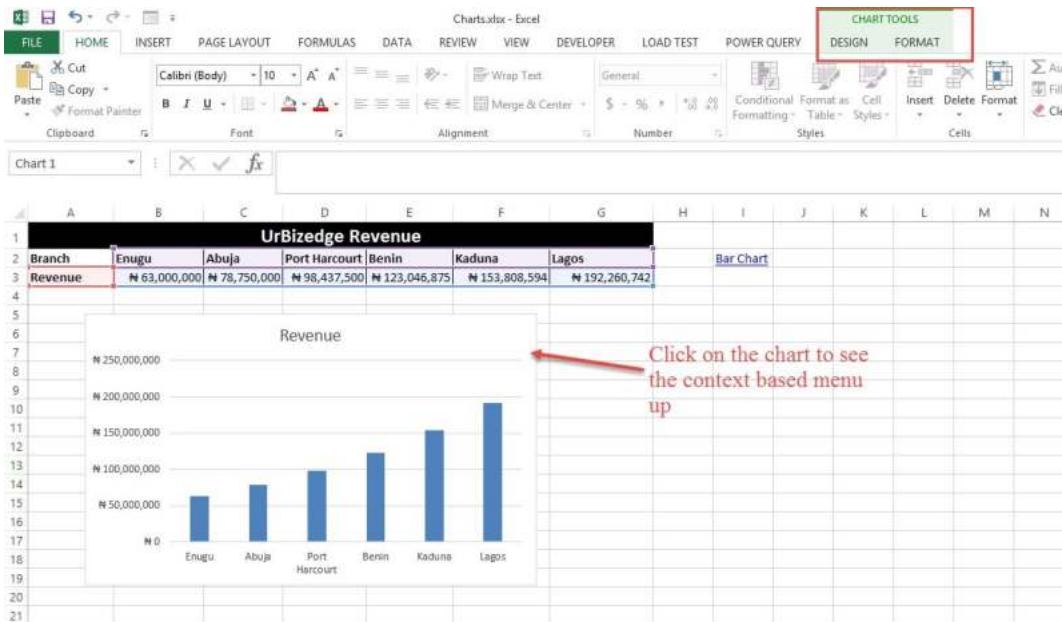
Select the table data you want to make a chart of and go to the Insert menu, click on the Column chart and select the 2D Clustered Column chart (the first option).



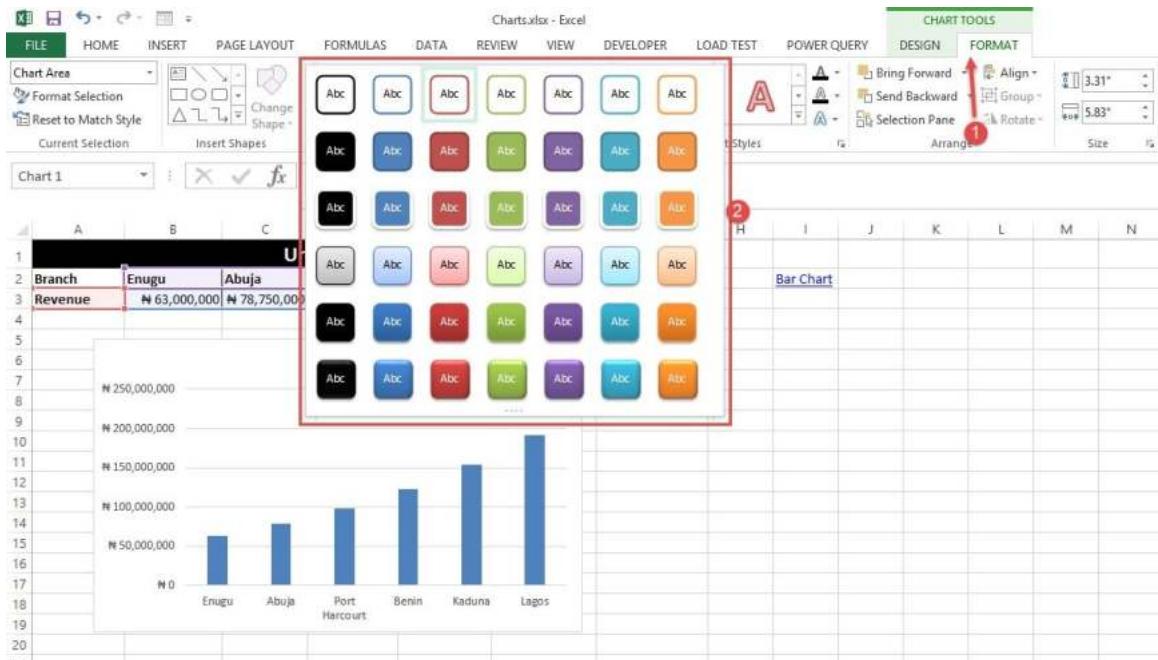
You will get a chart that looks like the one below. Not bad looking, just needs a little formatting to make great.



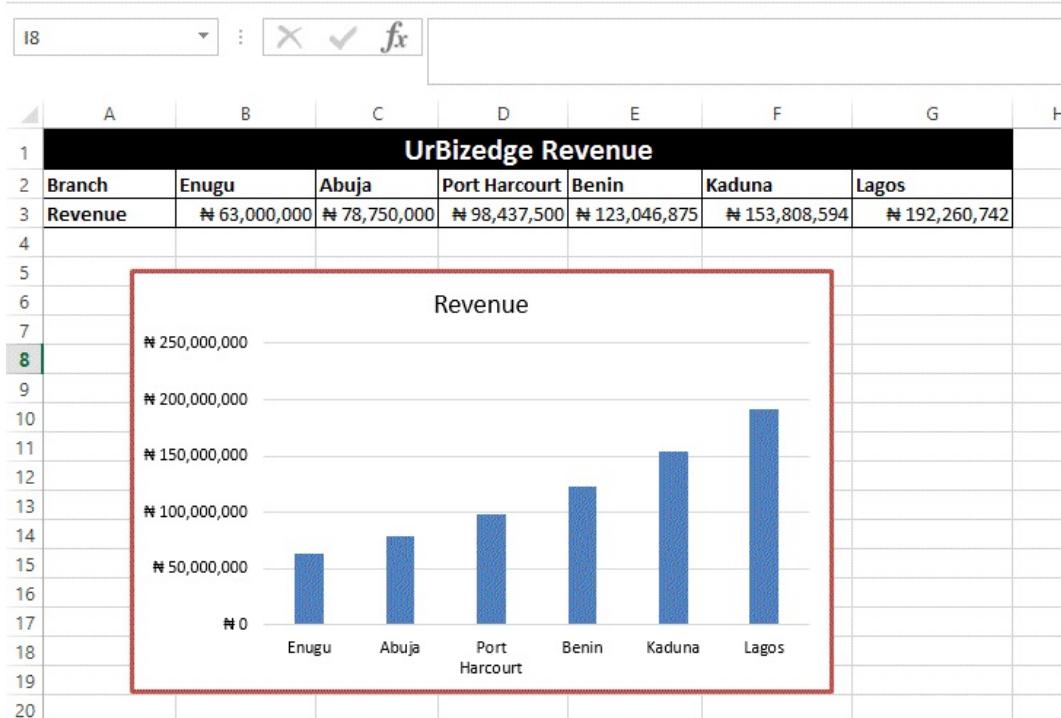
Click on the chart, and the context based menus will show up on the Excel menu bar.



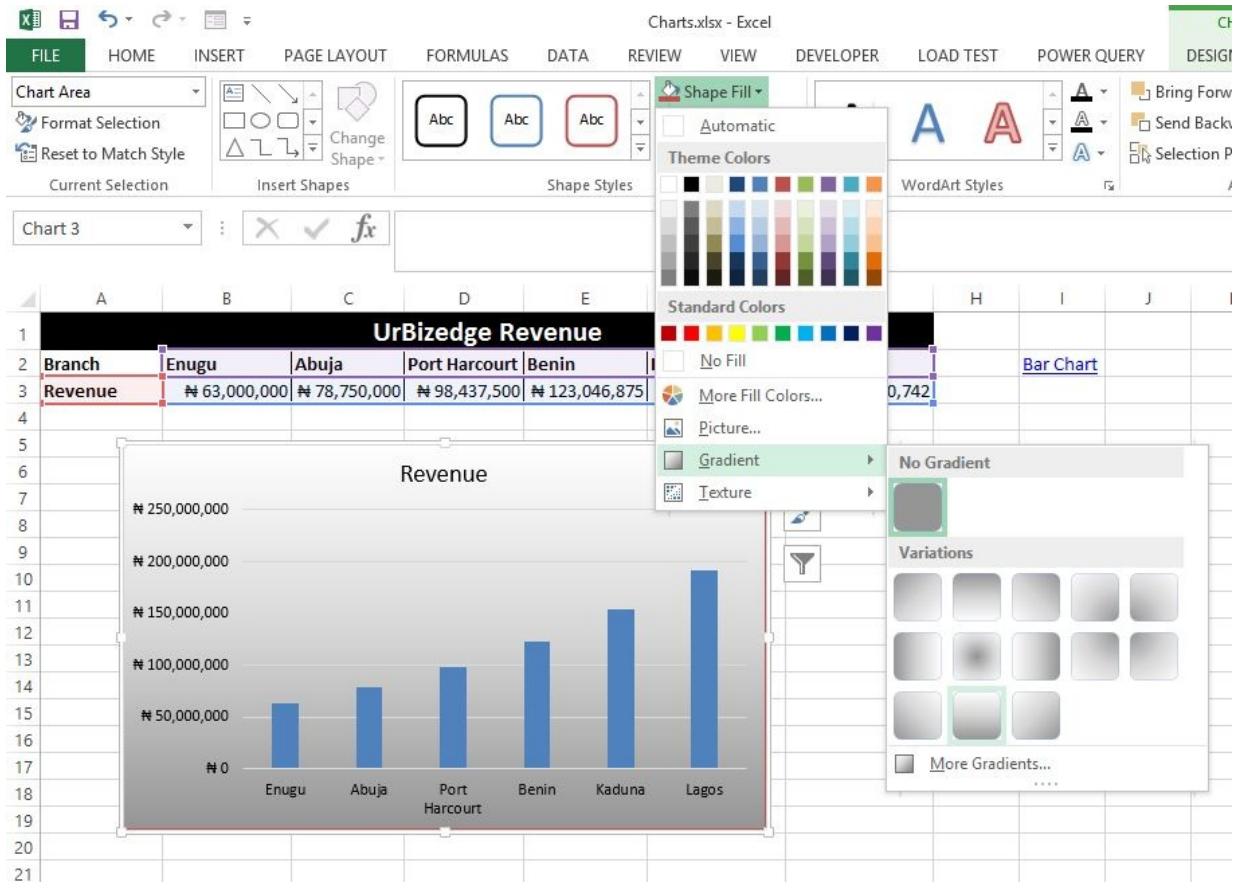
Go to the Format menu and choose a formatting you like for the entire chart. If your company's corporate color is red and purple, you might want to make charts that reflect that brand color.



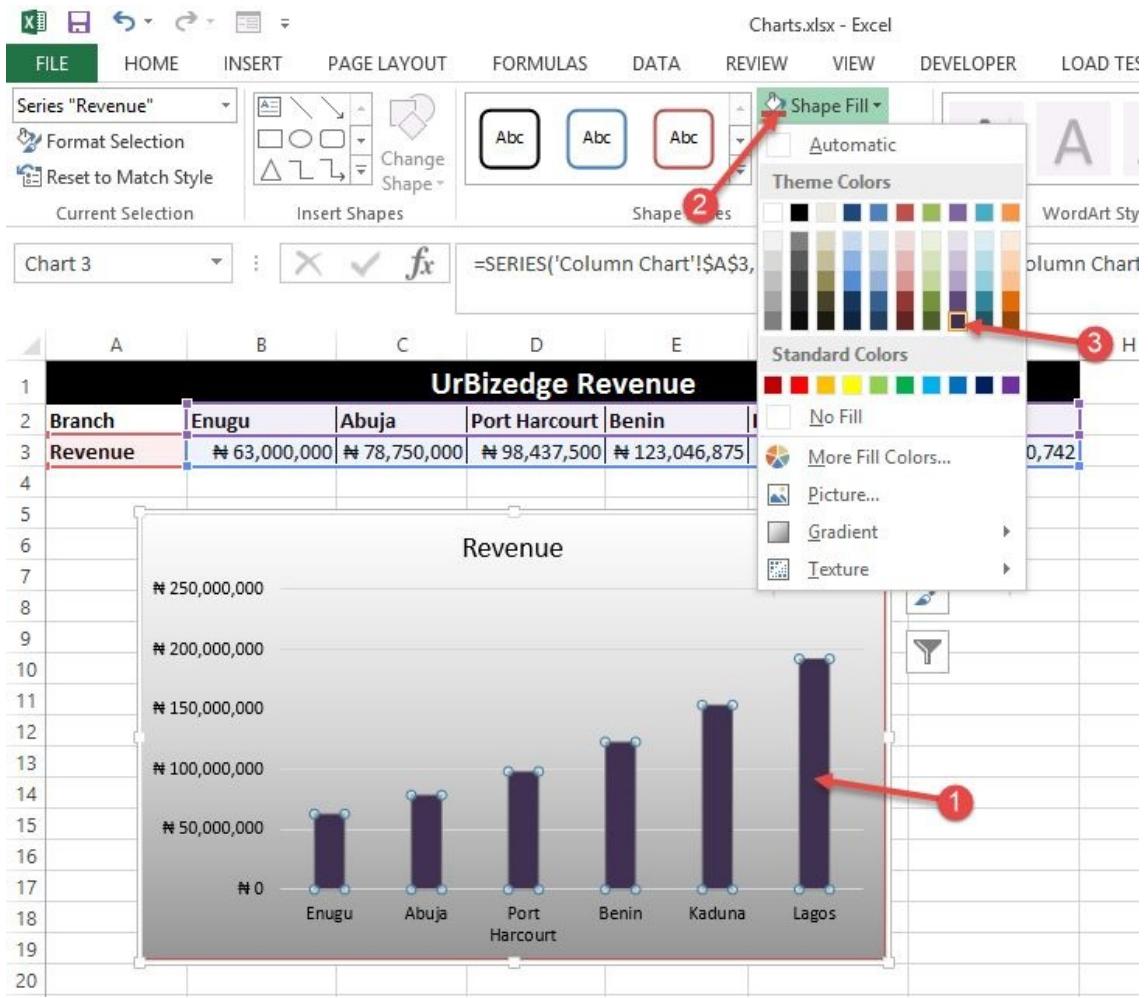
See the result red border white fill format.



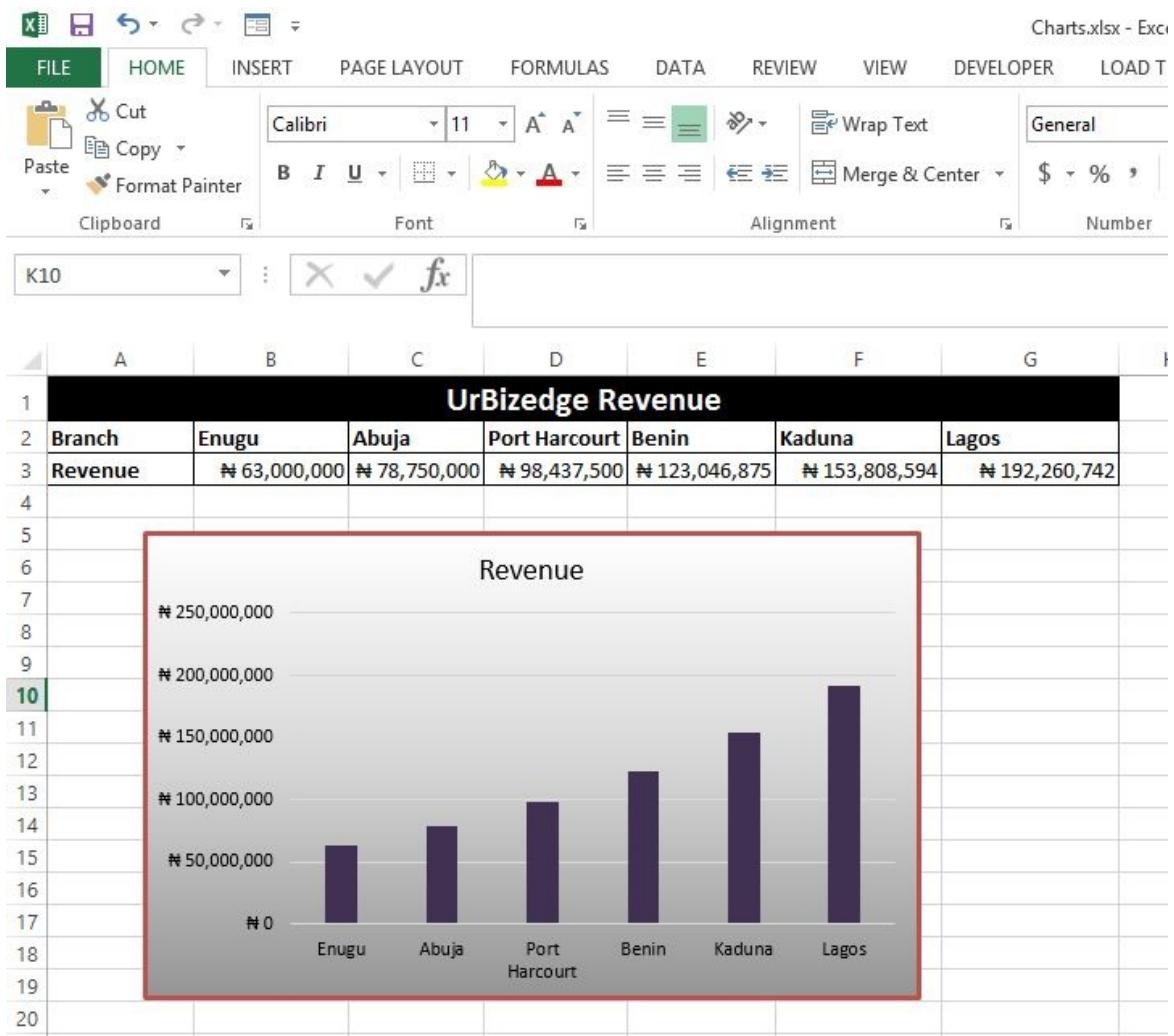
You can also change the chart background color.



Also you can change the color of the bars by clicking on them and choosing the color you want.

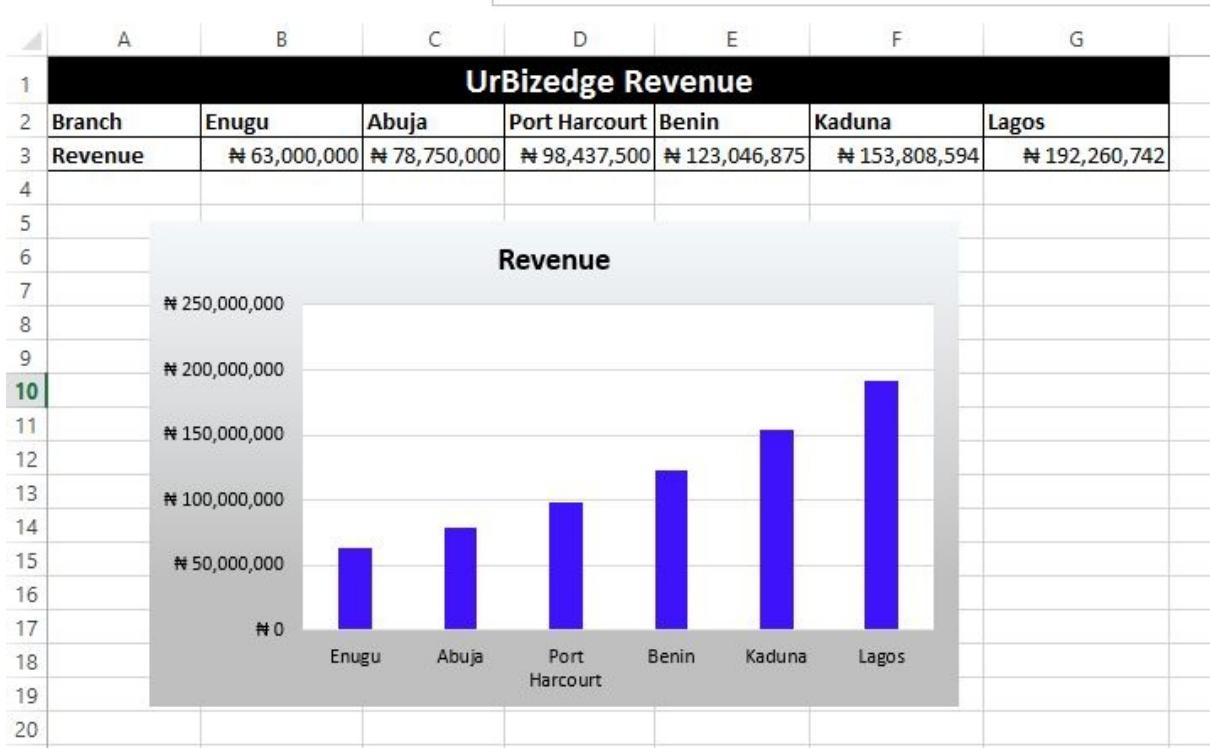


And this is the final result.

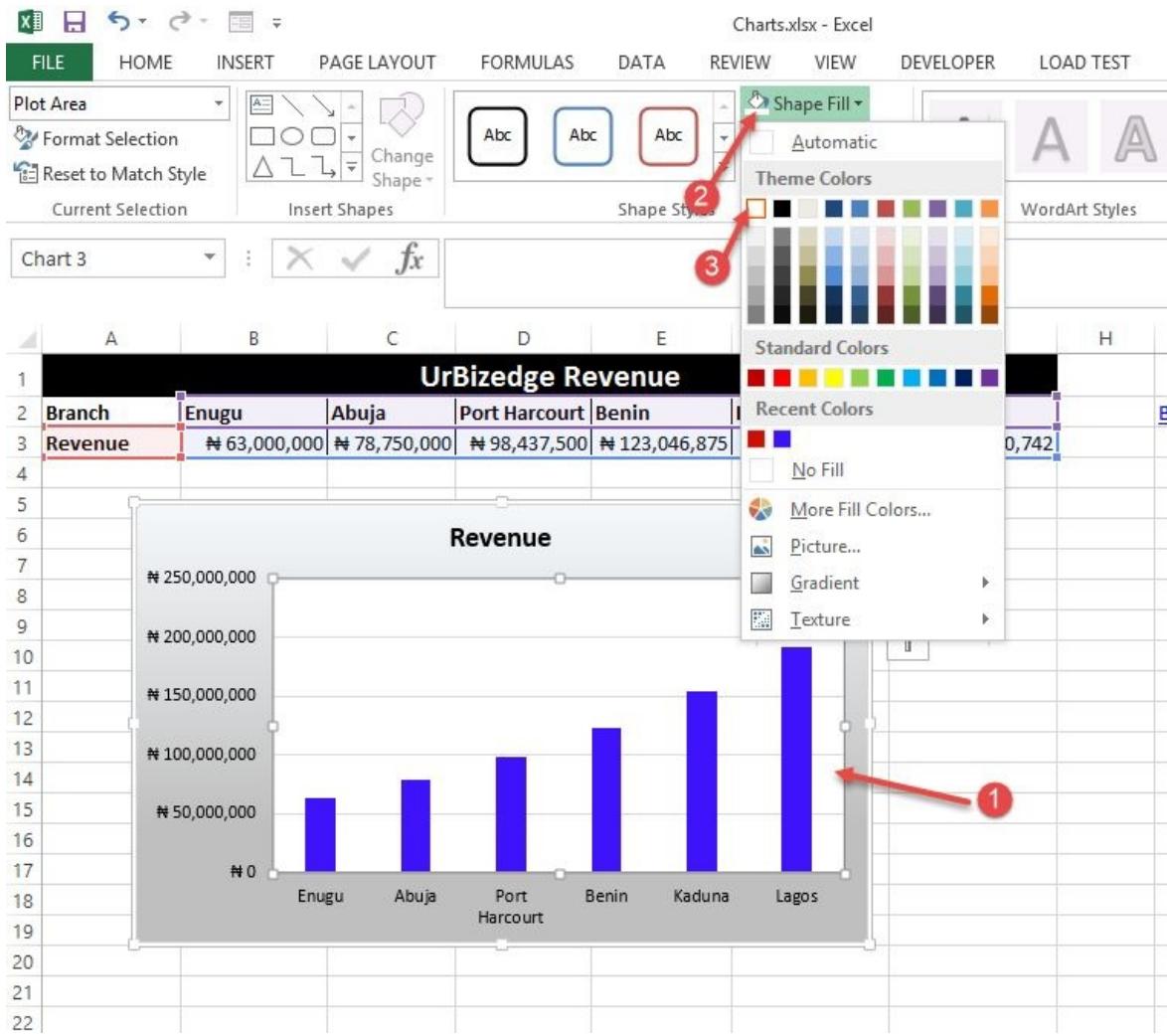


It looks better than the default and reflects your company's corporate color. Just that you might want to not use the red border. Most professionals argue that it's best to not use any border or background, just make only the important things obvious – data bar and the axis label. I suggest you do whatever looks great to you. This is not an exam and most likely what will look good to you will look good to your colleagues whom you'll share the report and charts with.

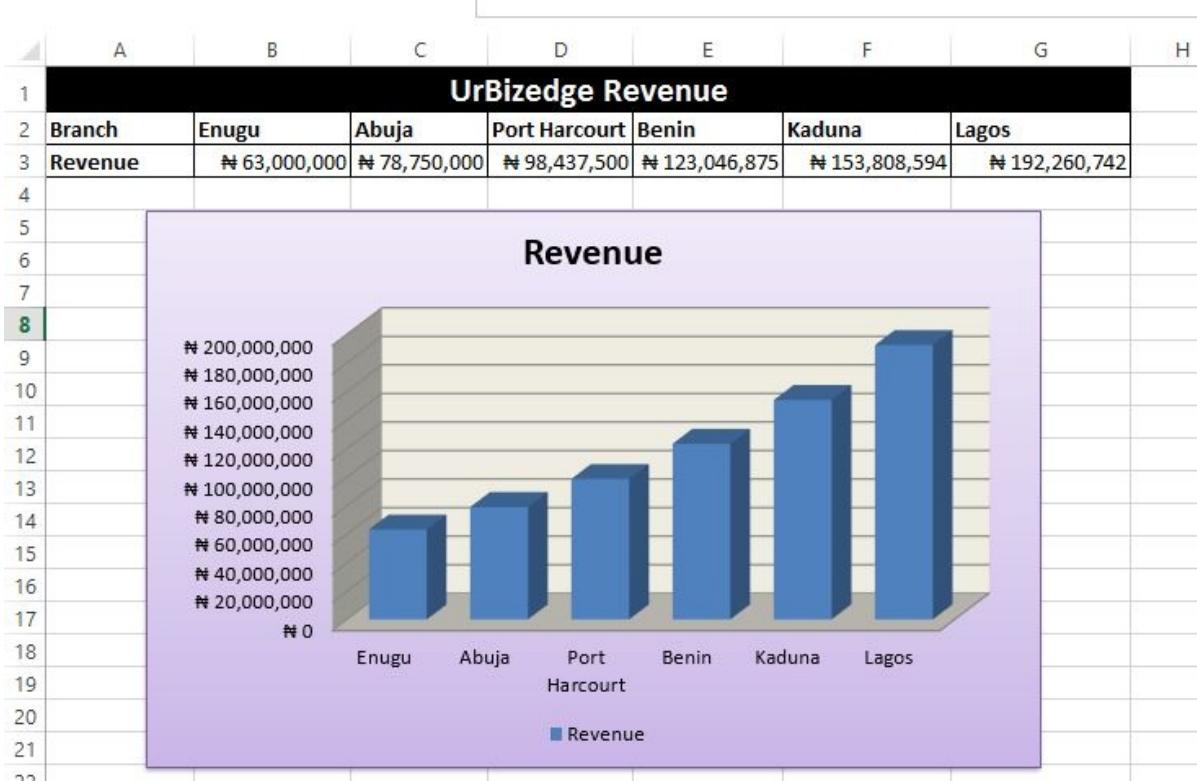
If you try out other color schemes you can end up with charts looking like the one below.



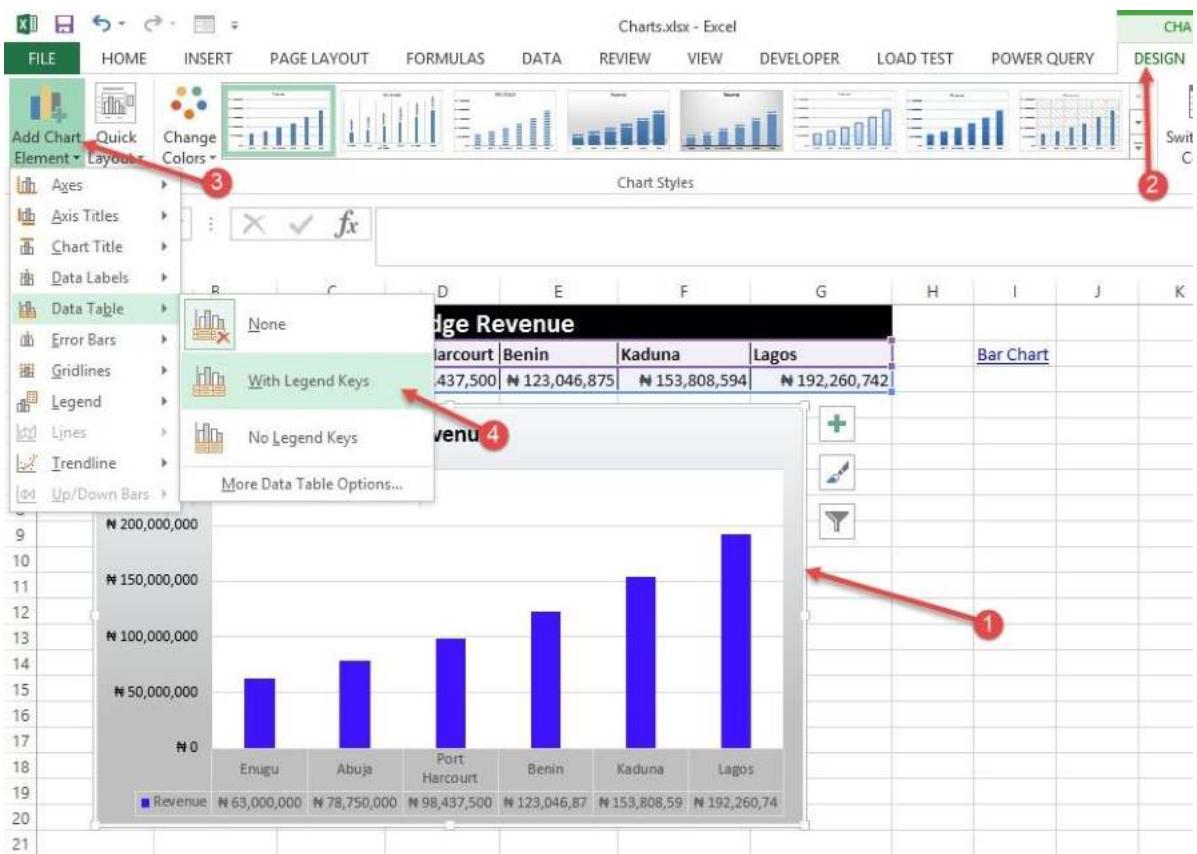
The extra step we took besides removing the red border and changing the bar color to bright blue is to change the chart area background to white.



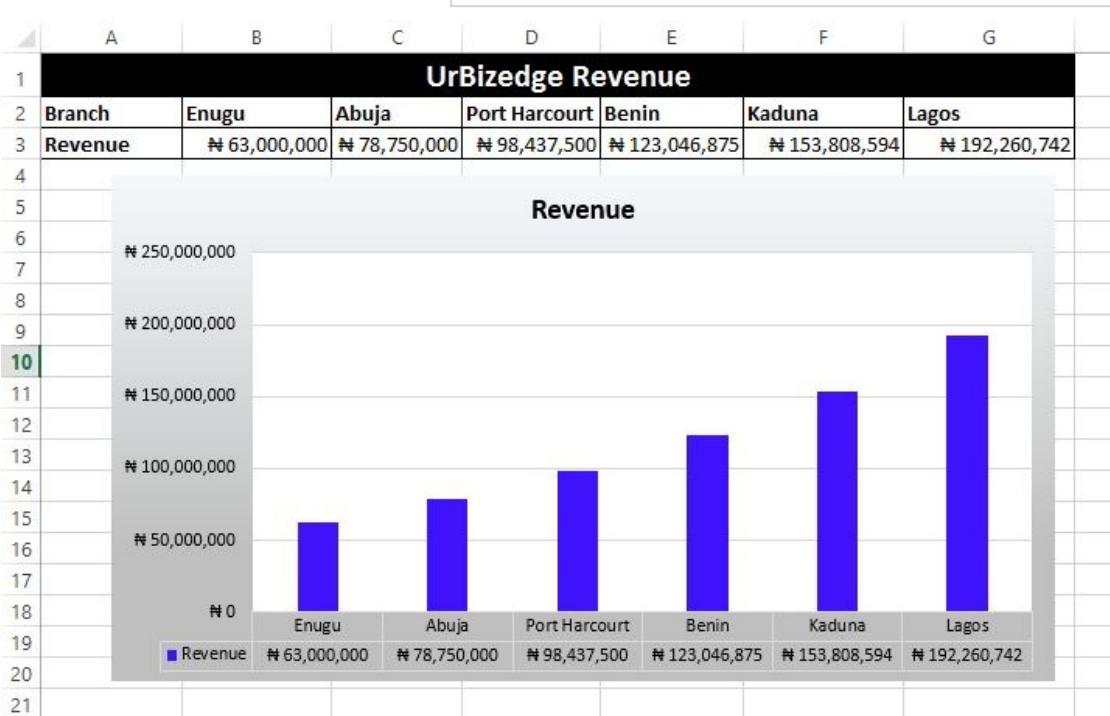
And that's basically how you insert and format a column chart. You can try inserting a 3D chart too for the same data. Follow the same steps but choose a 3D chart instead of the 2D we earlier used. And when you do the extra formatting already explained to you, you can end up with a beautiful chart like the one below.



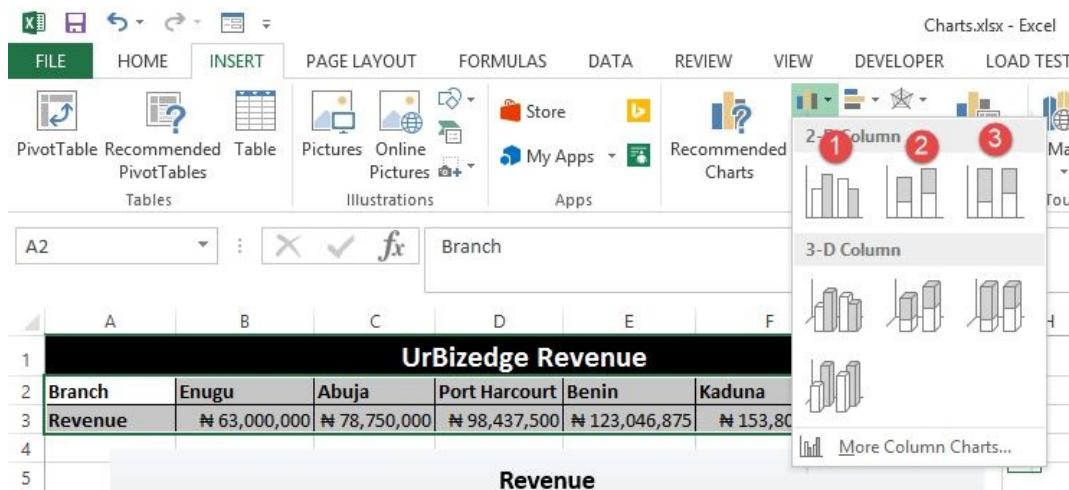
Finally, you can insert other elements on the chart like the data table, as shown below.



The result is shown below.



You would have noticed that there are other column chart types besides the Clustered one we selected (the first option).

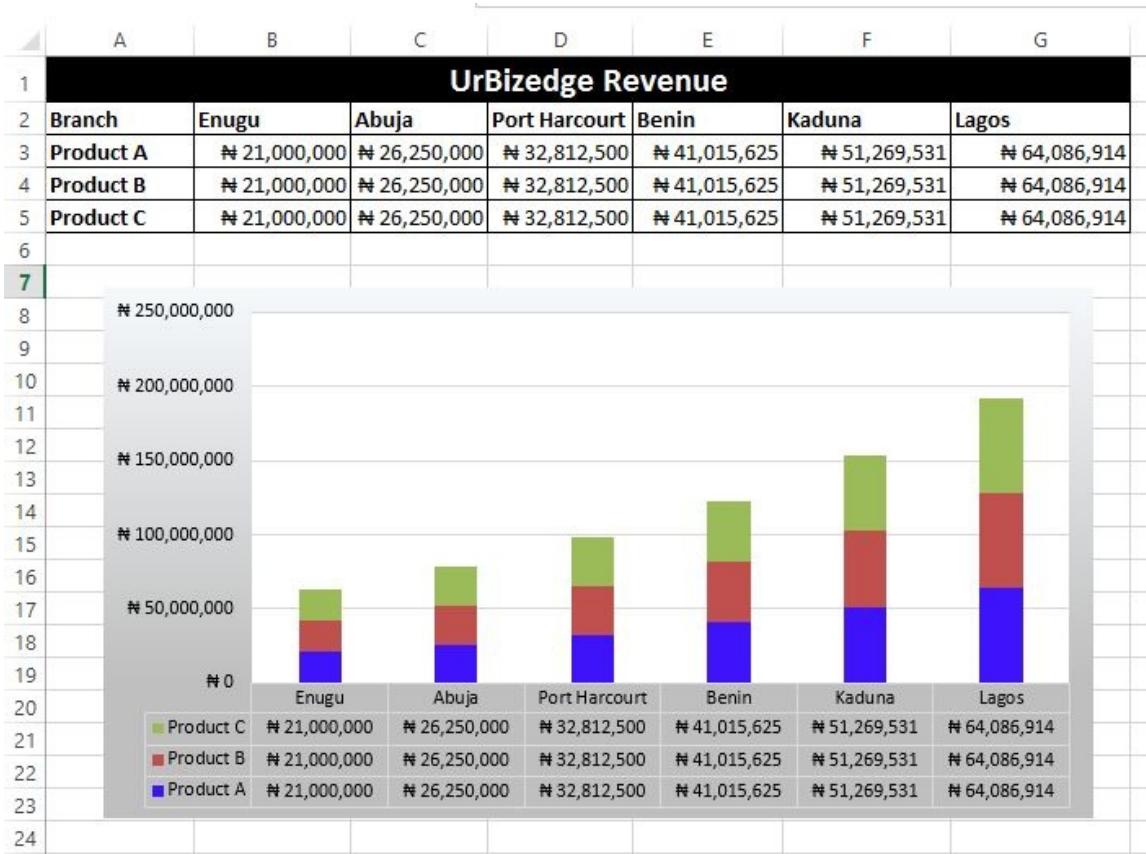


As numbered in the image above, they are

1. Clustered Column
2. Stacked Column
3. 100% Stacked Column

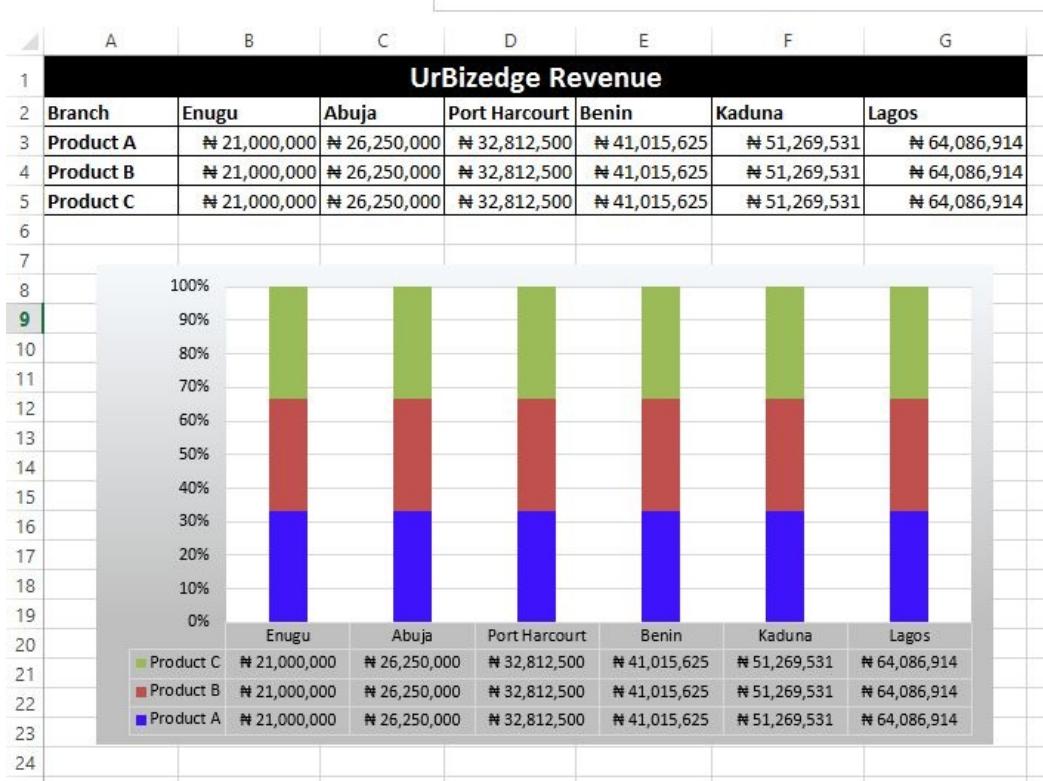
The clustered column is what we have used so far. It's straightforward to understand. The stacked column is useful for showing the breakdown of the data that makes up the bar. Below is an example of its use. We are going to breakdown the revenue by the products

that contributed to it.



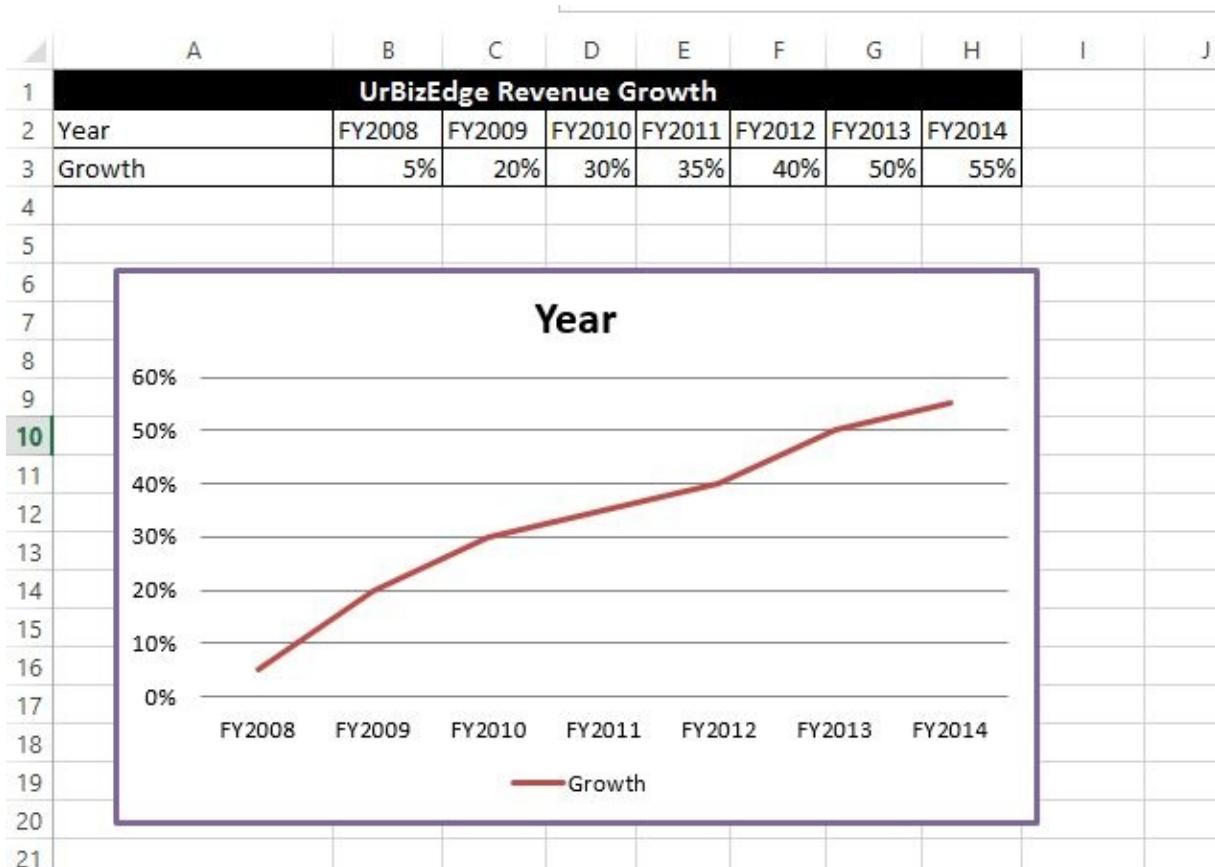
To do this stacked column chart, you simply select the entire table data, including the breakdown by products and choose the Stacked Column chart. And as you can see, it shows a breakdown of each bar by the constituting parts (products in this example)

The third one, 100% stacked column, is just slightly different. Rather than show you the breakdown by product revenue values, it shows the breakdown by the percentage contribution each product makes to the total. Below is the 100% Stacked Column output for the same data.

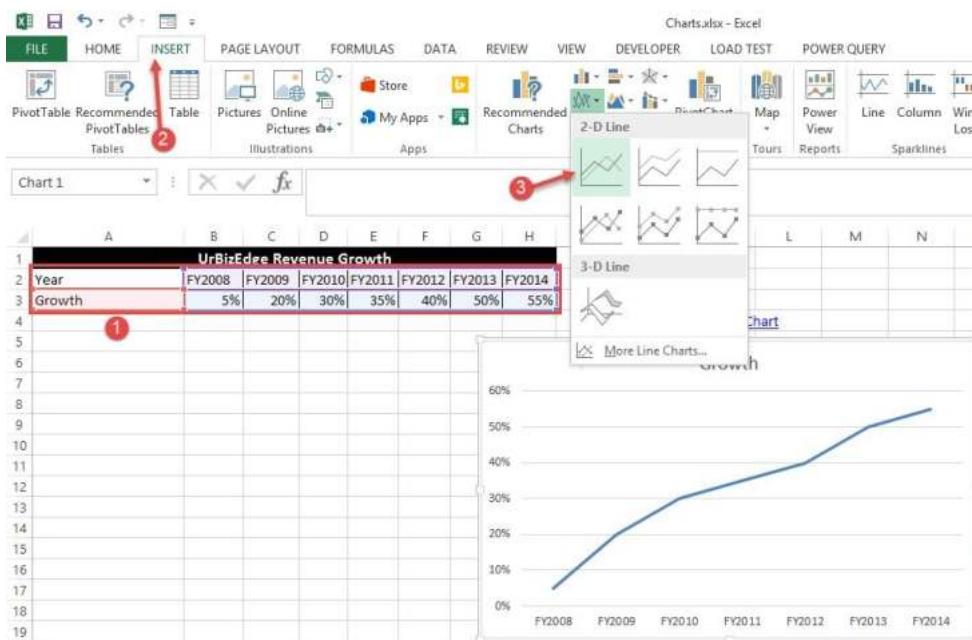


Line Chart and when to use it.

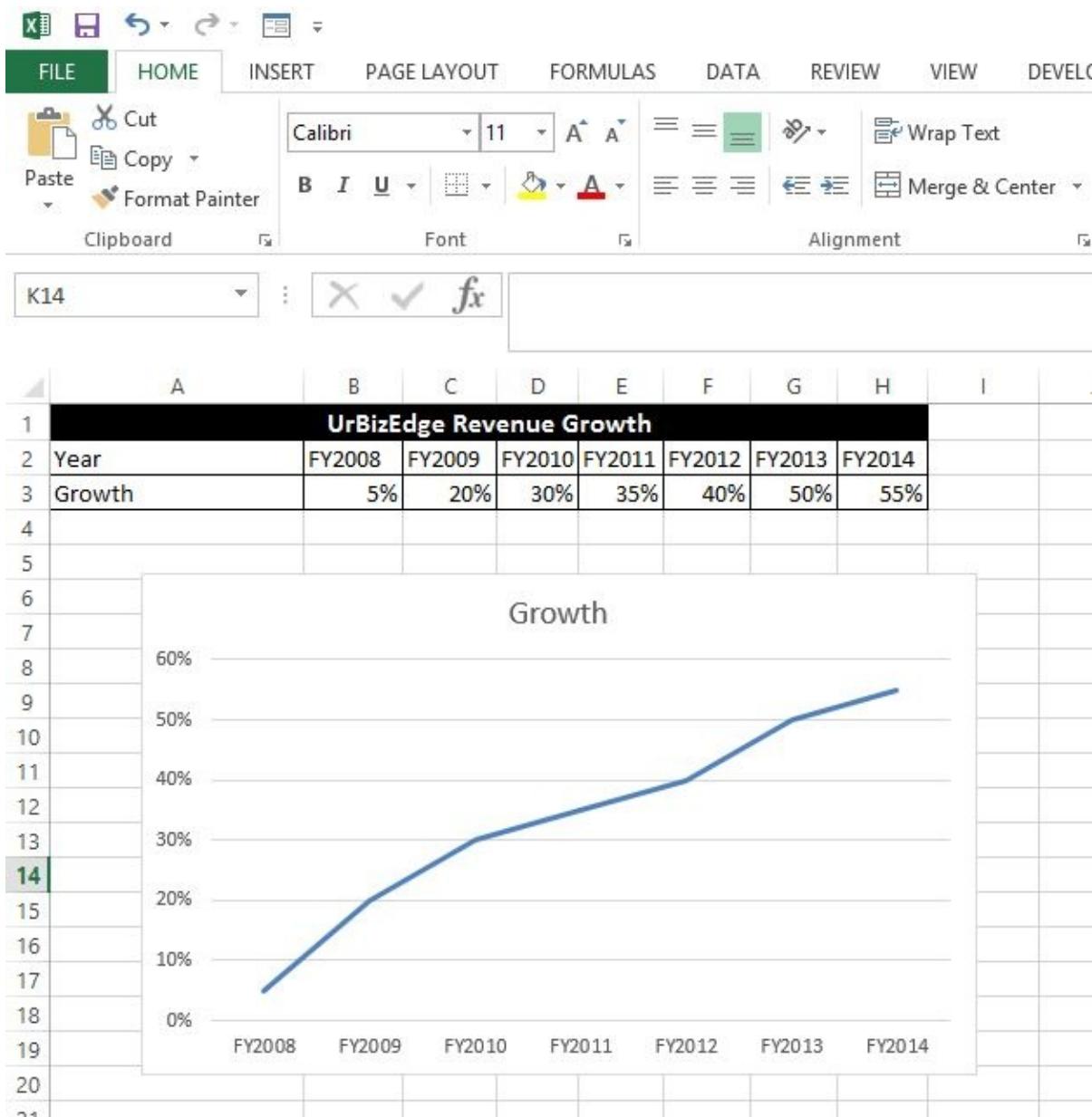
Line chart is used to show trend, usually over a time period. An example is if you want to show the trend of how the company's revenue has been growing for the last five years.



You create a line chart of a table in a similar way as we did for the column chart. You select the table's data and go to insert menu, click on the Line chart type you prefer.



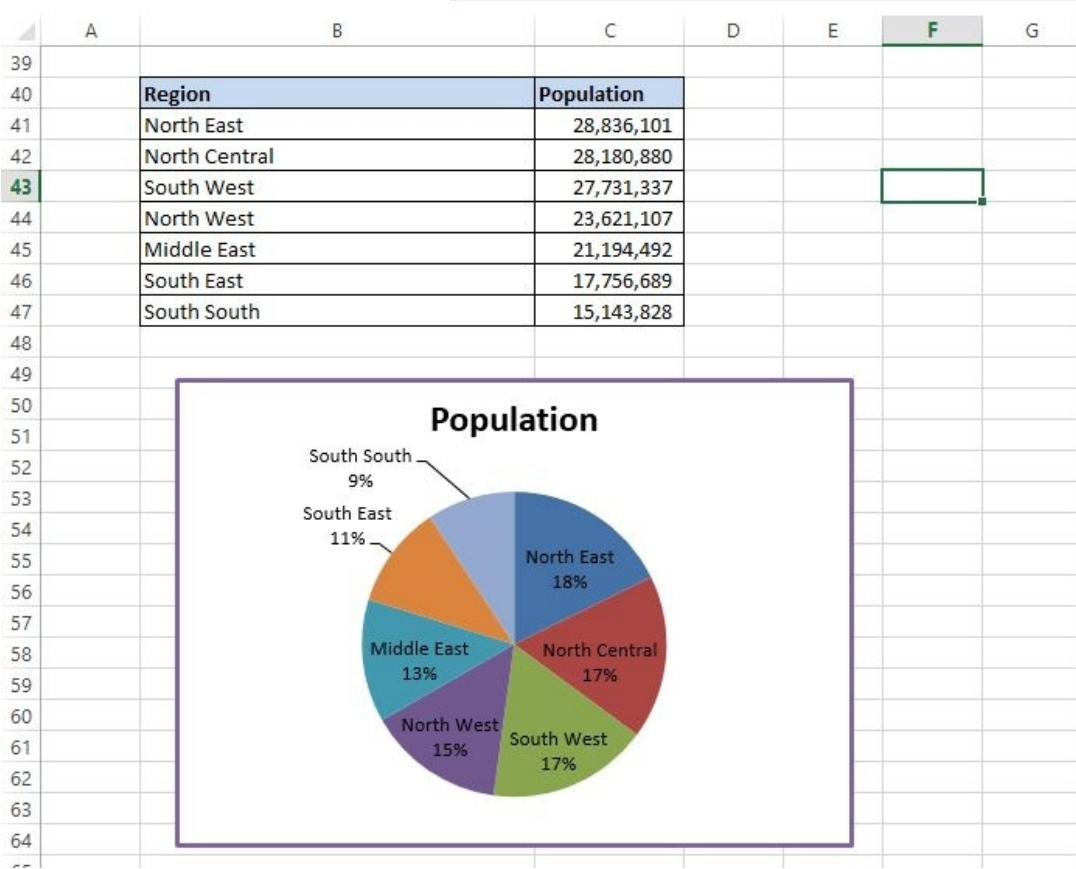
Again, Excel does a fairly good job and you can easily improve the format of the chart using the steps already explained.



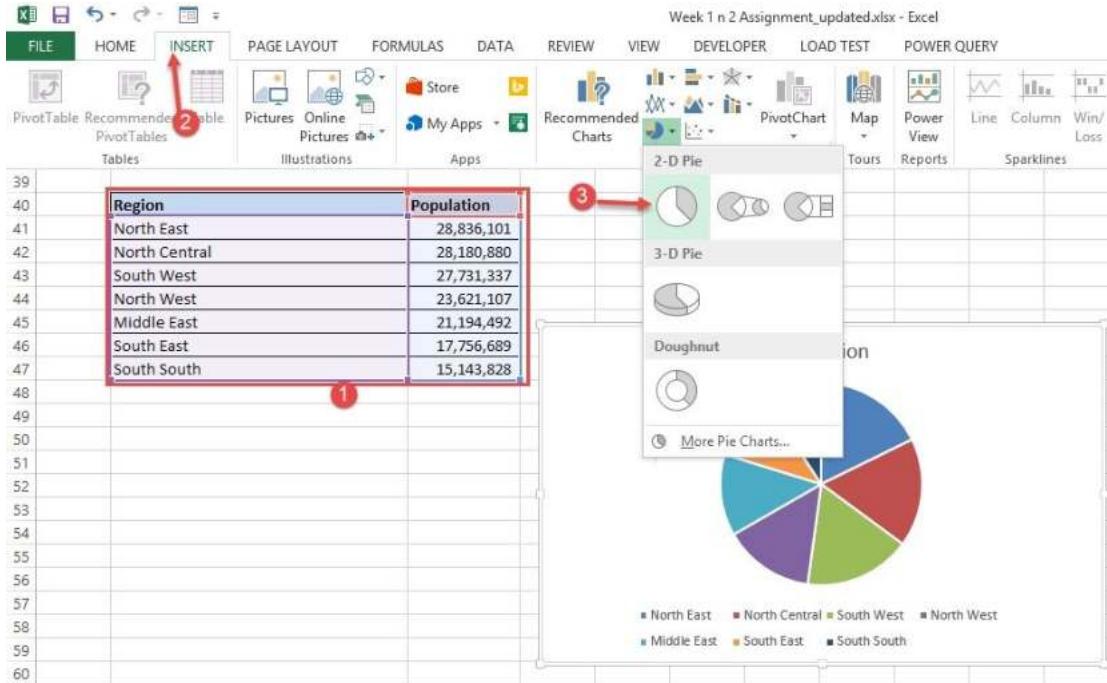
Pie Chart and when to use it.

Pie chart is used to show the contribution of each category to the pie that represents the grand total.

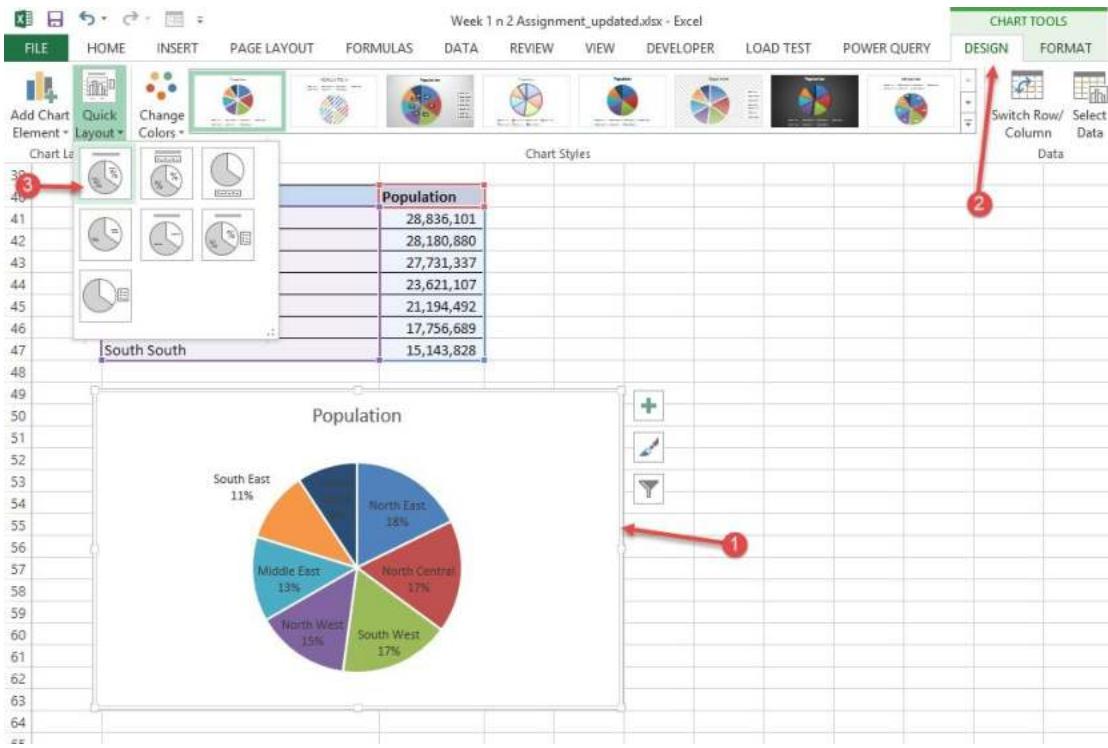
Below is an example showing the breakdown of Nigerian population by region. You can see how the Pie Chart makes it easy to see the contribution of each region to the total population of Nigeria.



It is extremely easy to make. You, like for others, select the table's data and select Pie Chart under the Insert menu.



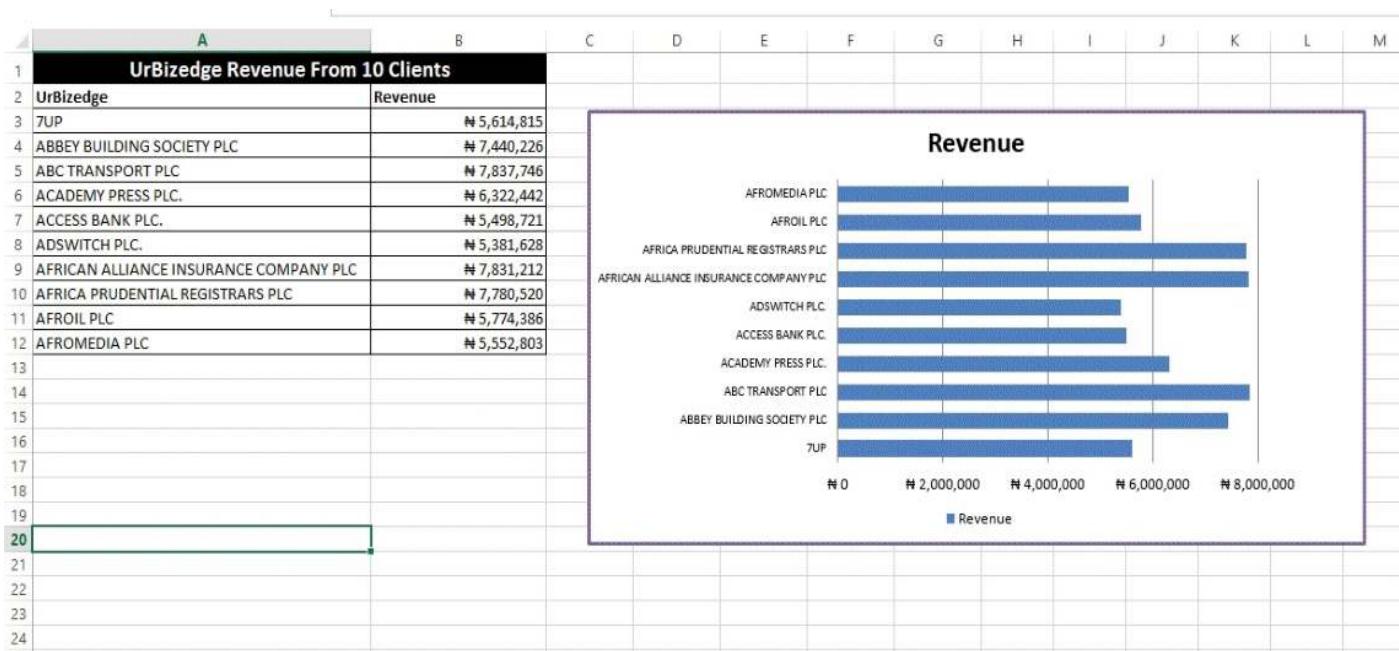
Excel does a default pie chart that you can greatly improve.



Bar Chart and when to use it.

Bar chart is technically the same as Column chart. The difference is that when you have a table with lots of entries, usually over 8, you are better off with using a bar chart rather than the column chart. Also when the entries have long label names, it's better to use bar chart even if the entries aren't many.

Below is an example.

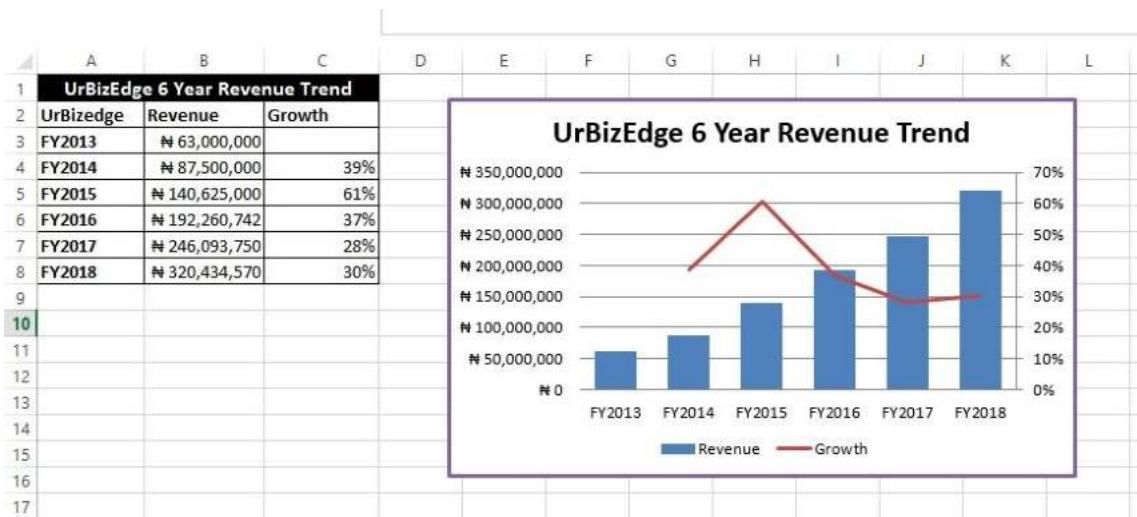


The same rules about Stacked and 100% stacked apply to bar chart and, even, line charts.

Combo Chart

Occasionally, you will have to combine two or more chart types in one visualization/graph. This is very useful if you want to show two interconnected data and their combined relevance.

An example is showing how a company's revenue has been changing in values and as a growth ratio.



In Excel 2013 and Excel 2016, it is very easy to make.

Just select the entire table and insert a combo chart. It can be easily located under Recommended Charts.

Charts.xlsx – Excel

UrBizedge 6 Year Revenue Trend

| A | B | C |
|-----------|---------------|--------|
| UrBizedge | Revenue | Growth |
| FY2013 | ₦ 63,000,000 | |
| FY2014 | ₦ 87,500,000 | 39% |
| FY2015 | ₦ 140,625,000 | 61% |
| FY2016 | ₦ 192,260,742 | 37% |
| FY2017 | ₦ 246,093,750 | 28% |
| FY2018 | ₦ 320,434,570 | 30% |

UrBizedge

Video 8 | Line Chart | Column Chart

READY

Insert Chart

Recommended Charts All Charts

Clustered Column - Line on Secondary Axis

Chart Title

Revenue Growth

A clustered column-line combination chart is used to emphasize different types of information. Use it when the range of values in the chart varies widely or when you have mixed types of data.

OK Cancel

PivotTable and PivotChart

PivotTable is Excel's premium tool for working with huge data table and even data stored in other database systems like Access, SQL servers and MySQL servers.

Below is an example of a large data table we will use PivotTable on to do some very relevant quick analysis. It is a table of sales for a particular Pizza Restaurant for a day and it has 5000 entries.

| A | B | C | D | E | F | G | H |
|----|-----|------------------|------------|----------|-------------|------------|---------------|
| 1 | S/N | Pizza Sold | Price | Quantity | Amount Sold | Time | Time Range |
| 2 | 1 | Meatzaa | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:01 AM | Before 9:00am |
| 3 | 2 | Extravaganza | ₦ 2,000.00 | 4 | ₦ 8,000.00 | 8:00:02 AM | Before 9:00am |
| 4 | 3 | BBQ Chicken | ₦ 4,000.00 | 5 | ₦ 20,000.00 | 8:00:04 AM | Before 9:00am |
| 5 | 4 | Extravaganza | ₦ 2,000.00 | 1 | ₦ 2,000.00 | 8:00:07 AM | Before 9:00am |
| 6 | 5 | Meatzaa | ₦ 2,000.00 | 4 | ₦ 8,000.00 | 8:00:08 AM | Before 9:00am |
| 7 | 6 | Hot Veggie | ₦ 4,000.00 | 2 | ₦ 8,000.00 | 8:00:14 AM | Before 9:00am |
| 8 | 7 | BBQ Philly Steak | ₦ 4,000.00 | 5 | ₦ 20,000.00 | 8:00:20 AM | Before 9:00am |
| 9 | 8 | Chicken Feast | ₦ 2,000.00 | 1 | ₦ 2,000.00 | 8:00:20 AM | Before 9:00am |
| 10 | 9 | Meatzaa | ₦ 2,000.00 | 3 | ₦ 6,000.00 | 8:00:22 AM | Before 9:00am |
| 11 | 10 | Chicken Suya | ₦ 4,000.00 | 5 | ₦ 20,000.00 | 8:00:25 AM | Before 9:00am |
| 12 | 11 | Chicken Legend | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:26 AM | Before 9:00am |
| 13 | 12 | BBQ Philly Steak | ₦ 4,000.00 | 4 | ₦ 16,000.00 | 8:00:27 AM | Before 9:00am |
| 14 | 13 | Chicken Suya | ₦ 4,000.00 | 2 | ₦ 8,000.00 | 8:00:29 AM | Before 9:00am |
| 15 | 14 | Chicken Feast | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:33 AM | Before 9:00am |
| 16 | 15 | Chicken Feast | ₦ 2,000.00 | 4 | ₦ 8,000.00 | 8:00:33 AM | Before 9:00am |
| 17 | 16 | Beef Suya | ₦ 3,000.00 | 5 | ₦ 15,000.00 | 8:00:34 AM | Before 9:00am |
| 18 | 17 | Chicken Feast | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:35 AM | Before 9:00am |
| 19 | 18 | Hot Veggie | ₦ 4,000.00 | 5 | ₦ 20,000.00 | 8:00:35 AM | Before 9:00am |
| 20 | 19 | Meatzaa | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:35 AM | Before 9:00am |
| 21 | 20 | Meatzaa | ₦ 2,000.00 | 2 | ₦ 4,000.00 | 8:00:36 AM | Before 9:00am |
| 22 | 21 | Margarita | ₦ 4,000.00 | 3 | ₦ 12,000.00 | 8:00:37 AM | Before 9:00am |

So how can we make a report that will show us the sales performance that day by the different type of Pizzas the restaurant sells. A report like the one below:

| J | K | L |
|---------------------|-----------------|------------------------|
| Pizza Type | Sum of Quantity | Total Sales Amount |
| BBQ Chicken | 900 | ₦ 3,600,000.00 |
| BBQ Philly Steak | 952 | ₦ 3,808,000.00 |
| Beef Suya | 981 | ₦ 2,943,000.00 |
| Chicken Bali | 889 | ₦ 1,778,000.00 |
| Chicken Feast | 872 | ₦ 1,744,000.00 |
| Chicken Legend | 883 | ₦ 1,766,000.00 |
| Chicken Suya | 956 | ₦ 3,824,000.00 |
| Extravaganza | 907 | ₦ 1,814,000.00 |
| Hot Pepperoni Feast | 1,073 | ₦ 4,292,000.00 |
| Hot Veggie | 950 | ₦ 3,800,000.00 |
| Italiano | 985 | ₦ 2,955,000.00 |
| Margarita | 871 | ₦ 3,484,000.00 |
| Meatzaa | 838 | ₦ 1,676,000.00 |
| Pepperoni Feast | 907 | ₦ 3,628,000.00 |
| Pepperoni Suya | 1,077 | ₦ 3,231,000.00 |
| Veggie Supreme | 1,009 | ₦ 3,027,000.00 |
| Grand Total | 15,050 | ₦ 47,370,000.00 |

It's quite easy with Pivot Table.

You start by selecting the sales transaction table or selecting one of the cells in it. Then go to Insert menu and click on Pivot Table.

Pivot table, Pivot Chart and PowerPivot.xlsx - Excel

FILE **HOME** **INSERT** PAGE LAYOUT FORMULAS DATA REVIEW VIEW DEVELOPER LOAD TEST POWER QUERY

PivotTable Recommended PivotTables Tables Illustrations Online Pictures Apps Recommended Charts Charts PivotChart Map Tours Power View Reports

A1 3 : X ✓ fx 2000

| S/N | Pizza Sold | Price | Quantity | Amount Sold | Time | Time Range |
|-----|------------------|------------|----------|-------------|------------|---------------|
| 1 | Meatzaa | ₦ 2,000.00 | 5 | ₦ 10,000.00 | 8:00:01 AM | Before 9:00am |
| 2 | Extravaganza | ₦ 2,000.00 | 4 | ₦ 8,000.00 | 8:00:02 AM | Before 9:00am |
| 3 | BBQ Chicken | ₦ 4,000.00 | 5 | | | |
| 4 | Extravaganza | ₦ 2,000.00 | 1 | | | |
| 5 | Meatzaa | ₦ 2,000.00 | 4 | | | |
| 6 | Hot Veggie | ₦ 4,000.00 | 2 | | | |
| 7 | BBQ Philly Steak | ₦ 4,000.00 | 5 | | | |
| 8 | Chicken Feast | ₦ 2,000.00 | 1 | | | |
| 9 | Meatzaa | ₦ 2,000.00 | 3 | | | |
| 10 | Chicken Suya | ₦ 4,000.00 | 5 | | | |
| 11 | Chicken Legend | ₦ 2,000.00 | 5 | | | |
| 12 | BBQ Philly Steak | ₦ 4,000.00 | 4 | | | |
| 13 | Chicken Suya | ₦ 4,000.00 | 2 | | | |
| 14 | Chicken Feast | ₦ 2,000.00 | 5 | | | |
| 15 | Chicken Feast | ₦ 2,000.00 | 4 | | | |
| 16 | Beef Suya | ₦ 3,000.00 | 5 | | | |
| 17 | Chicken Feast | ₦ 2,000.00 | 5 | | | |
| 18 | Hot Veggie | ₦ 4,000.00 | 5 | | | |
| 19 | Meatzaa | ₦ 2,000.00 | 5 | | | |
| 20 | Meatzaa | ₦ 2,000.00 | 2 | ₦ 4,000.00 | 8:00:36 AM | Before 9:00am |
| 21 | Margarita | ₦ 4,000.00 | 3 | ₦ 12,000.00 | 8:00:37 AM | Before 9:00am |
| 22 | | | | ₦ 15,000.00 | 8:00:40 AM | Before 9:00am |

Create PivotTable

Choose the data that you want to analyze

Select a table or range 4

Table/Range: 'Pivot Table n Pivot Chart'!\$A\$1:\$G\$5001

Use an external data source

Choose where you want the PivotTable report to be placed

New Worksheet

Existing Worksheet

Location: 5

Choose whether you want to analyze multiple tables

Add this data to the Data Model

OK Cancel

In the screenshot above, I selected one of the cells in the table, clicked on Insert menu, clicked on PivotTable, confirmed that my entire table has been selected and clicked on OK.

You will be taken to a new sheet that looks like the one below:

The screenshot shows the Microsoft Excel interface with the 'Pivot table, Pivot Chart and PowerPivot.xlsx' file open. The 'PIVOTABLE TOOLS' ribbon tab is selected. On the left, a pivot table is visible with the message 'To build a report, choose fields from the PivotTable Field List'. The 'PivotTable Fields' pane is open on the right, containing a list of fields: S/N, Pizza Sold, Price, Quantity, Amount Sold, Time, and Time Range. Below the list are sections for 'FILTERS', 'ROWS', and 'VALUES'. A red box highlights the 'PivotTable Fields' pane, and red arrows point from the text 'Core part' to its title and from 'Result part' to the main data area.

At first it looks really different, like you are no longer in Excel. But it is very easy to work with. The core part is the part on the right with the name **PivotTable Fields**. It has a list of all the fields in the original data table. The part below the field names are where you actually set up your report.

Whatever field you want to display its unique entries, one per line/row, you will drag to ROWS. Let's do that for the Pizza Sold field so we will be able to see all the pizza types the restaurant sells.

The screenshot shows the Microsoft Excel ribbon at the top with the 'PivotTable Tools' tab selected. The main area displays a list of pizza types in the 'Row Labels' section, which is highlighted with a red box. To the right, the 'PivotTable Fields' pane is open, showing the 'ROWS' section with 'Pizza Sold' selected. Other fields listed include S/N, Price, Quantity, Amount Sold, Time, and Time Range. The 'VALUES' section is also visible.

Then if it is that you want to display those unique entries one per column, drag the field to COLUMNS. Let's see what will happen if we drag that Pizza Sold field from ROWS to COLUMNS.

The screenshot shows the same Excel interface after dragging the 'Pizza Sold' field from the 'ROWS' section to the 'COLUMNS' section in the PivotTable Fields pane. The 'COLUMNS' section is now highlighted with a red box. The 'ROWS' section still contains 'Pizza Sold'. The main area shows the pivot table with columns for different pizza types.

So now you understand how ROWS and COLUMNS work.

Drag Pizza Sold back to ROWS, that is where we need it for our quick analysis.

Next is VALUES. Whatever you want to do a mathematical calculation on, you drag to the VALUES part. Common calculations you will find yourself doing are counts (to see the number of time each unique entry occurred in the original table), sum (to add the values a particular field) and average (to average the values of a particular field).

In our case, let's drag Quantity and Amount Sold fields to VALUES.

| Row Labels | Sum of Quantity | Sum of Amount Sold |
|---------------------|-----------------|--------------------|
| BBQ Chicken | 900 | 3600000 |
| BBQ Philly Steak | 952 | 3808000 |
| Beef Suya | 981 | 2943000 |
| Chicken Bali | 889 | 1778000 |
| Chicken Feast | 872 | 1744000 |
| Chicken Legend | 883 | 1766000 |
| Chicken Suya | 956 | 3824000 |
| Extravaganza | 907 | 1814000 |
| Hot Pepperoni Feast | 1073 | 4292000 |
| Hot Veggie | 950 | 3800000 |
| Italiano | 985 | 2955000 |
| Margarita | 871 | 3484000 |
| Meatzaa | 838 | 1676000 |
| Pepperoni Feast | 907 | 3628000 |
| Pepperoni Suya | 1077 | 3231000 |
| Veggie Supreme | 1009 | 3027000 |
| Grand Total | 15050 | 47370000 |

Can you see how quick this is? We have just analyzed a 5000 sales record table in seconds. Now we have a report that shows us how many of each Pizza type was sold and the total sales amount generated.

Those are the type of lightning fast analysis PivotTable allows you to do.

There is now one part we haven't touched: FILTERS. As the name suggests, it simply

gives us the capability to filter our report. We will drag Time Range to FILTERS to see which sales occurred at the peak period (before 9:00am) and after the peak period.

The screenshot shows a Microsoft Excel spreadsheet titled "Pivot table, Pivot Chart and PowerPivot.xlsx". The PivotTable Fields pane on the right indicates that the "Time Range" field is being used as a filter. The main table displays the sum of amount sold for various pizzas, with a filter applied to show data for the period before 9:00am. The data includes:

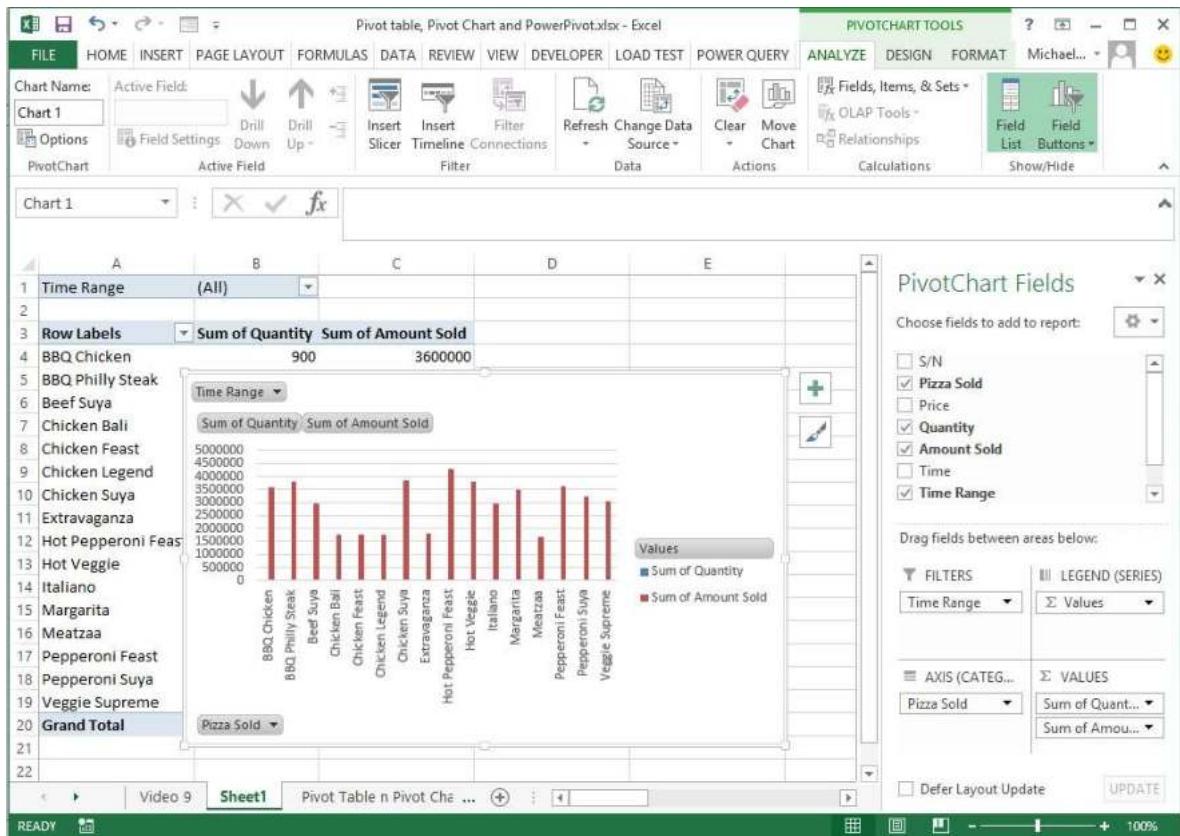
| Pizza | Sum of Amount Sold |
|--------------------|--------------------|
| After 9:00am | 3600000 |
| Before 9:00am | 3808000 |
| 2943000 | |
| 1778000 | |
| 1744000 | |
| 1766000 | |
| 3824000 | |
| 1814000 | |
| 4292000 | |
| 3800000 | |
| 2955000 | |
| 3484000 | |
| Meatzaa | 838 |
| 1676000 | |
| Pepperoni Feast | 907 |
| 3628000 | |
| Pepperoni Suya | 1077 |
| 3231000 | |
| Veggie Supreme | 1009 |
| 3027000 | |
| Grand Total | 15050 |
| | 47370000 |

And that's how PivotTable works. Very easy to use and powerful.

PivotChart

Whenever you insert a chart using data generated via a PivotTable, that chart is a PivotChart. It has some extra functionalities it inherits from the PivotTable which makes it a little different from the regular charts we have already discussed.

Below is the PivotChart for the PivotTable we just created.



Notice the extra elements on it. Even the Time Range filter is showing on the chart. Besides those extra elements, a PivotChart is same as the regular charts and the same kind of formatting you can do on the regular charts work on PivotCharts.

Business Data Analysis

When using Excel to organize or analyze your business operations data, there are some tools you need to be aware of.

Linking Sheets

You often have to pull data into a report from another report or Excel file, the most effective way to do this is to link the sheets. You will be mirroring the value in the source sheet in your destination sheet.

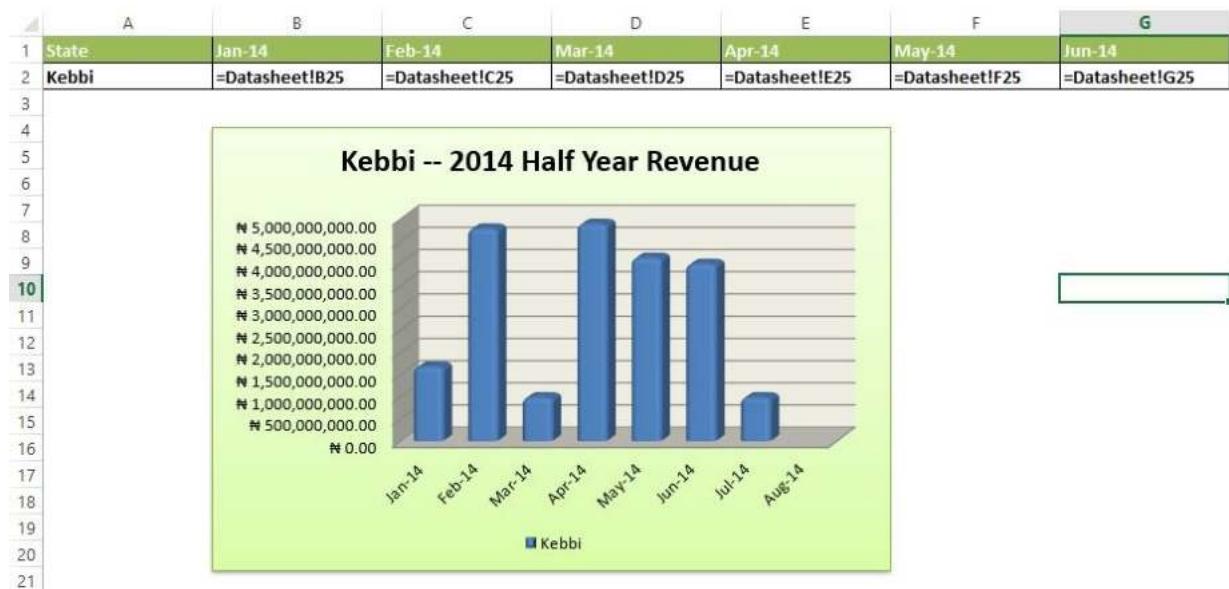
An example is if there is a sheet that contains the internal revenue of all the states in Nigeria and you are doing a report on Kebbi state. You want to pull the values for Kebbi state from the sheet that has everything (source sheet), your best bet is to link the sheets. It is preferable to copying the values from the source sheet because if the source sheet is updated with new values your analysis sheet will not automatically update (will still be showing the now incorrect old values). So how do you link sheets?



| | A | B | C | D | E | F | G |
|----|----------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|
| 1 | State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
| 2 | Abia | ₦ 1,297,498,300.00 | ₦ 821,123,500.00 | ₦ 1,175,454,800.00 | ₦ 967,327,400.00 | ₦ 2,265,644,000.00 | ₦ 4,544,916,100.00 |
| 3 | Adamawa | ₦ 4,022,792,500.00 | ₦ 4,317,641,300.00 | ₦ 1,627,470,600.00 | ₦ 1,023,694,700.00 | ₦ 3,493,691,500.00 | ₦ 1,973,059,900.00 |
| 23 | Kano | ₦ 2,981,980,300.00 | ₦ 2,021,735,600.00 | ₦ 3,016,518,600.00 | ₦ 4,411,651,000.00 | ₦ 2,387,291,000.00 | ₦ 530,613,400.00 |
| 24 | Katsina | ₦ 3,589,421,500.00 | ₦ 1,293,838,700.00 | ₦ 638,877,300.00 | ₦ 2,969,721,400.00 | ₦ 1,025,989,500.00 | ₦ 2,648,689,500.00 |
| 25 | Kebbi | ₦ 1,684,273,500.00 | ₦ 4,790,202,900.00 | ₦ 991,721,500.00 | ₦ 4,897,014,100.00 | ₦ 4,131,210,900.00 | ₦ 3,990,418,100.00 |
| 26 | Kogi | ₦ 2,812,863,300.00 | ₦ 2,734,189,600.00 | ₦ 2,306,601,300.00 | ₦ 867,264,000.00 | ₦ 2,104,687,400.00 | ₦ 2,825,512,800.00 |
| 27 | Kwara | ₦ 3,915,338,600.00 | ₦ 1,496,830,100.00 | ₦ 1,305,529,900.00 | ₦ 4,919,941,300.00 | ₦ 2,214,504,600.00 | ₦ 912,176,400.00 |
| 28 | Lagos | ₦ 6,239,473,500.00 | ₦ 7,319,183,000.00 | ₦ 6,211,689,500.00 | ₦ 3,351,178,500.00 | ₦ 11,610,307,000.00 | ₦ 22,681,984,500.00 |
| 29 | Nasarawa | ₦ 450,732,700.00 | ₦ 4,852,095,900.00 | ₦ 1,411,838,200.00 | ₦ 743,233,200.00 | ₦ 492,081,500.00 | ₦ 1,310,892,700.00 |
| 30 | Niger | ₦ 3,002,387,100.00 | ₦ 4,592,318,900.00 | ₦ 3,219,870,900.00 | ₦ 1,086,334,400.00 | ₦ 3,979,805,300.00 | ₦ 1,826,747,300.00 |
| 31 | Ogun | ₦ 3,434,714,900.00 | ₦ 2,586,000,100.00 | ₦ 3,907,557,600.00 | ₦ 1,642,410,200.00 | ₦ 2,265,022,600.00 | ₦ 3,200,451,900.00 |
| 32 | Ondo | ₦ 716,222,900.00 | ₦ 1,690,422,800.00 | ₦ 4,362,953,800.00 | ₦ 977,876,300.00 | ₦ 4,300,936,900.00 | ₦ 4,925,747,700.00 |
| 33 | Plateau | ₦ 4,527,323,100.00 | ₦ 2,371,220,000.00 | ₦ 4,471,653,300.00 | ₦ 932,778,800.00 | ₦ 3,593,441,000.00 | ₦ 4,894,816,200.00 |
| 34 | Rivers | ₦ 2,423,028,900.00 | ₦ 4,860,256,800.00 | ₦ 4,148,808,900.00 | ₦ 859,719,700.00 | ₦ 4,882,684,300.00 | ₦ 4,459,705,200.00 |
| 35 | Taraba | ₦ 531,248,900.00 | ₦ 785,603,400.00 | ₦ 2,475,480,400.00 | ₦ 878,820,400.00 | ₦ 1,389,495,200.00 | ₦ 3,244,525,900.00 |
| 36 | Yobe | ₦ 2,187,894,400.00 | ₦ 2,500,320,500.00 | ₦ 3,497,511,100.00 | ₦ 829,030,800.00 | ₦ 3,799,677,800.00 | ₦ 2,986,053,000.00 |
| 37 | Zamfara | ₦ 4,767,284,200.00 | ₦ 1,622,967,600.00 | ₦ 4,509,006,600.00 | ₦ 1,308,237,500.00 | ₦ 3,350,176,900.00 | ₦ 756,637,100.00 |

It's very easy. In the fields in the analysis sheet, for the different months values you will type = and select the cell with the actual figure in the source sheet.

In the end you will have the following or similar:



| A | B | C | D | E | F | G | |
|----|---|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|
| 1 | Internally Generated Revenue of States in Nigeria | | | | | | |
| 2 | State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
| 3 | Abia | ₦ 1,297,498,300.00 | ₦ 821,123,500.00 | ₦ 1,175,454,800.00 | ₦ 967,327,400.00 | ₦ 2,265,644,000.00 | ₦ 4,544,916,100.00 |
| 4 | Adamawa | ₦ 4,022,792,500.00 | ₦ 4,317,641,300.00 | ₦ 1,627,470,600.00 | ₦ 1,023,694,700.00 | ₦ 3,493,691,500.00 | ₦ 1,973,059,900.00 |
| 23 | Kano | ₦ 2,981,980,300.00 | ₦ 2,021,735,600.00 | ₦ 3,016,518,600.00 | ₦ 4,411,651,000.00 | ₦ 2,387,291,000.00 | ₦ 530,613,400.00 |
| 24 | Katsina | ₦ 3,589,421,500.00 | ₦ 1,293,838,700.00 | ₦ 638,877,300.00 | ₦ 2,969,721,400.00 | ₦ 1,025,989,500.00 | ₦ 2,648,689,500.00 |
| 25 | Kebbi | ₦ 1,632,500.00 | ₦ 4,025,290.00 | ₦ 9,225,500.00 | ₦ 4,025,4,100.00 | ₦ 4,025,900.00 | ₦ 3,902,25,100.00 |
| 26 | Kogi | ₦ 2,812,863,300.00 | ₦ 2,734,189,600.00 | ₦ 2,306,601,300.00 | ₦ 867,264,000.00 | ₦ 2,104,687,400.00 | ₦ 2,825,512,800.00 |
| 27 | Kwara | ₦ 3,915,338,600.00 | ₦ 1,496,830,100.00 | ₦ 1,305,529,900.00 | ₦ 4,919,941,300.00 | ₦ 2,214,504,600.00 | ₦ 912,176,400.00 |
| 28 | Lagos | ₦ 6,239,473,500.00 | ₦ 7,319,183,000.00 | ₦ 6,211,689,500.00 | ₦ 3,351,178,500.00 | ₦ 11,610,307,000.00 | ₦ 22,681,984,500.00 |
| 29 | Nasarawa | ₦ 450,732,700.00 | ₦ 4,852,095,900.00 | ₦ 1,411,838,200.00 | ₦ 743,233,200.00 | ₦ 492,081,500.00 | ₦ 1,310,892,700.00 |
| 30 | Niger | ₦ 3,002,387,100.00 | ₦ 4,592,318,900.00 | ₦ 3,219,870,900.00 | ₦ 1,086,334,400.00 | ₦ 3,979,805,300.00 | ₦ 1,826,747,300.00 |
| 31 | Ogun | ₦ 3,434,714,900.00 | ₦ 2,586,000,100.00 | ₦ 3,907,557,600.00 | ₦ 1,642,410,200.00 | ₦ 2,265,022,600.00 | ₦ 3,200,451,900.00 |
| 32 | Ondo | ₦ 716,222,900.00 | ₦ 1,690,422,800.00 | ₦ 4,362,953,800.00 | ₦ 977,876,300.00 | ₦ 4,300,936,900.00 | ₦ 4,925,747,700.00 |
| 33 | Plateau | ₦ 4,527,323,100.00 | ₦ 2,371,220,000.00 | ₦ 4,471,653,300.00 | ₦ 932,778,800.00 | ₦ 3,593,441,000.00 | ₦ 4,894,816,200.00 |
| 34 | Rivers | ₦ 2,423,028,900.00 | ₦ 4,860,256,800.00 | ₦ 4,148,808,900.00 | ₦ 859,719,700.00 | ₦ 4,882,684,300.00 | ₦ 4,459,705,200.00 |
| 35 | Taraba | ₦ 531,248,900.00 | ₦ 785,603,400.00 | ₦ 2,475,480,400.00 | ₦ 878,820,400.00 | ₦ 1,389,495,200.00 | ₦ 3,244,525,900.00 |
| 36 | Yobe | ₦ 2,187,894,400.00 | ₦ 2,500,320,500.00 | ₦ 3,497,511,100.00 | ₦ 829,030,800.00 | ₦ 3,799,677,800.00 | ₦ 2,986,053,000.00 |
| 37 | Zamfara | ₦ 4,767,284,200.00 | ₦ 1,622,967,600.00 | ₦ 4,509,006,600.00 | ₦ 1,308,237,500.00 | ₦ 3,350,176,900.00 | ₦ 756,637,100.00 |

The source sheet has the name Datasheet, hence the =Datasheet!B25 in January value cell in the analysis sheet. You don't type anything beyond = into the values cells in the analysis sheet, once you select the right cell in the source sheet, Excel will write everything you see in the cell.

Duplicating Sheets

Sometimes you will want an exact copy of a sheet to work with or email to someone (especially if the Excel file contains other sheets you don't want the person to access). Excel has a nifty tool for duplicating sheets. And it's very easy to use.

Right click on the name of the sheet you want to duplicate. Click on **Move or Copy...**

Budgeted Expense for the Month Actual Expense Surplus/Deficit

| | Budgeted Cost | Actual Cost | Difference |
|---------------------------------|---------------|-------------|------------|
| May | NGN 40,000 | NGN 35,000 | NGN 5,000 |
| Housing | | | |
| House Rent | NGN 5,000 | NGN 5,000 | NGN 0 |
| Business Rent | NGN 0 | NGN 0 | NGN 0 |
| Phone | NGN 25,000 | NGN 15,000 | NGN 10,000 |
| Electricity | NGN 10,000 | NGN 15,000 | -NGN 5,000 |
| Gas | | | NGN 0 |
| Water and sewer | | | NGN 0 |
| Cable | | | NGN 0 |
| Waste removal Maintenance or | | | NGN 0 |
| Supplies | | | NGN 0 |
| Other | | | NGN 0 |
| Total | NGN 40,000 | NGN 35,000 | NGN 5,000 |

Projected Monthly Income

| |
|----------------------|
| Income 1 |
| Income 2 |
| Extra income |
| Total monthly income |

Actual Monthly Income

| |
|----------------------|
| Income 1 |
| Income 2 |
| Extra income |
| Total monthly income |

Budgeted Income - Actual Income - Actual Difference

You'll see a dialog box. Select **new book** and tick **Create a Copy**.

Move or Copy

Move selected sheets
To book:
(new book)

Create a copy

OK Cancel

And the sheet will be duplicated in a new Excel file for you.

| Family Monthly Budget and Expense Sheet | | | | | | | | | | Instructions | | |
|---|--------------------------------|---------------|----------------|------------|--------------------|--------------|--|--|--|--------------|---|--|
| | Budgeted Expense for the Month | | Actual Expense | | Surplus/Difference | | | | | | | |
| May | | NGN 40,000 | | NGN 35,000 | | NGN 5,000 | | | | | | |
| | Housing | Budgeted Cost | Actual Cost | Difference | | | | | | | The Family Budget sheet | |
| House Rent | | NGN 5,000 | NGN 5,000 | | NGN 0 | | | | | | Just fill in Budgeted Expenses the ones that you find no parts that you don't Also fill your Budgeted in the month. Then at the end of the month. Then at the end of the month. | |
| Business Rent | | NGN 0 | NGN 0 | | NGN 0 | | | | | | Actual Income for that month. | |
| Phone | | NGN 25,000 | NGN 15,000 | ↑ | NGN 10,000 | | | | | | You can save a copy of this you'll need it for the next month. | |
| Electricity | | NGN 10,000 | NGN 15,000 | ↓ | -NGN 5,000 | | | | | | If you need any help don't mike@urbizedge.com | |
| Gas | | | | | NGN 0 | | | | | | | |
| Water and sewer | | | | | NGN 0 | | | | | | | |
| Cable | | | | | NGN 0 | | | | | | | |
| Waste removal maintenance or other | | | | | NGN 0 | | | | | | | |
| Supplies | | | | | NGN 0 | | | | | | | |
| Other | | | | | NGN 0 | | | | | | | |
| Total | | NGN 40,000 | NGN 35,000 | | NGN 5,000 | | | | | | | |
| Monthly Family Budget | | | | | | | | | | | | |
| Projected Monthly Income | | | | | | | | | | | | |
| Income 1 | | | | | | NGN 100,000 | | | | | | |
| Income 2 | | | | | | NGN 80,000 | | | | | | |
| Extra income | | | | | | NGN 50,000 | | | | | | |
| Total monthly income | | | | | | NGN 230,000 | | | | | | |
| Actual Monthly Income (filled at Month End) | | | | | | | | | | | | |
| Income 1 | | | | | | NGN 100,000 | | | | | | |
| Income 2 | | | | | | NGN 80,000 | | | | | | |
| Extra income | | | | | | NGN 25,000 | | | | | | |
| Total monthly income | | | | | | NGN 205,000 | | | | | | |
| Budgeted Income - Budgeted | | | | | | | | | | | | |
| Actual Income - Actual Expense | | | | | | NGN 190,000 | | | | | | |
| Difference | | | | | | NGN 170,000 | | | | | | |
| | | | | | | (NGN 20,000) | | | | | | |

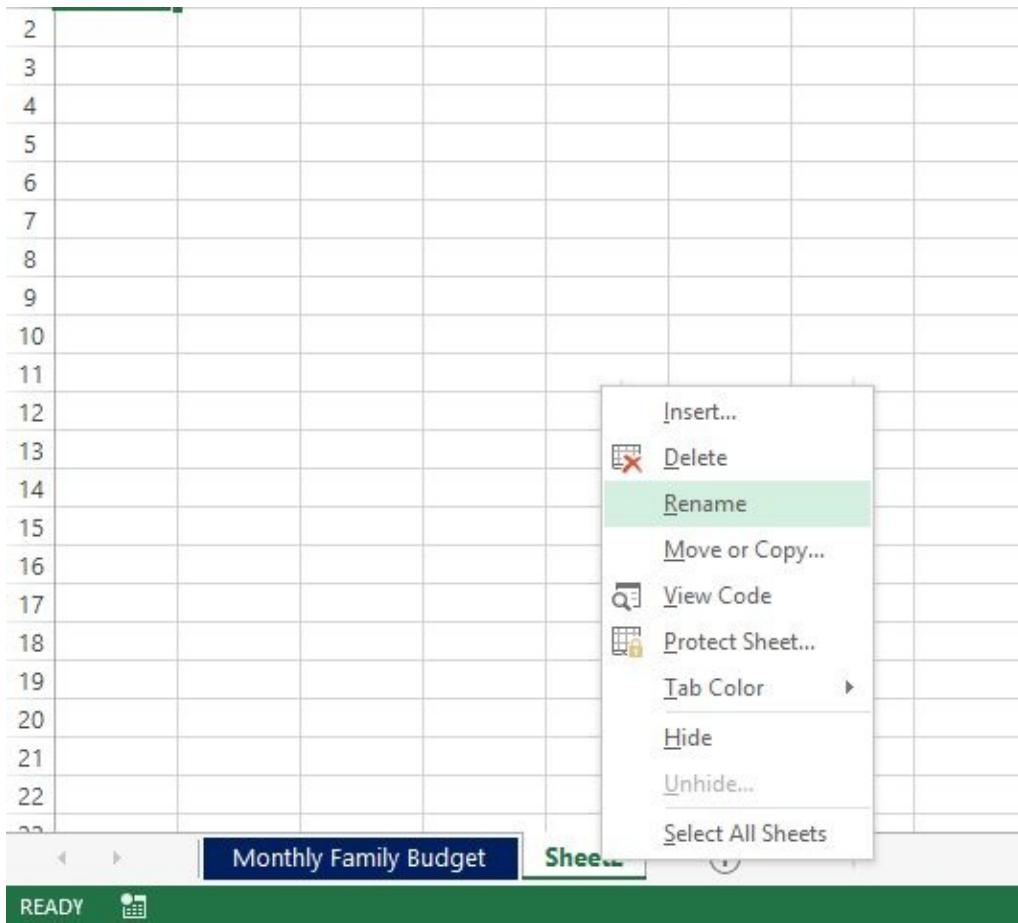
Inserting Sheets, Renaming Sheets and Changing Sheet Tab color

You can insert a new Sheet in an Excel file. Just click on the new sheet icon at the right of the last sheet tab in the file.

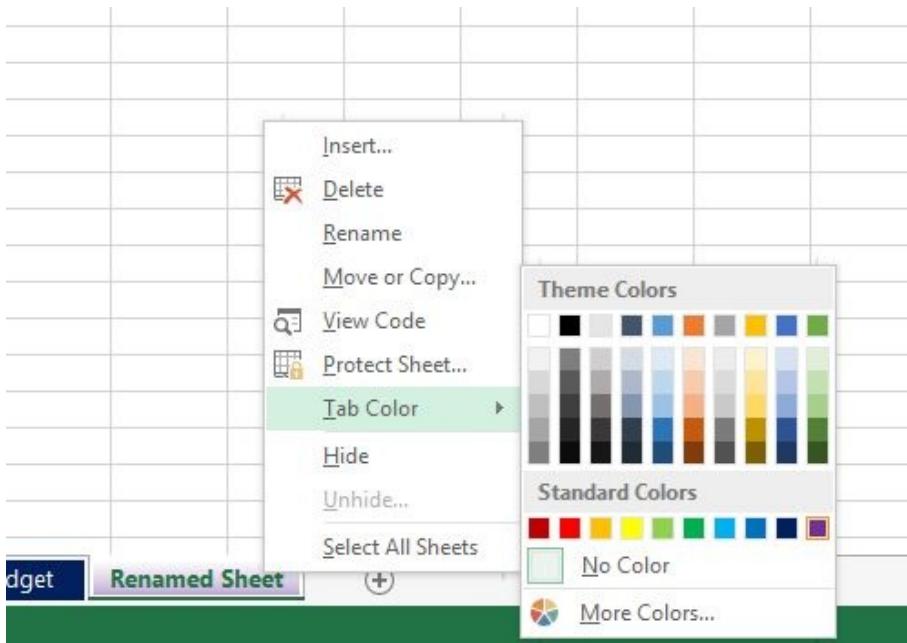
| 1 | Family Monthly Budget and Expenses | |
|----|------------------------------------|---------------|
| 2 | | |
| 3 | Budgeted Expense for the Month | Actual E |
| 4 | May | NGN 40,000 |
| 5 | | |
| 6 | Housing | Budgeted Cost |
| 7 | House Rent | NGN 5,000 |
| 8 | Business Rent | NGN 0 |
| 9 | Phone | NGN 25,000 |
| 10 | Electricity | NGN 10,000 |
| 11 | Gas | NGN |
| 12 | Water and sewer | |
| 13 | Cable | |
| 14 | Waste removal Maintenance or | |
| 15 | ----- | |
| 16 | Supplies | |
| 17 | Other | |
| 18 | Total | NGN 40,000 |

READY  **Monthly Family Budget**  New sheet

You can also rename the new Sheet to what you want. Just right click on the sheet tab and select Rename.



Finally, you can give it the color you want. Again, right click on the sheet name and click on Tab Color. Choose the color you want.



Freezing Panes

There will be times you have a table with lots of entries and will require a lot scrolling up and down, and even left and right. Often you will want some part of the table to never scroll out of view. This is usually the headers. Achieving this requires enabling a tool called Freeze Panes.

It freezes the part of your report you don't want to scroll out of view. Below is an example. You access it from the View menu.

The screenshot shows the Microsoft Excel ribbon with the 'View' tab selected. In the 'Freeze Panes' section, the 'Freeze Panes' button is highlighted. A dropdown menu is open, showing three options: 'Freeze Panes', 'Freeze Top Row', and 'Freeze First Column'. The 'Freeze Panes' option is described as 'Keep rows and columns visible while the rest of the worksheet scrolls (based on current selection)'. The 'Freeze Top Row' option is described as 'Keep the top row visible while scrolling through the rest of the worksheet'. The 'Freeze First Column' option is described as 'Keep the first column visible while scrolling through the rest of the worksheet'. The main Excel window displays a table of data with columns labeled 'State', 'Jan-14', 'Feb-14', 'Mar-14', and 'A' (partially visible). The table contains numerical values in millions of Naira (₦).

| | A | B | C | D | A |
|----|-------------|--------------------|--------------------|--------------------|------|
| 1 | State | Jan-14 | Feb-14 | Mar-14 | A |
| 2 | Abia | ₦ 1,297,498,300.00 | ₦ 821,123,500.00 | ₦ 1,175,454,800.00 | ₦ 1, |
| 3 | Adamawa | ₦ 4,022,792,500.00 | ₦ 4,317,641,300.00 | ₦ 1,627,470,600.00 | ₦ 1, |
| 4 | Akwa Ibom | ₦ 824,782,800.00 | ₦ 1,691,712,500.00 | ₦ 4,927,386,500.00 | ₦ 2, |
| 5 | Anambra | ₦ 2,159,322,900.00 | ₦ 1,511,863,500.00 | ₦ 4,060,131,900.00 | ₦ 3, |
| 6 | Bauchi | ₦ 764,748,600.00 | ₦ 3,059,451,100.00 | ₦ 2,879,985,600.00 | ₦ 3, |
| 7 | Bayelsa | ₦ 1,218,646,400.00 | ₦ 2,035,499,300.00 | ₦ 3,596,177,500.00 | ₦ 1, |
| 8 | Benue | ₦ 3,479,649,000.00 | ₦ 3,864,832,700.00 | ₦ 2,458,711,700.00 | ₦ 3, |
| 9 | Benue | ₦ 602,469,700.00 | ₦ 1,387,315,500.00 | ₦ 4,501,134,600.00 | ₦ 3, |
| 10 | Borno | ₦ 2,361,614,200.00 | ₦ 1,616,065,000.00 | ₦ 4,908,244,600.00 | ₦ 4, |
| 11 | Cross River | ₦ 2,416,592,600.00 | ₦ 1,971,834,600.00 | ₦ 1,814,142,400.00 | ₦ 4, |
| 12 | Delta | ₦ 4,755,914,300.00 | ₦ 2,382,209,500.00 | ₦ 3,361,514,600.00 | ₦ 2, |
| 13 | Ebonyi | ₦ 3,547,140,000.00 | ₦ 3,233,069,500.00 | ₦ 4,883,253,900.00 | ₦ 2, |
| 14 | Edo | ₦ 2,663,501,000.00 | ₦ 781,461,300.00 | ₦ 462,661,800.00 | ₦ 2, |
| 15 | Ekiti | ₦ 1,816,087,900.00 | ₦ 4,128,943,600.00 | ₦ 1,512,170,300.00 | ₦ 4, |
| 16 | Enugu | ₦ 1,409,979,200.00 | ₦ 2,609,372,800.00 | ₦ 1,990,646,300.00 | ₦ 4, |
| 17 | FCT | ₦ 3,199,223,200.00 | ₦ 2,063,317,300.00 | ₦ 1,829,381,400.00 | ₦ 2, |
| 18 | Gombe | ₦ 620,111,300.00 | ₦ 2,201,453,200.00 | ₦ 1,885,641,400.00 | ₦ 2, |
| 19 | Imo | ₦ 2,591,742,600.00 | ₦ 2,521,764,800.00 | ₦ 2,013,994,900.00 | ₦ 2, |

There are three options:

- 1. Freeze Panes.** To use this option you have to select a cell in the table. This option will freeze all the rows above the cell you selected and all the columns to the left of the cell you selected. So you have to select just the right cell. If you want to freeze rows 1 and 2, then you will select cell A3.
- 2. Freeze Top Row.** This freezes the top row in your Excel's current view.
- 3. Freeze First Column.** This freezes the first column in your Excel's current view.

Below is the result of freezing row 1. It doesn't scroll out of view even when I scroll way down.

| | A | B | C | D | E | F | G |
|----|------------|---------------------|---------------------|----------------------|---------------------|----------------------|----------------------|
| 1 | State | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
| 26 | Kwara | ₦ 3,915,338,600.00 | ₦ 1,496,830,100.00 | ₦ 1,305,529,900.00 | ₦ 4,919,941,300.00 | ₦ 2,214,504,600.00 | ₦ 912,176,400.00 |
| 27 | Lagos | ₦ 6,239,473,500.00 | ₦ 7,319,183,000.00 | ₦ 6,211,689,500.00 | ₦ 3,351,178,500.00 | ₦ 11,610,307,000.00 | ₦ 22,681,984,500.00 |
| 28 | Nasarawa | ₦ 450,732,700.00 | ₦ 4,852,095,900.00 | ₦ 1,411,838,200.00 | ₦ 743,233,200.00 | ₦ 492,081,500.00 | ₦ 1,310,892,700.00 |
| 29 | Niger | ₦ 3,002,387,100.00 | ₦ 4,592,318,900.00 | ₦ 3,219,870,900.00 | ₦ 1,086,334,400.00 | ₦ 3,979,805,300.00 | ₦ 1,826,747,300.00 |
| 30 | Ogun | ₦ 3,434,714,900.00 | ₦ 2,586,000,100.00 | ₦ 3,907,557,600.00 | ₦ 1,642,410,200.00 | ₦ 2,265,022,600.00 | ₦ 3,200,451,900.00 |
| 31 | Ondo | ₦ 716,222,900.00 | ₦ 1,690,422,800.00 | ₦ 4,362,953,800.00 | ₦ 977,876,300.00 | ₦ 4,300,936,900.00 | ₦ 4,925,747,700.00 |
| 32 | Plateau | ₦ 4,527,323,100.00 | ₦ 2,371,220,000.00 | ₦ 4,471,653,300.00 | ₦ 932,778,800.00 | ₦ 3,593,441,000.00 | ₦ 4,894,816,200.00 |
| 33 | Rivers | ₦ 2,423,028,900.00 | ₦ 4,860,256,800.00 | ₦ 4,148,808,900.00 | ₦ 859,719,700.00 | ₦ 4,882,684,300.00 | ₦ 4,459,705,200.00 |
| 34 | Taraba | ₦ 531,248,900.00 | ₦ 785,603,400.00 | ₦ 2,475,480,400.00 | ₦ 878,820,400.00 | ₦ 1,389,495,200.00 | ₦ 3,244,525,900.00 |
| 35 | Yobe | ₦ 2,187,894,400.00 | ₦ 2,500,320,500.00 | ₦ 3,497,511,100.00 | ₦ 829,030,800.00 | ₦ 3,799,677,800.00 | ₦ 2,986,053,000.00 |
| 36 | Zamfara | ₦ 4,767,284,200.00 | ₦ 1,622,967,600.00 | ₦ 4,509,006,600.00 | ₦ 1,308,237,500.00 | ₦ 3,350,176,900.00 | ₦ 756,637,100.00 |
| 37 | All States | ₦ 90,504,729,800.00 | ₦ 91,889,335,900.00 | ₦ 101,344,816,300.00 | ₦ 87,169,591,800.00 | ₦ 104,376,072,900.00 | ₦ 122,184,295,800.00 |
| 38 | | | | | | | |
| 39 | | | | | | | |

Splitting Windows

Excel lets you split your current Excel view into two independent windows that you can scroll separately. This is useful if you want to monitor changes in two different far away parts of your Excel file that are dependent.

An example is shown below. The Excel file is a stock analysis file and at the top far right are projected values based on assumptions made far down the Excel sheet. So in order to see instantaneously the effect of a change in an assumption on the projected values, splitting window was used.

The screenshot shows a financial statement for Nestle. The main part of the sheet contains historical income statement data from 2008 to 2012. To the right, there is a separate section titled "Projected values" which spans from 2013 to 2016. A red box highlights the projected values section. The projected values are based on assumptions made in the earlier rows of the sheet, specifically in row 9 where "Gross Profit" is listed. The projected values are as follows:

| | 2013 | 2014 | 2015 | 2016 |
|--|---------------|---------------|---------------|---------------|
| Revenues | ₦ 137,714,725 | ₦ 164,102,126 | ₦ 194,753,691 | ₦ 231,258,097 |
| Cost of goods sold | 80,083,818 | 94,660,140 | 112,028,169 | 133,636,694 |
| Gross Profit | 57,630,906 | 69,441,986 | 82,725,522 | 97,621,403 |
| Selling, general & administrative expenses | 26,465,637 | 32,428,338 | 38,982,529 | 45,876,359 |
| Operating Profit | 31,165,269 | 37,013,648 | 43,742,993 | 51,745,043 |
| Interest Income, net | (2,190,918) | (3,106,592) | (3,313,034) | (4,335,658) |
| Earnings before Income taxes | 28,974,351 | 33,907,056 | 40,429,959 | 47,409,385 |
| Income tax expense | 6,772,667 | 7,444,958 | 8,322,276 | 8,704,040 |
| NET EARNINGS | ₦ 22,201,685 | ₦ 26,462,098 | ₦ 32,107,683 | ₦ 38,705,346 |
| BALANCE SHEET | ₦ 45,865 | | | |

And the assumptions far down

Business Data Analysis, part 1.xlsx - Excel

Normal Page Break Preview Layout Custom Views Workbook Views Show Zoom Window All Arrange Panes Hide Synchronous Scrolling Switch Windows Macros

K9 ✎ fx =K7-K8

A B C D E F G H I J K L M N O

105
106 x ASSUMPTIONS
107
108 (IN\$ in thousands, except per share data) 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017

110 Income Statement Assumptions:
111 Revenue Growth 32.03% 21.09% 18.42% 19.14% 18.00% 19.16% 18.68% 18.74% 18.6
112 Cost of goods sold as a % of Rev. 60.49% 58.49% 56.20% 58.56% 57.01% 58.15% 57.68% 57.52% 57.79% 57.6
113 SG&A as a % of Rev. 16.50% 18.48% 20.91% 19.48% 20.72% 19.22% 19.76% 20.02% 19.84% 19.3
114 Operating Profit Margin 23.01% 23.03% 22.89% 21.96% 22.27% 22.12% 22.19% 22.15% 22.17% 22.1
115 ROIC 46.35% 46.49% 32.50% 37.44% 34.61% 36.03% 35.32% 35.67% 35.50% 35.5
116 Cash Flow as a % of Rev 2.53% -2.33% -0.69% -3.75% 6.60% 0.47% 0.06% 0.54% 0.78% 1.6
117 ROA 28.57% 25.61% 23.42% 23.89% 25.36% 25.37% 24.73% 24.56% 24.78% 24.9
118 ROE 92.25% 92.79% 84.78% 71.07% 61.83% 80.54% 78.20% 75.29% 73.39% 73.8
119 Interest Income, net as a % of Rev. -0.08% -2.85% -0.83% -3.38% -0.80% -1.59% -1.89% -1.70% -1.87% -1.5
120 Income tax expense as a % of Rev. 6.82% 5.85% 6.82% 1.74% 3.35% 4.92% 4.54% 4.27% 3.76% 4.1
121
122 Balance Sheet Assumptions:
123 Accounts receivable as a % of Rev. 0.04% 0.04% 11.21% 11.53% 5.70% 5.70% 6.84% 8.20% 7.6
124 Inventories as a % of Rev. 15.66% 10.27% 10.11% 7.53% 10.89% 10.89% 9.94% 9.87% 9.8
125 Prepaid expenses and other as a % of Rev. 10.92% 10.26% 0.26% 0.26% 5.42% 5.42% 4.32% 3.14% 3.7
126

Splitting window allows us to view this two far away parts of the Excel sheet at once.

To do this, select the middle row in the Excel sheet and go to View menu and click on Split.

Business Data Analysis, part 1.xlsx - Excel

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW DEVELOPER LOAD TEST POWER QUERY Michael Olafusi

Normal Page Break Preview Layout Custom Views Workbook Views Show Zoom Window All Arrange Panes Hide Synchronous Scrolling Switch Windows Macros

A13 ✎ fx

A B C D E F G H I J K L M N O

1 NESTLE
2 x INCOME STATEMENT
3
4 (IN\$ in thousands, except per share data) 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017

5 Revenues N 51,742,302 N 68,317,303 N 82,736,229 N 97,961,260 N 116,707,394 N 137,714,725 N 164,102,126 N 194,753,691 N 231,258,097 N 274,377,
6 Cost of goods sold 31,300,680 39,956,777 46,495,387 57,368,192 66,538,762 80,083,818 94,660,140 112,028,169 133,636,694 158,128,8
7 Gross Profit 20,441,622 28,360,526 36,230,842 40,593,068 50,168,632 57,630,906 69,441,986 82,725,522 97,621,403 116,249,1
8
9 Selling, general & administrative expenses 8,537,995 12,628,323 17,297,463 19,078,795 24,179,063 26,465,637 32,428,338 38,982,529 45,876,359 54,628,9
10 Operating Profit 11,903,627 15,732,203 18,933,379 21,514,273 25,989,569 31,165,269 37,013,648 43,742,993 51,745,043 61,620,1
11
12 Interest Income, net (41,414) (1,948,559) (688,925) (3,315,024) (939,397) (2,190,918) (3,106,592) (3,313,034) (4,335,658) (4,315,8
13 Earnings before income taxes 11,862,213 13,783,244 18,244,454 18,199,249 25,050,172 28,974,351 33,907,056 40,429,959 47,409,385 57,304,2
14 Income tax expense 3,530,614 3,999,666 5,642,345 7,702,796 3,912,897 6,772,667 7,444,958 8,322,276 8,704,040 11,438,5
15
16 NET EARNINGS N 8,331,599 N 9,783,578 N 12,602,109 N 16,496,453 N 21,137,275 N 22,201,685 N 26,462,098 N 32,107,683 N 38,705,346 N 45,865
17
18 x BALANCE SHEET
19
20
21

Then scroll the section below the splitting point down to the assumptions part. It will scroll independent of the part above the split line.

| Business Data Analysis, part 1.xlsx - Excel | | | | | | | | | | | |
|---|--------------------|--------------|--------------|--------------|---|---------------|---------------|-------------------|---------------------------------|--|--|
| FILE | HOME | INSERT | PAGE LAYOUT | FORMULAS | DATA | REVIEW | VIEW | DEVELOPER | LOAD TEST | POWER QUERY | |
| Normal | Page Break Preview | Page Layout | Custom Views | Ruler | <input checked="" type="checkbox"/> Formula Bar | Zoom | 100% | Zoom to Selection | Split | <input type="checkbox"/> View Side by Side | |
| Gridlines | Gridlines | Headings | | | | New Window | Arrange All | Freeze Panes | <input type="checkbox"/> Hide | <input type="checkbox"/> Synchronous Scrolling | |
| Workbook Views | Show | | | | | Zoom | | | <input type="checkbox"/> Unhide | <input type="checkbox"/> Reset Window Position | |
| F17 | * | X | ✓ | fx | 3530614 | | | | | | |
| A B C D E F G H I J K L M N O | | | | | | | | | | | |
| 1 NESTLE | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 x INCOME STATEMENT | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 (NIN in thousands, except per share data) | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | |
| 6 Revenues | N 51,742,302 | N 68,317,303 | N 82,726,229 | N 97,561,260 | N 116,707,394 | N 137,714,725 | N 164,102,126 | N 194,753,691 | N 231,258,097 | N 274,377, | |
| 7 Cost of goods sold | 31,300,680 | 39,956,777 | 46,495,387 | 57,368,192 | 66,538,762 | 80,083,818 | 94,660,140 | 112,028,169 | 133,636,694 | 158,128,8 | |
| 8 Gross Profit | 20,441,622 | 28,360,525 | 36,230,842 | 40,593,068 | 50,168,632 | 57,630,906 | 69,441,986 | 82,725,522 | 97,621,403 | 116,249,1 | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 104 | | | | | | | | | | | |
| 105 | | | | | | | | | | | |
| 106 x ASSUMPTIONS | | | | | | | | | | | |
| 107 | | | | | | | | | | | |
| 108 (NIN in thousands, except per share data) | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | |
| 109 Income Statement Assumptions: | | | | | | | | | | | |
| 110 | | | | | | | | | | | |
| 111 Revenue Growth | | 32.03% | 21.09% | 18.42% | 19.14% | 18.00% | 19.16% | 18.68% | 18.74% | 18.6 | |
| 112 Cost of goods sold as a % of Rev. | 60.49% | 58.49% | 56.20% | 58.56% | 57.01% | 58.15% | 57.68% | 57.52% | 57.79% | 57.6 | |
| 113 SG&A as a % of Rev. | 16.50% | 18.48% | 20.91% | 19.48% | 20.72% | 19.22% | 19.76% | 20.02% | 19.84% | 19.9 | |
| 114 Operating Profit Margin | 23.01% | 23.03% | 22.89% | 21.96% | 22.27% | 22.12% | 22.15% | 22.15% | 22.17% | 22.1 | |
| 115 | | | | | | | | | | | |

Notice the jump from row 10 to row 104.

Now whenever you alter the assumptions you won't have to scroll up to see the effect on the projected revenue and projected profit.

Conditional Formatting

Conditional formatting is another power tool in the power Excel user's toolbox. It allows you to indicate the relative performance of metrics (KPIs). Below is a simple example of its use.

| | A | B | C | D | E |
|---|---------------|----------------|------------|-----------------|---|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
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| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| Family Monthly Budget and Expense Sheet | | | | | |
| | | | | | |
| Budgeted Expense for the Month | | Actual Expense | | Surplus/Deficit | |
| May | | NGN 40,000 | | NGN 35,000 | |
| | | | | | |
| Housing | Budgeted Cost | Actual Cost | Difference | | |
| House Rent | NGN 5,000 | NGN 5,000 | NGN 0 | | |
| Business Rent | NGN 0 | NGN 0 | NGN 0 | | |
| Phone | NGN 25,000 | NGN 15,000 | NGN 10,000 | | |
| Electricity | NGN 10,000 | NGN 15,000 | -NGN 5,000 | | |
| Gas | | | NGN 0 | | |
| Water and sewer | | | NGN 0 | | |
| Cable | | | NGN 0 | | |
| Waste removal maintenance or | | | NGN 0 | | |
| Supplies | | | NGN 0 | | |
| Other | | | NGN 0 | | |
| Total | NGN 40,000 | NGN 35,000 | NGN 5,000 | | |

Notice the green, yellow and red arrows. They are conditional formats that let you visually see where you are spending below your budget, where you are spending exactly what you budgeted and where you are spending above your budget.

Those are type of practical visual analysis conditional formatting provides.

You can access it via the Home menu. And it has the following formatting groups.

TABLE TOOLS

POWER QUERY DESIGN

Conditional Formatting ▾ Format as Table ▾ Cell Styles ▾ Insert Delete Format

Highlight Cells Rules

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

Actual Monthly Income (Finalized at Month End)

TABLE TOOLS

POWER QUERY DESIGN

Conditional Formatting ▾ Format as Table ▾ Cell Styles ▾ Insert Delete Format

Top/Bottom Rules

- Top 10 Items...
- Top 10 %...
- Bottom 10 Items...
- Bottom 10 %...
- Above Average...
- Below Average...
- More Rules...

Actual Monthly Income (Finalized at Month End)

| | |
|----------|-------------|
| Income 1 | NGN 100,000 |
| Income 2 | NGN 80,000 |
| Income 3 | NGN 50,000 |
| Income 4 | NGN 230,000 |

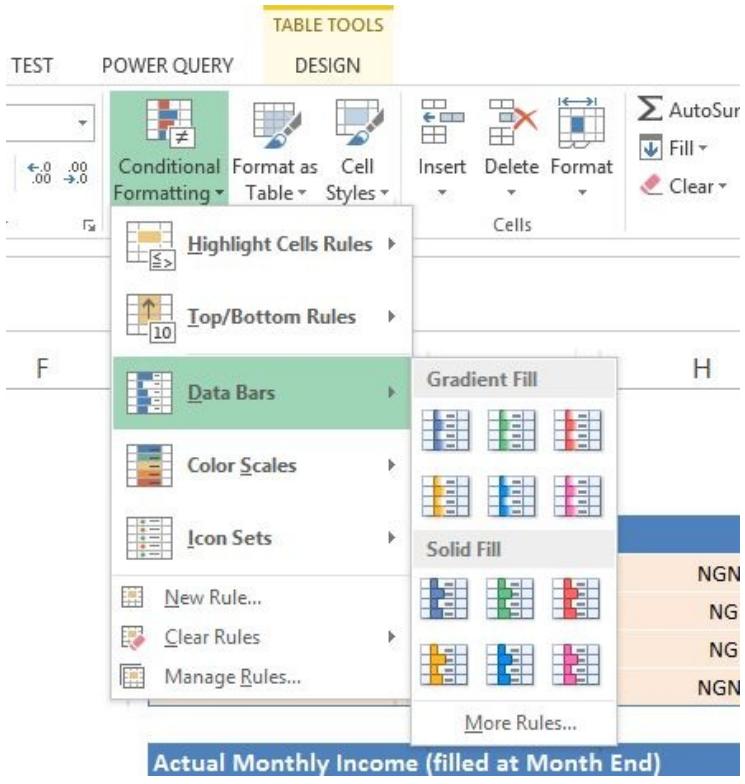


TABLE TOOLS

LOAD TEST POWER QUERY DESIGN Michael Ola

Conditional Formatting Format as Cell Styles Insert Delete Format Cells AutoSum A Z Sort & Find & Select

Fill Clear

Number F H

Actual Monthly Income

- Income 1
- Income 2
- Extra income
- Total monthly income

Budgeted Income - Budget

- Actual Income - Actual
- Difference

New Nam ...

Conditional Formatting Rules

- Highlight Cells Rules
- Top/Bottom Rules
- Data Bars
- Color Scales
- Icon Sets
- New Rule...
- Clear Rules
- Manage Rules...

Directional

- Up, Down, Left, Right
- Up, Right, Down, Left
- Up, Right, Down, Right
- Up, Right, Down, Left

Shapes

- Circles, Squares, Diamonds, Arrows, Stars, etc.
- Indicators
- Ratings

More Rules...

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Power Excel Formulas

Excel has thousands of formulas but a select few stand out as very versatile and useful for day to day business data analysis and reporting. We are going to focus on those formulas in this section.

VLOOKUP

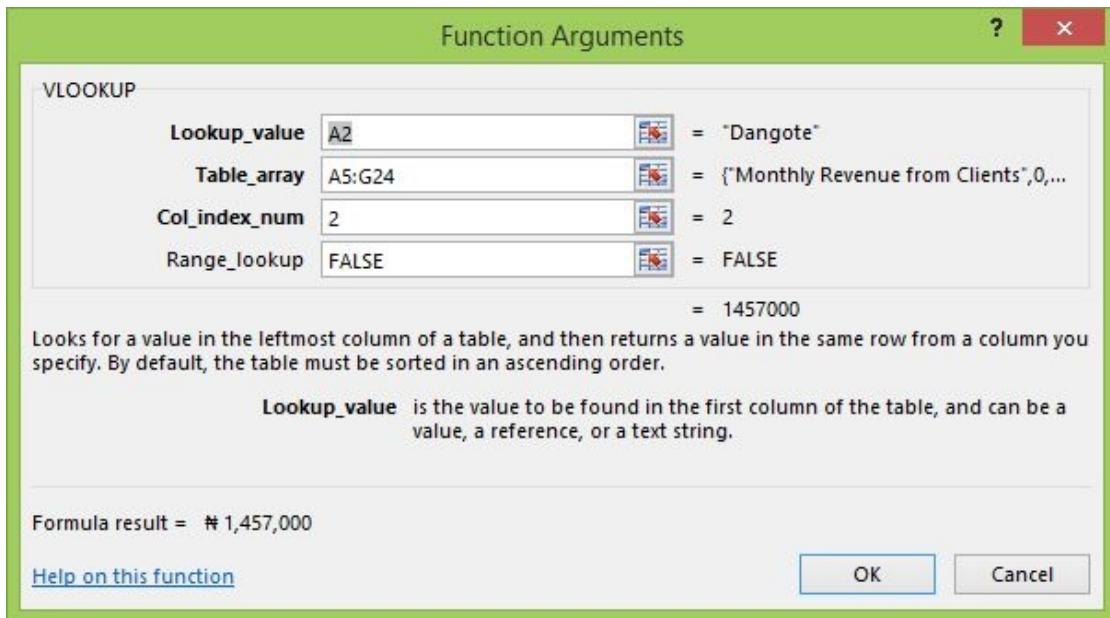
This is perhaps Excel's most popular function. In interviews it is used to sieve the power Excel users from the occasional Excel user. Its popularity lies in its ease of use and capability to get you the data you need from another table if you provide it a clue.

Below is an example of its use.

The screenshot shows a Microsoft Excel spreadsheet. The formula bar at the top contains the formula =VLOOKUP(A2,A5:G24,2,FALSE). The cell A2 contains the formula =VLOOKUP(A2,A5:G24,2,FALSE). The cell A5 contains the formula =VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup]). Below these, there is a table titled "Monthly Revenue from Clients" with columns for Clients and months from Jan-14 to Jun-14. The table lists various clients and their monthly revenue in Nigerian Naira (₦).

| Clients\Month | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
|-------------------------------------|---|-------------|-------------|-------------|-------------|-------------|
| Dangote | =VLOOKUP(A2,A5:G24,2,FALSE) | | | | | |
| | VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup]) | | | | | |
| | | | | | | |
| | | | | | | |
| Monthly Revenue from Clients | | | | | | |
| Clients | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
| Mobil | ₦ 4,129,000 | ₦ 3,695,000 | ₦ 2,770,000 | ₦ 4,520,000 | ₦ 2,223,000 | ₦ 3,929,000 |
| Nestle | ₦ 1,688,000 | ₦ 3,300,000 | ₦ 4,880,000 | ₦ 3,730,000 | ₦ 2,046,000 | ₦ 2,326,000 |
| NBC | ₦ 3,701,000 | ₦ 4,361,000 | ₦ 4,254,000 | ₦ 4,550,000 | ₦ 4,834,000 | ₦ 3,116,000 |
| Exp Nigeria | ₦ 2,587,000 | ₦ 4,198,000 | ₦ 2,146,000 | ₦ 1,062,000 | ₦ 2,341,000 | ₦ 4,713,000 |
| Insight Nigeria | ₦ 1,688,000 | ₦ 4,759,000 | ₦ 1,300,000 | ₦ 4,426,000 | ₦ 3,521,000 | ₦ 3,171,000 |
| Radisson Blu | ₦ 2,485,000 | ₦ 2,025,000 | ₦ 1,603,000 | ₦ 3,089,000 | ₦ 2,841,000 | ₦ 3,156,000 |
| Guinness | ₦ 2,703,000 | ₦ 1,888,000 | ₦ 1,360,000 | ₦ 1,664,000 | ₦ 1,097,000 | ₦ 4,920,000 |
| Chevron | ₦ 3,516,000 | ₦ 2,988,000 | ₦ 4,788,000 | ₦ 2,425,000 | ₦ 4,689,000 | ₦ 4,080,000 |
| Etisalat | ₦ 4,475,000 | ₦ 3,459,000 | ₦ 2,701,000 | ₦ 2,058,000 | ₦ 3,562,000 | ₦ 3,096,000 |
| Dangote | ₦ 1,457,000 | ₦ 3,241,000 | ₦ 4,441,000 | ₦ 1,544,000 | ₦ 3,749,000 | ₦ 3,544,000 |
| Dana Group | ₦ 2,984,000 | ₦ 1,882,000 | ₦ 2,898,000 | ₦ 4,618,000 | ₦ 2,372,000 | ₦ 3,723,000 |
| LaFarge | ₦ 2,111,000 | ₦ 3,293,000 | ₦ 1,427,000 | ₦ 3,953,000 | ₦ 1,616,000 | ₦ 2,885,000 |
| NB | ₦ 3,396,000 | ₦ 4,148,000 | ₦ 4,569,000 | ₦ 3,893,000 | ₦ 3,871,000 | ₦ 3,045,000 |
| MTN | ₦ 4,410,000 | ₦ 2,391,000 | ₦ 4,180,000 | ₦ 3,788,000 | ₦ 2,669,000 | ₦ 4,262,000 |
| Monacom | ₦ 4,190,000 | ₦ 2,228,000 | ₦ 4,615,000 | ₦ 2,756,000 | ₦ 3,123,000 | ₦ 1,464,000 |
| ARM | ₦ 4,536,000 | ₦ 1,412,000 | ₦ 4,313,000 | ₦ 1,130,000 | ₦ 3,700,000 | ₦ 3,196,000 |
| Total | ₦ 1,555,000 | ₦ 2,812,000 | ₦ 1,727,000 | ₦ 2,762,000 | ₦ 2,887,000 | ₦ 2,621,000 |

The formula breakdown is



Lookup_value

=VLOOKUP(A2,A5:G24,2,FALSE)

Basically, it is asking you for the clue you have. What piece of information do you have that I should look for in the table that has everything.

Table_array

=VLOOKUP(A2,A5:G24,2,FALSE)

Where is the table that has everything? So here you are selecting the table that has everything.

Col_index_num

=VLOOKUP(A2,A5:G24,2,FALSE)

When I see the clue, what data should I bring back? That data is in what column counting from the leftmost column in the selected table.

Range_lookup

=VLOOKUP(A2,A5:G24,2,FALSE)

If I am unable to find the clue, should I take a guess? Usually, you wouldn't want Excel to take a guess, that could cause you trouble. So say no by typing FALSE.

And that is how VLOOKUP works. It will look through the first column in the table you selected for the clue that you provided and when it finds it, it will bring back the data you specified for it to get.

It makes a lot of reports easy to do and very helpful with making dashboards.

The screenshot shows a Microsoft Excel interface with a formula bar at the top containing the formula `=VLOOKUP(A2,A5:G24,2,FALSE)`. The main area displays a table titled "Monthly Revenue from Clients". The table has columns for Clients and months from Jan-14 to Jun-14. A red arrow labeled "1" points to the formula bar, and another red arrow labeled "2" points to the value "₦ 1,457,000" in cell B2, which corresponds to the VLOOKUP result. A third red arrow labeled "3" points to the client name "Etisalat" in row 15, which is the lookup value in the formula.

| Clients\Month | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Dangote | ₦ 1,457,000 | | | | | |
| Monthly Revenue from Clients | | | | | | |
| Clients | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 |
| Mobil | ₦ 4,129,000 | ₦ 3,695,000 | ₦ 2,770,000 | ₦ 4,520,000 | ₦ 2,223,000 | ₦ 3,929,000 |
| Nestle | ₦ 1,688,000 | ₦ 3,300,000 | ₦ 4,880,000 | ₦ 3,730,000 | ₦ 2,046,000 | ₦ 2,326,000 |
| NBC | ₦ 3,701,000 | ₦ 4,361,000 | ₦ 4,254,000 | ₦ 4,550,000 | ₦ 4,834,000 | ₦ 3,116,000 |
| Exp Nigeria | ₦ 2,587,000 | ₦ 4,198,000 | ₦ 2,146,000 | ₦ 1,062,000 | ₦ 2,341,000 | ₦ 4,713,000 |
| Insight Nigeria | ₦ 1,688,000 | ₦ 4,759,000 | ₦ 1,300,000 | ₦ 4,426,000 | ₦ 3,521,000 | ₦ 3,171,000 |
| Radisson Blu | ₦ 2,485,000 | ₦ 2,025,000 | ₦ 1,603,000 | ₦ 3,089,000 | ₦ 2,841,000 | ₦ 3,156,000 |
| Guinness | ₦ 2,703,000 | ₦ 1,888,000 | ₦ 1,360,000 | ₦ 1,664,000 | ₦ 1,097,000 | ₦ 4,920,000 |
| Chevron | ₦ 3,516,000 | ₦ 2,988,000 | ₦ 4,788,000 | ₦ 2,425,000 | ₦ 4,689,000 | ₦ 4,080,000 |
| Etisalat | ₦ 4,475,000 | ₦ 3,459,000 | ₦ 2,701,000 | ₦ 2,058,000 | ₦ 3,562,000 | ₦ 3,096,000 |
| Dangote | ₦ 1,457,000 | ₦ 3,241,000 | ₦ 4,441,000 | ₦ 1,544,000 | ₦ 3,749,000 | ₦ 3,544,000 |
| Dana Group | ₦ 2,984,000 | ₦ 1,882,000 | ₦ 2,898,000 | ₦ 4,618,000 | ₦ 2,372,000 | ₦ 3,723,000 |
| LaFarge | ₦ 2,111,000 | ₦ 3,293,000 | ₦ 1,427,000 | ₦ 3,953,000 | ₦ 1,616,000 | ₦ 2,885,000 |
| NB | ₦ 3,396,000 | ₦ 4,148,000 | ₦ 4,569,000 | ₦ 3,893,000 | ₦ 3,871,000 | ₦ 3,045,000 |
| MTN | ₦ 4,410,000 | ₦ 2,391,000 | ₦ 4,180,000 | ₦ 3,788,000 | ₦ 2,669,000 | ₦ 4,262,000 |
| Monacom | ₦ 4,190,000 | ₦ 2,228,000 | ₦ 4,615,000 | ₦ 2,756,000 | ₦ 3,123,000 | ₦ 1,464,000 |
| ARM | ₦ 4,536,000 | ₦ 1,412,000 | ₦ 4,313,000 | ₦ 1,130,000 | ₦ 3,700,000 | ₦ 3,196,000 |

IF

IF is arguably the most powerful function in Excel. It can do almost the impossible. And it's only limited by the creativity of the user.

It allows you to check for a condition and specify what should be done when the condition is met and also what should be done when it is not met.

Here is the structure.

The screenshot shows a Microsoft Excel spreadsheet. The formula bar at the top contains the formula `=IF(B24>1000000,B24*0.05,0)`. The table below has columns A, B, and C. Row 22 is a header with "Sales Bonus" and a descriptive text. Rows 23 through 26 contain data for "Sales person", "Sales Made (NGN)", and "Sales Bonus (NGN)".

| A | B | C | D |
|----|-----------------------|--|--------------------------|
| 20 | | | |
| 21 | | | |
| 22 | Sales Bonus | 5% of sales when sales is more than N1,000,000, otherwise no bonus | |
| 23 | Sales person | Sales Made (NGN) | Sales Bonus (NGN) |
| 24 | Peter Slow | ₦ 800,000.00 | ₦ 0.00 |
| 25 | Michael Olafusi Sharp | ₦ 5,000,000.00 | ₦ 250,000.00 |
| 26 | Some Guy | ₦ 2,000,000.00 | ₦ 100,000.00 |
| 27 | | | |
| 28 | | | |
| 29 | | | |

The screenshot shows the "Function Arguments" dialog box for the IF function. The "Logical_test" is set to `B24>1000000`, "Value_if_true" is `B24*0.05`, and "Value_if_false" is 0. The formula result is shown as ₦ 0.00. The dialog box includes a description of the IF function and links for help.

| A | B | C | D |
|----|-----------------------|--|--------------------------|
| 20 | | | |
| 21 | | | |
| 22 | Sales Bonus | 5% of sales when sales is more than N1,000,000, otherwise no bonus | |
| 23 | Sales person | Sales Made (NGN) | Sales Bonus (NGN) |
| 24 | Peter Slow | ₦ 800,000.00 | 000,B24*0.05,0) |
| 25 | Michael Olafusi Sharp | ₦ 5,000,000.00 | ₦ 250,000.00 |
| 26 | Some Guy | ₦ 2,000,000.00 | ₦ 100,000.00 |

In the example above, we have specified a condition that only when the salesman makes more than 1 million naira worth of sales should he get the sales bonus of 5%. If he fails to meet that condition he is not entitled to any sales bonus.

COUNTIFS and SUMIFS

These combine an inbuilt if function with simple functions like count and sum.

A relevant example is the Pizza Sales record we used for PivotTable. We could have generated the same analysis without PivotTable by using the COUNTIFS and SUMIFS functions.

| S/N | Pizza Sold | Sales Amount | Time | Sales Report | | |
|-----|---------------------|--------------|------------|---------------------|----------------|---------------------|
| | | | | Pizza Type | Count of Sales | Sum of Sales Amount |
| 1 | Meatzaa | ₦ 2,500.00 | 8:00:01 AM | BBQ Chicken | 310 | ₦ 620,000.00 |
| 2 | Extravaganza | ₦ 3,000.00 | 8:00:02 AM | BBQ Philly Steak | 301 | ₦ 752,500.00 |
| 3 | BBQ Chicken | ₦ 2,000.00 | 8:00:04 AM | Beef Suya | 314 | ₦ 847,800.00 |
| 4 | Extravaganza | ₦ 3,000.00 | 8:00:07 AM | Chicken Bali | | |
| 5 | Meatzaa | ₦ 2,500.00 | 8:00:08 AM | Chicken Feast | | |
| 6 | Hot Veggie | ₦ 2,200.00 | 8:00:14 AM | Chicken Legend | | |
| 7 | BBQ Philly Steak | ₦ 2,500.00 | 8:00:20 AM | Chicken Suya | | |
| 8 | Chicken Feast | ₦ 3,000.00 | 8:00:20 AM | Extravaganza | | |
| 9 | Meatzaa | ₦ 2,500.00 | 8:00:22 AM | Hot Pepperoni Feast | | |
| 10 | Chicken Suya | ₦ 2,500.00 | 8:00:25 AM | Hot Veggie | | |
| 11 | Chicken Legend | ₦ 2,800.00 | 8:00:26 AM | Italiano | | |
| 12 | BBQ Philly Steak | ₦ 2,500.00 | 8:00:27 AM | Margarita | | |
| 13 | Chicken Suya | ₦ 2,500.00 | 8:00:29 AM | Meatzaa | | |
| 14 | Chicken Feast | ₦ 3,000.00 | 8:00:33 AM | Pepperoni Feast | | |
| 15 | Chicken Feast | ₦ 3,000.00 | 8:00:33 AM | Pepperoni Suya | | |
| 16 | Beef Suya | ₦ 2,700.00 | 8:00:34 AM | Veggie Supreme | | |
| 17 | Chicken Feast | ₦ 3,000.00 | 8:00:35 AM | | | |
| 18 | Hot Veggie | ₦ 2,200.00 | 8:00:35 AM | | | |
| 19 | Meatzaa | ₦ 2,500.00 | 8:00:35 AM | | | |
| 20 | Meatzaa | ₦ 2,500.00 | 8:00:36 AM | | | |
| 21 | Margarita | ₦ 2,000.00 | 8:00:37 AM | | | |
| 22 | Italiano | ₦ 2,000.00 | 8:00:40 AM | | | |
| 23 | Hot Veggie | ₦ 2,200.00 | 8:00:45 AM | | | |
| 24 | Pepperoni Suya | ₦ 2,500.00 | 8:00:45 AM | | | |
| 25 | Veggie Supreme | ₦ 2,200.00 | 8:00:48 AM | | | |
| 26 | Hot Pepperoni Feast | ₦ 2,500.00 | 8:00:49 AM | | | |

For the Count of Sales, the COUNTIFS structure is

| H3 | =COUNTIFS(B1:B5001,G3) | | | | | | | | | |
|-----|------------------------|--------------|------------|---|---|---------------------|--|---------------------|--------------|---|
| A | B | C | D | E | F | G | H | I | J | K |
| S/N | Pizza Sold | Sales Amount | Time | | | Sales Report | | | | |
| 1 | Meatzaa | ₦ 2,500.00 | 8:00:01 AM | | | Pizza Type | Count of Sales | Sum of Sales Amount | | |
| 2 | Extravaganza | ₦ 3,000.00 | 8:00:02 AM | | | BBQ Chicken | = COUNTIFS(B1:B5001, "BBQ Chicken") | ₦ 620,000.00 | | |
| 3 | BBQ Chicken | ₦ 2,000.00 | 8:00:04 AM | | | BBQ Philly Steak | = COUNTIFS(B1:B5001, "BBQ Philly Steak") | 301 | ₦ 752,500.00 | |
| 4 | Extravaganza | ₦ 3,000.00 | 8:00:07 AM | | | Beef Suya | = COUNTIFS(B1:B5001, "Beef Suya") | 314 | ₦ 847,800.00 | |
| 5 | Meatzaa | ₦ 2,500.00 | 8:00:08 AM | | | Chicken Bali | | | | |
| 6 | Hot Veggie | ₦ 2,200.00 | 8:00:14 AM | | | Chicken Feast | | | | |
| 7 | BBQ Philly Steak | ₦ 2,500.00 | 8:00:20 AM | | | Chicken Legend | | | | |
| 8 | Chicken Feast | ₦ 3,000.00 | 8:00:20 AM | | | Chicken Suya | | | | |
| 9 | Meatzaa | ₦ 2,500.00 | 8:00:22 AM | | | Extravaganza | | | | |
| 10 | Chicken Suya | ₦ 2,500.00 | 8:00:25 AM | | | Hot Pepperoni Feast | | | | |
| 11 | Chicken Legend | ₦ 2,800.00 | 8:00:26 AM | | | Hot Veggie | | | | |
| 12 | BBQ Philly Steak | ₦ 2,500.00 | 8:00:27 AM | | | Italiano | | | | |
| 13 | Chicken Suya | ₦ 2,500.00 | 8:00:29 AM | | | Margarita | | | | |
| 14 | Chicken Feast | ₦ 3,000.00 | 8:00:33 AM | | | Meatzaa | | | | |
| 15 | Chicken Feast | ₦ 3,000.00 | 8:00:33 AM | | | Pepperoni Feast | | | | |
| 16 | Beef Suya | ₦ 2,700.00 | 8:00:34 AM | | | Pepperoni Suya | | | | |
| 17 | Chicken Feast | ₦ 3,000.00 | 8:00:35 AM | | | Veggie Supreme | | | | |
| 18 | Hot Veggie | ₦ 2,200.00 | 8:00:35 AM | | | | | | | |
| 19 | Meatzaa | ₦ 2,500.00 | 8:00:35 AM | | | | | | | |
| 20 | Meatzaa | ₦ 2,500.00 | 8:00:36 AM | | | | | | | |
| 21 | Margarita | ₦ 2,000.00 | 8:00:37 AM | | | | | | | |
| 22 | Italiano | ₦ 2,000.00 | 8:00:40 AM | | | | | | | |
| 23 | Hot Veggie | ₦ 2,200.00 | 8:00:45 AM | | | | | | | |
| 24 | Pepperoni Suya | ₦ 2,500.00 | 8:00:45 AM | | | | | | | |

Function Arguments

COUNTIFS

Criteria_range1: B1:B5001 = ("Pizza Sold"; "Meatzaa"; "Extravaganza"; "BBQ Chicken")

Criteria1: G3 = "BBQ Chicken"

Counts the number of cells specified by a given set of conditions or criteria.

Criteria_range1: is the range of cells you want evaluated for the particular condition.

Formula result = 310

Help on this function

OK Cancel

This will count cells between range B1 and B5001 where the cell entry is equal to the G3 value (BBQ Chicken). And it was replicated for the other pizza types.

For the Sum Of Sales Amount, the SUMIFS structure is

The screenshot shows a Microsoft Excel spreadsheet with data in columns A through K. Column A contains row numbers from 1 to 26. Columns B, C, and D contain 'Pizza Sold', 'Sales Amount', and 'Time' respectively. Column E is empty. Column F contains a formula: =SUMIFS(C1:C5001,B1:B5001,G3). Column G contains a table titled 'Sales Report' with columns 'Pizza Type', 'Count of Sales', and 'Sum of Sales Amount'. The table has four rows: 'BBQ Chicken' (Count 310, Sum 752,500.00), 'BBQ Philly Steak' (Count 301, Sum 847,800.00), 'Beef Suya' (Count 314, Sum 847,800.00), and 'Chicken Bali' (Count 0, Sum 0.00). A red box highlights the 'Function Arguments' dialog box for the SUMIFS function.

| A | B | C | D | E | F | G | H | I | J | K |
|----|-----|------------------|--------------|------------|---|---|---|---|---|---|
| 1 | S/N | Pizza Sold | Sales Amount | Time | | | | | | |
| 2 | 1 | Meatzaa | ₦ 2,500.00 | 8:00:01 AM | | | | | | |
| 3 | 2 | Extravaganza | ₦ 3,000.00 | 8:00:02 AM | | | | | | |
| 4 | 3 | BBQ Chicken | ₦ 2,000.00 | 8:00:04 AM | | | | | | |
| 5 | 4 | Extravaganza | ₦ 3,000.00 | 8:00:07 AM | | | | | | |
| 6 | 5 | Meatzaa | ₦ 2,500.00 | 8:00:08 AM | | | | | | |
| 7 | 6 | Hot Veggie | ₦ 2,200.00 | 8:00:14 AM | | | | | | |
| 8 | 7 | BBQ Philly Steak | ₦ 2,500.00 | 8:00:20 AM | | | | | | |
| 9 | 8 | Chicken Feast | ₦ 3,000.00 | 8:00:20 AM | | | | | | |
| 10 | 9 | Meatzaa | ₦ 2,500.00 | 8:00:22 AM | | | | | | |
| 11 | 10 | Chicken Suya | ₦ 2,500.00 | 8:00:25 AM | | | | | | |
| 12 | 11 | Chicken Legend | ₦ 2,800.00 | 8:00:26 AM | | | | | | |
| 13 | 12 | BBQ Philly Steak | ₦ 2,500.00 | 8:00:27 AM | | | | | | |
| 14 | 13 | Chicken Suya | ₦ 2,500.00 | 8:00:29 AM | | | | | | |
| 15 | 14 | Chicken Feast | ₦ 3,000.00 | 8:00:33 AM | | | | | | |
| 16 | 15 | Chicken Feast | ₦ 3,000.00 | 8:00:33 AM | | | | | | |
| 17 | 16 | Beef Suya | ₦ 2,700.00 | 8:00:34 AM | | | | | | |
| 18 | 17 | Chicken Feast | ₦ 3,000.00 | 8:00:35 AM | | | | | | |
| 19 | 18 | Hot Veggie | ₦ 2,200.00 | 8:00:35 AM | | | | | | |
| 20 | 19 | Meatzaa | ₦ 2,500.00 | 8:00:35 AM | | | | | | |
| 21 | 20 | Meatzaa | ₦ 2,500.00 | 8:00:36 AM | | | | | | |
| 22 | 21 | Margarita | ₦ 2,000.00 | 8:00:37 AM | | | | | | |
| 23 | 22 | Italiano | ₦ 2,000.00 | 8:00:40 AM | | | | | | |
| 24 | 23 | Hot Veggie | ₦ 2,200.00 | 8:00:45 AM | | | | | | |
| 25 | 24 | Pepperoni Suya | ₦ 2,500.00 | 8:00:45 AM | | | | | | |
| 26 | 25 | Veggie Supreme | ₦ 2,200.00 | 8:00:48 AM | | | | | | |

Function Arguments

SUMIFS

- Sum_range:** C1:C5001
- Criteria_range1:** B1:B5001
- Criteria1:** G3

Adds the cells specified by a given set of conditions or criteria.

Sum_range: are the actual cells to sum.

Formula result = ₦ 620,000.00

[Help on this function](#)

OK Cancel

It will sum values in cells C1 to C5001 where the cells in B1 to B5001 has cell entry equal to G3 (BBQ Chicken).

AVERAGEIFS

AVERAGEIFS is similar to SUMIFS. Generally, I think it is much less used than SUMIFS. In my several consulting jobs for clients I have used more of COUNTIFS and SUMIFS than AVERAGEIFS. It is particularly useful in performance analysis. An example is if you are a stock analyst and you want to find the profit margin for a particular industry. You will need to use AVERAGEIFS to specify which companies to include in the computation of the profit margin, and statistically, you can't count or sum the individual profit margins, you have to average them.

Below is an example we'll use for illustration.

| | A | B | C | D |
|----|--------------------|-----------------|---------------|---|
| 1 | Company | Industry | Profit Margin | |
| 2 | Mobil | Oil & Gas | 23% | |
| 3 | Dangote Cement | Manufacturing | 15% | |
| 4 | Access Bank | Finance | 10% | |
| 5 | Julius Berger | Construction | 15% | |
| 6 | Oando | Oil & Gas | 23% | |
| 7 | Arik Air | Airline | 12% | |
| 8 | NBC | Food & Beverage | 7% | |
| 9 | Nigerian Breweries | Food & Beverage | 10% | |
| 10 | La Casera | Food & Beverage | 21% | |
| 11 | Lafarge | Manufacturing | 12% | |
| 12 | GTBank | Finance | 23% | |
| 13 | Aero Contractors | Airline | 6% | |
| 14 | Aiico Insurance | Finance | 17% | |
| 15 | Berger Paints | Manufacturing | 25% | |
| 16 | Cadbury | Food & Beverage | 13% | |
| 17 | Nestle | Food & Beverage | 23% | |
| 18 | PZ | Manufacturing | 21% | |
| 19 | Unilever | Manufacturing | 24% | |
| 20 | Total | Oil & Gas | 22% | |
| 21 | First Bank | Finance | 14% | |
| 22 | Dana Air | Airline | 11% | |
| 22 | | | | |

So how do we find the profit margin performance for the Airline Industry? We have to use AVERAGEIFS.

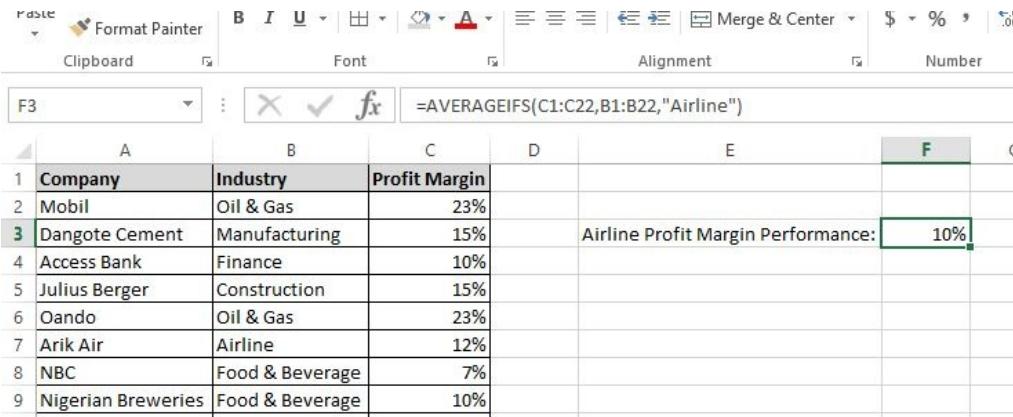
Here is how it works: =AVERAGEIFS(average_range, criteria_range, criteria)

The average range in our case is the Profit Margin field. That is where the profit margin values we want to average are.

The criteria range is the Industry field. It is where we will identify the companies that fall under the airline industry.

The criterion we are looking for is Airline. But remember to put it in double quotes. All texts in a formula must be in double quotes.

The resulting formula will be: =AVERAGEIFS(C1:C22,B1:B22,"Airline")



A screenshot of Microsoft Excel showing a table of company data. The table has columns for Company, Industry, Profit Margin, and a summary cell F3 which contains the formula =AVERAGEIFS(C1:C22,B1:B22,"Airline"). The summary cell F3 displays the result 10%.

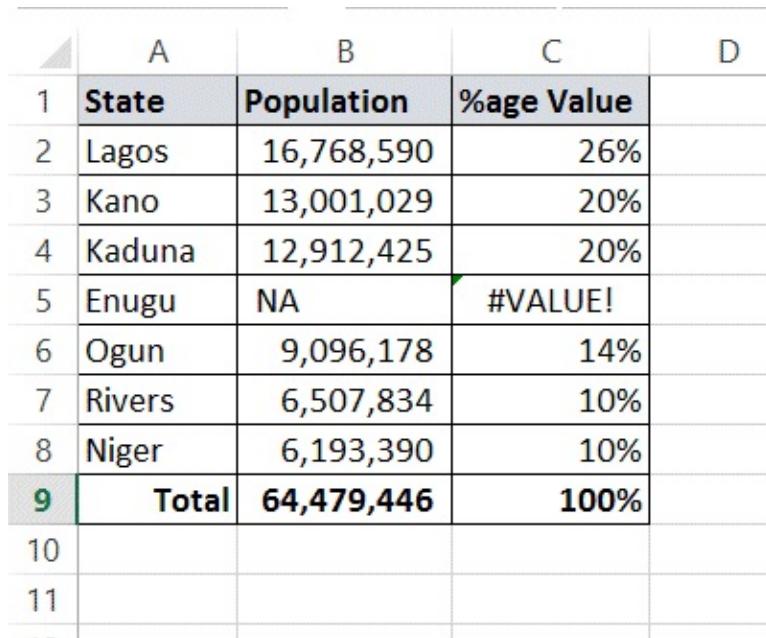
| A | B | C | D | E | F | G |
|---|--------------------|-----------------|---------------|------------------------------------|-----|---|
| 1 | Company | Industry | Profit Margin | | | |
| 2 | Mobil | Oil & Gas | 23% | | | |
| 3 | Dangote Cement | Manufacturing | 15% | Airline Profit Margin Performance: | 10% | |
| 4 | Access Bank | Finance | 10% | | | |
| 5 | Julius Berger | Construction | 15% | | | |
| 6 | Oando | Oil & Gas | 23% | | | |
| 7 | Arik Air | Airline | 12% | | | |
| 8 | NBC | Food & Beverage | 7% | | | |
| 9 | Nigerian Breweries | Food & Beverage | 10% | | | |

IFERROR

A lot of times your formulas in Excel will generate an error. It could be for reasons beyond your control: a missing record, wrong value type or a problematic entry. IFERROR lets you trap errors and display something more meaningful or less annoying than the cryptic error entry Excel gives you.

Its syntax is: =IFERROR(value, value_if_error)

An example to illustrate its use is given below.



A screenshot of Microsoft Excel showing a table of state population and percentage values. The table has columns for State, Population, and %age Value. Row 5 shows an error in the %age Value column, displaying #VALUE!. The total population is 64,479,446 and the total percentage is 100%.

| A | B | | D | |
|----|--------|------------|------------|--|
| 1 | State | Population | %age Value | |
| 2 | Lagos | 16,768,590 | 26% | |
| 3 | Kano | 13,001,029 | 20% | |
| 4 | Kaduna | 12,912,425 | 20% | |
| 5 | Enugu | NA | #VALUE! | |
| 6 | Ogun | 9,096,178 | 14% | |
| 7 | Rivers | 6,507,834 | 10% | |
| 8 | Niger | 6,193,390 | 10% | |
| 9 | Total | 64,479,446 | 100% | |
| 10 | | | | |
| 11 | | | | |

Notice that we have no value for Enugu state and it is generating an error in the %age value field. It would be nicer to have left a blank space or a hyphen instead of an error code in the Enugu row.

IFERROR can help us with that. And here is how we would do it.

| | A | B | C | D | E |
|----|--------|------------|------------|---|---|
| 1 | State | Population | %age Value | | |
| 2 | Lagos | 16,768,590 | 26% | | |
| 3 | Kano | 13,001,029 | 20% | | |
| 4 | Kaduna | 12,912,425 | 20% | | |
| 5 | Enugu | NA | - | | |
| 6 | Ogun | 9,096,178 | 14% | | |
| 7 | Rivers | 6,507,834 | 10% | | |
| 8 | Niger | 6,193,390 | 10% | | |
| 9 | Total | 64,479,446 | 100% | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |

=IFERROR(B5/\$B\$9,"-") which is simply telling Excel to calculate B5/\$B\$9 and if the result is an error it should put a hyphen in the cell instead of an error code.

CONCATENATE

Concatenate lets you join entries in different cells.

The syntax is =CONCATENATE(text1, text2, ...)

A clear example is what we have below.

| | A | B | C | D | E |
|---|-------------------|------------------|---|------------------|---|
| 1 | First Name | Last Name | | Full Name | |
| 2 | Matthew | Silas | | | |
| 3 | Mark | Paul | | | |
| 4 | Luke | Apollo | | | |
| 5 | John | Stephen | | | |
| 6 | | | | | |
| 7 | | | | | |

How do we join the First Name and Last Name to get the Full Name?

This is what CONCATENATE does for us.

| | A | B | C | D | E |
|---|-------------------|------------------|---|---------------------|---|
| 1 | First Name | Last Name | | Full Name | |
| 2 | Matthew | Silas | | =CONCATENATE(A2,B2) | |
| 3 | Mark | Paul | | | |
| 4 | Luke | Apollo | | | |
| 5 | John | Stephen | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |

| | A | B | C | D | E |
|---|------------|-----------|---|--------------|---|
| 1 | First Name | Last Name | | Full Name | |
| 2 | Matthew | Silas | | MatthewSilas | |
| 3 | Mark | Paul | | | |
| 4 | Luke | Apollo | | | |
| 5 | John | Stephen | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |

But there is a small problem: no space between the first name and the last name. How do we fix this?

CONCATENATE can handle that. You are not restricted to joining cell entries. You can put in your own text and that's what we will do to fix the problem we have.

| | A | B | C |
|----|------------|-----------|--|
| 1 | First Name | Last Name | CONCATENATE(text1, [text2], [text3], [text4], ...) |
| 2 | Matthew | Silas | CONCATENATE(A2, " ", B2) |
| 3 | Mark | Paul | |
| 4 | Luke | Apollo | |
| 5 | John | Stephen | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

We have added a space between the first name and the last name. We added it as a text entry, hence the double quotes encapsulating it.

=CONCATENATE(A2," ",B2)

| | A | B | C | D | E |
|---|------------|-----------|---|---------------|---|
| 1 | First Name | Last Name | | Full Name | |
| 2 | Matthew | Silas | | Matthew Silas | |
| 3 | Mark | Paul | | | |
| 4 | Luke | Apollo | | | |
| 5 | John | Stephen | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |

And that's how you can join different cell entries using CONCATENATE.

I'm sure you are wondering why the formula had to be a long name one. Well, there is a very short alternative operator: &.

We can simply join the different cell entries by putting an ampersand (&) between the entries. So replacing our long formula, we will have: =A3&" "&B3

| | A | B | C | D | E |
|---|------------|-----------|---|---------------|---|
| 1 | First Name | Last Name | | Full Name | |
| 2 | Matthew | Silas | | Matthew Silas | |
| 3 | Mark | Paul | | =A3&" "&B3 | |
| 4 | Luke | Apollo | | | |
| 5 | John | Stephen | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |

D4

| | A | B | C | D | E |
|---|------------|-----------|---|---------------|---|
| 1 | First Name | Last Name | | Full Name | |
| 2 | Matthew | Silas | | Matthew Silas | |
| 3 | Mark | Paul | | Mark Paul | |
| 4 | Luke | Apollo | | | |
| 5 | John | Stephen | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |

Great, right?

All that is left is to drag the formula down for the other entries.

D3

| | A | B | C | D | E |
|---|------------|-----------|---|---------------|---|
| 1 | First Name | Last Name | | Full Name | |
| 2 | Matthew | Silas | | Matthew Silas | |
| 3 | Mark | Paul | | Mark Paul | |
| 4 | Luke | Apollo | | | |
| 5 | John | Stephen | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |

| | A | B | C | D | E |
|---|-------------------|------------------|---|------------------|---|
| 1 | First Name | Last Name | | Full Name | |
| 2 | Matthew | Silas | | Matthew Silas | |
| 3 | Mark | Paul | | Mark Paul | |
| 4 | Luke | Apollo | | Luke Apollo | |
| 5 | John | Stephen | | John Stephen | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |

LEFT, RIGHT and MID

There will be times you need to extract a portion of a cell's entry. A practical case was a template I built for a telecoms company to determine the least cost partner to use for each international call destination. So I had to use a formula to pick out the country codes and check which provider is the cheapest to use to that destination.

I have prepared a sample data for a simple illustration. It is the matriculation number of the university I attended. It is a clever combination of department name, year of admission and candidate number.

| | A | B | C | D | E |
|---|--|---|------|-------------------|------------------|
| 1 | Federal University of Technology Akure | | | | |
| 2 | | | | | |
| 3 | Matric Number | | Dept | Year of Admission | Candidate Number |
| 4 | EEE/04/2995 | | EEE | 04 | 2995 |
| 5 | CVE/03/1235 | | | | |
| 6 | ARC/01/3254 | | | | |
| 7 | MNE/05/1005 | | | | |
| 8 | PHY/00/2145 | | | | |
| 9 | | | | | |

The first three characters are the department acronym. The two digits sandwiched between two forward slashes are the year of admission and the last four characters are the candidate number.

We are going to use LEFT to extract the department name, RIGHT to extract the candidate number and MID to extract the admission year.

The screenshot shows a Microsoft Excel spreadsheet. The formula bar at the top displays '=LEFT(A5,3)'. The main area shows a table with columns A through F. Row 1 contains 'Federal University of Technology Akure'. Row 2 is blank. Row 3 has 'Matric Number' in A, 'Dept' in B, 'Year of Admission' in C, and 'Candidate Number' in D. Row 4 has 'EEE/04/2995' in A, 'EEE' in B, '04' in C, and '2995' in D. Row 5 is selected and contains 'CVE/03/1235' in A and the formula '=LEFT(A5,3)' in C. Rows 6 through 8 contain 'ARC/01/3254', 'MNE/05/1005', and 'PHY/00/2145' respectively. Rows 9 and 10 are blank.

| | A | B | C | D | E | F |
|----|--|-------------|-------------------|------------------|---|---|
| 1 | Federal University of Technology Akure | | | | | |
| 2 | | | | | | |
| 3 | Matric Number | Dept | Year of Admission | Candidate Number | | |
| 4 | EEE/04/2995 | EEE | 04 | 2995 | | |
| 5 | CVE/03/1235 | =LEFT(A5,3) | | | | |
| 6 | ARC/01/3254 | | | | | |
| 7 | MNE/05/1005 | | | | | |
| 8 | PHY/00/2145 | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |

This screenshot shows the same Excel spreadsheet after the formula was executed. Cell C5 now contains 'CVE'. The rest of the table remains the same as in the previous screenshot.

| | A | B | C | D | E |
|----|--|------|-------------------|------------------|---|
| 1 | Federal University of Technology Akure | | | | |
| 2 | | | | | |
| 3 | Matric Number | Dept | Year of Admission | Candidate Number | |
| 4 | EEE/04/2995 | EEE | 04 | 2995 | |
| 5 | CVE/03/1235 | CVE | | | |
| 6 | ARC/01/3254 | | | | |
| 7 | MNE/05/1005 | | | | |
| 8 | PHY/00/2145 | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |

It is very easy to understand the formula: =LEFT(A5,3). You simply specify the cell you want to extract from and specify the number of characters you want to extract starting from the leftmost character.

In this example, it's three characters we want to extract starting from the left (beginning of the cell entry).

Now let's proceed to extracting the candidate number. This time we want to extract

starting from the right, four characters. So we will use RIGHT.

The screenshot shows a Microsoft Excel spreadsheet with data in rows 1 through 11. The columns are labeled A through F. Row 1 contains "Federal University of Technology Akure". Row 2 is blank. Rows 3 through 6 show matric numbers and their corresponding departments and admission years. Row 5 is highlighted with a blue border, and the formula `=RIGHT(A5,4)` is entered into cell E5. Row 7 is also highlighted with a green border, and the formula `=RIGHT(A5,4)` is entered into cell E7. The formula bar at the top shows `PMT` and the formula `=RIGHT(A5,4)`.

| | A | B | C | D | E | F |
|----|--|---|------|-------------------|------------------|---|
| 1 | Federal University of Technology Akure | | | | | |
| 2 | | | | | | |
| 3 | Matric Number | | Dept | Year of Admission | Candidate Number | |
| 4 | EEE/04/2995 | | EEE | 04 | 2995 | |
| 5 | CVE/03/1235 | | CVE | | =RIGHT(A5,4) | |
| 6 | ARC/01/3254 | | | | | |
| 7 | MNE/05/1005 | | | | | |
| 8 | PHY/00/2145 | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |

The screenshot shows the same Microsoft Excel spreadsheet after the formulas have been evaluated. The data remains the same as in the first screenshot, but the formula `=RIGHT(A5,4)` has been replaced by its result, "1235", in cell E5. The formula bar at the top now shows "G7" and the formula `=RIGHT(A5,4)`.

| | A | B | C | D | E | F |
|----|--|---|------|-------------------|------------------|---|
| 1 | Federal University of Technology Akure | | | | | |
| 2 | | | | | | |
| 3 | Matric Number | | Dept | Year of Admission | Candidate Number | |
| 4 | EEE/04/2995 | | EEE | 04 | 2995 | |
| 5 | CVE/03/1235 | | CVE | | 1235 | |
| 6 | ARC/01/3254 | | | | | |
| 7 | MNE/05/1005 | | | | | |
| 8 | PHY/00/2145 | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |

=RIGHT(A5,4)

Also very easy to understand.

Finally, let's extract the admission year. It requires the MID formula. It's a little not easy to grasp like the LEFT and RIGHT. It requires that you specify the starting point for the extraction. The concept is very easy to understand, the part that trips a lot of people up is how the starting point is determined. You have to count from the first character (from the left) to the first character you want to extract.

In this example, we will count till the first character of the year. It is the character number 5. Then you'll proceed to specify the number of characters you want to extract (2 in our case).

The screenshot shows a Microsoft Excel spreadsheet with the following data:

| | A | B | C | D | E | F |
|----|--|---|------|-------------------|------------------|---|
| 1 | Federal University of Technology Akure | | | | | |
| 2 | | | | | | |
| 3 | Matric Number | | Dept | Year of Admission | Candidate Number | |
| 4 | EEE/04/2995 | | EEE | 04 | 2995 | |
| 5 | CVE/03/1235 | | CVE | =MID(A5,5,2) | 1235 | |
| 6 | ARC/01/3254 | | | | | |
| 7 | MNE/05/1005 | | | | | |
| 8 | PHY/00/2145 | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |

The screenshot shows the same Microsoft Excel spreadsheet after the formula has been evaluated. The value '1235' is now displayed in cell D5.

| | A | B | C | D | E | F |
|----|--|---|------|-------------------|------------------|---|
| 1 | Federal University of Technology Akure | | | | | |
| 2 | | | | | | |
| 3 | Matric Number | | Dept | Year of Admission | Candidate Number | |
| 4 | EEE/04/2995 | | EEE | 04 | 2995 | |
| 5 | CVE/03/1235 | | CVE | 03 | 1235 | |
| 6 | ARC/01/3254 | | | | | |
| 7 | MNE/05/1005 | | | | | |
| 8 | PHY/00/2145 | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |

=MID(A5,5,2)

A5 is the cell we are extracting from.

5 is the starting point.

2 is the number of characters we want to extract.

TODAY, DAY, MONTH and YEAR

Excel allows you to do a lot on dates. There is even a formula to call up today's date; it is aptly named TODAY(). You have to enter the brackets.

The screenshot shows two instances of the Microsoft Excel interface. The top instance is the 'HOME' tab selected, displaying the ribbon menu and various toolbar options like Cut, Copy, Paste, and Format Painter. The formula bar at the top contains '=TODAY()' with a dropdown arrow. Below the formula bar is a table with four columns labeled 'Today's Date', 'Day of Today', 'Month of Today', and 'Year of Today'. The first row has headers, and the second row contains the formula '=TODAY()' in the first column. The bottom instance shows the result of the formula being evaluated. The 'C' column is selected, and the formula bar now displays 'Saturday, July 4, 2015'. The table below shows the same four columns, with the 'Day of Today' column containing the value 'Saturday, July 4, 2015'.

| | A | B | C | D | E | F |
|---|--------------|--------------|----------------|---------------|---|---|
| 1 | | | | | | |
| 2 | Today's Date | Day of Today | Month of Today | Year of Today | | |
| 3 | =TODAY() | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |

| | A | B | C | D | E |
|---|------------------------|--------------|----------------|---------------|---|
| 1 | | | | | |
| 2 | Today's Date | Day of Today | Month of Today | Year of Today | |
| 3 | Saturday, July 4, 2015 | | | | |
| 4 | | | | | |
| 5 | | | | | |

Then you can extract the day of the date, the month of the date and the year of the date very easily.

Screenshot of Microsoft Excel showing the formula `=DAY(A3)` entered into cell B3. The formula extracts the day of the month from the date in cell A3.

Clipboard

Font

Alignment

B3 : $=\text{DAY}(\text{A3})$

| A | B | C | D | E | F |
|---|------------------------|--------------------------|----------------|---------------|---|
| 1 | | | | | |
| 2 | Today's Date | Day of Today | Month of Today | Year of Today | |
| 3 | Saturday, July 4, 2015 | $=\text{DAY}(\text{A3})$ | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |

Screenshot of Microsoft Excel showing the formula `=MONTH(A3)` entered into cell C3. The formula extracts the month number from the date in cell A3.

FILE **HOME** **INSERT** **PAGE LAYOUT** **FORMULAS** **DATA** **REVIEW**

Clipboard

Font

Alignment

A3 : $=\text{MONTH}(\text{A3})$

| A | B | C | D | E |
|---|------------------------|--------------|----------------------------|---------------|
| 1 | | | | |
| 2 | Today's Date | Day of Today | Month of Today | Year of Today |
| 3 | Saturday, July 4, 2015 | 4 | $=\text{MONTH}(\text{A3})$ | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |

Screenshot of Microsoft Excel showing the formula `=YEAR(A3)` entered into cell D3. The formula extracts the year from the date in cell A3.

Clipboard

Font

Alignment

D3 : $=\text{YEAR}(\text{A3})$

| A | B | C | D | E |
|---|------------------------|--------------|----------------|---------------------------|
| 1 | | | | |
| 2 | Today's Date | Day of Today | Month of Today | Year of Today |
| 3 | Saturday, July 4, 2015 | 4 | 7 | $=\text{YEAR}(\text{A3})$ |
| 4 | | | | |
| 5 | | | | |

| | | | | | | | | | |
|-----------|------------------------|----------------|----------------|---------------|----------------|----------------|---|-----------|---------|
| Paste | Copy | Format Painter | Calibri | 11 | A ⁺ | A ⁻ | = | Wrap Text | General |
| Clipboard | Font | Alignment | | | | | | | |
| C10 | X | ✓ | fx | | | | | | |
| | A | B | C | D | E | F | G | | |
| 1 | | | | | | | | | |
| 2 | Today's Date | Day of Today | Month of Today | Year of Today | | | | | |
| 3 | Saturday, July 4, 2015 | 4 | 7 | 2015 | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |

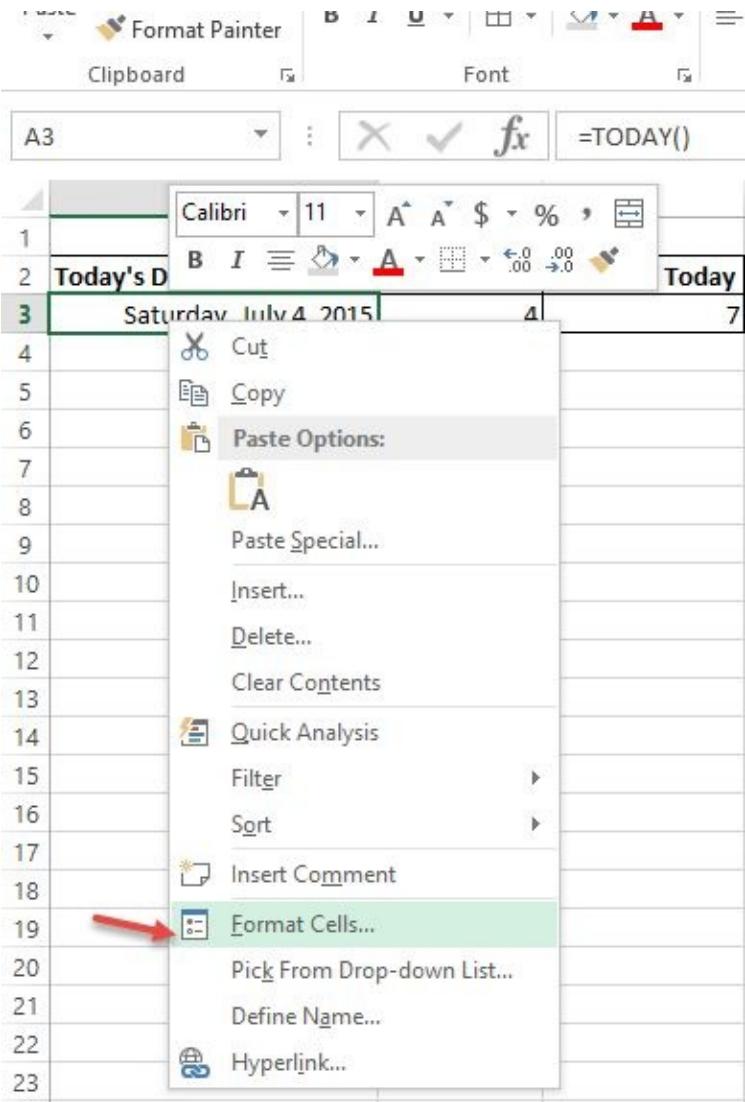
=DAY(A3)

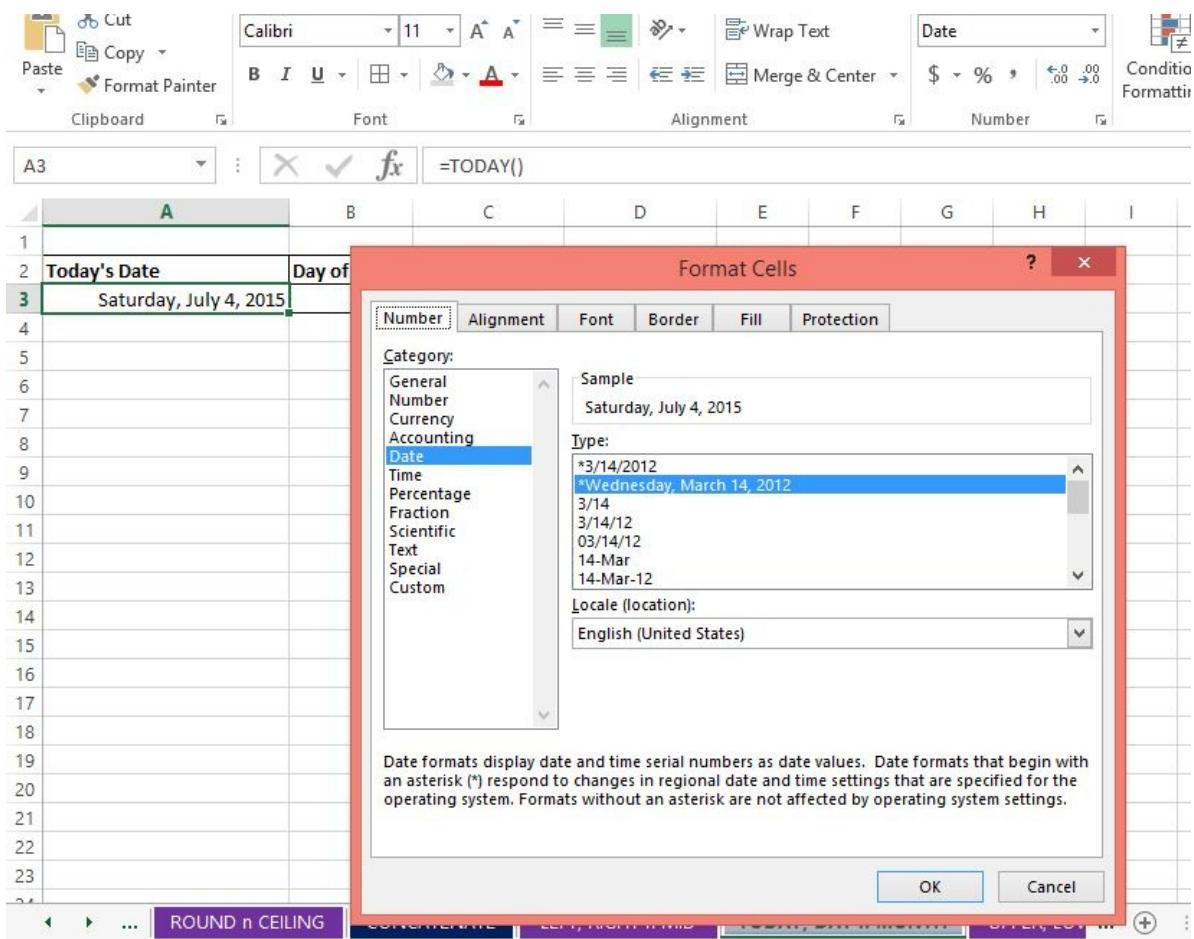
=MONTH(A3)

=YEAR(A3)

A3 is the cell that has the date. And it works on dates you manually type or copy into Excel and not just the ones we use a formula like TODAY() to generate.

Finally, Excel lets you choose how a date should be displayed. Right click on the cell housing the date and click on Format Cells.





You can specify how it should be displayed.

UPPER, LOWER and PROPER

Ever tried changing a text from upper case to lower case in Excel? Too quickly people give up and conclude that it's not possible in Excel. Well, Excel has that functionality but as a formula.

UPPER converts a cell entry to all upper case.

LOWER converts a cell entry to all lower case.

Proper capitalizes the first letter of each word in the cell.



| | A | B |
|---|---|---|
| 1 | Let us change the case of this sentence | |
| 2 | | |
| 3 | =UPPER(A1) | |
| 4 | | |
| 5 | =LOWER(A1) | |
| 6 | | |
| 7 | =PROPER(A1) | |
| 8 | | |

A1 is the cell entry we want to change the caps of.

See the results of the UPPER, LOWER and PROPER formulas below.

| | A | B |
|----|---|---|
| 1 | Let us change the case of this sentence | |
| 2 | | |
| 3 | LET US CHANGE THE CASE OF THIS SENTENCE | |
| 4 | | |
| 5 | let us change the case of this sentence | |
| 6 | | |
| 7 | Let Us Change The Case Of This Sentence | |
| 8 | | |
| 9 | | |
| 10 | | |

RAND and RANDBETWEEN

Wondered how I generated all the data I have been using for illustrations? Well, I used RAND and RANDBETWEEN for most of the numbers and even some of the texts (in conjunction with a magic formula called INDIRECT).

RAND() generates random decimal numbers that are greater than 0 but less than 1. Essentially, decimal numbers between 0 and 1 (0 and 1 non-included).

RANDBETWEEN(bottom_number, top_number) generates numbers between the bounds

you specified as bottom and top.

Below is a relevant example. I have used the formulas to generate sales number and profit margin.

| | | | |
|----|------------------|-----------------------------|----------------------|
| 2 | | | |
| 3 | Sales Man | Sales Made | Profit Margin |
| 4 | Mark David | =RANDBETWEEN(400000,800000) | =RAND() |
| 5 | Tunde Seun | =RANDBETWEEN(400000,800000) | =RAND() |
| 6 | Akeem Saliu | =RANDBETWEEN(400000,800000) | =RAND() |
| 7 | Ahmed Tafa | =RANDBETWEEN(400000,800000) | =RAND() |
| 8 | Obi Okonkwo | =RANDBETWEEN(400000,800000) | =RAND() |
| 9 | Uche Mba | =RANDBETWEEN(400000,800000) | =RAND() |
| 10 | Inam Effiong | =RANDBETWEEN(400000,800000) | =RAND() |
| 11 | Segun Azeez | =RANDBETWEEN(400000,800000) | =RAND() |
| 12 | Kola Adesida | =RANDBETWEEN(400000,800000) | =RAND() |
| 13 | Mark Femi | =RANDBETWEEN(400000,800000) | =RAND() |
| 14 | Seun Akinde | =RANDBETWEEN(400000,800000) | =RAND() |
| 15 | Lola Adigun | =RANDBETWEEN(400000,800000) | =RAND() |
| 16 | Nana Lolu | =RANDBETWEEN(400000,800000) | =RAND() |

| | | | |
|----|------------------|-------------------|----------------------|
| 2 | | | |
| 3 | Sales Man | Sales Made | Profit Margin |
| 4 | Mark David | ₦ 401,083 | 73% |
| 5 | Tunde Seun | ₦ 720,482 | 8% |
| 6 | Akeem Saliu | ₦ 456,036 | 91% |
| 7 | Ahmed Tafa | ₦ 716,166 | 76% |
| 8 | Obi Okonkwo | ₦ 739,312 | 74% |
| 9 | Uche Mba | ₦ 564,919 | 13% |
| 10 | Inam Effiong | ₦ 544,028 | 94% |
| 11 | Segun Azeez | ₦ 702,257 | 20% |
| 12 | Kola Adesida | ₦ 799,302 | 1% |
| 13 | Mark Femi | ₦ 693,876 | 59% |
| 14 | Seun Akinde | ₦ 657,925 | 52% |
| 15 | Lola Adigun | ₦ 487,943 | 99% |
| 16 | Nana Lolu | ₦ 682,111 | 84% |

Named Range, Goal Seek and Scenario Manager

Excel has some what-if-analysis tools that greatly help with business decision analysis. You can easily simulate effect of changes in circumstances on your business projections and create compelling business case analysis.

Named Range

Excel lets you name a cell or a selection of cells. It's very useful when you are building models in Excel as it makes the model formulas easy to write and troubleshoot.

There are two ways to create a named range and I will start with the very quick and easy way.

Just select the cell or group of cells you want to name. Go to the name box and type in the name, replacing the cell address in the name box.



| Internally Generated Revenue of States in Nigeria | | | | | | | |
|---|--------------------|---------------------|--------------------|--------------------|---------------------|--------------------|--|
| State | Feb-14 | Jun-14 | Jan-14 | Mar-14 | May-14 | Apr-14 | |
| Imo | ₦ 2,521,764,800.00 | ₦ 2,922,241,900.00 | ₦ 2,591,742,600.00 | ₦ 2,013,994,900.00 | ₦ 3,014,428,300.00 | ₦ 4,994,515,700.00 | |
| Abia | ₦ 821,123,500.00 | ₦ 4,544,916,100.00 | ₦ 1,297,498,300.00 | ₦ 1,175,454,800.00 | ₦ 2,265,644,000.00 | ₦ 967,327,400.00 | |
| Lagos | ₦ 7,319,183,000.00 | ₦ 22,681,984,500.00 | ₦ 6,239,473,500.00 | ₦ 6,211,689,500.00 | ₦ 11,610,307,000.00 | ₦ 3,351,178,500.00 | |
| Kano | ₦ 2,021,735,600.00 | ₦ 530,613,400.00 | ₦ 2,981,980,300.00 | ₦ 3,016,518,600.00 | ₦ 2,387,291,000.00 | ₦ 4,411,651,000.00 | |
| Ondo | ₦ 1,690,422,800.00 | ₦ 4,925,747,700.00 | ₦ 716,222,900.00 | ₦ 4,362,953,800.00 | ₦ 4,300,936,900.00 | ₦ 977,876,300.00 | |
| Kogi | ₦ 2,734,189,600.00 | ₦ 2,825,512,800.00 | ₦ 2,812,863,300.00 | ₦ 2,306,601,300.00 | ₦ 2,104,687,400.00 | ₦ 867,264,000.00 | |
| Benue | ₦ 3,864,832,700.00 | ₦ 3,212,451,900.00 | ₦ 3,479,649,000.00 | ₦ 2,458,711,700.00 | ₦ 2,700,421,800.00 | ₦ 4,801,142,000.00 | |



| Internally Generated Revenue of States in Nigeria | | | | | | | |
|---|--------------------|---------------------|--------------------|--------------------|---------------------|--------------------|--|
| State | Feb-14 | Jun-14 | Jan-14 | Mar-14 | May-14 | Apr-14 | |
| Imo | ₦ 2,521,764,800.00 | ₦ 2,922,241,900.00 | ₦ 2,591,742,600.00 | ₦ 2,013,994,900.00 | ₦ 3,014,428,300.00 | ₦ 4,994,515,700.00 | |
| Abia | ₦ 821,123,500.00 | ₦ 4,544,916,100.00 | ₦ 1,297,498,300.00 | ₦ 1,175,454,800.00 | ₦ 2,265,644,000.00 | ₦ 967,327,400.00 | |
| Lagos | ₦ 7,319,183,000.00 | ₦ 22,681,984,500.00 | ₦ 6,239,473,500.00 | ₦ 6,211,689,500.00 | ₦ 11,610,307,000.00 | ₦ 3,351,178,500.00 | |
| Kano | ₦ 2,021,735,600.00 | ₦ 530,613,400.00 | ₦ 2,981,980,300.00 | ₦ 3,016,518,600.00 | ₦ 2,387,291,000.00 | ₦ 4,411,651,000.00 | |

We've successfully named all the Imo state revenue values as Imo. As benefit number 1, we can use it in a SUM formula instead of highlighting the entire range.

| | A | B | C | D | E | F | G | H |
|---|---|--------------------|---------------------|--------------------|--------------------|---------------------|--------------------|-----------|
| 1 | Internally Generated Revenue of States in Nigeria | | | | | | | |
| 2 | State | Feb-14 | Jun-14 | Jan-14 | Mar-14 | May-14 | Apr-14 | |
| 3 | Imo | ₦ 2,521,764,800.00 | ₦ 2,922,241,900.00 | ₦ 2,591,742,600.00 | ₦ 2,013,994,900.00 | ₦ 3,014,428,300.00 | ₦ 4,994,515,700.00 | =SUM(Imo) |
| 4 | Abia | ₦ 821,123,500.00 | ₦ 4,544,916,100.00 | ₦ 1,297,498,300.00 | ₦ 1,175,454,800.00 | ₦ 2,265,644,000.00 | ₦ 967,327,400.00 | |
| 5 | Lagos | ₦ 7,319,183,000.00 | ₦ 22,681,984,500.00 | ₦ 6,239,473,500.00 | ₦ 6,211,689,500.00 | ₦ 11,610,307,000.00 | ₦ 3,351,178,500.00 | |
| 6 | Kano | ₦ 2,021,735,600.00 | ₦ 530,613,400.00 | ₦ 2,981,980,300.00 | ₦ 3,016,518,600.00 | ₦ 2,387,291,000.00 | ₦ 4,411,651,000.00 | |

Another advantage will become obvious later when we do Scenario Manager.

So what is the second way of creating a named range?

It is, in fact, the standard way. It's also the only way that allows you to edit an already created named range.

Go to Formulas menu and click on the Name Manager.

The screenshot shows the Microsoft Excel ribbon with the 'FORMULAS' tab selected. A red arrow labeled 1 points to the 'Name Manager' button in the Functions group. Another red arrow labeled 2 points to the 'Close' button in the 'Name Manager' dialog box. The 'Name Manager' dialog box is open, showing a list of defined names. A third red arrow labeled 3 points to the 'New...' button in the dialog box. The 'Refers to:' field in the dialog box contains the formula =NamedRange!\$B\$3:\$G\$3.

| State | Feb-14 | Jun-14 | Jan-14 | Mar-14 | May-14 | Apr-14 |
|-------|--------------------|---------------------|--------------------|--------------------|---------------------|--------------------|
| Imo | ₦ 2,521,764,800.00 | ₦ 2,922,241,900.00 | ₦ 2,591,742,600.00 | ₦ 2,013,994,900.00 | ₦ 3,014,428,300.00 | ₦ 4,994,515,700.00 |
| Abia | ₦ 821,123,500.00 | ₦ 4,544,916,100.00 | ₦ 1,297,498,300.00 | ₦ 1,175,454,800.00 | ₦ 2,265,644,000.00 | ₦ 967,327,400.00 |
| Lagos | ₦ 7,319,183,000.00 | ₦ 22,681,984,500.00 | ₦ 6,239,473,500.00 | ₦ 6,211,689,500.00 | ₦ 11,610,307,000.00 | ₦ 3,351,178,500.00 |
| Kano | ₦ 2,021,735,600.00 | ₦ 530,613,400.00 | ₦ 2,981,980,300.00 | ₦ 3,016,518,600.00 | ₦ 2,387,291,000.00 | ₦ 4,411,651,000.00 |

You can create new named range, edit already created ones and delete a named range.

GOAL SEEK

Goal seek is one of those powerful but seldom used tools in Excel.

It allows you to set-up a small model and tell Excel to optimize it for you based on one variable input and one set output. It's the perfect introduction to a model and linear programming in Excel.

Let's a simple and common use case. Below is a loan calculation table. Let's say I have found a huge business opportunity in large scale cocoa farming and I want to borrow N100 million from the bank. And the table below is the conditions the bank gave me: a payment period of 10 years and annual interest rate of 24%.

| D11 | | fx |
|-----|----------------|------------------|
| A | B | C |
| 1 | Loan Amount | ₦ 100,000,000.00 |
| 2 | Payment period | 10 |
| 3 | Interest Rate | 24% |
| 4 | Payment Amount | |
| 5 | | |
| 6 | | |

Excel has a formula for calculating the annual payment amount.

The screenshot shows a Microsoft Excel spreadsheet with the following data:

| A | B | |
|---|----------------|------------------|
| 1 | Loan Amount | ₦ 100,000,000.00 |
| 2 | Payment period | 10 |
| 3 | Interest Rate | 24% |
| 4 | Payment Amount | =PMT(B3,B2,-B1) |

The formula `=PMT(B3,B2,-B1)` is selected in cell B4. A green box highlights the "Function Arguments" dialog box for the PMT function, which is displayed over the spreadsheet. The dialog box shows the following arguments:

| Argument | Value | Description |
|----------|-------|--------------|
| Rate | B3 | = 0.24 |
| Nper | B2 | = 10 |
| Pv | -B1 | = -100000000 |
| Fv | | = number |
| Type | | = number |

The dialog box also contains the following text and buttons:

- Text: "Calculates the payment for a loan based on constant payments and a constant interest rate."
- Text: "Rate is the interest rate per period for the loan. For example, use 6%/4 for quarterly payments at 6% APR."
- Text: "Formula result = ₦ 27,160,212.71"
- Buttons: "OK" and "Cancel"

So I go and check my business financial projection, and find out that I can only afford to make N20 million annual payment. What rate will I negotiate with the bank?

This is where Goal Seek comes in. We simply tell it to find out what interest rate will evaluate to N20 million annual payment.

To access Goal Seek, go to Data menu and What-If-Analysis.

| FILE | | HOME | INSERT | PAGE LAYOUT | FORMULAS | DATA | REVIEW | VIEW | DEVELOPER | L |
|-------------------|------------------|--------------------|----------------------|-------------|-----------------------------------|------|--------|------------------------|-----------------|--------|
| From Access | From Web | From Other Sources | Existing Connections | Refresh All | Connections Properties Edit Links | Sort | Filter | Clear Reapply Advanced | Text to Columns | Fla Fi |
| Get External Data | | | | | | | | | | |
| B3 | : | X | ✓ | fx | | | | | | |
| A | B | C | D | E | F | | | | | |
| 1 Loan Amount | ₦ 100,000,000.00 | | | | | | | | | |
| 2 Payment period | 10 | | | | | | | | | |
| 3 Interest Rate | 24% | | | | | | | | | |
| 4 Payment Amount | ₦ 27,160,212.71 | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |

I set payment amount cell to N20 million and tell Goal Seek to vary the interest rate.

Once I click on OK, it does a series of iteration and gives me the result.

| FILE | | HOME | INSERT | PAGE LAYOUT | FORMULAS | DATA | REVIEW | VIEW | DEVELOPER | LOAD |
|-------------------|------------------|--------------------|----------------------|-------------|-----------------------------------|------|--------|------------------------|-----------------|------------|
| From Access | From Web | From Other Sources | Existing Connections | Refresh All | Connections Properties Edit Links | Sort | Filter | Clear Reapply Advanced | Text to Columns | Flash Fill |
| Get External Data | | | | | | | | | | |
| E4 | : | X | ✓ | fx | | | | | | |
| A | B | C | D | E | F | | | | | |
| 1 Loan Amount | ₦ 100,000,000.00 | | | | | | | | | |
| 2 Payment period | 10 | | | | | | | | | |
| 3 Interest Rate | 15% | | | | | | | | | |
| 4 Payment Amount | ₦ 20,000,000.00 | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |

I should ask for 15% annual interest rate.

Scenario Manager

Scenario Manager is one of Excel's decision analysis tool. It allows you compare outcome for different business scenarios.

Below is a practical business use case of the scenario manager. It is taken from our business circumstance and you'll find it very interesting.

We run a Microsoft Excel and Business Data Analysis business. Our major income streams are consulting for big multinational firms on data analysis and business process automations, and Microsoft Excel training. So let's say we decide to run a special one day Microsoft Excel training. It was specifically my idea. I had stumbled on a training advert on Punch newspaper. A one day training at VCP Hotel and costing N80,000. So I felt we should try it too. But I needed to build a convincing business case for the idea. And in doing this I used scenario manager.

I called up the hotel to get the details of the cost of hosting a full day training in their conference hall. I then went to work on the other costs that would be incurred in putting together the training. And below is the sheet of the cost details.

| A | B | C | D | E |
|----|---|-----------------------|---|---|
| 1 | High Quality Full Day Excel Training | | | |
| 2 | | | | |
| 3 | Cost Item | Amount | | |
| 4 | Hotel Conference Room | ₦ 600,000.00 | | |
| 5 | Feeding per participant | ₦ 12,500.00 | | |
| 6 | Training Material | ₦ 3,000.00 | | |
| 7 | Certificate | ₦ 2,000.00 | | |
| 8 | Prize for best participant | ₦ 100,000.00 | | |
| 9 | | | | |
| 10 | Analysis based on estimates | Figure | | |
| 11 | Number of participants | 40 | | |
| 12 | Course Fee | ₦ 100,000.00 | | |
| 13 | Total Feeding cost | ₦ 500,000.00 | | |
| 14 | Conference Room cost | ₦ 600,000.00 | | |
| 15 | Training Materials cost | ₦ 120,000.00 | | |
| 16 | Certificate Costs | ₦ 80,000.00 | | |
| 17 | Prize Award cost | ₦ 100,000.00 | | |
| 18 | | | | |
| 19 | Total Revenue | ₦ 4,000,000.00 | | |
| 20 | Total Cost | ₦ 1,400,000.00 | | |
| 21 | VAT Fee (5%) | ₦ 200,000.00 | | |
| 22 | Contingencies (7%) | ₦ 280,000.00 | | |
| 23 | Gross Profit | ₦ 2,120,000.00 | | |
| 24 | | | | |

And the underlying formulas are:

| High Quality Full Day Excel Training | |
|--------------------------------------|-----------------------------|
| 1 | Cost Item |
| 3 | Amount |
| 4 | Hotel Conference Room |
| 5 | 12500 |
| 6 | Training Material |
| 7 | 3000 |
| 8 | Certificate |
| 9 | 2000 |
| 10 | Prize for best participant |
| 11 | 100000 |
| 12 | Analysis based on estimates |
| 13 | Figure |
| 14 | Number of participants |
| 15 | 40 |
| 16 | Course Fee |
| 17 | 100000 |
| 18 | Total Feeding cost |
| 19 | =B11*B5 |
| 20 | Conference Room cost |
| 21 | =B4 |
| 22 | Training Materials cost |
| 23 | =B6*B11 |
| 24 | Certificate Costs |
| 25 | =B7*B11 |
| 26 | Prize Award cost |
| 27 | =B8 |
| 28 | Total Revenue |
| 29 | =B11*B12 |
| 30 | Total Cost |
| 31 | =SUM(B13:B17) |
| 32 | VAT Fee (5%) |
| 33 | =B19*0.05 |
| 34 | Contingencies (7%) |
| 35 | =B19*0.07 |
| 36 | Gross Profit |
| 37 | =B19-SUM(B20:B22) |

As you can see, I have gotten every cost item listed; the estimated number of participants and the course fee too. But to build a convincing business case I need to create different scenarios. Maybe three scenarios.

- Scenario 1: The worst that could happen if we don't market the training well and put the course fee enticingly low.
- Scenario 2: The most likely thing to happen if we do our regular marketing and put up a fair course fee.
- Scenario 3: What would happen if everything goes extremely well. Which will be our marketing aim.

So how do you set up these scenarios in Excel? You use Scenario Manager.

But first we need to use Named Range for the most important cells in our scenario. They are the Gross Profit cell, the Number of Participants cell and the Course Fee cell. In our scenarios we want to monitor what the Gross Profit will be for different combinations of Number of Participants and Course Fee.

I hope you remember how to do Named Range. You simply select the cell or range, go to the name box and type in the name you want to name the selection as.

The screenshot shows a Microsoft Excel spreadsheet titled "High Quality Full Day Excel Training". The ribbon menu is visible at the top. In the formula bar, the name "Number_of_Participants" is selected, and the value "40" is displayed. A red arrow labeled "2" points to the formula bar. A red arrow labeled "1" points to the cell B11, which contains the value "40" and is highlighted with a green border, indicating it is the active cell.

| | A | B | C | D | |
|--------------------------------------|------------------------------------|---|---------------|---|--|
| High Quality Full Day Excel Training | | | | | |
| 1 | | | | | |
| 3 | Cost Item | | Amount | | |
| 4 | Hotel Conference Room | | ₦ 600,000.00 | | |
| 5 | Feeding per participant | | ₦ 12,500.00 | | |
| 6 | Training Material | | ₦ 3,000.00 | | |
| 7 | Certificate | | ₦ 2,000.00 | | |
| 8 | Prize for best participant | | ₦ 100,000.00 | | |
| 9 | | | | | |
| 10 | Analysis based on estimates | | Figure | | |
| 11 | Number of participants | | 40 | | |
| 12 | Course Fee | | ₦ 100,000.00 | | |
| 13 | Total Feeding cost | | ₦ 500,000.00 | | |
| 14 | Conference Room cost | | ₦ 600,000.00 | | |
| 15 | Training Materials cost | | ₦ 120,000.00 | | |

We do same for Course Fee.

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW

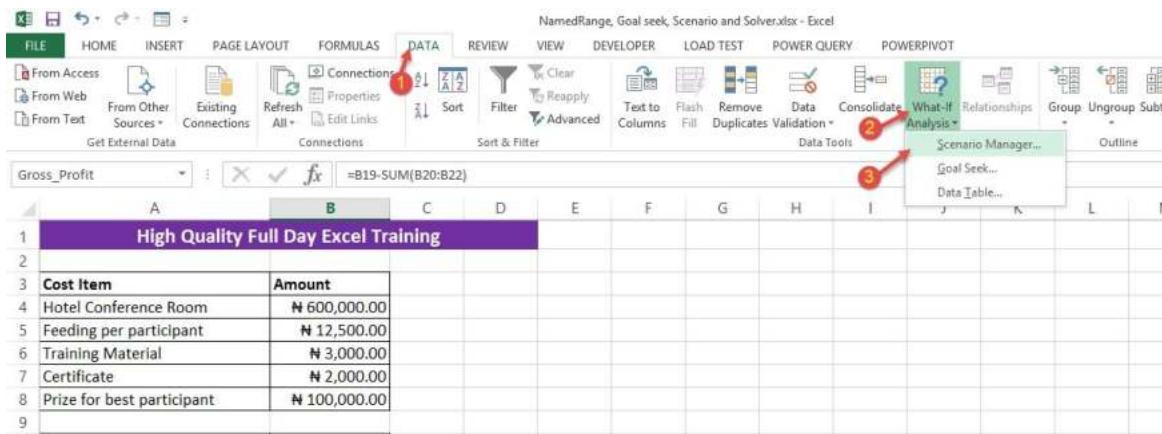
| | Course_Fee | 100000 |
|--------------------------------------|------------------------------------|----------------|
| | A | B |
| High Quality Full Day Excel Training | | |
| | | |
| 3 | Cost Item | Amount |
| 4 | Hotel Conference Room | ₦ 600,000.00 |
| 5 | Feeding per participant | ₦ 12,500.00 |
| 6 | Training Material | ₦ 3,000.00 |
| 7 | Certificate | ₦ 2,000.00 |
| 8 | Prize for best participant | ₦ 100,000.00 |
| 9 | | |
| 10 | Analysis based on estimates | Figure |
| 11 | Number of participants | 40 |
| 12 | Course Fee | ₦ 100,000.00 |
| 13 | Total Feeding cost | ₦ 500,000.00 |
| 14 | Conference Room cost | ₦ 600,000.00 |
| 15 | Training Materials cost | ₦ 120,000.00 |
| 16 | Certificate Costs | ₦ 80,000.00 |
| 17 | Prize Award cost | ₦ 100,000.00 |
| 18 | | |
| 19 | Total Revenue | ₦ 4,000,000.00 |

And for Gross Profit.

| Gross_Profit | | | | |
|--------------|---|-----------------------|---|---|
| | A | B | C | D |
| 1 | High Quality Full Day Excel Training | | | |
| 2 | | | | |
| 3 | Cost Item | Amount | | |
| 4 | Hotel Conference Room | ₦ 600,000.00 | | |
| 5 | Feeding per participant | ₦ 12,500.00 | | |
| 6 | Training Material | ₦ 3,000.00 | | |
| 7 | Certificate | ₦ 2,000.00 | | |
| 8 | Prize for best participant | ₦ 100,000.00 | | |
| 9 | | | | |
| 10 | Analysis based on estimates | Figure | | |
| 11 | Number of participants | 40 | | |
| 12 | Course Fee | ₦ 100,000.00 | | |
| 13 | Total Feeding cost | ₦ 500,000.00 | | |
| 14 | Conference Room cost | ₦ 600,000.00 | | |
| 15 | Training Materials cost | ₦ 120,000.00 | | |
| 16 | Certificate Costs | ₦ 80,000.00 | | |
| 17 | Prize Award cost | ₦ 100,000.00 | | |
| 18 | | | | |
| 19 | Total Revenue | ₦ 4,000,000.00 | | |
| 20 | Total Cost | ₦ 1,400,000.00 | | |
| 21 | VAT Fee (5%) | ₦ 200,000.00 | | |
| 22 | Contingencies (7%) | ₦ 280,000.00 | | |
| 23 | Gross Profit | ₦ 2,120,000.00 | | |

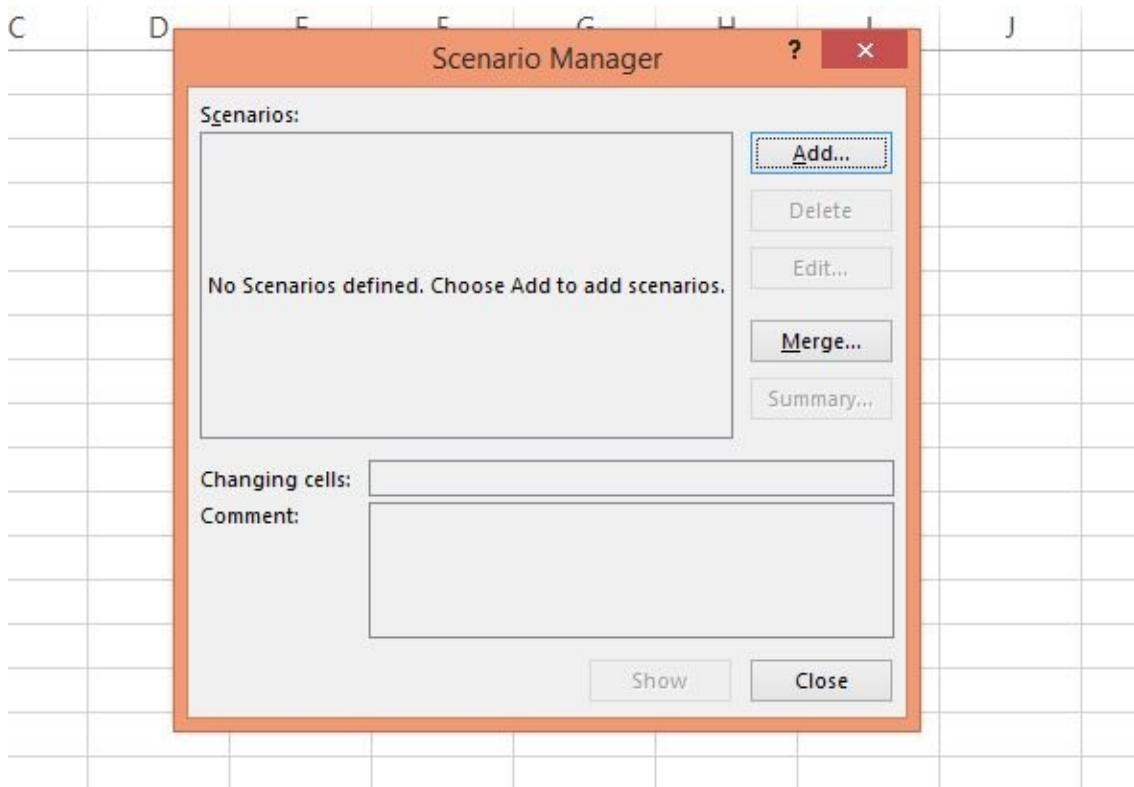
Now, we launch the Scenario Manager.

It is under Data Menu, What-If-Analysis.





20:B22)

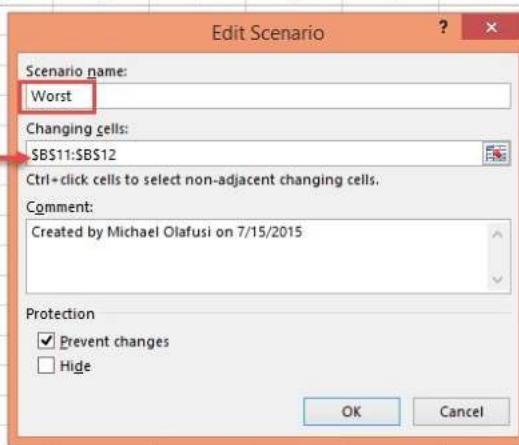


So let's add the three different scenarios.

I'll start with the worst. Click on Add and give the Scenario name as Worst. The cells we will vary are the Number of Participants and Course Fee cells.

B11 : =B19-SUM(B20:B22)

| A | B | C | D | E | F | G | H | I |
|--------------------------------|----------------|---|---|---|---|---|---|---|
| 7 Certificate | ₦ 2,000.00 | | | | | | | |
| 8 Prize for best participant | ₦ 100,000.00 | | | | | | | |
| 9 | | | | | | | | |
| 10 Analysis based on estimates | Figure | | | | | | | |
| 11 Number of participants | 40 | | | | | | | |
| 12 Course Fee | ₦ 100,000.00 | | | | | | | |
| 13 Total Feeding cost | ₦ 500,000.00 | | | | | | | |
| 14 Conference Room cost | ₦ 600,000.00 | | | | | | | |
| 15 Training Materials cost | ₦ 120,000.00 | | | | | | | |
| 16 Certificate Costs | ₦ 80,000.00 | | | | | | | |
| 17 Prize Award cost | ₦ 100,000.00 | | | | | | | |
| 18 | | | | | | | | |
| 19 Total Revenue | ₦ 4,000,000.00 | | | | | | | |
| 20 Total Cost | ₦ 1,400,000.00 | | | | | | | |
| 21 VAT Fee (5%) | ₦ 200,000.00 | | | | | | | |
| 22 Contingencies (7%) | ₦ 280,000.00 | | | | | | | |
| 23 Gross Profit | ₦ 2,120,000.00 | | | | | | | |
| 24 | | | | | | | | |

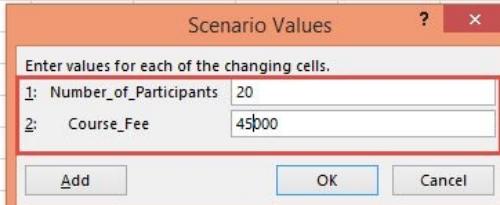


Click on OK.

It will ask you to set the number of participants and course fee. So based on experience, I know that if we do no serious marketing and set the price to N45,000 we can get 20 people. And that is the worst that can happen.

B23 : =B19-SUM(B20:B22)

| A | B | C | D | E | F | G | H |
|--------------------------------|----------------|---|---|---|---|---|---|
| 7 Certificate | ₦ 2,000.00 | | | | | | |
| 8 Prize for best participant | ₦ 100,000.00 | | | | | | |
| 9 | | | | | | | |
| 10 Analysis based on estimates | Figure | | | | | | |
| 11 Number of participants | 40 | | | | | | |
| 12 Course Fee | ₦ 100,000.00 | | | | | | |
| 13 Total Feeding cost | ₦ 500,000.00 | | | | | | |
| 14 Conference Room cost | ₦ 600,000.00 | | | | | | |
| 15 Training Materials cost | ₦ 120,000.00 | | | | | | |
| 16 Certificate Costs | ₦ 80,000.00 | | | | | | |
| 17 Prize Award cost | ₦ 100,000.00 | | | | | | |
| 18 | | | | | | | |
| 19 Total Revenue | ₦ 4,000,000.00 | | | | | | |
| 20 Total Cost | ₦ 1,400,000.00 | | | | | | |
| 21 VAT Fee (5%) | ₦ 200,000.00 | | | | | | |
| 22 Contingencies (7%) | ₦ 280,000.00 | | | | | | |
| 23 Gross Profit | ₦ 2,120,000.00 | | | | | | |
| 24 | | | | | | | |
| 25 | | | | | | | |

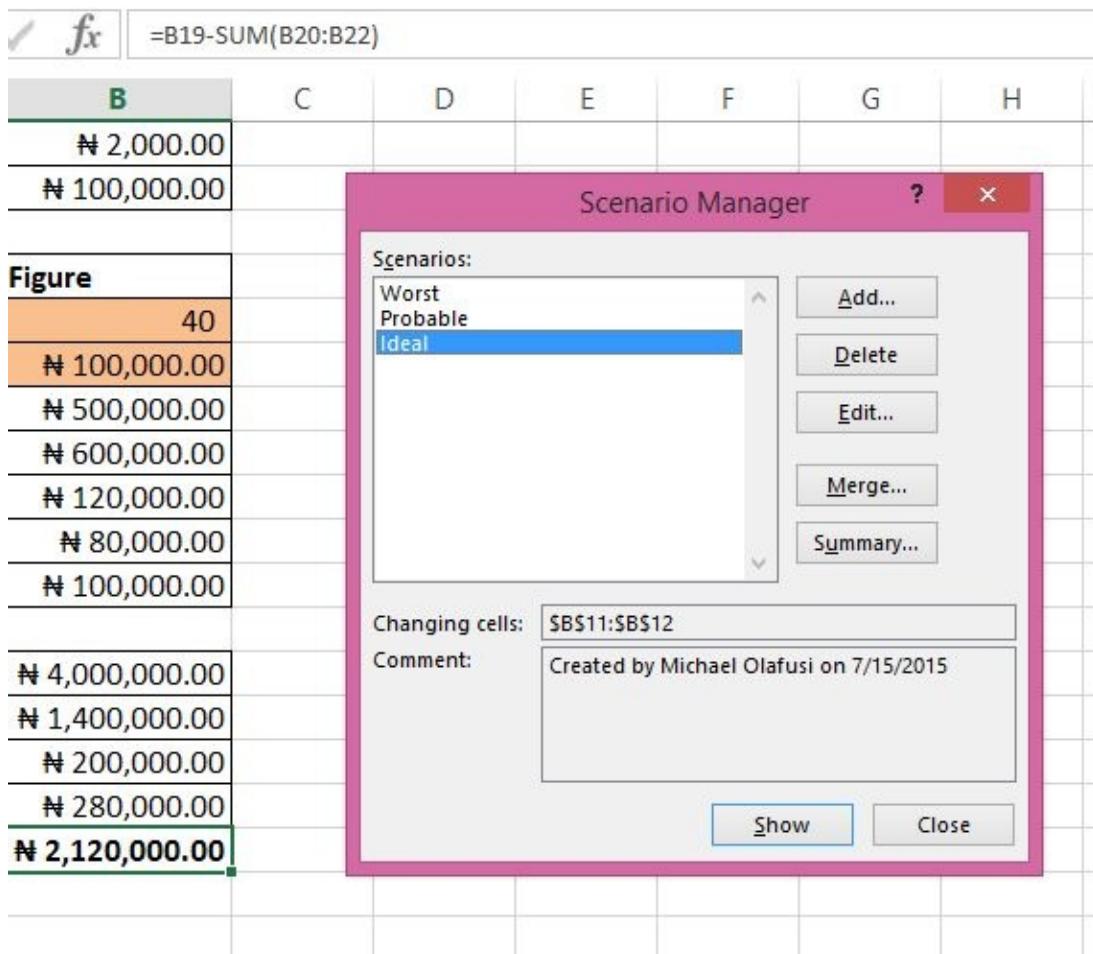


Click on OK.

Create a second scenario. Name it “Probable”. It will be what we will most likely achieve. Give the number of participants as 30 and the cost as N70,000.

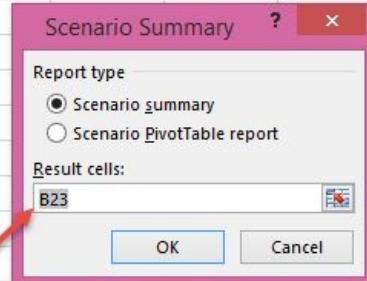
Finally, do the last scenario. Name it “Ideal”. It will be our marketing aim if we decide to go ahead with the training idea. Give the number of participants as 40 and the cost as N100,000

Once you are done, the Scenario Manager dialog box would look like the one below.



Click on Summary. It will ask you for the Result cell to monitor. That is the Gross Profit cell.

| Analysis based on estimates | Figure |
|-----------------------------|-----------------------|
| Number of participants | 40 |
| Course Fee | ₦ 100,000.00 |
| Total Feeding cost | ₦ 500,000.00 |
| Conference Room cost | ₦ 600,000.00 |
| Training Materials cost | ₦ 120,000.00 |
| Certificate Costs | ₦ 80,000.00 |
| Prize Award cost | ₦ 100,000.00 |
| | |
| Total Revenue | ₦ 4,000,000.00 |
| Total Cost | ₦ 1,400,000.00 |
| VAT Fee (5%) | ₦ 200,000.00 |
| Contingencies (7%) | ₦ 280,000.00 |
| 23 Gross Profit | ₦ 2,120,000.00 |
| | |



Click on OK.

You will be taken to a new sheet showing the comparison of the different scenarios.

| | Current Values: | Worst | Probable | Ideal |
|------------------------|-----------------|--------------|--------------|----------------|
| Number_of_Participants | 40 | 20 | 30 | 40 |
| Course_Fee | ₦ 100,000.00 | ₦ 45,000.00 | ₦ 70,000.00 | ₦ 100,000.00 |
| Gross_Profit | ₦ 2,120,000.00 | ₦ 258,000.00 | ₦ 623,000.00 | ₦ 2,120,000.00 |

Notes: Current Values column represents values of changing cells at time Scenario Summary Report was created. Changing cells for each scenario are highlighted in gray.

And as you can see, I now have a convincing case to show my partners and make them agree to organizing the one day training.

That's how easy and powerful the Scenario Manager is.

Introduction To Excel VBA (macros)

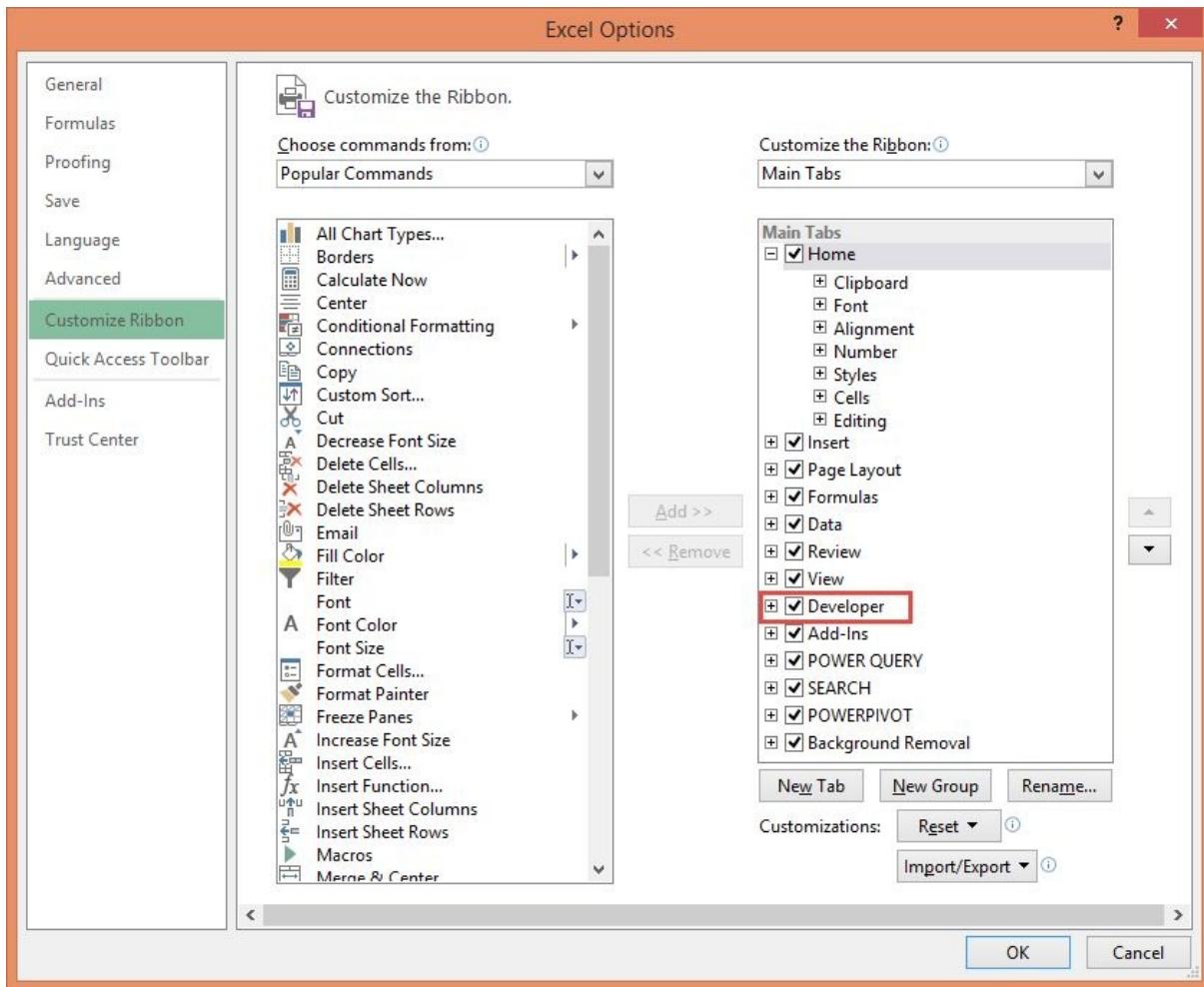
A lot of people feel making macros in Excel is extremely hard and should be left only people who make a living from doing it full-time. If you are one of such people, I have a pleasant surprise for you. Macros in Excel are very easy and in the next five minutes I will guide you into making one.

So just before we start, let me do a brief explanation of what a macro is, why you might need to make one and the benefits of being able to make one.

Macros are simply a means of automating tasks in Excel. It's no more than that. You might need to do it when you have a daily or weekly report you make that is of an unvarying standard format, input and output-wise. Having a macro can cut your analysis time from hours to 15 seconds. It's like magic and everyone in your office will see you as a special being.

To be able to make macros, you need to make a small settings change in your Microsoft Excel.

Go to Files, Options and Customize Ribbon. Check the box beside Developer.



Now you will be able to access the Developer menu.

Excel Macros (VBA).xlsx - Excel

The screenshot shows the Excel ribbon with the DEVELOPER tab selected. The DEVELOPER tab contains several icons for managing macros and code, such as Record Macro, Use Relative References, Add-Ins, Insert, Design Mode, View Code, Properties, Map Properties, Import, Source, Expansion Packs, Export, Refresh Data, XML, Document Panel, and Modify.

| Month | Toyota | Ford | Mercerdes Benz | BMW | GMC | |
|--------|---|--------------------------------------|--|---------------------------------------|--------------------------------------|---------------------------------------|
| Jan-13 | John Sparrow Jane Porter Mark Spencer Kate Greitz Total | 54 90 144 71 490 | 95 86 142 158 622 | 46 138 74 120 523 | 123 90 156 96 621 | 139 |
| Feb-13 | John Sparrow Jane Porter Mark Spencer Kate Greitz Michael Peter Total | 60 124 143 81 148 556 | 105 126 139 153 126 649 | 107 147 77 122 101 554 | 102 116 48 58 160 484 | 61 113 125 152 104 555 |
| Mar-13 | John Sparrow Jane Porter Total | 116 104 100 | 65 103 133 | 94 61 133 | 96 62 61 | 116 62 62 |

Video 14 | **Record Macro** | +

Also enabling the Macro record button which we will use in this introduction to Excel VBA.

| Month | Toyota | Ford | Mercerdes Benz | BMW | GMC | |
|--------|---|--------------------------------------|--|---------------------------------------|--------------------------------------|---------------------------------------|
| Jan-13 | John Sparrow Jane Porter Mark Spencer Kate Greitz Michael Peter Total | 54 90 144 71 131 490 | 95 86 142 158 141 622 | 46 138 74 120 145 523 | 123 90 156 96 156 621 | 139 |
| Feb-13 | John Sparrow Jane Porter Mark Spencer Kate Greitz Michael Peter Total | 60 124 143 81 148 556 | 105 126 139 153 126 649 | 107 147 77 122 101 554 | 102 116 48 58 160 484 | 61 113 125 152 104 555 |
| Mar-13 | John Sparrow Jane Porter Total | 116 104 100 | 65 103 133 | 94 61 133 | 96 62 61 | 116 62 62 |

Video 14 | **Record Macro** | +

READY

Next, I will show you how to create a macro by clicking the right button twice — the macro record button.

I have prepared a sample illustration data.

| | A | B | C | D | E | F | G | H |
|----|---|--------|------|----------------|-----|-----|---|---|
| 1 | XYZ Car Dealership Sales Record for year 2013 | | | | | | | |
| 3 | Jan-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | | |
| 4 | John Sparrow | 54 | 95 | 46 | 123 | 139 | | |
| 5 | Jane Porter | 90 | 86 | 138 | 90 | 152 | | |
| 6 | Mark Spencer | 144 | 142 | 74 | 156 | 54 | | |
| 7 | Kate Greitz | 71 | 158 | 120 | 96 | 132 | | |
| 8 | Michael Peter | 131 | 141 | 145 | 156 | 153 | | |
| 9 | Total | 490 | 622 | 523 | 621 | 630 | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | Feb-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | | |
| 13 | John Sparrow | 60 | 105 | 107 | 102 | 61 | | |
| 14 | Jane Porter | 124 | 126 | 147 | 116 | 113 | | |
| 15 | Mark Spencer | 143 | 139 | 77 | 48 | 125 | | |
| 16 | Kate Greitz | 81 | 153 | 122 | 58 | 152 | | |
| 17 | Michael Peter | 148 | 126 | 101 | 160 | 104 | | |
| 18 | Total | 556 | 649 | 554 | 484 | 555 | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | Mar-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | | |
| 22 | John Sparrow | 116 | 65 | 94 | 96 | 116 | | |
| 23 | Jane Porter | 104 | 103 | 133 | 61 | 62 | | |

It is fictitious table of Sales at an Autodealership by the different salesmen and the car make.

So the task I will use a macro to automate is a series of formatting steps.

Note: For the gurus, it would be obvious that copy pasting format would have done the same thing our macro will do. Yes. But we have to do the illustration with something not too complex to confuse anyone. The good thing is that you will learn all the steps required to make any complex recorded macro you desire.

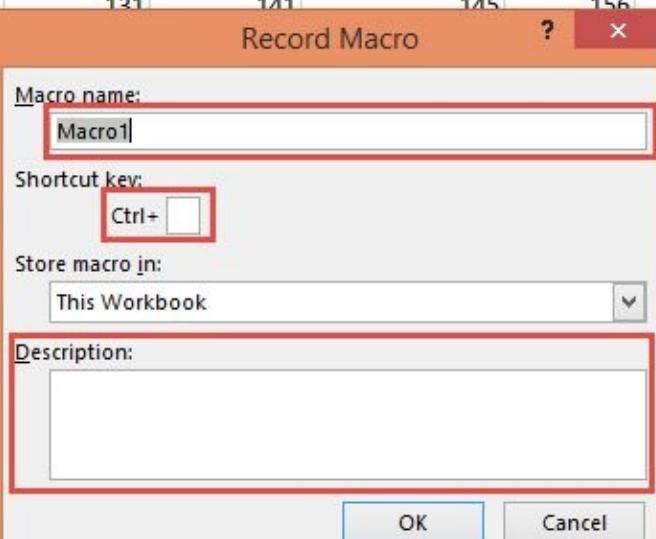
So here are the easy steps to creating a macro.

First, I select the month I want to manually do the formatting for and have the macro recorder save my steps.

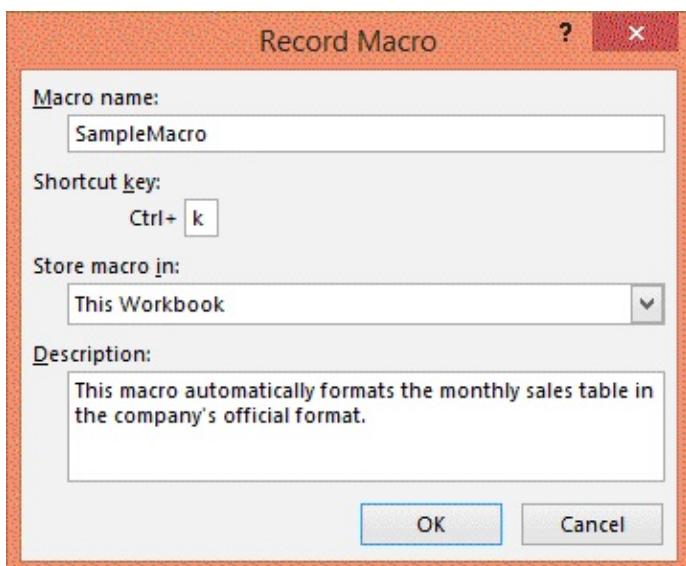
| A | B | C | D | E | F | G | H |
|---|-----|-----|-----|-----|-----|---|---|
| XYZ Car Dealership Sales Record for year 2013 | | | | | | | |
| 3 Jan-13 Toyota Ford Mercerdes Benz BMW GMC | | | | | | | |
| 4 John Sparrow | 54 | 95 | 46 | 123 | 139 | | |
| 5 Jane Porter | 90 | 86 | 138 | 90 | 152 | | |
| 6 Mark Spencer | 144 | 142 | 74 | 156 | 54 | | |
| 7 Kate Greitz | 71 | 158 | 120 | 96 | 132 | | |
| 8 Michael Peter | 131 | 141 | 145 | 156 | 153 | | |
| 9 Total | 490 | 622 | 523 | 621 | 630 | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 Feb-13 Toyota Ford Mercerdes Benz BMW GMC | | | | | | | |
| 13 John Sparrow | 60 | 105 | 107 | 102 | 61 | | |
| 14 Jane Porter | 124 | 126 | 147 | 116 | 113 | | |
| 15 Mark Spencer | 143 | 139 | 77 | 48 | 125 | | |
| 16 Kate Greitz | 81 | 153 | 122 | 58 | 152 | | |
| 17 Michael Peter | 148 | 126 | 101 | 160 | 104 | | |
| 18 Total | 556 | 649 | 554 | 484 | 555 | | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 Mar-13 Toyota Ford Mercerdes Benz BMW GMC | | | | | | | |
| 22 John Sparrow | 116 | 65 | 94 | 96 | 116 | | |
| 23 Jane Porter | 104 | 103 | 133 | 61 | 62 | | |

Click on the macro record button.

| 1 | XYZ Car Dealership Sales Record for year 2013 | | | | | |
|----|---|--------|------|----------------|-----|------------|
| 2 | Jan-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC |
| 3 | John Sparrow | 54 | 95 | 46 | 123 | 139 |
| 4 | Jane Porter | 90 | 86 | 138 | 90 | 152 |
| 5 | Mark Spencer | 144 | 142 | 74 | 156 | 54 |
| 6 | Kate Greitz | 71 | 158 | 120 | 96 | 132 |
| 7 | Michael Peter | 131 | 141 | 145 | 156 | 153 |
| 8 | Total | | | | | 630 |
| 9 | Feb-1 | | | | | |
| 10 | John Sparrow | | | | | 61 |
| 11 | Jane Porter | | | | | 113 |
| 12 | Mark Spencer | | | | | 125 |
| 13 | Kate Greitz | | | | | 152 |
| 14 | Michael Peter | | | | | 104 |
| 15 | Total | | | | | 555 |
| 16 | Mar-1 | | | | | |
| 17 | John Sparrow | 104 | 103 | 133 | 61 | 116 |
| 18 | Jane Porter | | | | | 62 |
| 19 | | | | | | |
| 20 | | | | | | |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |



Give the macro a name, a keyboard shortcut and a description.



The screenshot shows a Microsoft Excel spreadsheet titled "XYZ Car Dealership Sales Record for year 2013". The spreadsheet contains three monthly sales tables: January (Jan-13), February (Feb-13), and March (Mar-13). Each table has columns for Toyota, Ford, Mercedes Benz, BMW, and GMC, with rows for individual salespeople and a total row. The January table is highlighted with a green border. A macro recording dialog box titled "Record Macro" is overlaid on the spreadsheet. The dialog box contains fields for "Macro name" (set to "SampleMacro"), "Shortcut key" (set to "Ctrl+K"), "Store macro in" (set to "This Workbook"), and a "Description" box containing the text "This macro automatically formats the monthly sales table in the company's official format".

| | A | B | C | D | E | F | G | H | I | J | K |
|----|---|---|--------|------|----------------|-----|-----|---|---|---|---|
| 1 | XYZ Car Dealership Sales Record for year 2013 | | | | | | | | | | |
| 3 | Jan-13 | | Toyota | Ford | Mercerdes Benz | BMW | GMC | | | | |
| 4 | John Sparrow | | 54 | 95 | 46 | 123 | 139 | | | | |
| 5 | Jane Porter | | 90 | 86 | 138 | 90 | 152 | | | | |
| 6 | Mark Spencer | | 144 | 142 | 74 | 156 | 54 | | | | |
| 7 | Kate Greitz | | 71 | 158 | 120 | 96 | 132 | | | | |
| 8 | Michael Peter | | 131 | 141 | 145 | 156 | 153 | | | | |
| 9 | Total | | 490 | 622 | 523 | 621 | 630 | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | Feb-13 | | Toyota | Ford | Mercerdes Benz | BMW | GMC | | | | |
| 13 | John Sparrow | | 60 | 105 | 107 | 102 | 61 | | | | |
| 14 | Jane Porter | | 124 | 126 | 147 | 116 | 113 | | | | |
| 15 | Mark Spencer | | 143 | 139 | 77 | 48 | 125 | | | | |
| 16 | Kate Greitz | | 81 | 153 | 122 | 58 | 152 | | | | |
| 17 | Michael Peter | | 148 | 126 | 101 | 160 | 104 | | | | |
| 18 | Total | | 556 | 649 | 554 | 484 | 555 | | | | |
| 19 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 21 | Mar-13 | | Toyota | Ford | Mercerdes Benz | BMW | GMC | | | | |
| 22 | John Sparrow | | 116 | 65 | 94 | 96 | 116 | | | | |
| 23 | Jane Porter | | 104 | 103 | 133 | 61 | 62 | | | | |

Click on OK.

Then begin doing the formatting steps. I change the font type, font color and add border, making it have our corporate color feel. Once I am done, I click on the stop recording button.

| A | B | C | D | E | F | G | H |
|--|---|------------|------------|----------------|------------|------------|---|
| XYZ Car Dealership Sales Record for year 2013 | | | | | | | |
| 3 | Jan-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | |
| 4 | John Sparrow | 54 | 95 | 46 | 123 | 139 | |
| 5 | Jane Porter | 90 | 86 | 138 | 90 | 152 | |
| 6 | Mark Spencer | 144 | 142 | 74 | 156 | 54 | |
| 7 | Kate Greitz | 71 | 158 | 120 | 96 | 132 | |
| 8 | Michael Peter | 131 | 141 | 145 | 156 | 153 | |
| 9 | Total | 490 | 622 | 523 | 621 | 630 | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | Feb-13 Toyota Ford Mercerdes Benz BMW GMC | | | | | | |
| 13 | John Sparrow | 60 | 105 | 107 | 102 | 61 | |
| 14 | Jane Porter | 124 | 126 | 147 | 116 | 113 | |
| 15 | Mark Spencer | 143 | 139 | 77 | 48 | 125 | |
| 16 | Kate Greitz | 81 | 153 | 122 | 58 | 152 | |
| 17 | Michael Peter | 148 | 126 | 101 | 160 | 104 | |
| 18 | Total | 556 | 649 | 554 | 484 | 555 | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 | Mar-13 Toyota Ford Mercerdes Benz BMW GMC | | | | | | |
| 22 | John Sparrow | 116 | 65 | 94 | 96 | 116 | |
| 23 | Jane Porter | 104 | 103 | 133 | 61 | 62 | |

Video 14

Record Macro

READY



And that's all. We have created a macro. Next is to try it out and see it work.

Select another month's record and press CTRL + k (the keyboard shortcut we used for the macro).

| | A | B | C | D | E | F | G |
|----|---|--------|------|----------------|-----|-----|---|
| 1 | XYZ Car Dealership Sales Record for year 2013 | | | | | | |
| 2 | | | | | | | |
| 3 | Jan-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | |
| 4 | John Sparrow | 54 | 95 | 46 | 123 | 139 | |
| 5 | Jane Porter | 90 | 86 | 138 | 90 | 152 | |
| 6 | Mark Spencer | 144 | 142 | 74 | 156 | 54 | |
| 7 | Kate Greitz | 71 | 158 | 120 | 96 | 132 | |
| 8 | Michael Peter | 131 | 141 | 145 | 156 | 153 | |
| 9 | Total | 490 | 622 | 523 | 621 | 630 | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | Feb-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | |
| 13 | John Sparrow | 60 | 105 | 107 | 102 | 61 | |
| 14 | Jane Porter | 124 | 126 | 147 | 116 | 113 | |
| 15 | Mark Spencer | 143 | 139 | 77 | 48 | 125 | |
| 16 | Kate Greitz | 81 | 153 | 122 | 58 | 152 | |
| 17 | Michael Peter | 148 | 126 | 101 | 160 | 104 | |
| 18 | Total | 556 | 649 | 554 | 484 | 555 | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 | Mar-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | |
| 22 | John Sparrow | 116 | 65 | 94 | 96 | 116 | |
| 23 | Jane Porter | 104 | 103 | 133 | 61 | 62 | |



Video 14

Record Macro



A12 : X ✓ fx 2/1/2013

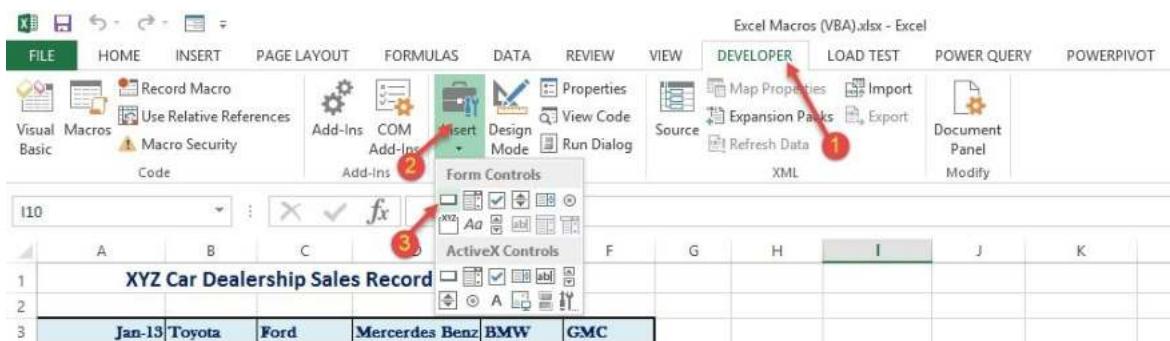
| | A | B | C | D | E | F | G |
|----|---|--------|------------|----------------|------------|------------|------------|
| 1 | XYZ Car Dealership Sales Record for year 2013 | | | | | | |
| 3 | Jan-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | |
| 4 | John Sparrow | | 54 | 95 | 46 | 123 | 139 |
| 5 | Jane Porter | | 90 | 86 | 138 | 90 | 152 |
| 6 | Mark Spencer | | 144 | 142 | 74 | 156 | 54 |
| 7 | Kate Greitz | | 71 | 158 | 120 | 96 | 132 |
| 8 | Michael Peter | | 131 | 141 | 145 | 156 | 158 |
| 9 | Total | | 490 | 622 | 523 | 621 | 630 |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | Feb-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | |
| 13 | John Sparrow | | 60 | 105 | 107 | 102 | 61 |
| 14 | Jane Porter | | 124 | 126 | 147 | 116 | 119 |
| 15 | Mark Spencer | | 143 | 139 | 77 | 48 | 125 |
| 16 | Kate Greitz | | 81 | 153 | 122 | 58 | 152 |
| 17 | Michael Peter | | 148 | 126 | 101 | 160 | 104 |
| 18 | Total | | 556 | 649 | 554 | 484 | 555 |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 | Mar-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | |
| 22 | John Sparrow | | 116 | 65 | 94 | 96 | 116 |
| 23 | Jane Porter | | 104 | 103 | 133 | 61 | 62 |

← → | Video 14 | **Record Macro** | +

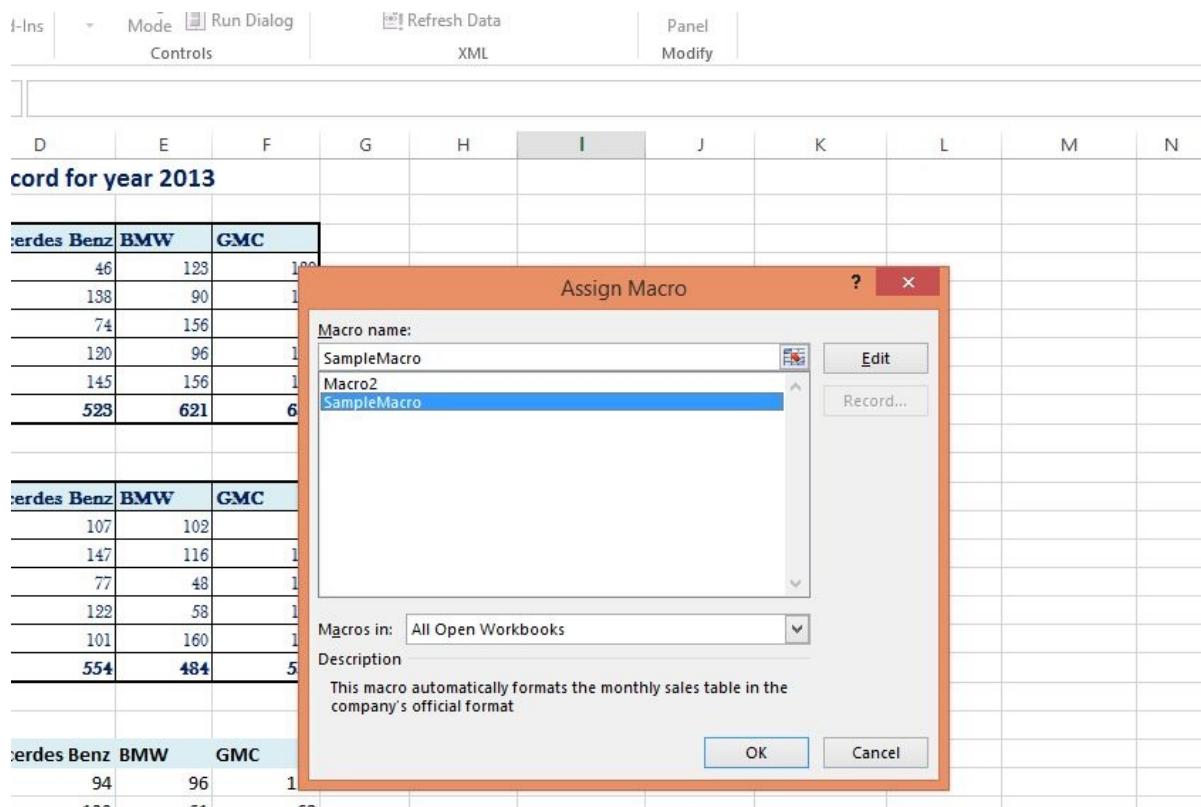
Voila! It works!

So let's insert a macro button. A button you will click to run the macro. I am sure you've seen one before. They are super easy to create.

Go to the Developer menu, Insert and select Button under Form Controls.



Draw a rectangular button where you want the macro button to be. Immediately, Excel will ask you to select the macro to link it to. Select the macro we just created.



Click on OK.

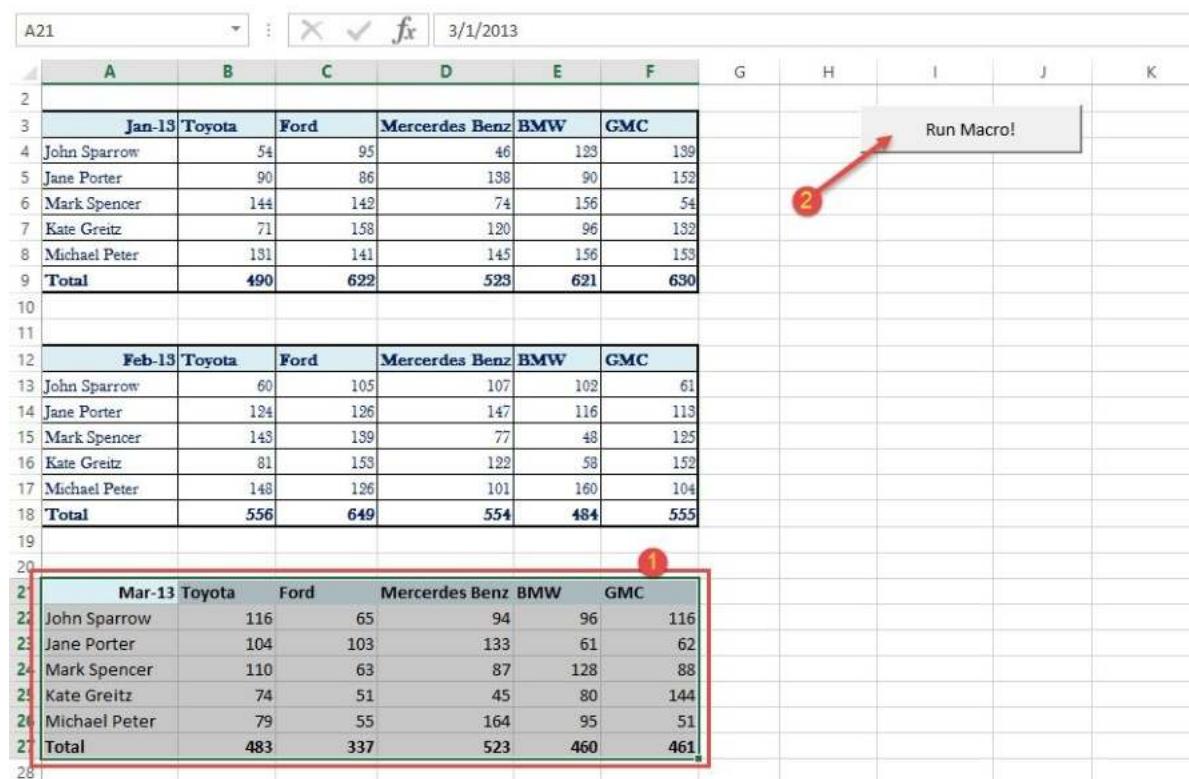
Then edit the name of the rectangular button.

| | E | F | G | H | I | J | K | L |
|----|------------|------------|---|---|---|---|---|---|
| nz | BMW | GMC | | | | | | |
| 46 | 123 | 139 | | | | | | |
| 38 | 90 | 152 | | | | | | |
| 74 | 156 | 54 | | | | | | |
| 20 | 96 | 132 | | | | | | |
| 45 | 156 | 153 | | | | | | |
| 23 | 621 | 630 | | | | | | |

| | E | F | G | H | I | J | K | L |
|----|-----|-----|---|---|---|---|---|---|
| nz | BMW | GMC | | | | | | |
| 07 | 102 | 61 | | | | | | |
| 47 | 116 | 113 | | | | | | |
| 77 | 48 | 125 | | | | | | |
| 22 | 58 | 152 | | | | | | |

And that's it! You've created a macro button.

Now select another month's data and click on the macro button to see it work the magic we configured it for.



| A | B | C | D | E | F | G | H | I | J | K |
|----|---------------|------------|------------|----------------|------------|------------|---|---|---|---|
| 3 | Jan-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | | | | |
| 4 | John Sparrow | 54 | 95 | 46 | 123 | 139 | | | | |
| 5 | Jane Porter | 90 | 86 | 138 | 90 | 152 | | | | |
| 6 | Mark Spencer | 144 | 142 | 74 | 156 | 54 | | | | |
| 7 | Kate Greitz | 71 | 158 | 120 | 96 | 132 | | | | |
| 8 | Michael Peter | 131 | 141 | 145 | 156 | 153 | | | | |
| 9 | Total | 490 | 622 | 523 | 621 | 630 | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | Feb-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | | | | |
| 13 | John Sparrow | 60 | 105 | 107 | 102 | 61 | | | | |
| 14 | Jane Porter | 124 | 126 | 147 | 116 | 113 | | | | |
| 15 | Mark Spencer | 143 | 139 | 77 | 48 | 125 | | | | |
| 16 | Kate Greitz | 81 | 153 | 122 | 58 | 152 | | | | |
| 17 | Michael Peter | 148 | 126 | 101 | 160 | 104 | | | | |
| 18 | Total | 556 | 649 | 554 | 484 | 555 | | | | |
| 19 | | | | | | | | | | |
| 20 | Mar-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | | | | |
| 21 | John Sparrow | 116 | 65 | 94 | 96 | 116 | | | | |
| 22 | Jane Porter | 104 | 103 | 133 | 61 | 62 | | | | |
| 23 | Mark Spencer | 110 | 63 | 87 | 128 | 88 | | | | |
| 24 | Kate Greitz | 74 | 51 | 45 | 80 | 144 | | | | |
| 25 | Michael Peter | 79 | 55 | 164 | 95 | 51 | | | | |
| 26 | Total | 483 | 337 | 523 | 460 | 461 | | | | |

See the result!

| | A | B | C | D | E | F | G | H | I | J | K |
|----|---------------|--------|------------|------------|----------------|------------|------------|---|---|---|---|
| 2 | | | | | | | | | | | |
| 3 | | Jan-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | | | | |
| 4 | John Sparrow | | 54 | 95 | 46 | 123 | 139 | | | | |
| 5 | Jane Porter | | 90 | 86 | 138 | 90 | 152 | | | | |
| 6 | Mark Spencer | | 144 | 142 | 74 | 156 | 54 | | | | |
| 7 | Kate Greitz | | 71 | 158 | 120 | 96 | 132 | | | | |
| 8 | Michael Peter | | 131 | 141 | 145 | 156 | 153 | | | | |
| 9 | Total | | 490 | 622 | 523 | 621 | 630 | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | Feb-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | | | | |
| 13 | John Sparrow | | 60 | 105 | 107 | 102 | 61 | | | | |
| 14 | Jane Porter | | 124 | 126 | 147 | 116 | 113 | | | | |
| 15 | Mark Spencer | | 143 | 139 | 77 | 48 | 125 | | | | |
| 16 | Kate Greitz | | 81 | 153 | 122 | 58 | 152 | | | | |
| 17 | Michael Peter | | 148 | 126 | 101 | 160 | 104 | | | | |
| 18 | Total | | 556 | 649 | 554 | 484 | 555 | | | | |
| 19 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 21 | | Mar-13 | Toyota | Ford | Mercerdes Benz | BMW | GMC | | | | |
| 22 | John Sparrow | | 116 | 65 | 94 | 96 | 116 | | | | |
| 23 | Jane Porter | | 104 | 103 | 133 | 61 | 62 | | | | |
| 24 | Mark Spencer | | 110 | 63 | 87 | 128 | 88 | | | | |
| 25 | Kate Greitz | | 74 | 51 | 45 | 80 | 144 | | | | |
| 26 | Michael Peter | | 79 | 55 | 164 | 95 | 51 | | | | |
| 27 | Total | | 483 | 337 | 523 | 460 | 461 | | | | |
| 28 | | | | | | | | | | | |

Amazing, isn't it?

I hope you are now convinced that creating a macro in Excel is very easy.

It's now time for you to think up other creative ways to use a recorded macro.

Bonne chance!