AND BUSINESS DATA ANALYSIS for The Busy Professional



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© Michael Olafusi 2014 **Preface** Microsoft Excel: It's more powerful and easier to... How Excel Handles What You Type Data Consistency, starting with the end in view Building Datasheets that can easily scale **Sorting Filtering Data Cleaning Data Formatting Charts PivotTable and PivotChart Business Data Analysis** Power Excel Formulas Named Range, Goal Seek and Scenario Manager Introduction To Excel VBA (macros)

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eBook written and formatted by <u>mike@urbizedge.com</u>

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 <u>www.urbizedge.com/about</u> (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 <u>mike@urbizedge.com</u>

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

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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...

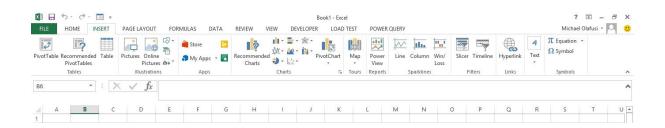
Styles: Allows you to set the format of an Excel cell based on the data it holds (conditional formatting). It also allows you to convert a selection of cells to table, and to set quick formats for a cell.

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.

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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.

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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.

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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.

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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.

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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.

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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:

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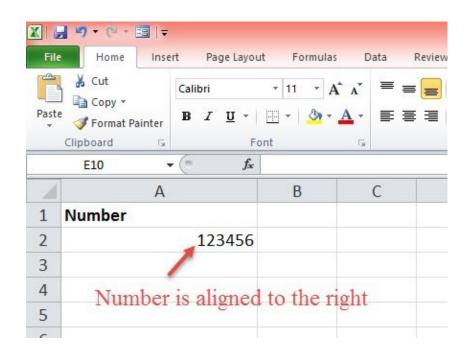
Different Data Types in Excel

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.

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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.



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.

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

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As a recap, see the image below.

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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.

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

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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.

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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 you 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:

70	columns	Monthly	Revenue from C	lients		
Cirents	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-1
Mobil	₩ 4,129,000	₩ 3,695,000	₩ 2,770,000	₩4,520,000	₩ 2,223,000	₩ 3,929,00
Nestle	₩1,688,000	₩ 3,300,000	₩ 4,880,000	₩ 3,730,000	₩ 2,046,000	₩ 2,326,00
NBC	₩ 3,701,000	₩4,361,000	₩ 4,254,000	₩4,550,000	₩4,834,000	₩ 3,116,00
Exp Nigeria	₩ 2,587,000	₩ 4,198,000	₩ 2,146,000	₦ 1,062,000	₩ 2,341,000	₩ 4,713,00
Insight Nigeria	₩ 2,408,000	₩ 4,759,000	₩ 1,300,000	₩ 4,426,000	₩ 3,521,000	₩ 3,171,00
Radisson Blu	₩ 2,485,000	₩ 2,025,000	₩ 1,603,000	₩ 3,089,000	₩ 2,841,000	₩ 3,156,00
Guinness	₩ 2,703,000	₩1,888,000	₩ 1,360,000	₦ 1,664,000	₩ 1,097,000	₩ 4,920,00
Chevron	₩ 3,516,000	₩ 2,988,000	₩ 4,788,000	₩ 2,425,000	₩ 4,689,000	₩ 4,080,00
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4 Dangote	₩ 1,457,000	₩ 3,241,000	₩ 4,441,000	₦ 1,544,000	₩ 3,749,000	₩ 3,544,00
Dana Group	₩ 2,984,000	₩ 1,882,000	₩ 2,898,000	₩ 4,618,000	₩ 2,372,000	₩ 3,723,00
6 LaFarge	₩ 2,111,000	₩ 3,293,000	₩ 1,427,000	₩ 3,953,000	₩ 1,616,000	₩ 2,885,00
7 NB	₩ 3,396,000	₩ 4,148,000	₩ 4,569,000	₩ 3,893,000	₩ 3,871,000	₩ 3,045,00
	₩ 4,410,000	₩ 2,391,000	₩ 4,180,000	₩ 3,788,000	₩ 2,669,000	₩ 4,262,00
Monacom	₩ 4,190,000	₩ 2,228,000	₩ 4,615,000	₩ 2,756,000	₩ 3,123,000	₩ 1,464,00
	₩ 4,536,000	₩ 1,412,000	₩ 4,313,000	₩ 1,130,000	₩ 3,700,000	₩ 3,196,00
C&I	₩1,655,000	₩ 3,942,000	₩ 4,727,000	₩ 2,763,000	₩ 3,987,000	₩ 2,621,00
Total	₩ 52,431,000	₩ 53,210,000	₩ 56,972,000	₩ 51,969,000	₩ 52,241,000	₩ 57,247,00

Same table but not compact, shown below.

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
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
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.

1	A	В	С	D	E	F	G	F
1			Monthly Re	evenue 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.

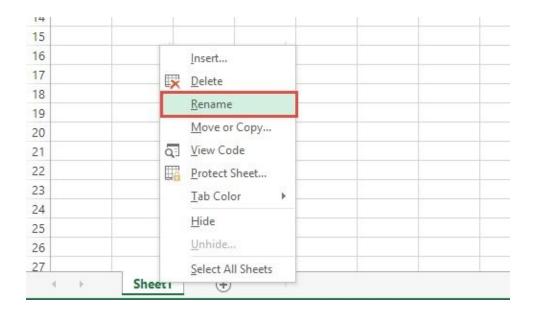
22		1		Some Data			
23	Companies	January	February	March	April	May	June
24	Mobil	₩ 4,129,000	₩ 3,695,000	₦ 2,770,000	₩ 4,520,000	₩ 2,223,000	₩ 3,929,000
25	Nestle	₦ 1,688,000	₦ 3,300,000	₩ 4,880,000	₦ 3,730,000	₩ 2,046,000	₩ 2,326,000
26	NBC	₩ 3,701,000	₩4,361,000	₩4,254,000	₩4,550,000	₩4,834,000	₩ 3,116,000
27	Exp Nigeria	₩ 2,587,000	₩4,198,000	₩ 2,146,000	₩1,062,000	₩ 2,341,000	₩4,713,000
28	Insight Nigeria	₩ 2,408,000	₩4,759,000	₩1,300,000	₩4,426,000	₩ 3,521,000	₩ 3,171,000
29	Radisson Blu	₩ 2,485,000	₩ 2,025,000	₩ 1,603,000	₩ 3,089,000	₩ 2,841,000	₩ 3,156,000
30	Guinness	₩ 2,703,000	₩1,888,000	₩ 1,360,000	₩1,664,000	₩1,097,000	₩4,920,000
31	Chevron	₩ 3,516,000	₩ 2,988,000	₩4,788,000	₩ 2,425,000	₩4,689,000	₩4,080,000
32	Etisalat	₩4,475,000	₩ 3,459,000	₩ 2,701,000	₩ 2,058,000	₩ 3,562,000	₩ 3,096,000
33	Dangote	₩ 1,457,000	₩ 3,241,000	₩4,441,000	₩1,544,000	₩ 3,749,000	₩ 3,544,000
34	Dana Group	₩ 2,984,000	₩1,882,000	₩ 2,898,000	₩4,618,000	₩ 2,372,000	₩ 3,723,000
35	LaFarge	₩ 2,111,000	₩ 3,293,000	₩ 1,427,000	₩ 3,953,000	₩ 1,616,000	₩ 2,885,000
36	NB	₩ 3,396,000	₩4,148,000	₩ 4,569,000	₩ 3,893,000	₩ 3,871,000	₩ 3,045,000
37	MTN	₩ 4,410,000	₩ 2,391,000	₩4,180,000	₩ 3,788,000	₩ 2,669,000	₩ 4,262,000
38	Monacom	₩ 4,190,000	₩ 2,228,000	₩4,615,000	₩ 2,756,000	₩ 3,123,000	₩ 1,464,000
39	ARM	₩4,536,000	₩ 1,412,000	₩4,313,000	₩1,130,000	₩ 3,700,000	₩ 3,196,000
40	C&I	₩ 1,655,000	₩ 3,942,000	₩4,727,000	₩ 2,763,000	₩ 3,987,000	₩ 2,621,000
11			1 m / 1				

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	E.	Renamed S	Select All Sheets	No Color
27				
26			<u>U</u> nhide	Standard Colors
25			<u>H</u> ide	
24				
23			Tab Color	
22			Protect Sheet	
21			Q View Code	
20			Move or Copy	Theme Colors
19			<u>R</u> ename	
18				
17			Delete	
16			Insert	
15				
14				

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

14	Dayeisa	TT 2,033,433,300.00	T,104,000,100.00	TT 1,210,040,400.00	TT 3,330,111,
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,
77	Zamfara	NamedRange	ioal Seek Loan Pa	yment Scenario r	

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.

1	А	В	С	D	E	F	
1				U	BizEdge Employee	es Biodata Table	e
2	First Name	Last Name	Employee ID	Sex	Employment Date	Phone Number	Contact Address
3	Michael	Olafusi	1000001	М	21-Oct-13	08089382423	21, Adigun Alabi
4	John	Abiola	1000002	М	1-Apr-14	08080810251	21, Adigun Alabi
5	Mary	Eze	1000003	F	1-Apr-14	08080810252	21, Adigun Alabi
6	Segun	Owolabi	1000004	М	1-Apr-14	08080810253	21, Adigun Alabi
7	Tolu	Owoeye	1000005	F	1-Apr-14	08080810254	21, Adigun Alabi
8	Uche	Nnamdi	1000006	М	1-Apr-14	08080810255	21, Adigun Alabi
9	David	Aluko	1000007	М	1-May-14	08080810256	21, Adigun Alabi
10	Lekan	Bello	1000008	М	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	A	В	C	U	Ł	F	G
1			Internally Gen	erated Revenue	of States in Ni	geria	
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
7	7amfara	N 1 633 067 600 00	M 756 637 100 00	N 4 767 304 300 00	N 4 500 005 600 00	N 2 250 175 000 00	N 1 200 227 500 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.

ust .	Clipboard	D T 11	The second second		Wrap Text	General r - \$ - % * *			Insert	Delete Format	∑ AutoSum ↓ Fill + & Clear +	Filter	82 Find 82 r • Select •	
2	Chipboard		✓ <i>f</i> _X State	Ta All	gomen	sa Number.	14	aques		Cem		ž.	Sort A to Z Sort Z to A Cystom Sort	
	А	B	с	D	E	F	G	н	0	J K	1		Eilter	0
			Internally Ge	nerated Revenue	e of States in Nig	eria							Clear	
s	state	Feb-14	Jun-1	4 Jan-14	Mar-14	May-14	Apr-1	4				10	Reapply	
1	mo	₩ 2,521,764,800.00	₩ 2,922,241,900.0	0 N 2,591,742,600.00	₦ 2,013,994,900.00	₩ 3,014,428,300.00	₩ 4,994,515,700.0	0						
	Abia	₩ 821,123,500.00	₩ 4,544,916,100.0	0 ₩1,297,498,300.00	₩ 1,175,454,800.00	₩ 2,265,644,000.00	₩ 967,327,400.0	0						
	agos	₩ 7,319,183,000.00	₩ 22,681,984,500.0	0 ₩ 6,239,473,500.00	₩ 6,211,689,500.00	₩ 11,610,307,000.00	₩ 3,351,178,500.0	0						
	(ano	₩ 2,021,735,600.00	₩ 530,613,400.0	0 N 2,981,980,300.00	₩ 3,016,518,600.00	N 2,387,291,000.00	₩ 4,411,651,000.0	0						
	Ondo	₩ 1,690,422,800.00	₩ 4,925,747,700.0	0 # 716,222,900.00	₩ 4,362,953,800.00	₩ 4,300,936,900.00	₩ 977,876,300.0	0						
	(ogi	₩ 2,734,189,600.00	₩ 2,825,512,800.0	0 N 2,812,863,300.00	₩ 2,306,601,300.00	₩ 2,104,687,400.00	₩ 867,264,000.0	0						
E	Benue	₩ 3,864,832,700.00	₩ 3,212,451,900.0	0 ₩ 3,479,649,000.00	₩ 2,458,711,700.00	₩ 2,700,421,800.00	₩4,801,142,000.0	0						
	CT	₩ 2,063,317,300.00	₩ 2,520,202,900.0	0 ₦ 3,199,223,200.00	₩ 1,829,381,400.00	₩ 4,980,777,000.00	₩ 3,704,640,600.0	O						
	Ogun	₩ 2,586,000,100.00	₩ 3,200,451,900.0	0 ₩ 3,434,714,900.00	₩ 3,907,557,600.00	₩ 2,265,022,600.00	₩ 1,642,410,200.0	D						
	Bayelsa	₩ 2,035,499,300.00	₩ 1,754,855,100.0	0 ₩1,218,646,400.00	₩ 3,596,177,500.00	₩ 4,856,865,900.00	₩ 3,958,333,500.0	0						
	Rivers	₩4,860,256,800.00	₩ 4,459,705,200.0	0 № 2,423,028,900.00		N 4,882,684,300.00	₩ 859,719,700.0	-						
	Anambra	₩ 1,511,863,500.00	₩ 3,015,652,900.0	0 ₩ 2,159,322,900.00	₩4,060,131,900.00	₩ 2,439,308,800.00	₩1,843,665,900.0	0						
	inugu	₦ 2,609,372,800.00				₩ 1,893,090,400.00			back					
	Benue	₩ 1,387,315,500.00				₩ 1,687,978,600.00		-						
	Borno	₩ 1,616,065,000.00				₩ 581,980,000.00								
	Sombe	₩ 2,201,453,200.00	and the second design of the s			₩ 2,551,023,100.00		-						
	latsina	₦ 1,293,838,700.00	₩ 2,648,689,500.0	0 ₩ 3,589,421,500.00	₩ 638,877,300.00	₦ 1,025,989,500.00	₩ 2,969,721,400.0	0						
	Caduna	N 2,599,773,900.00		0 N 3,938,598,800.00	and the second se	₩ 450,931,500.00								
	Cross River	₩ 1,971,834,600.00		0 ₩ 2,416,592,600.00		₩ 745,327,000.00								
Ŕ	(wara	N 1,496,830,100.00	N 912.176.400.0	0 * 3,915,338,600.00	₩ 1.305.529.900.00	₦ 2,214,504,600.00	₩4,919,941,300.0	0						

The sorting dialog box comes up.

	A	B	с		D	E	F	1	G	н	1
1			Internally Gen	erate	ed Revenue	of States in Ni	geria		20		
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	₩ 2,5	91,742,600.00	₩ 2,013,994,900.00	₩ 3,014,428,300.00	₩ 4,994,5	515,700.00		
4	Abia	₩ 821,123,500.00	₩ 4,544,916,100.00	₩1,2	97,498,300.00	₩ 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, ^	20.472.500.00	N.C. 311. COD. COD. 00	N 11 C10 207 000 00	LALA ARA	170 500 00		? ×
6	Kano	₩ 2,021,735,600.00	₩ 530,613,400.00	₩2,			Sort				· ·
7	Ondo	₩1,690,422,800.00	₩ 4,925,747,700.00	N	Add Level	X Delete Level	Copy Level	Option	- 12	Mu data	has <u>h</u> eaders
8	Kogi	₩ 2,734,189,600.00	₩ 2,825,512,800.00	₩2,	ZU Add Level			Option	5	wy uata	nas <u>n</u> eaders
9	Benue	₩ 3,864,832,700.00	₩ 3,212,451,900.00	₩3,	Column		Sort On		Order		
10	FCT	₩ 2,063,317,300.00	₩ 2,520,202,900.00	₩3,	Sort by	× .	Values	~	A to Z		¥
11	Ogun	₩ 2,586,000,100.00	₩ 3,200,451,900.00	₩ 3	A.5						
	-0			14 31							
12	Bayelsa	₩ 2,035,499,300.00	₩ 1,754,855,100.00								
-	And the state of the second			₩1,							
-	Bayelsa	₩ 2,035,499,300.00	₩ 1,754,855,100.00	₩1,							
13 14	Bayelsa Rivers	₩ 2,035,499,300.00 ₩ 4,860,256,800.00	₦ 1,754,855,100.00₦ 4,459,705,200.00	₩1, ₩2, ₩2,							
13 14 15	Bayelsa Rivers Anambra	 № 2,035,499,300.00 № 4,860,256,800.00 № 1,511,863,500.00 	₦ 1,754,855,100.00₦ 4,459,705,200.00₦ 3,015,652,900.00	₩1, ₩2, ₩2,							
13 14 15	Bayelsa Rivers Anambra Enugu	 ₦ 2,035,499,300.00 ₦ 4,860,256,800.00 ₦ 1,511,863,500.00 ₦ 2,609,372,800.00 	№ 1,754,855,100.00 № 4,459,705,200.00 № 3,015,652,900.00 № 4,581,716,900.00	№ 1, № 2, № 2, № 1, № 1,					OK		Cancel
13 14 15 16 17	Bayelsa Rivers Anambra Enugu Benue	 ₩ 2,035,499,300.00 ₩ 4,860,256,800.00 ₦ 1,511,863,500.00 ₦ 2,609,372,800.00 ₦ 1,387,315,500.00 	 ₦ 1,754,855,100.00 ₦ 4,459,705,200.00 ₦ 3,015,652,900.00 ₦ 4,581,716,900.00 ₦ 3,627,716,800.00 	№ 1, № 2, № 2, № 1, № 1,					ОК		Cancel
13 14 15 16 17 18	Bayelsa Rivers Anambra Enugu Benue Borno	 ₩ 2,035,499,300.00 ₩ 4,860,256,800.00 ₩ 1,511,863,500.00 ₩ 2,609,372,800.00 ₩ 1,387,315,500.00 ₩ 1,616,065,000.00 	 N 1,754,855,100.00 N 4,459,705,200.00 N 3,015,652,900.00 N 4,581,716,900.00 N 3,627,716,800.00 N 4,166,988,100.00 N 2,523,019,700.00 	₩1, ₩2, ₩2, ₩1, ₩	89,421,500.00	₩ 638,877,300.00	₩ 1,025,989,500.00	₩ 2,969,	//3		Cancel
14 15	Bayelsa Rivers Anambra Enugu Benue Borno Gombe	 ₩ 2,035,499,300.00 ₦ 4,860,256,800.00 ₦ 1,511,863,500.00 ₦ 2,609,372,800.00 ₦ 1,387,315,500.00 ₦ 1,616,065,000.00 ₦ 2,201,453,200.00 	 N 1,754,855,100.00 N 4,459,705,200.00 N 3,015,652,900.00 N 4,581,716,900.00 N 3,627,716,800.00 N 4,166,988,100.00 N 2,523,019,700.00 	 № 1, № 2, № 1, № 2, № 4, 2, № 3,5 		¥ 638,877,300.00 ₩ 1,224,849,400.00			721,400.00		Cancel
13 14 15 16 17 18 19	Bayelsa Rivers Anambra Enugu Benue Borno Gombe Katsina	 ₩ 2,035,499,300.00 ₦ 4,860,256,800.00 ₦ 1,511,863,500.00 ₦ 2,609,372,800.00 ₦ 1,387,315,500.00 ₦ 1,616,065,000.00 ₦ 2,201,453,200.00 ₦ 1,293,838,700.00 	 N 1,754,855,100.00 N 4,459,705,200.00 N 3,015,652,900.00 N 4,581,716,900.00 N 3,627,716,800.00 N 4,166,988,100.00 N 2,523,019,700.00 N 2,648,689,500.00 	N 1, N 2, N 2, N 1, N 2, N 3,5 N 3,9	38,598,800.00		₩ 450,931,500.00	₩ 1,662,2	721,400.00		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.

		Sort			? ×
⁺ AJ <u>A</u> dd Level	X Delete Level	E Copy Level	• Options	🖌 My c	lata has <u>h</u> eaders
Column		Sort On	Order	ę.	
Sort by State		Values	V A to Z	5	~
Ĺ			Г	OK	Cancel
				OK	Cancel

The result is shown below.

Ĵ.	A	В	С	D	E	F	G
1			Internally Gen	erated Revenue	e of States in Nig	geria	
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
0	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
1	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
2	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
3	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
4	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
5	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
6	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
7	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
8	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
9	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
0	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
2	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
_	2 0	Video 4 Next S	haat	2)	N 2		3.14

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

				S	ort					? ×
⁺ <u>A</u> ↓ <u>A</u> dd	Level	X Delete Leve	ei 🖹 🖹 🖸	opy Level		•	Optio	ns	🖌 My	data has <u>h</u> eaders
Column			Sort	On				Order		
Sort by	State		Valu	es			V	A to Z		~
Then by	LGA		/ Valu	es			~	A to Z		~

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.

Н	G	F	E	D		С	В
		eria	of States in Nig	erated Revenue	ly Gen	Internally	
	Apr-14	May-14	Mar-14	Jan-14	Jun-14		Feb-14
	₩ 967,327,400.00	₩ 2,265,644,000.00	₩ 1,175,454,800.00	₩ 1,297,498,300.00	5,100.00	₩ 4,544,916,	₩ 821,123,500.00
	₩ 1,023,694,700.00	₩ 3,493,691,500.00	₩ 1,627,470,600.00	₩ 4,022,792,500.00	9,900.00	₩ 1,973,059,	 4,317,641,300.00
	₩ 2,187,626,200.00	₩ 2,966,925,400.00	₩ 4,927,386,500.00	₩ 824,782,800.00	1,900.00	₩ 2,202,014,	\$1,691,712,500.00
	₩ 1,843,665,900.00	₩ 2,439,308,800.00	₩ 4,060,131,900.00	₩ 2,159,322,900.00	2,900.00	₩ 3,015,652,	\$1,511,863,500.00
×	?	•	S			₩ 3,000,31:	\$ 3,059,451,100.00
						₩ 1,754,85	± 2,035,499,300.00
eader	My data has h	A Options	evel	dd Level X Delete L	*AL A	₩ 3,212,45:	\$ 3,864,832,700.00
010200						₩ 3,627,71	1,387,315,500.00
1000	der	Ord	Sort On		Colum Sort by	₩ 4,166,98	ŧ 1,616,065,000.00
×	Z	options	Value Sort C	/	Son b	₩ 4,779,95	1,971,834,600.00
		sensitive	Case			₩ 2,363,22	\$ 2,382,209,500.00
		tion	Orienta			₩ 713,04	\$ 3,233,069,500.00
		rt top to bottom			8	₩ 2,900,70	₩ 781,461,300.00
		rt left to right				₩ 4,040,34:	\$4,128,943,600.00
		refere to fight,	2			₩ 4,581,71	₹2,609,372,800.00
		(Cancel	0			₩ 2,520,20	\$2,063,317,300.00
		Cancer				Sector and the sector of the	the second second second second second
cel	OK Can	Calicer	8			₩ 2,523,01!	\$2,201,453,200.00
cel	OK Can	Cancer	3			₦ 2,523,01! ₦ 2,922,24:	
cel		₩ 1,417,963,700.00	3,756,243,200.00	₩ 3,550,126,700.00	9,800.00		<pre>\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$</pre>

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

1	A	В	C	D	E	F	G	н
1			Internally Ger	nerated Revenue	of States in Ni	geria		
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	Anam <mark>br</mark> a	₩ 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	₩ 3,000,31		S	ort	?	×
8	Bayelsa	₩ 2,035,499,300.00	₩ 1,754,85			on		
9	Benue	₩ 3,864,832,700.00	₩ 3,212,45	dd Level X Delete L	evel	🔺 🔻 Options	My data has h	eaders
10	Benue	₩ 1,387,315,500.00	₩ 3,627,71		Sort On	Ore	4	
11	Borno	₩ 1,616,065,000.00	₩ 4,166,98	W				1223
12	Cross River	₩ 1,971,834,600.00	₩ 4,779,95	Row 2	Values		dest to Newest	~
13	Delta	₩ 2,382,209,500.00	₩ 2,363,22	Row 3		2		
14	Ebonyi	₩ 3,233,069,500.00	₩ 713,04	Row 4 Row 5		•		
15	Edo	₩ 781,461,300.00	₩ 2,900,70	Row 6				
16	Ekiti	₩4,128,943,600.00	₩ 4,040,34	Row 7 Row 8				
17	Enugu	₩ 2,609,372,800.00	₩ 4,581,71	Row 9		0		
18	FCT	₩ 2,063,317,300.00	₩ 2,520,20	Row 10 Row 11		(3)		
19	Gombe	₩ 2,201,453,200.00	₩ 2,523,01	Row 12	23		OK Can	cel
20	Imo	₩ 2,521,764,800.00	₩ 2,922,24	Row 13	×	/		
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.

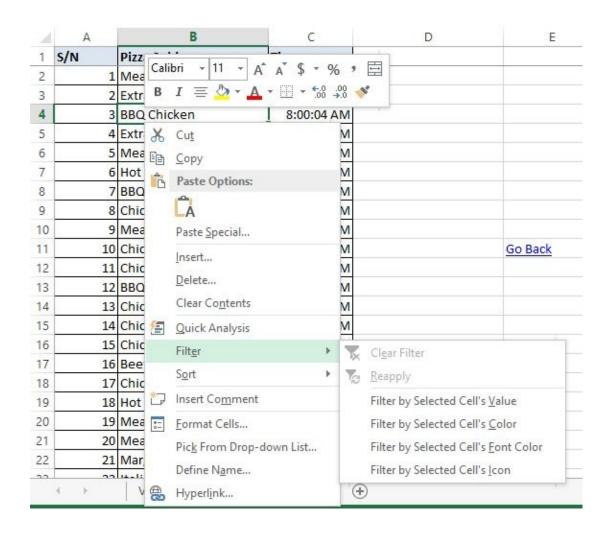
A	В	с	D	E	F	G
		Internally Gen	erated Revenue	e of States in Nig	geria	
State	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
Abia	₩ 1,297,498,300.00	₩ 821,123,500.00	₩ 1,175,454,800.00	₩ 967,327,400.00	₩ 2,265,644,000.00	₩ 4,544,916,100.0
Adamawa	₩4,022,792,500.00	₩ 4,317,641,300.00	₩ 1,627,470,600.00	₩ 1,023,694,700.00	₩ 3,493,691,500.00	₩ 1,973,059,900.0
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	₩ 2,202,014,900.0
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
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
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
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
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	₩ 3,627,716,800.0
Borno	₩ 2,361,614,200.00	₩ 1,616,065,000.00	₩ 4,908,244,600.00	₩ 4,216,846,800.00	₩ 581,980,000.00	₩ 4,166,988,100.0
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
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	
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
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
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
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
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
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
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	₩ 2,922,241,900.0
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	₩ 2,311,559,800.0
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	₩ 3,835,345,400.0
4 6	Video 4 Next SI	heet (+)				: 1
	State Abia Adamawa Akwa Ibom Anambra Bauchi Bayelsa Benue Benue Benue Benue Borno Cross River Delta Ebonyi Edo Ekiti Enugu FCT Gombe Imo Jigawa	State Jan-14 Abia ₩ 1,297,498,300.00 Adamawa ₩ 4,022,792,500.00 Akwa Ibom ₩ 824,782,800.00 Anambra ₩ 2,159,322,900.00 Bauchi ₩ 764,748,600.00 Bayelsa ₩ 1,218,646,400.00 Benue ₩ 3,479,649,000.00 Benue ₩ 602,469,700.00 Borno ₩ 2,361,614,200.00 Cross River ₩ 2,416,592,600.00 Delta ₩ 4,755,914,300.00 Edo ₩ 2,663,501,000.00 Ekiti ₩ 1,816,087,900.00 Fungu ₩ 1,409,979,200.00 FCT ₩ 3,199,223,200.00 Gombe ₩ 620,111,300.00 Imo ₩ 2,591,742,600.00 Jigawa ₩ 3,938,598,800.00	Internally Gen State Jan-14 Feb-14 Abia ₦ 1,297,498,300.00 ₦ 821,123,500.00 Adamawa ₦ 4,022,792,500.00 ₦ 4,317,641,300.00 Akwa Ibom ₦ 824,782,800.00 ₦ 1,691,712,500.00 Anambra ₦ 2,159,322,900.00 ₦ 1,511,863,500.00 Bauchi ₦ 764,748,600.00 ₦ 3,059,451,100.00 Bayelsa ₦ 1,218,646,400.00 ₦ 2,035,499,300.00 Benue ₦ 3,479,649,000.00 ₦ 3,87,315,500.00 Benue ₦ 602,469,700.00 ₦ 1,817,315,500.00 Borno ₦ 2,361,614,200.00 ₦ 1,616,065,000.00 Cross River ₦ 2,416,592,600.00 ₦ 1,971,834,600.00 Delta ₦ 4,755,914,300.00 ₦ 2,333,069,500.00 Edo ₦ 2,663,501,000.00 ₦ 781,461,300.00 Ekiti ₦ 1,816,087,900.00 ₦ 2,269,317,300.00 Enugu ₦ 1,409,979,200.00 ₦ 2,603,317,300.00 Gombe ₦ 620,111,300.00 ₦ 2,251,764,800.00 Ingawa ₦ 3,550,126,700.00 ₦ 2,597,73,900.00	Internally Generated Revenue State Jan-14 Feb-14 Mar-14 Abia N 1,297,498,300.00 N 821,123,500.00 N 1,175,454,800.00 Adamawa N 4,022,792,500.00 N 4,317,641,300.00 N 1,627,470,600.00 Akwa Ibom N 824,782,800.00 N 1,691,712,500.00 N 4,927,386,500.00 Anambra N 2,159,322,900.00 N 1,511,863,500.00 N 4,060,131,900.00 Bauchi N 764,748,600.00 N 3,059,451,100.00 N 2,879,985,600.00 Bayelsa N 1,218,646,400.00 N 2,035,499,300.00 N 3,596,177,500.00 Benue N 3,479,649,000.00 N 3,864,832,700.00 N 4,501,134,600.00 Benue N 602,469,700.00 N 1,817,1834,600.00 N 4,908,244,600.00 Cross River N 2,361,614,200.00 N 1,971,834,600.00 N 4,982,243,600.00 Cross River N 2,416,592,600.00 N 1,971,834,600.00 N 4,883,253,900.00 Edo N 2,663,501,000.00 N 4,238,09,500.00 N 4,883,253,900.00 Edo N 2,663,501,000.00 N 4,128,943,600.00 N 4,512,170,300.00 Edo	Internally Generated Revenue of States in Nig State Jan-14 Feb-14 Mar-14 Apr-14 Abia ₦ 1,297,498,300.00 ₦ 821,123,500.00 ₦ 1,175,454,800.00 ₦ 967,327,400.00 Adamawa ₦ 4,022,792,500.00 ₦ 4,317,641,300.00 ₦ 1,627,470,600.00 ₦ 1,023,694,700.00 Akwa Ibom ₦ 824,782,800.00 ₦ 1,691,712,500.00 ₦ 4,927,386,500.00 ₦ 2,187,626,200.00 Anambra ₦ 2,159,322,900.00 ₦ 1,511,863,500.00 ₦ 4,006,131,900.00 ₦ 1,843,665,900.00 Bauchi ₦ 764,748,600.00 ₦ 3,059,451,100.00 ₦ 2,879,985,600.00 ₦ 3,032,115,500.00 Bayelsa ₦ 1,218,646,400.00 ₦ 2,035,499,300.00 ₦ 3,596,177,500.00 ₦ 3,958,333,500.00 Benue ₦ 3,479,649,000.00 ₦ 3,864,832,700.00 ₦ 4,501,134,600.00 ₦ 2,728,902,800.00 Benue ₦ 602,469,700.00 ₦ 1,818,7315,500.00 ₦ 4,908,244,600.00 ₦ 4,216,846,800.00 Cross River ₦ 2,416,592,600.00 ₦ 1,971,834,600.00 ₦ 4,908,244,600.00 ₦ 4,060,164,800.00 Edo ₦ 2,663,501,000.00 ₦ 3,233,069,500.00 ₦ 4,883,253,900.	Internally Generated Revenue of States in Nigeria State Jan-14 Feb-14 Mar-14 Apr-14 Apr-14 May-14 Abia N 1,297,498,300.00 N 821,123,500.00 N 1,175,454,800.00 N 967,327,400.00 N 2,265,644,000.00 Adamawa N 4,022,792,500.00 N 4,317,641,300.00 N 1,627,470,600.00 N 1,023,694,700.00 N 2,496,925,400.00 Akwa Ibom N 824,782,800.00 N 1,691,712,500.00 N 4,927,386,500.00 N 2,187,626,200.00 N 2,439,308,800.00 Bauchi N 764,748,600.00 N 3,059,451,100.00 N 2,879,985,600.00 N 3,032,115,500.00 N 2,669,930,900.00 Bayelsa N 1,218,646,400.00 N 2,035,499,300.00 N 3,596,177,500.00 N 3,958,333,500.00 N 4,861,142,000.00 N 2,700,421,800.00 Benue N 602,469,700.00 N 1,837,315,500.00 N 4,980,244,600.00 N 2,728,902,800.00 N 1,687,978,600.00 Borno N 2,361,614,200.00 N 1,971,834,600.00 N 4,814,142,400.00 N 4,753,27,000.00 Cross River N 2,416,592,600.00 N 1,971,834,600.00 N 4,832,395,00.00 N 4,671,269,900.00 <

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.

FILE	20 0) her all	E LAYOUT FORM	IULAS DATA R	EVIEW VIEW I	Filtering.xlsx - Excel DEVELOPER LOAD TEST	POWER QUERY			? 💿 🗕 Michael Olafusi 👻	8 ×
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al u	A B	c	D	E	E	G	н	Ê	T <u>F</u> ilter	
1 S/N	Pizza Sold	Time							📡 <u>C</u> lear	
2	1 Meatzaa	8:00:01 AM							Reapply	
	2 Extravaganza	8:00:02 AM							-	1
1	3 BBQ Chicken	8:00:04 AM								
5	4 Extravaganza	8:00:07 AM								
5	5 Meatzaa	8:00:08 AM								
7	6 Hot Veggie	8:00:14 AM								
3	7 BBQ Philly Steak	8:00:20 AM								
9	8 Chicken Feast	8:00:20 AM								
0	9 Meatzaa	8:00:22 AM								
1	10 Chicken Suya	8:00:25 AM		Go Back						
2	11 Chicken Legend	8:00:26 AM								
3	12 BBQ Philly Steak	8:00:27 AM								
4	13 Chicken Suya	8:00:29 AM								
5	14 Chicken Feast	8:00:33 AM								
6	15 Chicken Feast	8:00:33 AM								
7	16 Beef Suya	8:00:34 AM								
8	17 Chicken Feast	8:00:35 AM								
19	18 Hot Veggie	8:00:35 AM								
20	19 Meatzaa	8:00:35 AM								
21	20 Meatzaa 21 Margarita	8:00:36 AM 8:00:37 AM								

From the Data menu.

F	ILE HO	DME INSERT PAGE L	AYOUT FORM	IULAS	DATA R	EVIEW VIEW D	EVELOPER
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	A	B	с		D	E	F
1	S/N	Pizza Sold	Time				
2	1	Meatzaa	8:00:01 AM				
3	2	Extravaganza	8:00:02 AM				
4	3	BBQ Chicken	8:00:04 AM				
5	4	Extravaganza	8:00:07 AM				
6	5	Meatzaa	8:00:08 AM				
7	6	Hot Veggie	8:00:14 AM				
8	7	BBQ Philly Steak	8:00:20 AM				
9	8	Chicken Feast	8:00:20 AM				
10	9	Meatzaa	8:00:22 AM				
11	10	Chicken Suya	8:00:25 AM			Go Back	
12	11	Chicken Legend	8:00:26 AM				
13	12	BBQ Philly Steak	8:00:27 AM				
14	-	Chicken Suya	8:00:29 AM				
15		Chicken Feast	8:00:33 AM				
16	15	Chicken Feast	8:00:33 AM				
17		Beef Suya	8:00:34 AM				
18	17	Chicken Feast	8:00:35 AM				
19		Hot Veggie	8:00:35 AM				
20		Meatzaa	8:00:35 AM				
21	20	Meatzaa	8:00:36 AM				
22	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.

4	А		В			С	
1	5/N	•	Pizza Sold		Tir	ne	-
Ļ	<u>S</u> ort A t	οZ				8:00:01	AM
Ţ	Sort Z to	A				2:00:02	2 AM
T C	Sor <u>t</u> by		or			8:00:04	AM
					1	8:00:07	7 AM
×	<u>C</u> lear Fi	ter	From "Pizza Sold"			8:00:08	3 AM
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			ct All)		^	8:00:25	AM
	1.000		Chicken Philly Steak			8:00:26	5 AM
						8:00:27	7 AM
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			ken Feast			8:00:33	AM
	100000000000000000000000000000000000000		ken Legend ken Suya			8:00:33	AM
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	V H	lot	Pepperoni Feast		~	8:00:35	5 AM
	: m.	• •				8:00:35	AM
			ОК	Cancel		8:00:35	5 AM
						8:00:36	AM
2		21	Margarita			8:00:37	AM

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).

1			AYOUT FORMI	
	From Web		Prope	ZV AS
		From Other Existing	Refresh Brown	Z Sor
LE	From Text	Sources Connections	All 🗸 🗋 Edit L	
	G	et External Data	Connection	15
C3		• : X 🗸	fx 8:00:02	AM
	A	В	С	D
1	s/n 🔻	Pizza Sold 🛛 🖵	Time 💌	
4	3	BBQ Chicken	8:00:04 AM	
51	50	BBQ Chicken	8:01:34 AM	
72	71	BBQ Chicken	8:02:06 AM	
75	74	BBQ Chicken	8:02:13 AM	
84	83	BBQ Chicken	8:02:37 AM	
92	91	BBQ Chicken	8:02:49 AM	
169	168	BBQ Chicken	8:05:23 AM	
177	176	BBQ Chicken	8:05:34 AM	
182	181	BBQ Chicken	8:05:39 AM	
183	182	BBQ Chicken	8:05:40 AM	
197	196	BBQ Chicken	8:06:01 AM	
199	198	BBQ Chicken	8:06:03 AM	
206	205	BBQ Chicken	8:06:22 AM	
214	213	BBQ Chicken	8:06:40 AM	
216	215	BBQ Chicken	8:06:46 AM	
232	231	BBQ Chicken	8:07:07 AM	
243	242	BBQ Chicken	8:07:28 AM	
267	266	BBQ Chicken	8:08:31 AM	
276	275	BBQ Chicken	8:08:45 AM	
277	276	BBQ Chicken	8:08:45 AM	
317	316	BBQ Chicken	8:09:55 AM	

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.

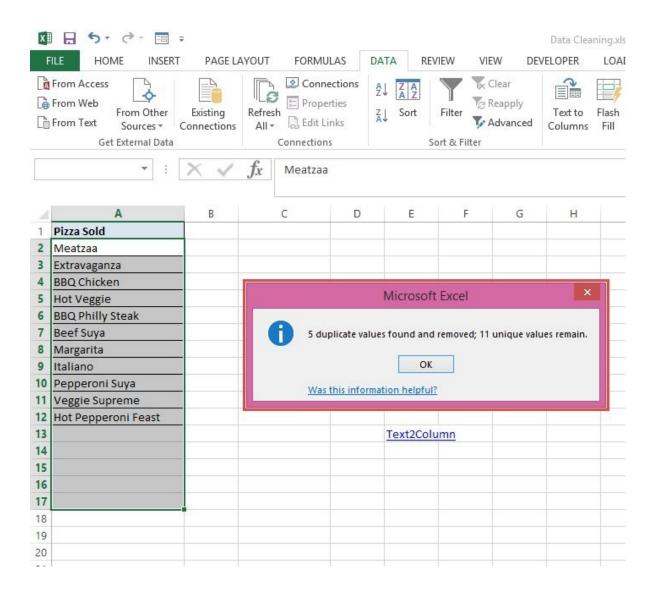
X	ile home inser		AYOUT FORM	ULAS D	ATA REV	IEW VIE	W DE	Data Cleani VELOPER	ng.xlsx - Exc LOAD TEST	
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	А	В	с	D	E	F	G	Н	Ē	J
1	Pizza Sold									
2	Meatzaa									
3	Extravaganza									
4	BBQ Chicken									
5	Hot Veggie									
6	BBQ Philly Steak									
7	Meatzaa									
8	Extravaganza									
9	BBQ Chicken									
10	Beef Suya									
11	Margarita									
12	Italiano									
13	Pepperoni Suya				Text2Column					
14	Veggie Supreme									
15	Pepperoni Suya									
16										
17	Hot Pepperoni Feast									
18										
19										

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.

X	ile home insert		AYOUT FORM	ULAS DA	TA RE	VIEW V	IEW DE	Data Clear	ing.xlsx - Exc LOAD TEST		ER QUERY
Lê	From Access From Web From Text Get External Data	Existing Connections	Refresh	Links 1	↓ Sort	Filter	Clear Reapply Advanced	Text to Columns	Flash Rem Fill Dupli	iove Da cates Valida	ata Co ation = Data Tools
A	2 * :	XV	$f_{\!X}$ Meatza	а					2		
	А	В	c	D	E	F	G	Н	F	J	K
1	Pizza Sold										
2	Meatzaa		h.	Dom	ove Dupl	icator	1	? ×			
3	Extravaganza										
4	BBQ Chicken	Т	To delete duplicate values, select one or more columns that contain duplicates.								
5	Hot Veggie		Select All								
6	BBQ Philly Steak		5 Perece Wu	1							
7	Meatzaa		Columns								
8	Extravaganza		✓ Pizza Sold								
9	BBQ Chicken										
10	Beef Suya										
11	Margarita		Q								
12	Italiano										
13	Pepperoni Suya										
14	Veggie Supreme		OK Cancel								
15	Pepperoni Suya				294 C			.11			
16	Veggie Supreme										
17	Hot Pepperoni Feast										
18											

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.



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.

1	Α	B			С		D		E				
1	Car Make	Car Sales	5	Uche & S	Sons Autodealers	hip	C Davies Cars Ltd	Bello &	Bello	Ltd			
2	France	Bugatti				25	25			33			
3	France	Peugeot				20	5			25			
4	France	Renault	į			24	24			31			
5	Germany	BMW			Pomovo	Dur	alicator	?	×	33			
6	Germany	Porsche	Remove Duplicates ?										
7	Germany	Audi	To delete duplicate values, select one or more columns that contain duplicates.										
8	Germany	Volksw	S=	Select All									
9	Germany	Mercec	5≡ -	Select All		2				14 13 11 34 11			
10	Germany	Opel											
11	India	Tata	Columns										
12	India	Ashok											
13	India	Mahind		103123	todealership					L3 L5			
14	Italy	Masera								9			
15	Italy	Lambor	T C Davies cars cea										
16	Japan	Toyota								10			
17	Japan	Honda								27 40 12 34			
18	Japan	Honda					OK	Can	cel	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			
22	1	D-+				- 11	10			44			

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.

x	1 🖯 🗲 🕞							Data Clea	ining.xlsx	- Excel		
	FILE HOME INS	SERT PAGE LAYOU	T FORM	ULAS	DATA	EVIEW	VIEW DE	VELOPER	LOAD	TEST	POWER QU	EF
Ce	From Access From Web From Othe From Text Get External Da	Connections A	Connection	erties Links 2	Ž↓ ZAZZ Z↓ Sort	Filter	Clear Reapply Advanced	Text to Columns		Remove Duplicates	Data Validation • Data Te	
A	1 *	$\times \checkmark f_x$	FirstNa	me <mark>LastN</mark>	ame			3				
2	А	В	С	D	E	F	G	Н	L	j	ŀ	ĸ
1 2	FirstName LastName Michael Olafusi			Convert	t Text to C	olumns V	Vizard - Ste	p 1 of 3	?	×		
	John Abiola Mary Eze Lola Adigun Segun Owolabi Tolu Owoeye Uche Nnamdi David Aluko Lekan Bello Luke Tsangi	lif th Or	iginal data typ hoose the file Delimited	hoose Next pe type that b d - Char	t, or choose test describe racters such	he data type your data: as commas o	imited. e that best des or tabs separat s with spaces t	e each field.				
13 14 15 16 17 18		Subtotal 1 2 3 4	FirstName Michael O John Abio Mary Eze Lola Adigu	LastName lafusi la	2		6			^		
19 20 21 22					Can	el	< Back	<u>N</u> ext >	<u> </u>	> ish		

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.

	Convert Text to Columns Wizard - Step 2 d	of 3 ? ×
This screen lets in the preview	you set the delimiters your data contains. You can see ho below.	w your text is affected
Delimiters Image: Tab Semicolor Comma Space Other: Other:	Text <u>qualifier</u> :	
FirstName Michael John Mary Lola	LastName Olafusi Abiola Eze Adigun	^
<	Cancel < <u>B</u> ack <u>N</u> ext	> t > <u>F</u> inish

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.

This screen lo			t to Colur			ep 3 of 3	?	×
Column dat © <u>G</u> enera ○ <u>T</u> ext ○ <u>D</u> ate:	ta format	v	'General' to dates,	converts nu and all rema	ımeric va	alues to text		values
D <u>e</u> stination: Data <u>p</u> revie								
<u>Seneral</u> FirstNam Michael John Mary Lola	General LastNam Olafusi Abiola Eze Adigun	e						^
<			Cancel	< <u>B</u> ac	k 🗌	Next >		>

Below is the result. Just as desired.

E1	2	• : X v Jx	¢
_	А	В	С
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			
10			

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.

1	А	В	С	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	Hvundai	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.

FILE HOP	C ² · □ = VIE INSERT F	PAGE LAYOUT FORMULAS	DATA REVIEW		LOPER	ing.xlsx - Excel LOAD TEST	POWER	QUERY						
From Access From Web From Text Get	From Other Sources * Conne External Data		Â↓ ZĂ Z↓ Sort Filte Sort &	Advanced		Fill Duplicates		Conso	lidate Wh		K ionships	Group	Ungroup • Outline	+
A1	* : X	✓ f_x Car Make												3
A	В	c	D	E	F	G	Н	1	J	К		L	М	N
Car Make	Car Sales	Uche & Sons Autodealership	C Davies Cars Ltd	Bello & Bello Ltd	1									
France	Bugatti	25	25	33		de la companya de la	Subto	tal	? ×					
France	Peugeot	20	5	25		6	Subio	nai		-				
France	Renault	24	24	31		<u>At each change</u>	in:							
Germany	BMW	20	6	33		Car Make			~					
Germany	Porsche	27	45	14		Use function:								
Germany	Audi	28	43	43		Sum			~					
Germany	Volkswagen	16	43	11		Add subtotal to	¢							
Germany	Mercedes-Benz	23	45	34	-	Car Make			÷.					
Germany	Opel	24	16	41	4	Car Sales	s Autodea	lershin						
India	Tata	41	. 29	7	5	C Davies Ca	rs Ltd	recomp						
India	Ashok Leyland	41	. 19	13	6	🖌 Bello & Bell	o Ltd							
India	Mahindra	34	27	15		1								
Italy	Maserati	13	22	9		Replace curr								
Italy	Lamborghini	31	. 26	27		Page break		proups						
Japan	Toyota	30	24	40		Summary be	low data							
Japan	Honda	11	. 42	12		Remove All	OK		Cancel					
Japan	Honda	36	31	34		In the second se	1		01000126					
Japan	Mazda	22	5	25		7								
Japan	Nissan	11	. 36	6		-								
Japan	Isuzu	44	15	34										
Japan	Infiniti	8	18	28										

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 —

2 3	1	- × 1e	veis pr ca	tegorization	D	E
	1	Car Make	Car Sales	Uche & Sons Autodealership	C Davies Cars Ltd	Bello & Bello Ltd
102	2	France	Bugatti	25	25	33
\sim	3	France	Peugeot	20	5	25
52	4	France	Renault	24	24	31
	5	France Total		69	54	89
19	6	Germany	BMW	20	6	33
\otimes	7	Germany	Porsche	27	45	14
82	8	Germany	Audi	28	43	43
\sim	9	Germany	Volkswagen	16	43	11
52	10	Germany	Mercedes-Benz	23	45	34
	11	Germany	Opel	24	16	41
-	12			138	198	176
20	13	India	Tata	41	29	7
82	14	India	Ashok Leyland	41	19	13
22	15	India	Mahindra	34	27	15
	16	India Total		116	75	35
°	17	Italy	Maserati	13	22	9
52	18	Italy	Lamborghini	31	26	27
	19	Italy Total		44	48	36
102	20	Japan	Toyota	30	24	40
22	21	Japan	Honda	11	42	12
8	22	Japan	Honda	36	31	34
\mathbb{R}^{2}	23	Japan	Mazda	22	5	25
8	24	Japan	Nissan	11	36	6
82	25	Japan	Isuzu	44	15	34
52	26	Japan	Infiniti	8	18	28
82	27	Japan	Datsun	31	18	11

FILE	1	🔹 💣 🖂 OME INSEF	∓ RT PAGE LA	YOUT	FORMULAS	DATA	REVIEW VIEW	Data Cleanir DEVELOPER	LOAD
🛕 From 🍓 From 📋 From	Web Text	ss From Other Sources →	Existing Connections	Refresh All -	Connections	2↓ ZAZ	Reap	ply Text to FI	lash Fill [
G60		•	$\times \checkmark$	<i>fx</i>					
1 2 3		A	В		с		D	E	
~	1	Car Make	Car Sales	Uc	ne & Sons Autod	ealership	C Davies Cars Ltd	Bello & Bello Ltd	
+	54	Grand Total				1124	1165	1104	
	55								
	56								
	57								
	58								
	59								
		1							
	60								
	60 61								

Level 2:

FILE	н	OME INSER	RT PAGE LA	YOUT FORMULAS	DATA	REVIEW VIEW	DEVELOPER	LOAD TEST
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G60		*	$\times \checkmark$	fx				
2 3		A	В	C		D	E	F
K	1	Car Make	Car Sales	Uche & Sons Autod	ealership	C Davies Cars Ltd	Bello & Bello Ltd	[
+	5	France Total			69	54	89	
+	12	Germany Tot	tal		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 Tota	d		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:

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G60		•	$\times \checkmark f$	c				
1 2 3		A	В	c		D	E	I
1	1	Car Make	Car Sales	Uche & Sons Autod	ealership	C Davies Cars Ltd	Bello & Bello Ltd	
[·]	2	France	Bugatti		25	25	33	
- 53	3	France	Peugeot		20	5	25	
100	4	France	Renault	<u> </u>	24	24	31	
-	5	France Total			69	54	89	
- C.	6	Germany	BMW		20	6	33	
- 52	7	Germany	Porsche		27	45	14	
- 22	8	Germany	Audi		28	43	43	
- 22	9	Germany	Volkswagen		16	43	11	
- 22	10	Germany	Mercedes-Benz		23	45	34	
	11	Germany	Opel		24	16	41	
-	12	Germany Tot	tal		138	198	176	
- 22	13	India	Tata		41	29	7	
- 22	14	India	Ashok Leyland		41	19	13	
L.	15	India	Mahindra		34	27	15	
	16	India Total			116	75	35	
- 54	17	Italy	Maserati		13	22	9	
<u></u>	18	Italy	Lamborghini		31	26	27	
_		Italy Total			44	48	36	
1		Japan	Toyota		30	24	40	
- 10	21	Japan	Honda		11	42	12	
- 22	22	Japan	Honda]	36	31	34	

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.

X		· 🤄 🗉				Data Cleaninga	
FILE	Acce: Web Text	OME INSE ss From Other Sources * Set External Dat	Existing Connections a	Connections	Te Reapply	Text to Elash	sh Remove Data Consolidate What-If Relationships Group Ungroup Subtotal
A1		• : A	× √ ∱	c Car Make	D	E	F G H I J K L M
123	1	Car Make	Car Sales	Uche & Sons Autodealership	-		
F F	2	France	Bugatti	25		33	
5	3	France	Peugeot	20		25	
	4	France	Renault	24		31	Subtotal ? ×
-	5	France Total		69	54	89	At each change in:
Γ.	6	Germany	BMW	20	6	33	Car Make
5	7	Germany	Porsche	27	45	14	Use function:
	8	Germany	Audi	28	43	43	Sum V
- 5	9	Germany	Volkswagen	16	43	11	Add subtotal to:
	10	Germany	Mercedes-Benz	23	45	34	Car Make
5	11	Germany	Opel	24	16	41	Car Sales
-	12	Germany To	tal	138	198	176	Uche & Sons Autodealership C Davies Cars Ltd
1.1	13	India	Tata	41	29	7	🗹 Bello & Bello Ltd
	14	India	Ashok Leyland	41	19	13	
5	15	India	Mahindra	34	27	15	Replace current subtotals
-				116	75	35	Page break between groups
1		Italy	Maserati	13		9	Summary below data
100	18	Italy	Lamborghini	31	26	27	Remove All OK Cancel
-		Italy Total		44	48	36	Keniove Air Ok Cancer
- Field	20	Japan	Toyota	30		40	1
5	21	Japan	Honda	11		12	
	22	Japan	Honda	36	31	34	

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

1	A	В	С	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	Hvundai	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.

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ł	FILE HON	ME INSEF	RT PAGE LA	YOUT FORM	NULAS	DATA	REVIE	W	VIEW
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	Clipboard		Fo	nt	rs.		Alignr	nent	
D	2 A	▼ :	c ×	fx		-		6	Н
1			Employee ID	Donartmont	E	F		G of De	
2	Mary	Porter	1000058				HR	orbe	JUS
3	Joseph	Saliu	1000588	12		-	Fina	nce	
4	Kenneth	Lenny	1000588				IT	nee	
5	Lekan	Jakes	1000589					ratior	ns
6	Gabriel	Matthew	1000590					keting	
7					li -				
8									
0									

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

x	1 🖯 5-	¢ - 🖽	Ŧ						Data Cle	aning.xlsx -	- Excel		
	FILE HOI	ME INSEF	RT PAGE LA	YOUT FOR	MULAS DA	ATA	REVIEW	VIEW	DEVELOPER	LOAD	TEST PC	WER QUER	Y
Lê	J From Access From Web J From Text Ge	From Other Sources * t External Data	Existing Connections	Refresh	IT LINKS	Sort	Filter Sort & Filt	Clear Clear Reapply Advance er	Text to Columns		Remove uplicates Va		a Consolid
D	2	*	$\times \checkmark$	fx							3		
	A	В	С	D	E	F	G	Н	1	J	K	L	N
1	First Name	Last Name	Employee ID	Department			List of De	pts					
2	Mary	Porter	1000058		0		HR						
3	Joseph	Saliu	1000588				Finance						
4	Kenneth	Lenny	1000588	-			IT						
5	Lekan	Jakes	1000589				Operatio	ns					
6	Gabriel	Matthew	1000590				Marketin	g					
7 8 9 10 11 12 13 14 15 16 17 18 19 20	Decima List Date Time Text let <u>Custor</u>	lue number il ngth n		nore blank	? ×		<u>Go back</u>						
21	<u>C</u> lear Al			ОК	Cancel					())			

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		Connectio	ns		Sort & Filter	
2	2	•	$\times \checkmark$	fx				
	А	В	с	D	E	F	G	н
-	First Name	Last Name	Employee ID	Department			List of Dep	ts
	Mary	Porter	1000058				HR	
	Joseph	Saliu	1000588				Finance	
	Kenneth	Lenny	1000588				IT	
	Lekan	Jakes	1000589				Operation:	5
	Gabriel	Matthew	1000590				Marketing	
)	Validation Allow: List Data:	Input Messa n criteria	v v Igr	nore <u>b</u> lank cell dropdown			<u>Go back</u>	
	betwee	en	v			-	-	
;	Source:					-		
				1				
					2			
)					9			
1	Apply	these change	s to all other cell	s with the same se	ttings			
	Clear All			ОК	Cancel			

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	e	Connect	ions		Sort & Filter
D	2	-	$\times \checkmark$	<i>fx</i> G2:G6			
4	А	В	с	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
7 B			Data Valida	ition	?	×	
9	=\$G\$2:\$G\$	6				52	6
0			T I				Cobook

	A	В	C		D	E	F	G	Н	
F	rst Name	Last Name	Employ	ee ID	Department			List of Dep	ots	
N	lary	Porter	10	00058	G2:G6	v		HR		
Jo	seph	Saliu	10	00588				Finance		
K	enneth	Lenny	10	00588				IT		
L	ekan	Jakes	10	00589				Operation	s	
G	abriel	Matthew	10	00590				Marketing		
	Settings Validation <u>A</u> llow:	Input Messa n criteria		or Alert				Go back		
	List		¥		nore <u>b</u> lank -cell dropdown					
	Data:	en	~	<u> </u>	cen aropaonin					-
	Source:						-			-
	=\$G\$2	SG\$6			1					-
	Ap <u>p</u> ly	these change	s to all ot	her cell	s with the same	settings				

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.

1	A	В	С	D		E
1	First Name	Last Name	Employee ID	Department		
2	Mary	Porter	1000058		-	
3	Joseph	Saliu	1000588	HR Finance		
4	Kenneth	Lenny	1000588	IT		
5	Lekan	Jakes	1000589	Operations Marketing		
6	Gabriel	Matthew	1000590	Marketing		
7						
0						

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	В	С	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
ļ	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
5	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
3	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
0	Borno	₩ 2,361,614,200	₩ 1,616,065,000	₩ 4,908,244,600	₩ 4,216,846,800	₩ 581,980,000	₩ 4,166,988,100
1	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
2	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
3	Ebonyi	₩ 3,547,140,000	₩ 3,233,069,500	₩ 4,883,253,900	₩ 1,060,164,800	₩ 2,926,053,500	₩ 713,048,500
4	Edo	₩ 2,663,501,000	₩ 781,461,300	₩ 462,661,800	₩ 543,085,200	₩ 3,256,011,600	₩ 2,900,705,900
5	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
6	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
7	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
8	Gombe	₩ 620,111,300	₩ 2,201,453,200	₩ 1,885,641,400	₩ 4,146,024,300	₩ 2,551,023,100	₩ 2,523,019,700
9	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
0	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
1	Kaduna	₩ 3,938,598,800	₩ 2,599,773,900	₦ 1,224,849,400	₩ 1,662,248,400	₩ 450,931,500	₩ 3,835,345,400
2	Kano	₩ 2,981,980,300	₩ 2,021,735,600	₩ 3,016,518,600	₩ 4,411,651,000	₩ 2,387,291,000	₩ 530,613,400
-	V-t-i	N 3 500 431 500	N 4 202 020 700	N COO 077 000	N 3 0C0 731 400	N 4 005 000 500	N 0 640 600 F06

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

Cut Copy aste Format Pain		$\begin{array}{c c} & & & \\ \hline \\ \hline$		Merge & Center - \$	eneral -] 5 - 96 + 58 -93	POWER QUER Conditional Formatting *	Format as: Cell Table: Styles: Insert Delete Format Table: Styles: Insert Delete Format
Clipboard	re Font	13	Alignment	5	Number 174		Light
1	\cdot $\times \checkmark f_x$	State					
A	8	c	D	E	F	G	
State	Jan-14	Feb-14 M	Aar-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	
Adamawa	₩ 4,022,792,500	N 4,317,641,300	₩ 1,627,470,600	₩ 1,023,694,700	N 3,493,691,500	₩ 1,973	
Akwa Ibom	# 824,782,800	₩ 1,691,712,500	₩4,927,386,500	₩ 2,187,626,200	₩ 2,966,925,400	₩ 2,202	Neres state state state state state state
Anambra	N 2,159,322,900	N 1,511,863,500	₩ 4,050,131,900	N 1,843,665,900	N 2,439,308,800	N 3,015,	Medium
Bauchi	₩ 764,748,600	₩ 3,059,451,100	₩ 2,879,985,600	₩ 3,032,115,500	₩ 2,609,030,900	₩ 3,000	
Bayelsa	₩ 1,218,646,400	N 2,035,499,300	N 3,596,177,500	N 3,958,333,500	₩ 4,856,865,900	N 1,754	
Benue	₩ 3,479,649,000	₩ 3,864,832,700	₩ 2,458,711,700	₩ 4,801,142,000	₩ 2,700,421,800	₩ 3,212	
Benue	₩ 602,469,700	N 1,387,315,500	N 4,501,134,600	N 2,728,902,800	₩ 1,687,978,600	₩ 3,627	
Borno	₩ 2,361,614,200	₩ 1,616,065,000	₩ 4,908,244,600	₩ 4,216,846,800	₩ 581,980,000	₩ 4,166	
Cross River	₩ 2,416,592,600	₩ 1,971,834,600	₩ 1,814,142,400	₩4,658,487,000	₩ 745,327,000	₩ 4,779	
Delta	₩4,755,914,300	₩ 2,382,209,500	₩ 3,361,514,600	₩ 2,060,298,000	₩ 4,671,269,900	N-2,363	
Ebonyi	₩ 3,547,140,000	₩ 3,233,069,500	₩ 4,883,253,900	₩ 1,060,164,800	₩ 2,926,053,500	₩ 713	
Edo	N 2,663,501,000	₩ 781,461,300	N 462,661,800	₩ 543,085,200	₩ 3,256,011,600	₩ 2,900	, PEREPERENT AND A
Ekiti	₩ 1,816,087,900	N 4,128,943,600	₩ 1,512,170,300	₩ 2,592,908,100	₩ 3,340,038,100	N 4,040	
Enugu	₩ 1,409,979,200	₩ 2,609,372,800	₩ 1,990,646,300	₩ 3,219,650,200	₩ 1,893,090,400	₩ 4,581	Intel const state state state state state
FCT	₩ 3,199,223,200	₩ 2,063,317,300	₩ 1,829,381,400	₩ 3,704,640,600	₩ 4,980,777,000	₩ 2,520	Dark
Gombe	₩ 620,111,300	₩ 2,201,453,200	₩ 1,885,641,400	₩ 4,146,024,300	₩ 2,551,023,100	₩ 2,523	
Imo	₩ 2,591,742,600	₩ 2,521,764,800	₩ 2,013,994,900	₩4,994,515,700	₩ 3,014,428,300	₩ 2,922	
Jigawa	₩ 3,550,126,700	N 1,573,445,100	₦ 3,756,243,200	N 3,092,703,100	N 1,417,963,700	N 2,311,	NAMES OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY.
Kaduna	₩ 3,938,598,800	₦ 2,599,773,900	₩ 1,224,849,400	₩ 1,662,248,400	₩ 450,931,500	₩ 3,835	i, 📶 New Table Style
Kano	₩ 2,981,980,300	₩ 2,021,735,600	N 3,016,518,600	₩ 4,411,651,000	N 2,387,291,000	N 530	New PivotTable Style

4	A	В	с	D	E	F	G
1	State	🗙 Jan-14 📃 💌	Feb-14 💌	Mar-14 🗾	Apr-14 💌	May-14 🗾 J	un-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	₩4,671,269,900	₩ 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
23	Katsina	₩ 3,589,421,500	₩ 1,293,838,700	₩ 638,877,300	₩ 2,969,721,400	₩ 1,025,989,500	₩ 2,648,689,500
24	Kebbi	₩1,684,273,500	₩ 4,790,202,900	₩ 991,721,500	₩ 4,897,014,100	₩ 4,131,210,900	₩ 3,990,418,100
25	Kogi	₩ 2,812,863,300	₩ 2,734,189,600	₩ 2,306,601,300	₩ 867,264,000	₩ 2,104,687,400	₩ 2,825,512,800
26	Kwara	₩ 3,915,338,600	₩ 1,496,830,100	₩ 1,305,529,900	₩ 4,919,941,300	₩ 2,214,504,600	₩ 912,176,400
27	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.

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sector manager	below th	e data we analyzed. Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	[
lease find b	below th		Feb-14 ₩ 821,123,500	Mar-14 № 1,175,454,800	Apr-14 ₦ 967,327,400	May-14 ₦ 2,265,644,000	Jun-14. ₩ 4,544,916,100	
lease find b State	below th	Jan-14	200000000000000000000000000000000000000	- MANAGER CANADA -	1975 MECH 00000		contestaties	
lease find b State Abia Adamawa Akwa Ibom		Jan-14 № 1,297,498,300 № 4,022,792,500 ₩ 824,782,800	₦ 821,123,500 ₦ 4,317,641,300 ₦ 1,691,712,500	₦ 1,175,454,800 ₦ 1,627,470,600 ₦ 4,927,386,500	₦ 967,327,400 ₦ 1,023,694,700 ₦ 2,187,626,200	 ₦ 2,265,644,000 ₦ 3,493,691,500 ₦ 2,966,925,400 	₦ 4,544,916,100 ₦ 1,973,059,900 ₦ 2,202,014,900	
lease find b State Abia Adamawa Akwa Ibom Anambra		Jan-14. № 1,297,498,300 № 4,022,792,500 № 824,782,800 № 2,159,322,900	₦ 821,123,500 ₦ 4,317,641,300 ₦ 1,691,712,500 ₦ 1,511,863,500	 ₦ 1,175,454,800 ₦ 1,627,470,600 ₦ 4,927,386,500 ₦ 4,060,131,900 	 ₦ 967,327,400 ₦ 1,023,694,700 ₦ 2,187,626,200 ₦ 1,843,665,900 	 № 2,265,644,000 № 3,493,691,500 № 2,966,925,400 № 2,439,308,800 	 ₩ 4,544,916,100 ₩ 1,973,059,900 ₩ 2,202,014,900 ₩ 3,015,652,900 	
lease find b State Abia Adamawa Akwa Ibom Anambra Bauchi		Jan-14 № 1,297,498,300 № 4,022,792,500 № 824,782,800 № 2,159,322,900 № 764,748,600	₦ 821,123,500 ₦ 4,317,641,300 ₦ 1,691,712,500 ₦ 1,511,863,500 ₦ 3,059,451,100	 № 1,175,454,800 № 1,627,470,600 № 4,927,386,500 № 4,060,131,900 № 2,879,985,600 	₦ 967,327,400 ₦ 1,023,694,700 ₦ 2,187,626,200 ₦ 1,843,665,900 ₦ 3,032,115,500	 ₦ 2,265,644,000 ₦ 3,493,691,500 ₦ 2,966,925,400 ₦ 2,439,308,800 ₦ 2,609,030,900 	 ₦ 4,544,916,100 ₦ 1,973,059,900 ₦ 2,202,014,900 ₦ 3,015,652,900 ₦ 3,000,312,200 	
lease find b State Abia Adamawa Adamawa Akwa Ibom Anambra Bauchi Bayelsa		Jan-14 № 1,297,498,300 № 4,022,792,500 № 824,782,800 № 2,159,322,900 № 764,748,600 № 1,218,646,400	 ₩ 821,123,500 ₩ 4,317,641,300 ₩ 1,691,712,500 ₩ 1,511,863,500 ₩ 3,059,451,100 ₩ 2,035,499,300 	 ₩ 1,175,454,800 ₩ 1,627,470,600 ₩ 4,927,386,500 ₩ 4,060,131,900 ₩ 2,879,985,600 ₩ 3,596,177,500 	 ₦ 967,327,400 ₦ 1,023,694,700 ₦ 2,187,626,200 ₦ 1,843,665,900 ₦ 3,032,115,500 ₦ 3,958,333,500 	 ₩ 2,265,644,000 ₩ 3,493,691,500 ₩ 2,966,925,400 ₩ 2,439,308,800 ₩ 2,609,030,900 ₩ 4,856,865,900 	₦ 4,544,916,100 ₦ 1,973,059,900 ₦ 2,202,014,900 ₦ 3,015,652,900 ₦ 3,000,312,200 ₦ 1,754,855,100	
lease find b State Abia Adamawa Adamawa Adamawa Bawa Ibom Anambra Bauchi Bayelsa Benue		Jan-14 № 1,297,498,300 № 4,022,792,500 № 824,782,800 № 2,159,322,900 № 764,748,600 № 1,218,646,400 № 3,479,649,000	 ₩ 821,123,500 ₩ 4,317,641,300 ₩ 1,691,712,500 ₩ 1,511,863,500 ₩ 3,059,451,100 ₩ 2,035,499,300 ₩ 3,864,832,700 	 № 1,175,454,800 № 1,627,470,600 № 4,927,386,500 № 4,060,131,900 № 2,879,985,600 № 3,596,177,500 № 2,458,711,700 	 ₦ 967,327,400 ₦ 1,023,694,700 ₦ 2,187,626,200 ₦ 1,843,665,900 ₦ 3,032,115,500 ₦ 3,958,333,500 ₦ 4,801,142,000 	N 2,265,644,000 N 3,493,691,500 N 2,966,925,400 N 2,439,308,800 N 2,609,030,900 N 4,856,865,900 N 2,700,421,800	 ₦ 4,544,916,100 ₦ 1,973,059,900 ₦ 2,202,014,900 ₦ 3,015,652,900 ₦ 3,000,312,200 ₦ 1,754,855,100 ₦ 3,212,451,900 	
lease find b State Abia Adamawa Akwa Ibom Anambra Bauchi Bayelsa Benue Benue		Jan-14. № 1,297,498,300 № 4,022,792,500 № 824,782,800 № 2,159,322,900 № 764,748,600 № 1,218,646,400 № 3,479,649,000 № 602,469,700	 ₩ 821,123,500 ₩ 4,317,641,300 ₩ 1,691,712,500 ₩ 1,511,863,500 ₩ 3,059,451,100 ₩ 2,035,499,300 ₩ 3,864,832,700 ₩ 1,387,315,500 	 № 1,175,454,800 № 1,627,470,600 № 4,927,386,500 № 4,060,131,900 № 2,879,985,600 № 3,596,177,500 № 2,458,711,700 № 4,501,134,600 	 ₦ 967,327,400 ₦ 1,023,694,700 ₦ 2,187,626,200 ₦ 1,843,665,900 ₦ 3,032,115,500 ₦ 3,958,333,500 ₦ 4,801,142,000 ₦ 2,728,902,800 	 ₩ 2,265,644,000 ₩ 3,493,691,500 ₩ 2,966,925,400 ₩ 2,439,308,800 ₩ 2,609,030,900 ₩ 4,856,865,900 ₩ 2,700,421,800 ₩ 1,687,978,600 	 ₩ 4,544,916,100 ₩ 1,973,059,900 ₩ 2,202,014,900 ₩ 3,015,652,900 ₩ 3,000,312,200 ₩ 1,754,855,100 ₩ 3,212,451,900 ₩ 3,627,716,800 	
lease find b State Abia Adamawa Adama Ada	<u>n</u>	Jan-14. № 1,297,498,300 № 4,022,792,500 № 824,782,800 № 2,159,322,900 № 764,748,600 № 1,218,646,400 № 3,479,649,000 № 602,469,700 № 2,361,614,200	 ₩ 821,123,500 ₩ 4,317,641,300 ₩ 1,691,712,500 ₩ 1,511,863,500 ₩ 3,059,451,100 ₩ 2,035,499,300 ₩ 3,864,832,700 ₩ 1,387,315,500 ₩ 1,616,065,000 	 № 1,175,454,800 № 1,627,470,600 № 4,927,386,500 № 4,060,131,900 № 2,879,985,600 № 3,596,177,500 № 2,458,711,700 № 4,501,134,600 № 4,908,244,600 	 ₦ 967,327,400 ₦ 1,023,694,700 ₦ 2,187,626,200 ₦ 1,843,665,900 ₦ 3,032,115,500 ₦ 3,958,333,500 ₦ 4,801,142,000 ₦ 2,728,902,800 ₦ 4,216,846,800 	× 2,265,644,000 × 3,493,691,500 × 2,966,925,400 × 2,439,308,800 × 2,609,030,900 × 4,856,865,900 × 2,700,421,800 × 1,687,978,600 × 581,980,000	 ₩ 4,544,916,100 ₩ 1,973,059,900 ₩ 2,202,014,900 ₩ 3,015,652,900 ₩ 3,000,312,200 ₩ 1,754,855,100 ₩ 3,212,451,900 ₩ 3,627,716,800 ₩ 4,166,988,100 	
lease find b State Abia Adamawa Adamawa Akwa Ibom Anambra Bawa Banue Banue Banue Banue Banue Cross River	<u>n</u>	Jan-14. № 1,297,498,300 № 4,022,792,500 № 824,782,800 № 2,159,322,900 № 764,748,600 № 1,218,646,400 № 3,479,649,000 № 602,469,700 № 2,361,614,200 № 2,416,592,600	 ₩ 821,123,500 ₩ 4,317,641,300 ₩ 1,691,712,500 ₩ 1,511,863,500 ₩ 3,059,451,100 ₩ 2,035,499,300 ₩ 3,864,832,700 ₩ 1,387,315,500 ₩ 1,616,065,000 ₩ 1,971,834,600 	 № 1,175,454,800 № 1,627,470,600 № 4,927,386,500 № 4,060,131,900 № 2,879,985,600 № 3,596,177,500 № 2,458,711,700 № 4,501,134,600 № 4,908,244,600 № 1,814,142,400 	 ₦ 967,327,400 ₦ 1,023,694,700 ₦ 2,187,626,200 ₦ 1,843,665,900 ₦ 3,032,115,500 ₦ 3,958,333,500 ₦ 4,801,142,000 ₦ 2,728,902,800 ₦ 4,216,846,800 ₦ 4,658,487,000 	× 2,265,644,000 × 3,493,691,500 × 2,966,925,400 × 2,439,308,800 × 2,609,030,900 × 4,856,865,900 × 2,700,421,800 × 1,687,978,600 × 581,980,000 × 745,327,000	 ₩ 4,544,916,100 ₩ 1,973,059,900 ₩ 2,202,014,900 ₩ 3,015,652,900 ₩ 3,000,312,200 ₩ 1,754,855,100 ₩ 3,212,451,900 ₩ 3,627,716,800 ₩ 4,166,988,100 ₩ 4,779,952,700 	
lease find b State Abia Adamawa Adamawa Akwa Ibom Anambra Banawa Bana Banue Banue Banue Banue Banue Cross River Delta	<u>n</u>	Jan-14. № 1,297,498,300 № 4,022,792,500 № 824,782,800 № 2,159,322,900 № 764,748,600 № 1,218,646,400 № 3,479,649,000 № 602,469,700 № 2,361,614,200 № 2,416,592,600 № 4,755,914,300	 ₩ 821,123,500 ₩ 4,317,641,300 ₩ 1,691,712,500 ₩ 1,511,863,500 ₩ 3,059,451,100 ₩ 2,035,499,300 ₩ 3,864,832,700 ₩ 1,87,315,500 ₩ 1,616,065,000 ₩ 1,971,834,600 ₩ 2,382,209,500 	 № 1,175,454,800 № 1,627,470,600 № 4,927,386,500 № 4,060,131,900 № 2,879,985,600 № 3,596,177,500 № 2,458,711,700 № 4,908,244,600 № 1,814,142,400 № 3,361,514,600 	 ₦ 967,327,400 ₦ 1,023,694,700 ₦ 2,187,626,200 ₦ 1,843,665,900 ₦ 3,032,115,500 ₦ 3,958,333,500 ₦ 4,801,142,000 ₦ 2,728,902,800 ₦ 4,216,846,800 ₦ 4,658,487,000 ₦ 2,060,298,000 	× 2,265,644,000 × 3,493,691,500 × 2,966,925,400 × 2,439,308,800 × 2,609,030,900 × 4,856,865,900 × 2,700,421,800 × 1,687,978,600 × 581,980,000 × 745,327,000 × 4,671,269,900	 ₩ 4,544,916,100 ₩ 1,973,059,900 ₩ 2,202,014,900 ₩ 3,015,652,900 ₩ 3,000,312,200 ₩ 1,754,855,100 ₩ 3,212,451,900 ₩ 3,212,716,800 ₩ 4,166,988,100 ₩ 4,179,952,700 ₩ 2,363,220,900 	
lease find b State Abia Adamawa Adamawa Akwa Ibom Anambra Bawa Banue Banue Banue Banue Banue Cross River	<u>n</u>	Jan-14. № 1,297,498,300 № 4,022,792,500 № 824,782,800 № 2,159,322,900 № 764,748,600 № 1,218,646,400 № 3,479,649,000 № 602,469,700 № 2,361,614,200 № 2,416,592,600	 ₩ 821,123,500 ₩ 4,317,641,300 ₩ 1,691,712,500 ₩ 1,511,863,500 ₩ 3,059,451,100 ₩ 2,035,499,300 ₩ 3,864,832,700 ₩ 1,387,315,500 ₩ 1,616,065,000 ₩ 1,971,834,600 	 № 1,175,454,800 № 1,627,470,600 № 4,927,386,500 № 4,060,131,900 № 2,879,985,600 № 3,596,177,500 № 2,458,711,700 № 4,501,134,600 № 4,908,244,600 № 1,814,142,400 	 ₦ 967,327,400 ₦ 1,023,694,700 ₦ 2,187,626,200 ₦ 1,843,665,900 ₦ 3,032,115,500 ₦ 3,958,333,500 ₦ 4,801,142,000 ₦ 2,728,902,800 ₦ 4,216,846,800 ₦ 4,658,487,000 	× 2,265,644,000 × 3,493,691,500 × 2,966,925,400 × 2,439,308,800 × 2,609,030,900 × 4,856,865,900 × 2,700,421,800 × 1,687,978,600 × 581,980,000 × 745,327,000	 ₩ 4,544,916,100 ₩ 1,973,059,900 ₩ 2,202,014,900 ₩ 3,015,652,900 ₩ 3,000,312,200 ₩ 1,754,855,100 ₩ 3,212,451,900 ₩ 3,627,716,800 ₩ 4,166,988,100 ₩ 4,779,952,700 	

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

Here's what you get from Print Preview.

	Jan-14	eb-14	Mar-14	Apr-14
Abia	# 1,297,498,300	#821,123,500	# 1,175,454,800	# 967,327,400
Adamawa	# 4,022,792,500	#4,317,641,300	₩ 1,627,470,600	# 1,023,694,700
Akwa ibom	# 824,782,800	#1,691,712,500	# 4,927,386,500	# 2,187,526,200
Anambra	# 2,159,322,900	#1,511,863,500	# 4,050,131,900	# 1,843,665,900
Bauchi	₩ 754,748,600	#3,039,451,100	# 2,879,985,600	# 3,032,115,500
Bayetsa	₩ 1,218,646,400	#2,035,499,300	# 3,596,177,500	# 3,958,333,500
Benue	₩ 3,479,649,000	#3,864,832,700	# 2,458,711,700	₩ 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	# 4,658,487,000
Delta	# 4,755,914,300	#2,382,209,500	# 3,361,514,600	\$2,060,298,000
Ebonyi	₩ 3,547,140,000	\$3,233,069,500	# 4,883,253,900	# 1,050,164,800
Edo	# 2,663,501,000	₩781,461,300	# 452,661,800	# 543,085,200
Ekiti	₩ 1,816,087,900	#4,128,943,600	₩1,512,170,300	# 2,592,908,100
Enugu	# 1,409,979,200	\$2,609,372,800	# 1,990,646,300	\$3,219,550,200
FCT	# 3,199,223,200	#2,063,317,300	# 1,829,381,400	# 3,704,540,600
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
ligewe	# 3,550,126,700	#1,573,445,100	# 3,756,243,200	\$3,092,703,100
Kaduna	₩ 3,938,598,800	#2,599,773,900	# 1,224,849,400	# 1,662,248,400
Kano	# 2,981,980,300	\$2,021,735,600	₩ 3,016,518,600	# 4,411,551,000
Katsina	# 3,589,421,500	#1,293,838,700	# 638,877,300	\$2,969,721,400
Kebbi	₩ 1,684,273,500	\$4,790,202,900	# 991,721,500	\$4,897,014,100
Kogi	# 2,812,863,300	#2,734,189,600	# 2,305,601,300	# 857,254,000
Kware	# 3,915,338,600	#1,495,830,100	\$1,305,529,900	# 4,919,941,300
Lagos	# 6,239,473,500	#7,319,183,000	# 6,211,689,500	# 3,351,178,500
Nasarawa	# 450,732,700	#4,852,095,900	# 1,411,838,200	# 743,233,200
Niger	₩ 3,002,387,100	#4,592,318,900	₩ 3,219,870,900	₩ 1,086,334,400
Dgun	₩ 3,434,714,900	#2,586,000,100	# 3,907,557,600	\$ 1,642,410,200
Dindo	₩ 716,222,900	\$1,690,422,800	# 4,362,953,800	₩ 977,876,300
Plateau	# 4,527,323,100	\$2,371,220,000	# 4,471,653,300	\$ 932,778,800
Rivers	# 2,423,028,900	#4,860,256,800	# 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	# 3,497,511,100	\$ 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	\$91,889,335,900	# 101,344,816,300	₩ 87,169,591,800

	un-14
₩ 2.265,644,000	# 4.544,916,100
# 3,493,691,500	\$ 1,973,059,900
\$2,955,925,400	# 2,202,014,900
# 2,439,308,800	# 3,015,652,900
\$2,609,030,900	₩ 3,000,312,200
# 4,855,865,900	₩ 1,754,855,100
# 2,700,421,800	# 3.212.451.900
\$1,687,978,600	\$ 3,627,716,800
# 581,980,000	# 4.165.988.100
# 745,327,000	# 4,779,952,700
# 4,671,269,900	# 2,363,220,900
# 2,926,053,500	₩ 713.048.500
# 3.256.011.600	# 2,900,705,900
₩ 3,340,038,100	₩ 4.040.341.600
₩1,893,090,400	₩ 4,581,716,900
₩ 4,980,777,000	₩ 2,520,202,900
# 2,551,023,100	₩ 2,523,019,700
₩ 3.014.428.300	# 2,922,241,900
# 1,417,953,700	₩ 2,322,241,500
# 450,931,500	₩ 3,835,345,400
# 2,387,291,000	# 530,613,400
# 1,025,989,500	₩ 2,648,689,500
# 4,131,210,900	₩ 3,990,418,100
₩ 2,104,687,400	₩ 2,825,512,800
# 2,214,504,600	₩ 912,176,400
₩ 11,610,307,000	# 22,681,984,500
	₩ 1,310,892,700
₩ 3,979,805,300	₩ 1,826,747,300
# 2,265,022,600	₩ 3,200,451,900
\$ 4,300,936,900	# 4,925,747,700
₩ 3,593,441,000	₩ 4,894,816,200
# 4,882,684,300	₩ 4,459,705,200
#1,389,495,200	₩ 3,244,525,900
\$3,799,677,800	\$2,986,053,000
# 3,350,176,900	₩ 756,637,100
\$104,376,072,900	₩ 122,184,295,800

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

Very Easy.

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

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2	Abia	₩ 1,297,498,300	₩ 821,123,500	₩ 1,175,454,8	00 ₦ 967,32	7,400 🙌 2,.	265,644,000	₩ 4,544,916,10	0
ŝ	Adamawa	₩ 4,022,792,500	₩ 4,317,641,300	₩ 1,627,470,6	00 ₩ 1,023,694	4,700 🙌 3,4	493,691,500	₩ 1,973,059,90	0
	Akwa Ibom	₩ 824,782,800	₩ 1,691,712,500	₩ 4,927,386,5	00 ₩ 2,187,620	5,200 🙌 2,5	966,925,400	₩ 2,202,014,90	0
	Anambra	₩ 2,159,322,900	₩ 1,511,863,500	₩ 4,060,131,9	00 ₩ 1,843,665	5,900 🙌 2,4	439,308,800	₩ 3,015,652,90	0
5	Bauchi	₩ 764,748,600	₩ 3,059,451,100	₩ 2,879,985,6	00 ₦ 3,032,11	5,500 N 2,	609,030,900	₩ 3,000,312,20	0
7	Bayelsa	₩ 1,218,646,400	₩ 2,035,499,300	₩ 3,596,177,5	00 🙌 3,958,333	3,500 🙌 4,3	856,865,900	₩ 1,754,855,10	0
3	Benue	₩ 3,479,649,000	₩ 3,864,832,700	₩ 2,458,711,7	00 ₩ 4,801,142	2,000 🙌 2,	700,421,800	₩ 3,212,451,90	0
9	Benue	₩ 602,469,700	₩ 1,387,315,500	₩ 4,501,134,6	00 ₩ 2,728,90	2,800 🙌 1,	687,978,600	₩ 3,627,716,80	0
0	Borno	₩ 2,361,614,200	₩ 1,616,065,000	₩ 4,908,244,6	0 ₩ 4,216,84	5,800 N	581,980,000	₩ 4,166,988,10	0
1	Cross River	₩ 2,416,592,600	₩ 1,971,834,600	₩ 1,814,142,4	00 ₩ 4,658,48	7,000 🙌	745,327,000	₩ 4,779,952,70	0
2	Delta	₩ 4,755,914,300	₩ 2,382,209,500	₩ 3,361,514,6	00 N 2,060,29	8,000 ₦4,	671,269,900	₩ 2,363,220,90	0
3	Ebonyi	₩ 3,547,140,000	₩ 3,233,069,500	₩ 4,883,253,9	00 ₩ 1,060,164	4,800 N 2,	926,053,500	₩ 713,048,50	0
4	Edo	₩ 2,663,501,000	₩ 781,461,300	₩ 462,661,8	00 ₦ 543,083	5,200 🙌 3,3	256,011,600	₩ 2,900,705,90	0
5	Ekiti	₩ 1,816,087,900	₩ 4,128,943,600	₩ 1,512,170,3	00 ¥ 2,592,90	8,100 🙌 3,3	340,038,100	₩ 4,040,341,60	0
6	Enugu	₩ 1,409,979,200	₩ 2,609,372,800	₩ 1,990,646,3	00 N 3,219,650	0,200 № 1,	893,090,400	₩ 4,581,716,90	0
7	FCT	₩ 3,199,223,200	₩ 2,063,317,300	₩ 1,829,381,4	00 ¥ 3,704,64	0,600 № 4,9	980,777,000	₩ 2,520,202,90	0
8	Gombe	₩ 620,111,300	₩ 2,201,453,200	₩ 1,885,641,4	00 ₩4,146,024	4,300 N 2,	551,023,100	₩ 2,523,019,70	0
9	Imo	₩ 2,591,742,600	₩ 2,521,764,800	₩ 2,013,994,9	00 ₩ 4,994,51	5,700 🙌 3,0	014,428,300	₩ 2,922,241,90	0
0	Jigawa	₩ 3,550,126,700	₩ 1,573,445,100	₩ 3,756,243,2	00 N 3,092,70	3,100 🙌 1,4	417,963,700	₩ 2,311,559,80	0
1	Kaduna	₩ 3,938,598,800	₩ 2,599,773,900	₩ 1,224,849,4	00 ₩ 1,662,24	3,400 ₦	450,931,500	₩ 3,835,345,40	0
2	Kano	₩ 2,981,980,300	₩ 2,021,735,600	₩ 3,016,518,6	00 ₩4,411,65	1,000 N 2,	387,291,000	₩ 530,613,40	0
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So let's see the result.

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Borg H 250, 6-200 H 1655500 H 4023460 H 41569480 H 5158200 Dord River H 26, 6-200 J 212400 H 2424940 H 2554240 H 21234260 H 12124260 <t< td=""></t<>
Dest Num # 445.52.000 # 121.244.00 # 1.64.147.00 # 4.55.47.00 # 4.77.35.00 # 4.77.35.00 Dest M 4.75.24.00 Y 22.055.00 Y 22.051.24.00 Y 22.050.25.00 Y 22.050.10 Y 71.045.50 Derd M 205.57.00 M 22.057.200 M 205.057.200 M 205.057.200 Y 22.050.25.00 Y 22.050.200 Y 22.050.200 <thy 22.050.200<="" th=""> <thy 22.050.200<="" th=""> <</thy></thy>
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Parasa # 457,722,100 # 271,220,000 # 4,71,553,200 # 922,734,200 # 2552,41,000 # 4,557,152,00 Rist # 242,550,000 # 4,857,152,000 # 4,857,152,000 Tasta # 51,24,500 # 455,002,400 # 2,75,420,400 # 655,715,000 # 4,557,152,00 Tote # 1,17,24,400 # 120,210,500 # 2,47,51,100 # 672,510,400 # 1,76,677,400 # 2,566,300 Tasta, # 1,77,24,400 # 120,210,500 # 2,47,51,110 # 672,610,400 # 1,766,77,100 # 2,566,300
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Tasta ME124200 M785502420 M2.5426420 M87420140 M874251240 M224451320 Yobe M1127,24400 M1202015500 M2.47511.120 M2202420 M219677342 M22633200 Tanfar M1767,24100 M1202207500 M1.49506420 M120227720 M2265174500 M25657700
Yobs N 2157,524,400 N 2100,220,500 N 2,407,511,100 N 229,020,200 N 2,759,571,900 N 2,965,052,000 Ismfars N 4,757,324,200 N 1,522,957,600 N 4,539,006,600 N 1,202,227,500 N 2,250,175,900 N 754,537,100
Innina #475,224200 #1,52255,500 #4,529,005,500 #1,208,227,500 #2,250,175,930 #755,527,100

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.

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2 Abia	₩ 1,297,498,300	₩ 821,123,500	₩ 1,175,454,800	₩ 967,327,400	₩ 2,265,644,000	0 ₩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	0 ₩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	0 ₩ 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	0 ₩ 3,015,652,900	
Bauchi	₩ 764,748,600	₩ 3,059,451,100	₩ 2,879,985,600	₩ 3,032,115,500	₩ 2,609,030,900	0 ₩ 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	0 ₩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	0 ₩ 3,212,451,900	
Benue	₩ 602,469,700	₩ 1,387,315,500	₩ 4,501,134,600	₩ 2,728,902,800	₩ 1,687,978,600	0 ₩ 3,627,716,800	
Borno	₩ 2,361,614,200	₩ 1,616,065,000	₩ 4,908,244,600	₩ 4,216,846,800	₩ 581,980,000	0 ₩4,166,988,100	
1 Cross River	₩ 2,416,592,600	₩ 1,971,834,600	₩ 1,814,142,400	₩ 4,658,487,000	₩ 745,327,000	0 ₩4,779,952,700	
2 Delta	₩ 4,755,914,300	₩ 2,382,209,500	₩ 3,361,514,600	₩ 2,060,298,000	₩ 4,671,269,900	0 ₩ 2,363,220,900	-
3 Ebonyi	₩ 3,547,140,000	₩ 3,233,069,500	₩ 4,883,253,900	₩ 1,060,164,800	₩ 2,926,053,500	0 ₩ 713,048,500	
4 Edo	₩ 2,663,501,000	₩ 781,461,300	₩ 462,661,800	₩ 543,085,200	₩ 3,256,011,600	0 ₩ 2,900,705,900	
5 Ekiti	₩ 1,816,087,900	₩4,128,943,600	₩ 1,512,170,300	₩ 2,592,908,100	₩ 3,340,038,100	0 ₩4,040,341,600	
6 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	
7 FCT	₩ 3,199,223,200	₩ 2,063,317,300	₩ 1,829,381,400	₩ 3,704,640,600	₩ 4,980,777,000	0 ₩ 2,520,202,900	-
8 Gombe	₩ 620,111,300	₩ 2,201,453,200	₩ 1,885,641,400	₩ 4,146,024,300	₩ 2,551,023,100		
9 Imo	₩ 2,591,742,600	₩ 2,521,764,800	₩ 2,013,994,900	₩ 4,994,515,700			
0 Jigawa	₩ 3,550,126,700	₩ 1,573,445,100	₩ 3,756,243,200	₩ 3,092,703,100			-
1 Kaduna	₩ 3,938,598,800	₩ 2,599,773,900	₩ 1,224,849,400	₩ 1,662,248,400			
2 Kano	₩ 2,981,980,300	₩ 2,021,735,600	₩ 3,016,518,600	₩ 4,411,651,000			-
2 Katalaa	N.2.500 421 500	N 1 202 020 700	AL COO 077 000	N 3 0C0 731 400	N 1 000 000 FO		-

Let's view the result.

Citritians life was free	constitute the date of the book the book the	Second Second States in the second	to an a second second second		AND THE REAL PROPERTY OF	
State		Second and the second se	Mer-14		stated Barberry Contractor States and States	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
la uchi	₩ 764,748,600	₩ 3,059,451,100	# 2,879,985,600	# 3,082,115,500	# 2,609,030,900	# 3,000,312,200
Bayelsa	# 1,218,646,400	# 2,085,499,300	₩ 3,596,177,500	# 3,958,333,500	# 4,856,865,900	₩ 1,754,855,100
le nue	# 3,479,649,000	₩ 3,854,832,700	₩ 2,458,711,700	# 4,801,142,000	# 2,700,421,800	# 3,212,451,900
Se nue	№ 602,469,700	N 1,387,315,500	₩ 4,501,134,600	N 2,728,902,800	N 1,687,978,600	N 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	# 2,368,220,900
Ebonyi	# 3,547,140,000	# 3, 253,069,500	₩ 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	N 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
mo	# 2,591,742,600	N 2,521,764,800	₩ 2,013,994,900	N 4,994,515,700	N 3,014,428,300	₩ 2,922,241,900
igawa	₩ 3,550,126,700	₩ 1,573,445,100	₩ 3,756,243,200	# 3,092,703,100	₩ 1,417,963,700	₩ 2,311,559,800
laduna	# 3,938,598,800	¥ 2,599,773,900	# 1,224,849,400	₩ 1,662,248,400	# 450,931,500	# 3,835,345,400
ano	₩ 2,981,980,300	# 2,021,735,600	# 3,016,518,600	# 4,411,651,000	₩ 2,387,291,000	₩ 530,613,400
latsina	# 3,589,421,500	# 1,293,838,700	# 638,877,300	# 2,969,721,400	# 1,025,989,500	₩ 2,648,689,500
(ebbi	₩ 1,684,273,500	N 4,790,202,900	# 991,721,500	N 4,897,014,100	₩ 4,131,210,900	₩3,990,418,100
logi	# 2,812,863,300	# 2,734,189,600	₩ 2,306,601,300	# 867,264,000	# 2,104,687,400	₩ 2,825,512,800
(wara	₩ 3,915,338,600	₩ 1,496,830,100	#1,305,529,900	# 4,919,941,300	₩ 2,214,504,600	₩ 912,176,400
agos	# 6,239,473,500	#7,319,183,000	₩ 6,211,689,500	# 3,351,178,500	₩ 11,610,307,000	₩ 22,681,984,500
Na sa ra wa	# 450, 732,700	# 4,852,095,900	₩ 1,411,838,200	# 743,233,200	# 492,081,500	# 1,310,892,700
Niger	# 3,002,387,100	N 4,592,318,900	# 3,219,870,900	# 1,086,334,400	# 3,979,805,300	₩1,826,747,500
Dgun	₩ 3,434,714,900	₩ 2,586,000,100	₩ 3,907,557,600	₩ 1,642,410,200	₩ 2,265,022,600	₩ 3,200,451,900
Ondo	₩716,222,900	₩ 1,690,422,800	₩ 4,362,953,800	# 977,876,300	₩ 4,300,936,900	₩ 4,925,747,700
Nateau	# 4,527,323,100	# 2,371,220,000	₩ 4,471,653,300	# 952,778,800	₩ 3,593,441,000	# 4,894,816,200
livers	# 2,423,028,900	# 4,860,256,800	# 4,148,808,900	# 859,719,700	# 4,882,684,300	# 4,459,705,200
araba	₩ 531,248,900	# 785,603,400	# 2,475,480,400	# 878,820,400	#1,389,495,200	# 3,244,525,900
obe	₩ 2,187,894,400	₩ 2,500,320,500	₩ 3,497,511,100	₩ 829,030,800	₦ 3,799,677,800	₩ 2,986,053,000
Zamfara	₩ 4,767,284,200	₩ 1,622,967,600	₩ 4,509,006,600	# 1,308,237,500	₩ 3,350,176,900	# 756,637,100
otal	# 90.504.729.800	# 91,889,335,900	₩ 101 344,816,300	₩ 87,169,591,800	# 104,376,072,900	₩ 122 184 295 800

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.

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	A	В	с	D	E	F	G	н
I	State	💌 Jan-14 💽 Fi	eb-14 🗾 Mar	-14	Apr-14	May-14	Jun-14	3
2	Abia	₩1,297,498,300	₩ 821,123,500	₩ 1,175,454,800	₩ 967,327,40	0 ₩ 2,265,644,00	0 ₩4,544,916,10	0
3	Adamawa	₩4,022,792,500	₩ 4,317,641,300	₦ 1,627,470,600	₩ 1,023,694,70	0 🙀 3,493,691,50	0 ₩1,973,059,90	0
4	Akwa Ibom	₩ 824,782,800	₩ 1,691,712,500	₩ 4,927,386,500	₩ 2,187,626,20	0 ₩ 2,966,925,40	0 ₦ 2,202,014,90	0
5	Anambra	₩ 2,159,322,900	₩ 1,511,863,500	₩ 4,060,131,900	₩ 1,843,665,90	0 ¥ 2,439,308,80	0 ₩ 3,015,652,90	0
5	Bauchi	₩ 764,748,600	₩ 3,059,451,100	₩ 2,879,985,600	₩ 3,032,115,50	0 ₩ 2,609,030,90	0 ₦ 3,000,312,20	0
7	Bayelsa	₩ 1,218,646,400	₩ 2,035,499,300	₩ 3,596,177,500	₩ 3,958,333,50	0 ₩4,856,865,90	0 ₩ 1,754,855,10	0
B	Benue	₩ 3,479,649,000	₩ 3,864,832,700	₩ 2,458,711,700	₩ 4,801,142,00	00 ₩ 2,700,421,80	0 ₦ 3,212,451,90	0
9	Benue	₩ 602,469,700	₩ 1,387,315,500	₩ 4,501,134,600	₩ 2,728,902,80	0 ₩1,687,978,60	0 ₩ 3,627,716,80	0
0	Borno	₩ 2,361,614,200	₩ 1,616,065,000	₩ 4,908,244,600	₩ 4,216,846,80	0 ₩ 581,980,00	0 ₩ 4,166,988,10	0
1	Cross River	₩ 2,416,592,600	₩ 1,971,834,600	₩ 1,814,142,400	₩ 4,658,487,00	0 ₩ 745,327,00	0 ₩ 4,779,952,70	0
2	Delta	₩ 4,755,914,300	₩ 2,382,209,500	₩ 3,361,514,600	₩ 2,060,298,00	0 ₩4,671,269,90	0 ₦ 2,363,220,90	0
3	Ebonyi	₩ 3,547,140,000	₩ 3,233,069,500	₩ 4,883,253,900	₩ 1,060,164,80	0 ₦ 2,926,053,50	0 ₩ 713,048,50	0
4	Edo	₩ 2,663,501,000	₩ 781,461,300	₩ 462,661,800	₩ 543,085,20	0 ₩ 3,256,011,60	0 ₦ 2,900,705,90	0
5	Ekiti	₩1,816,087,900	₩ 4,128,943,600	₩ 1,512,170,300	₩ 2,592,908,10	0 ₩ 3,340,038,10	0 ₩4,040,341,60	0
6	Enugu	₩1,409,979,200	₩ 2,609,372,800	₩ 1,990,646,300	₩ 3,219,650,20	0 ₩1,893,090,40	0 ₩4,581,716,90	0
7	FCT	₩ 3,199,223,200		₩ 1,829,381,400				20
8	Gombe	₩ 620,111,300	₩ 2,201,453,200	₩ 1,885,641,400	₩ 4,146,024,30	0 ₩ 2,551,023,10	0 ₦ 2,523,019,70	0
9	Imo	₩ 2,591,742,600		₩ 2,013,994,900	1			
20	Jigawa	₩ 3,550,126,700		₩ 3,756,243,200				
21	Kaduna	₩ 3,938,598,800	₩ 2,599,773,900	₩ 1,224,849,400	₩ 1,662,248,40	0 ₩450,931,50		
22	Kano	₩ 2,981,980,300	₩ 2,021,735,600	₩ 3,016,518,600	₩ 4,411,651,00	0 ₩ 2,387,291,00	0 ₦ 530,613,40	0

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

State	Jan-14	Feb-14	Mar-14	Apr-14	May-14
Abia	₩ 1,297,498,300	# 821,123,500	₩ 1,175,454,800	# 967,327,400	# 2,265,644,000
Adamawa	# 4,022,792,500	# 4,317,641,300	₩ 1,627,470,600	# 1,023,694,700	# 3,493,691,500
Akwa Ibom	# 824,782,800	₩ 1,691,712,500	# 4,927,386,500	# 2, 187, 626, 200	# 2,966,925,400
Anambra	# 2,159,322,900	₩ 1,511,863,500	# 4,050,131,900	₩ 1,843,665,900	# 2,439,308,800
Bauchi	₩ 764,748,600	# 3,059,451,100	# 2,879,985,600	# 3,082,115,500	# 2,609,030,900
Bayelsa	₩ 1,218,646,400	# 2,085,499,300	₩ 3,596,177,500	# 3,958,333,500	₩ 4,856,865,900
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, 382,209,500	# 3,361,514,600	# 2,060,298,000	# 4,671,269,900
Ebonyi	₩ 3,547,140,000	# 3, 233,069,500	# 4,883,253,900	₩ 1,060,164,800	# 2,926,053,500
Edo	₩ 2,663,501,000	₩ 781,461,300	₩ 462,661,800	₩ 543,085,200	# 3,256,011,600
Ekiti	₩ 1,815,087,900	₩ 4, 128,943,600	₩ 1,512,170,300	# 2,592,908,100	# 3,340,038,100
Enugu	# 1,409,979,200	# 2,609,372,800	# 1,990,646,300	# 3,219,650,200	# 1,893,090,400
FCT	₩ 3,199,223,200	₩ 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	# 4,994,515,700	₩ 3,014,428,300
ligawa	# 3,550,126,700	# 1, 573,445,100	# 3,756,243,200	# 3,092,703,100	₩ 1,417,968,700
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	₩ 2,387,291,000
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, 495,830,100	₩ 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	# 11,610,307,000
Nasarawa	# 450,732,700	# 4,852,095,900	# 1,411,838,200	₩ 743,233,200	# 492,081,500
Niger	# 3,002,387,100	# 4,592,318,900	# 3,219,870,900	₩ 1,086,334,400	# 3,979,805,300
Ogun	# 3,434,714,900	# 2,586,000,100	# 3,907,557,600	# 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	# 952,778,800	# 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	# 1,622,967,600	₩ 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.

5/N	Pizza Sold	Price	Quantity	Amount Sold	Time
	1 Mestzes	\$2,000.00		\$10,000,00	8:00:01 AM
	2 Extravaganza	\$2,000.00	4		8:00:02 AM
	3 880 Chicken	\$4,000.00		\$20,000,00	8:00:04 AM
	4 Extravaganza	\$2,000.00	1	₩2,000,00	8:00:07 AM
	5 Mestzes	\$2,000.00	4	₩8.000.00	8:00:08 AM
	6 Hot Veggie	\$4,000.00	2		8:00:14 AM
	7 BBQ Phility Steak	\$4,000.00			8:00:20 AM
	8 Chicken Feast	\$2,000.00	1		8:00:20 AM
	9 Meetzee	\$2,000.00	3		8:00:22 AM
	0 Chicken Suya	\$4,000.00			8:00:25 AM
1		\$2,000.00			8:00:26 AM
	2 BBQ Philly Steak	\$4,000.00	4		8:00:27 AM
	3 Chicken Suya	\$4,000.00	2		8:00:29 AM
1		\$2,000.00			8:00:33 AM
-	5 Chicken Feast	\$2,000.00	4		8:00:33 AM
	6 Beef Suya	#3,000,00			8:00:34 AM
	7 Chicken Feast	#2,000.00			8:00:35AM
	8 Hot Veggie	#4,000.00			8:00:35 AM
	9 Meetzaa	\$2,000.00			8:00:35 AM
	0 Meetzee	\$2,000.00	2		8:00:36 AM
	1 Marcarita	\$4,000.00	3		8:00:36AM
	2 Italiano	#4,000.00			8:00:37 AM 8:00:40 AM
		#4,000.00	2		8:00:45 AM
	3 Hot Veggie				
	4 Pepperoni Suya	₩3,000.00	3		8:00:45 AM
	Veggie Supreme	₩3,000.00	3		8:00:48 A.M
	6 Hot Pepperoni Reast	\$4,000.00 \$2,000.00	4		8:00:49 AM 8:00:49 AM
	7 Chicken Legend				
	8 BBQ Philly Steak	\$4,000.00	1		8:00:52 A.M
2		#4,000.00	2		8:00:56 A.M
3		₩2,000.00	4		8:00:56 A.M
3		₩2,000.00	3		8:00:57 AM
	2 Veggie Supreme	₩3,000.00	2		8:00:57 AM
	3 Extravaganza	₩2,000.00	4		8:01:00 AM
	4 Pepperoni Suya	#3,000.00	4		8:01:01 AM
	5 Veggie Supreme	#3,000.00	2		8:01:02 AM
	6 Extravaganza	₩2,000.00	2		8:01:08 A.M
3		₩3,000.00	2		8:01:14 AM
	8 BBQ Phility Steak	\$4,000.00	2		8:01:16 AM
	9 Pepperoni Feast	\$4,000.00			8:01:16 AM
	0 Chicken Bali	\$2,000.00	4		8:01:17 AM
	1 Pepperoni Suya	\$3,000.00	2		8:01:18 AM
	2 BBQ Philly Steak	\$4,000.00			8:01:20 AM
	3 Chicken Bali	\$2,000.00	3		8:01:21 AM
	4 Italian o	₩3,000.00	3		8:01:22 AM
	5 BBQ Phility Steak	\$4,000.00	4		8:01:26 AM
4	6 Hot Pepperoni Feast	#4,000.00		₩20,000.00	8:01:28AM

47 Chicken L	egend	\$2,000.00	2	₩4,000.00	8:01:31 AM
48 Chicken B		#2.000.00	2	#4,000.00	8:01:32 A/
49 88Q Ph in		\$4,000.00	1	#4,000.00	8:01:34 AM
30 880 Chick		\$4,000.00	4	\$15,000.00	8:01:34 AM
51 Pepperon	iFeast	#4,000.00	4	\$15,000.00	8:01:35 A/
52 880 Ph in	/ Steak	\$4,000.00	1	#4,000.00	8:01:35 AM
53 88Q Ph ilt		\$4,000.00	4	\$15,000.00	8:01:36 A/
34 Pepperon	iSuya	#3,000.00	2	\$6,000.00	8:01:37 A/
55 Veggie Su	preme	₩3,000.00	5	#15,000.00	8:01:37 AM
36 Chicken S	uya	₩4,000.00	5	\$20,000.00	8:01:39 A/
57 Margarita	1 ()	\$4,000.00	4	#16,000.00	8:01:43 AM
38 Chicken B	ali	₩2,000.00	5	₩10,000.00	8:01:44 AM
39 Mestzes		\$2,000.00	5	₩10,000.00	8:01:44 AM
60 BBQ Phill	/ Steak	#4,000.00	3	\$12,000.00	8:01:45 AM
61 Pepperon	iSuya	#3,000.00	5	#15,000.00	8:01:48 AM
62 Chicken F	east	₩2,000.00	5	⇒10,000.00	8:01:49 AM
63 Chicken F	east	₩2,000.00	4	#8,000.00	8:01:52 AM
64 Chicken S	uya	#4,000.00	2	₩8,000.00	8:01:54 AM
65 Chicken L	egend	\$2,000.00	3	\$6,000.00	8:01:55 A/
66 Chicken F	east	\$2,000.00	4	₩8,000.00	8:01:35 AM
67 Chicken B	đi	\$2,000.00	1	#2,000.00	8:02:03 AM
68 Pepperon	i Suya	#3,000.00	1	#3,000.00	8:02:03 AM
69 Pepperon		#4,000.00	3	#12,000.00	8:02:04 AM
70 Beef Suys		#3,000.00	3	\$9,000.00	8:02:05 AM
71 880 Chici	ken	#4,000.00	1	\$4,000.00	8:02:05 AM
72 Pepperon	iFeast	\$4,000.00	3	#12,000.00	8:02:10 AM
73 Pepperon	Feast	\$4,000.00	5	\$20,000.00	8:02:13 AM
74 BBQ Chick	kein	\$4,000.00	2	#8,000.00	8:02:13 AM
75 Extravaga	inza	\$2,000.00	5	#10,000.00	8:02:18 AM
76 Chicken L	egend	\$2,000.00	1	\$2,000.00	8:02:18 AM
77 Pepperon	ii Suya	#3,000.00	2	\$6,000.00	8:02:22 AM
78 Hot Veggi		#4,000.00	2	#8,000.00	8:02:22 AM
79 Extravaga	inza	₩2,000.00	3	₩6,000.00	8:02:30 AM
80 Chicken S	uya	#4,000.00	3	\$12,000.00	8:02:31 AM
81 Pepperon	iFeast	₩4,000.00	5	\$20,000.00	8:02:35 A/
82 Pepperon	iFeast	#4,000.00	3	#12,000.00	8:02:36 AM
83 BBQ Chick	kein	#4,000.00	3	\$12,000.00	8:02:37 AM
84 BBQ Phill	Steak	₩4,000.00	4	₩16,000.00	8:02:38 A/
85 Hot Veggi		#4,000.00	5	₩20,000.00	8:02:38 A/
86 Chicken B	ai	#2,000.00	1	\$2,000.00	8:02:42 AM
87 Beef Suya	1	#3,000.00	2	\$6,000.00	8:02:44 AM
88 88Q Ph ilt	/ Steak	\$4,000.00	2	#8,000.00	8:02:45 AM
89 Veggie Su	preme	#3,000.00	4	\$12,000.00	8:02:47 AM
90 Chicken S	uya	\$4,000.00	1	\$4,000.00	8:02:47 AI
91 880 Chc	ken	\$4,000.00	5	#20,000.00	8:02:49 AM
92 88Q Ph ilt	Steak	\$4,000.00	4	\$16,000.00	\$:02:50 AM
93 Meetzee		\$2,000.00	5	#10,000.00	\$:02:50 AM

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.

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2		Meatzaa	₩ 2,000.00	5	₩ 10,000.00		Before 9:00am	
3	1	Extravaganza	₩ 2,000.00	4	₩ 8,000.00		Before 9:00am	18
4	200 Dec	BBQ Chicken	₩ 4,000.00	5	₩ 20,000.00	2	Before 9:00am Before 9:00am	-
6		Extravaganza Meatzaa	¥ 2,000.00 ¥ 2,000.00	4	¥ 2,000.00 ¥ 8,000.00		Before 9:00am	12
7	-	Hot Veggie	₩ 4,000.00	2	₩ 8,000.00		Before 9:00am	
8	1.1	BBQ Philly Steak	₩ 4,000.00	5	₩ 20,000.00		Before 9:00am	12
9	-	Chicken Feast	₩ 2,000.00	1	₩ 2,000.00		Before 9:00am	-
10	- 7	Meatzaa	₩ 2,000.00	3	₩ 6,000.00		Before 9:00am	12
11	-	Chicken Suya	₩ 4,000.00	5	₩ 20,000.00		Before 9:00am	
12	- Contract	Chicken Legend	₩ 2,000.00	5	₩ 10,000.00		Before 9:00am	18
13		BBQ Philly Steak	₩ 4,000.00	4	₩ 16,000.00		Before 9:00am	-
14	1011	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	
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And that is all!

So let's see the result.

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	8:00:25 AM
12	BBQ Philly Steak	₩ 4,000.00	4	₩ 15,000.00	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	BeefSuya	₩ 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
	Italiano	# 3,000.00	5	# 15,000.00	8:00:40 AM
28	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
	Veggie Supreme	# 3,000.00	5	₩ 15.000.00	8:00:48 AM
	Hot Pepperoni Feast	₩ 4.000.00	3	₩ 12.000.00	8:00:49 AM
	Chicken Legend	₩ 2,000.00	4	₩ 8,000.00	8:00:49 AM
	BBQ Philly Steak	₩ 4,000.00	1	₩ 4,000.00	8:00:52 AM
	Hot Pepperoni Feast	₩ 4.000.00	2	# 8.000.00	8:00:56 AM
	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
Ð	Veggie Supreme	# 3,000.00	2	# 6,000,00	8:00:57 AM
	Extravaganza	₩ 2,000,00	4	# 8,000,00	8:01:00 AM
	Pepperoni Suya	# 3,000,00	4	# 12,000,00	801-01 AM
	Veggie Supreme	# 3,000.00	2	# 6.000.00	8:01:02 AM
	Extravaganza	₩ 2,000,00	2	₩ 4.000.00	80108AM
	Italiano	# 3,000,00	2	₩ 6.000.00	801-14 AM
38	BBQ Philly Steak	₩ 4,000,00	2	# 8.000.00	801-16 AM
	Pepperoni Feast	₩ 4.000.00	5	# 20.000.00	801:16 AM
	Chicken Bali	# 2,000,00	4	# 8.000.00	801:17 AM
41	Pepperoni Suya	₩ 3,000,00	2	₩ 6.000.00	801-18 AM
	BBQ Philly Steak	₩ 4.000.00	5	# 20.000.00	8:01:20 AM
	Chicken Bali	₩ 2,000,00	3	₩ 6.000.00	80121 AM
	Italiano	₩ 3.000.00	5	₩ 15.000.00	8:01:22 AM
	BBQ Philly Steak	₩ 4.000.00	4	₩ 16.000.00	8:01:26 AM
	Hot Pepperoni Feast	₩ 4.000.00	5	₩ 20.000.00	8:01:28 AM

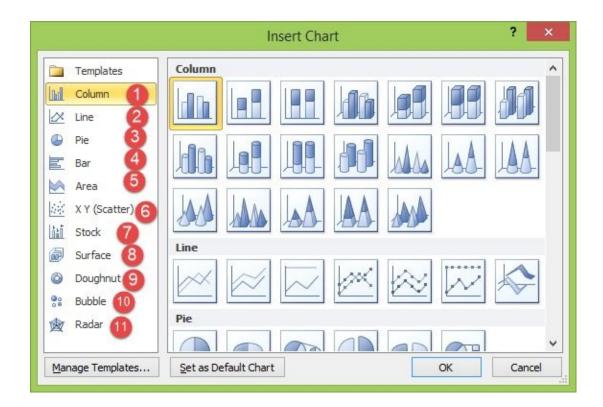
V.	Pizza Sold	Price	Quantity	Amount Sold	Time
47	Chicken Legend	# 2,000.00	2	₩ 4,000.00	8:01:31 AM
48	Chicken Bali	# 2,000.00	2	₩ 4,000.00	8:01:32 AM
49	BBQ Philly Steak	₩ 4,000.00	1	₩ 4,000.00	8:01:34 AM
50	BBQ Chicken	₩ 4,000.00	4	₩ 16,000.00	8:01:34 AM
51	Pepperoni Feast	₩ 4,000.00		₩ 16,000.00	
2	BBQ Philly Steak	₩ 4,000.00	1	₩ 4,000.00	8:01:35 AM
3	BBQ Philly Steak	₩ 4,000.00	4	₩ 16,000.00	8:01:35 AM
54	Pepperoni Suya	₩ 3,000.00	2	# 6,000.00	8:01:37 AM
5	Veggie Supreme	₩ 3,000.00	5	₩ 15,000.00	8:01:37 AM
	Chicken Suya	₩ 4,000.00	5	# 20,000.00	8:01:39 AM
57	Margarita	₩ 4,000.00	4	₩ 16,000.00	8:01:43 AM
	Chicken Bali	# 2,000.00	5	₩ 10,000.00	8:01:44 AM
19	Meatzaa	# 2,000.00	5	₩ 10,000.00	8:01:44 AM
60	BBQ Philly Steak	₩ 4,000.00	3	₩ 12,000.00	8:01:45 AM
61	Pepperoni Suya	₩ 3,000.00	5	# 15,000.00	8:01:48 AM
62	Chicken Feast	₩ 2,000.00	5	₩ 10,000.00	8:01:49 AM
8	Chicken Feast	# 2,000.00	4	₩ 8,000.00	8:01:52 AM
	Chicken Suya	₩ 4,000.00	2	# 8,000.00	8:01:54 AM
6	Chicken Legend	# 2,000.00	3	₩ 6,000.00	8:01:55 AM
66	Chicken Feast	₩ 2,000.00	4	₩ 8,000.00	8:01:55 AM
67	Chicken Bali	₩ 2,000.00	1	# 2,000.00	8:02:05 AM
68	Pepperoni Suya	# 3,000.00	1	# 3,000.00	8:02:05 AM
69	Pepperoni Feast	₩ 4,000.00	3	₩ 12,000.00	8:02:04 AM
70	BeefSuya	# 3,000.00	3	# 9,000.00	8:02:05 AM
71	BBQ Chicken	₩ 4,000.00	1	₩ 4,000.00	8:02:06 AM
72	Pepperoni Feast	₩ 4,000.00	3	₩ 12,000.00	8:02:10 AM
73	Pepperoni Feast	₩ 4,000.00	5	₩ 20,000.00	8:02:13 AM
74	BBQ Chicken	₩ 4,000.00	2	₩ 8,000.00	8:02:13 AM
	Extravaganza	₩ 2,000.00	5	₩ 10,000.00	8:02:18 AM
75	Chicken Legend	₩ 2,000.00	1	₩ 2,000.00	8:02:18 AM
	Pepperoni Suya	# 3,000.00	2	# 6,000.00	8:02:22 AM
	Hot Veggie	₩ 4,000.00	2	₩ 8,000.00	8:02:22 AM
	Extravaganza	₩ 2,000.00	3	₩ 6,000.00	8:02:30 AM
	Chicken Suya	₩ 4,000.00	3	₩ 12,000.00	8:02:31 AM
8	Pepperoni Feast	₩ 4,000.00	5	₩ 20,000.00	8:02:35 AM
	Pepperoni Feast	₩ 4,000.00	3	₩ 12,000.00	8:02:36 AM
8	BBQ Chicken	₩ 4,000.00	3	₩ 12,000.00	8:02:37 AM
	BBQ Philly Steak	₩ 4,000.00	4	₩ 16,000.00	
西	Hot Veggie	₩ 4,000.00	5	₩ 20,000.00	8:02:38 AM
	Chicken Bali	₩ 2,000.00	1	₩ 2,000.00	8:02:42 AM
87	BeefSuya	₩ 3,000.00	2	₩ 6,000.00	8:02:44 AM
	BBQ Philly Steak	₩ 4,000.00	2	₩ 8,000.00	8:02:45 AM
	Veggie Supreme	₩ 3,000.00		₩ 12,000.00	8:02:47 AM
	Chicken Suya	₩ 4,000.00	1	₩ 4,000.00	8:02:47 AM
	BBQ Chicken	₩ 4,000.00	5	₩ 20,000.00	8:02:49 AM
9	BBQ Philly Steak	₩ 4,000.00	4	₩ 15,000.00	8:02:50 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.

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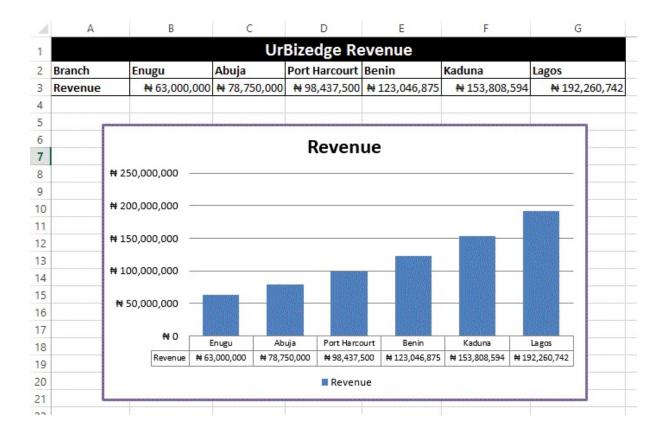
But in all you will end up using majorly,

- 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.

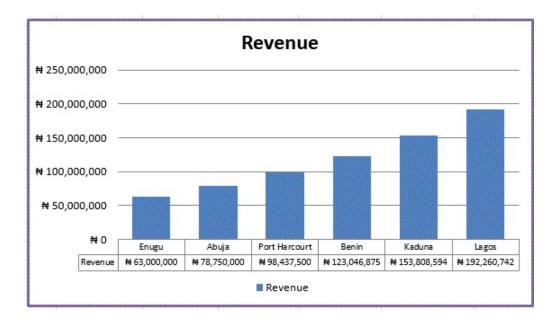
Column chart is used to visualize data across different categories. An example is revenue across the four different branches of a company.



So how do you turn a boring data like this:

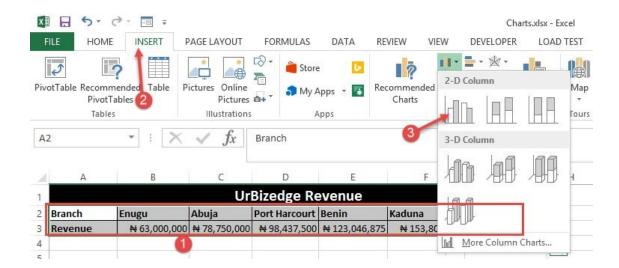
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2	Branch	Enugu	Abuja	Port Harcourt	Benin	Kaduna	Lagos	
3 4	Revenue	₩ 63,000,000	₦ 78,750,000	₩ 98,437,500	₩ 123,046,875	₩ 153,808,594	₦ 192,260,742	

Into a beautiful insightful chart like this:



It is very easy.

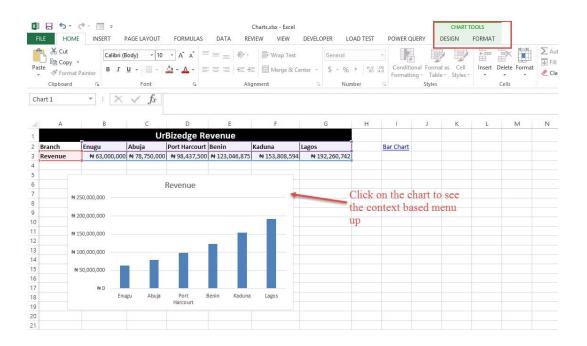
Select the table data you want to make a chart of and go to the Insert menu, click on the Column chart and select the 2D Clustered Column chart (the first option).



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

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2	Branch	Enugu	Abuja	Port Harcourt	Benin	Kaduna	Lagos	
3	Revenue	₩ 63,000,000	₩ 78,750,000	₦ 98,437,500	₦ 123,046,875	₩ 153,808,594	₩ 192,260,742	
4								
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6			1	Revenue				
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Click on the chart, and the context based menus will show up on the Excel menu bar.



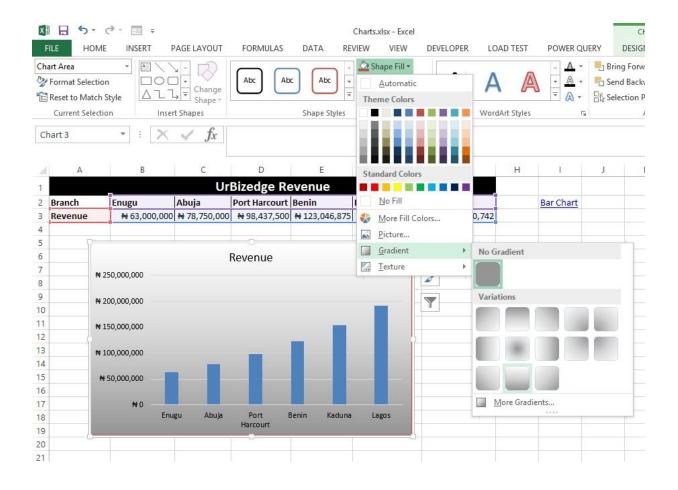
Go to the Format menu and choose a formatting you like for the entire chart. If your company's corporate color is red and purple, you might want to make charts that reflect that brand color.

XI H	5- 0- 1					Chartsa	dsx - Excel					1	CHART	TOOLS		
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3 Revent	<u>le ₩6</u>	3,000,000	₩ 78,750,000	Abc A	c Abc	Abc	Abc	Abc	Abc							
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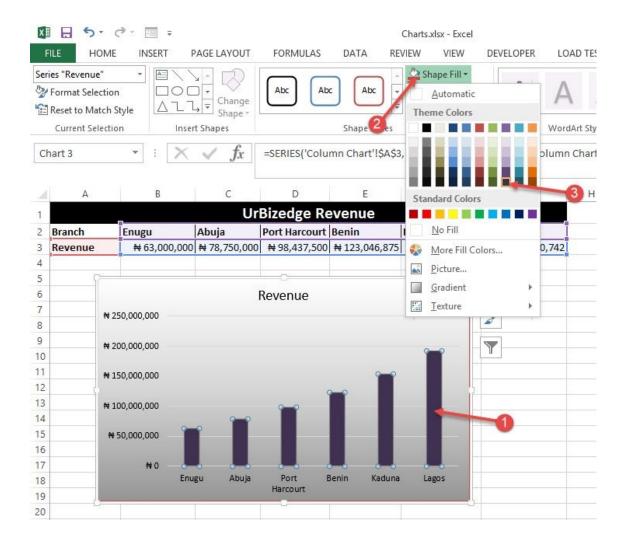
See the result red border white fill format.

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2	Branch	Enugu	Abuja	Port Harcourt		Kaduna	Lagos	
3	Revenue	₩ 63,000,000	₩ 78,750,000	₦ 98,437,500	₦ 123,046,875	₩ 153,808,594	₦ 192,260,742	
4								
5						1		
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19				Harcourt				
20								

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.

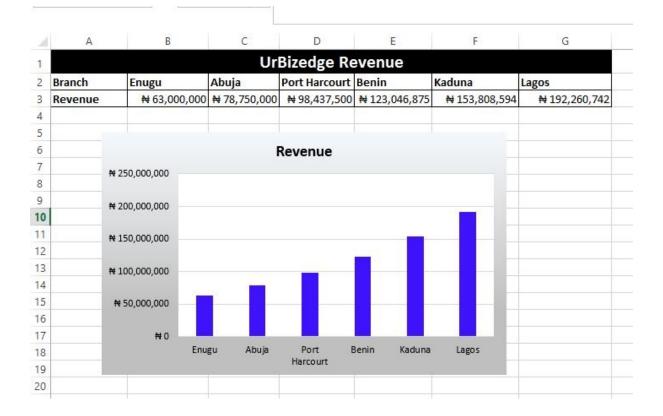


And this is the final result.

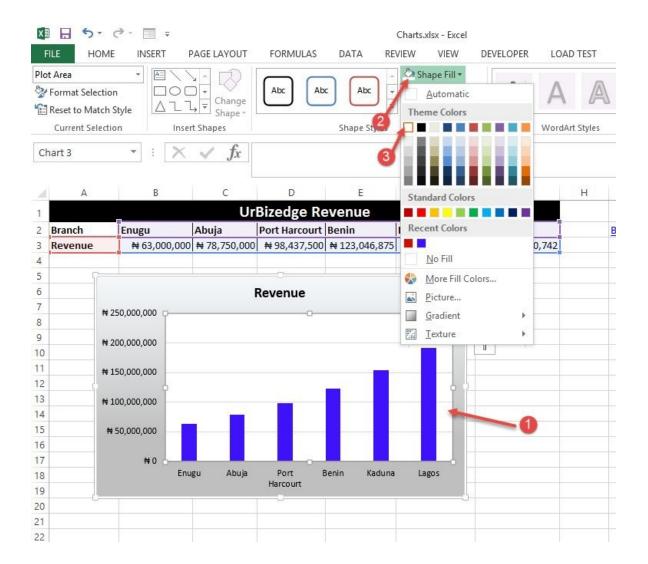
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2	Branch	Enugu	Abuja	Port Harcourt		Kaduna	Lagos	
3	Revenue				₩ 123,046,875		₩ 192,260,742	
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It looks better than the default and reflects your company's corporate color. Just that you might want 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.



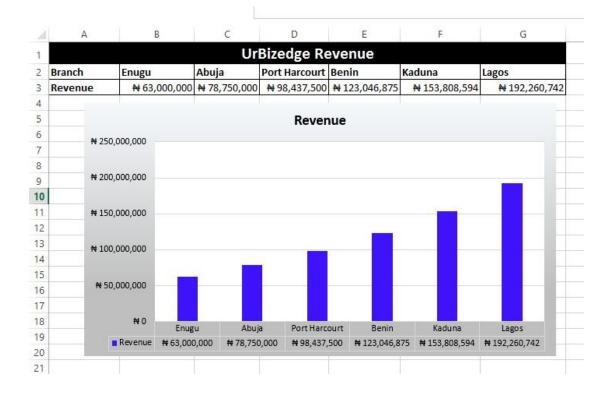
And that's basically how you insert and format a column chart. You can try inserting a 3D chart too for the same data. Follow the same steps but choose a 3D chart instead of the 2D we earlier used. And when you do the extra formatting already explained to you, you can end up with a beautiful chart like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

.4	A	В	C	D	E	F	G	2
1			Ur	Bizedge Re	evenue			
2	Branch	Enugu	Abuja	Port Harcourt	Benin	Kaduna	Lagos	
3	Revenue	₩ 63,000,000	₩ 78,750,000	₩ 98,437,500	₦ 123,046,875	₩ 153,808,594	₦ 192,260,742	
4								
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8		H0	Enugu Ab	uia Port	Benin Kao	duna Lagos		
9				Harcourt				
0								
1				Revenu 📕	ie			
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Finally, you can insert other elements on the chart like the data table, as shown below.

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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).

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3	Reven	ue	₩ 63,000,000	₦ 78,750,000	₩ 98,437,500	₩ 123,046,8	75 ₦ 153,80				
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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.

	A	В	C	D	E	F	G
1			Ur	Bizedge Re	evenue		
2	Branch E	nugu	Abuja	Port Harcourt	Benin	Kaduna	Lagos
3	Product A	₩ 21,000,000	₦ 26,250,000	₩ 32,812,500	₩ 41,015,625	₩ 51,269,531	₩ 64,086,914
4	Product B	₩ 21,000,000	₩ 26,250,000	₩ 32,812,500	₩ 41,015,625	₩ 51,269,531	₩ 64,086,914
5	Product C	₩ 21,000,000	₩ 26,250,000	₩ 32,812,500	₩ 41,015,625	₩ 51,269,531	₩ 64,086,914
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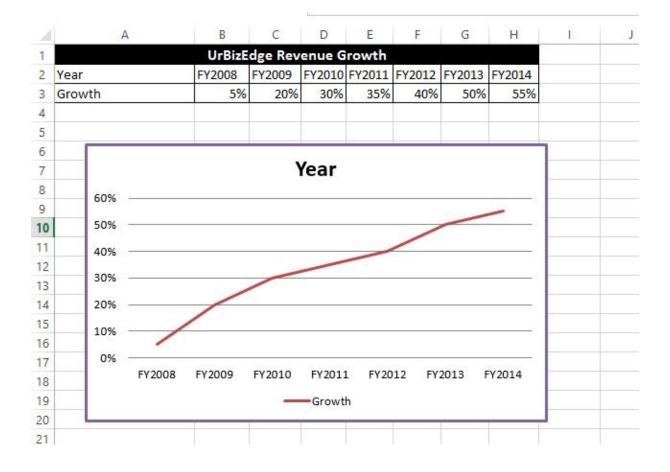
To do this stacked column chart, you simply select the entire table data, including the breakdown by products and choose the Stacked Column chart. And as you can see, it shows a breakdown of each bar by the constituting parts (products in this example)

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.

зi	A	В	С	D	E	F	G
1			Ur	Bizedge Re	evenue		
2	Branch E	nugu	Abuja	Port Harcourt	Benin	Kaduna	Lagos
3	Product A	₩ 21,000,000	₩ 26,250,000	₩ 32,812,500	₩ 41,015,625	₩ 51,269,53	L ₩ 64,086,914
4	Product B	₩ 21,000,000	₩ 26,250,000	₩ 32,812,500	₩ 41,015,625	₩ 51,269,53	L ₩ 64,086,914
5	Product C	₩ 21,000,000	₩ 26,250,000	₩ 32,812,500	₩ 41,015,625	₩ 51,269,53	L ₩ 64,086,914
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1	= Produ						₩ 64,086,914
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24							

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.

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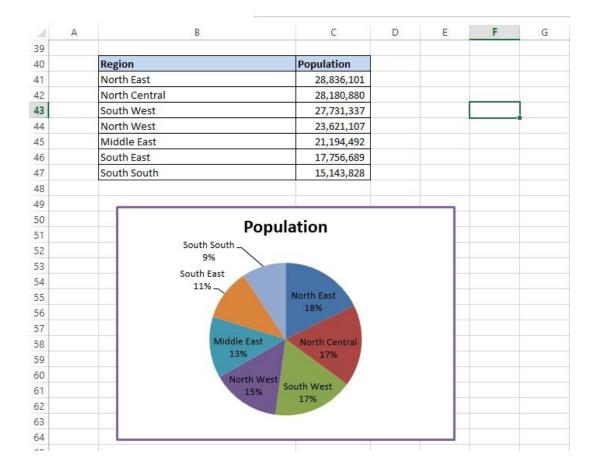
Again, Excel does a fairly good job and you can easily improve the format of the chart using the steps already explained.

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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.

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42	North Central		28,180,880		3-D Pie					
43	South West		27,731,337							
44	North West		23,621,107							
45	Middle East		21,194,492	<u>.</u>			_			
46	South East		17,756,689		Doughnut	t -	ion			
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Excel does a default pie chart that you can greatly improve.

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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.

Α	В	С	D	E	F	G	Н	1	J	К	L	M
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2 UrBizedge	Revenue											
3 7UP	₩ 5,614,815									ele ele ele ele ele ele ele		
4 ABBEY BUILDING SOCIETY PLC	₩ 7,440,226					Reve	nue					
5 ABC TRANSPORT PLC	₩ 7,837,746											
6 ACADEMY PRESS PLC.	₩ 6,322,442			AFROMEDI	A PLC	an an an an an an an an an an an an an a	an an an an an an an an an an an an an a					
7 ACCESS BANK PLC.	₩ 5,498,721			AFROI	L PLC			a hair dhair				
8 ADSWITCH PLC.	₩ 5,381,628		AFRICA PRUDI	ENTIAL REGISTRAR	S PLC	Checkel States and the	in a sur arsan	es de las de las de	the and a second	Subacine a		
9 AFRICAN ALLIANCE INSURANCE COMPANY PL	€ ₩ 7,831,212	AFRI	CAN ALLIANCE INS	URANCE COMPAN	YPIC							
10 AFRICA PRUDENTIAL REGISTRARS PLC	₩ 7,780,520			ADSWITCH					INTO ITS N TO RECUTS	and a second second second second second second second second second second second second second second second		
11 AFROIL PLC	₩ 5,774,386											
12 AFROMEDIA PLC	₩ 5,552,803			ACCESS BANK	PLC.	e na se se se se se se se se se se se se se	de le dédeide de	na haing balans				
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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.

	A	В	С	D	E	F	G	Н	1	J	K	1
1	UrBizEd	ge 6 Year Reve	nue Trend									
2	UrBizedge	Revenue	Growth								8	
3	FY2013	₩ 63,000,000				UrBize	dge 6	Year H	levenue	e Irend	6	
4	FY2014	₩ 87,500,000	39%		₩ 350,000,00	0 0					70%	
5	FY2015	₩ 140,625,000	61%		₩ 300,000,00	n					60%	
6	FY2016	₩ 192,260,742	37%					\wedge			001109053	I
7	FY2017	₩ 246,093,750	28%		₩ 250,000,00		/				- 50%	I
8	FY2018	₩ 320,434,570	30%		₩ 200,000,00	00	/				- 40%	I
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2					85 85						0%	
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4						11201	, 112014	112015	112010	112017 11	2010	
15							Re	evenue 🗕	Growth			ľ
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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.

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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.

4	A	В	C	D	E	F	G
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	К	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

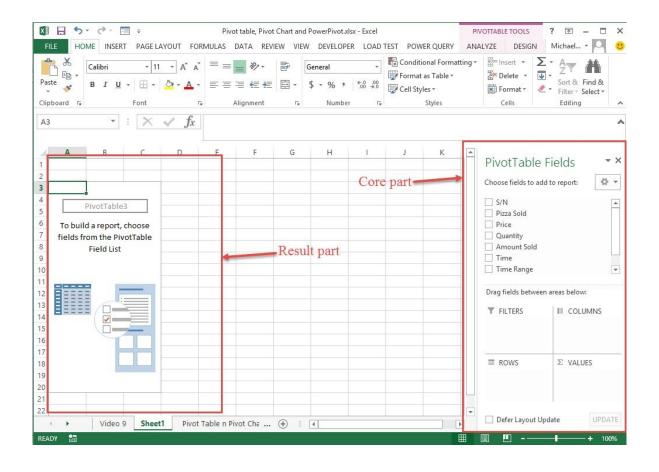
It's quite easy with Pivot Table.

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.

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á.	А	В	C	D		E		F	(3	Н	
1 5	/N	Pizza Sold	Price	Quantity	Amou	int Sold	Time		Time Rai	nge]	
2	1	Meatzaa	₩ 2,000.00	5	0 2	₩ 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					-		? ×	
5	4	Extravaganza	₩ 2,000.00	1				Create Pivo	traple			
6	5	Meatzaa 🚺	₩ 2,000.00	4		Choose the data f	that you	want to analy	ze			-
7	6	Hot Veggie	₩ 4,000.00	2		• Select a table	e or rang	je 🙆				
8	7	BBQ Philly Steak	₩ 4,000.00	5		<u>T</u> able/Ra	nge: F	Pivot Table n Pi	vot Chart'!	AS1:SGS5	001	5
9	8	Chicken Feast	₩ 2,000.00	1		O Use an exter	nal data	source				
0	9	Meatzaa	₩ 2,000.00	3		Choose	Connec	tion				
1	10	Chicken Suya	₩ 4,000.00	5		Connecti						
2	11	Chicken Legend	₩ 2,000.00	5		Choose where yo	1212102011		report to b	aplaced		
3	12	BBQ Philly Steak	₩ 4,000.00	4		New Worksh		ne rivotrable i	report to b	e placeu		
4	13	Chicken Suya	₩ 4,000.00	2		Existing Works						
5	14	Chicken Feast	₩ 2,000.00	5		Location	No contractor				E	
16	15	Chicken Feast	₩ 2,000.00	4		-	-		10050808-004	0	FR	18
7	16	Beef Suya	₩ 3,000.00	5	20	Choose whether j		v	ultiple table	es		-
8	17	Chicken Feast	₩ 2,000.00	5		Add this dat	a to the	Data <u>M</u> odel				
9	18	Hot Veggie	₩ 4,000.00	5					ОК		Cancel	1
20	19	Meatzaa	₩ 2,000.00	5			12				14	-1
- E	20	Meatzaa	₩ 2,000.00	2		₩4,000.00		8:00:36 AM	Before 9	:00am	1	
21	10000	100 Low 013 377 5128										

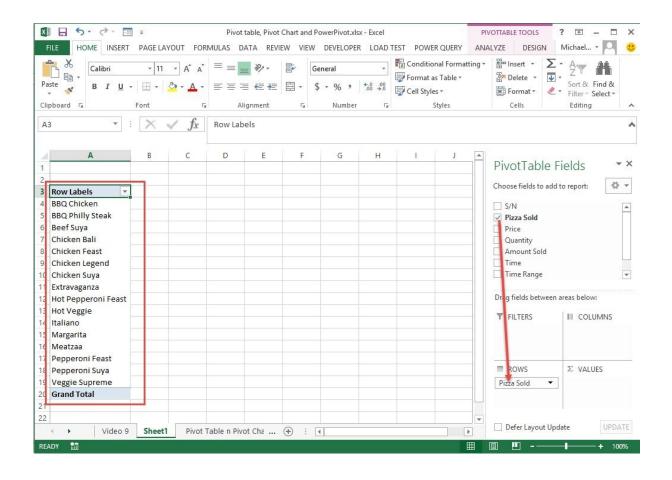
In the screenshot above, I selected one of the cells in the table, clicked on Insert menu, clicked on PivotTable, confirmed that my entire table has been selected and clicked on OK.

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



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.



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.

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4	A	В	C	D	E	PivotTable Fie	lds -
	n Labels <mark>- </mark> hicken B	BQ Philly Steak	Beef Suya	Chicken Bali Chi	icken Feast Chick	Choose fields to add to r S/N Pizza Sold Price Quantity Amount Sold	report:
>						 Time Time Range 	
						Drag fields between are	as below:
						T FILTERS	
							Pizza Sold
						ROWS 2	Σ VALUES
1							

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.

te board S	• 11 • A* A* ⊞ • 🖉 • 🛓 • Font 5	≡ ≡ ∎ ≫ • ≡ ≡ ≡ ∉ ₩ Alignment	General	Conditional Formatting Format as Table * Cell Styles * Styles	y · ₩ Inset ·	
• 1	$\times \checkmark f_x$	Row Labels				
А	В	C	D	E	PivotTable Fields	•
		64			Choose fields to add to report:	4
Row Labels S BO Chicken	um of Quantity Sui 900	3600000				172
BQ Philly Steak	952	3808000			S/N	
Beef Suya	981	2943000			Prizza Sold	
Chicken Bali	889	1778000			Quantity	
Chicken Feast	872	1744000			Amount Sold	
Chicken Legend	883	1766000			Time	- 3
Chicken Suya	956	3824000			Time Range	
Extravaganza	907	1814000				
lot Pepperoni Feast	1073	4292000			Drag fields between areas below:	
Hot Veggie	950	3800000				
taliano	985	2955000			T FILTERS	S
Margarita	871	3484000			∑ Values	
Veatzaa	838	1676000				
Pepperoni Feast	907	3628000				
Pepperoni Suya	1077	3231000			\equiv ROWS Σ ALUES	
Veggie Supreme	1009	3027000			Pizza Sold 🔻 Sum of Quar	nt 🔻
Grand Total	15050	47370000			Sum of Amo	u 🔻
				1		

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.

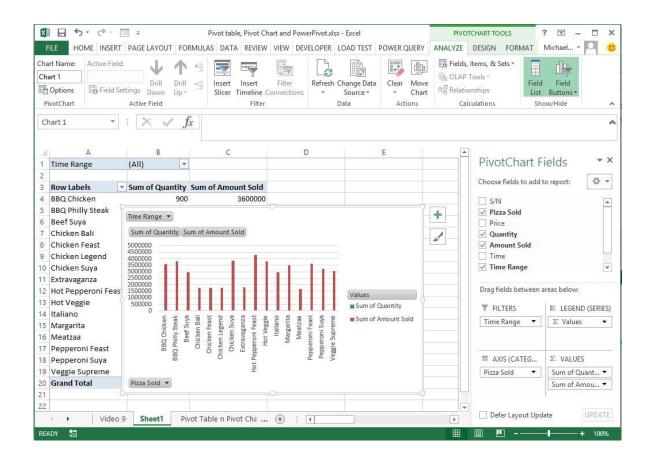
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A3 • : × ✓ ƒ3	Row Labels						~
A B 1 Time Range (All) 2 Search	C	D		E	A	PivotTable F	
3 (All) After 9:00am Before 9:00am	Sum of Amount Sold 3600000 3808000 2943000					Choose fields to add t S/N Pizza Sold Price	to report:
7 8 9 10	1778000 1744000 1766000 3824000					Quantity Amount Sold Time Time Range	•
11 12 Select Multiple Items 13 14 0K Cancel	1814000 4292000 3800000 2955000 3484000					Drag fields between a T FILTERS Time Range	reas below: IIII COLUMNS Σ Values ▼
Imagenta 072 16 Meatzaa 838 17 Pepperoni Feast 907 18 Pepperoni Suya 1077	1676000 3628000 3231000					Rows	Σ VALUES
Veggie Supreme 1007 20 Grand Total 15050	3027000 47370000					Pizza Sold 🔻	Sum of Amou •
22	ot Table n Pivot Cha	+ : •			•	Defer Layout Upd	ate UPDATE

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.

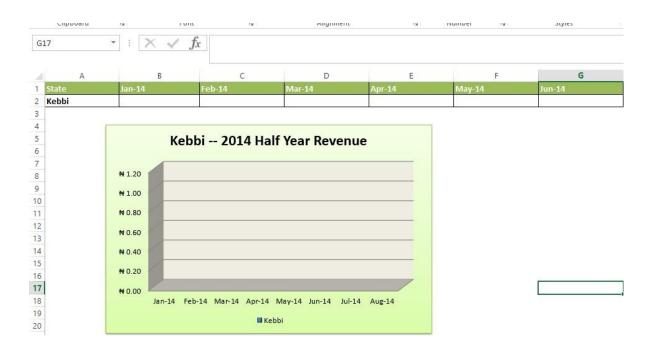
Business Data Analysis

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.

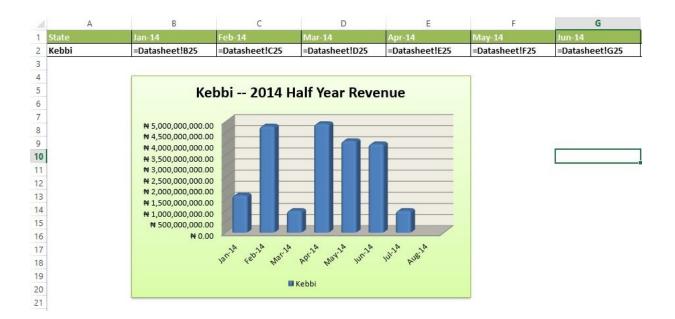
An example is if there is a sheet that contains the internal revenue of all the states in Nigeria and you are doing a report on Kebbi state. You want to pull the values for Kebbi state from the sheet that has everything (source sheet), your best bet is to link the sheets. It is preferable to copying 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?



1	А	В	С	D	E	F	G
1			Internally	Generated Revenue	e of States in Niger	ia	
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	₦ 1,684,273,500.00	₦ 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	N 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:



2	A	В	C	D	E	F	G
1			Internally	Generated Revenue	e of States in Niger	a	
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	₦ 1,6828,500.00	₦ 4, 02252,900.00	₦ 90 23,500.00	₩ 4, 100.00	₩ 4,151250,900.00	₦ 3,9@218,100.00
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	N 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...

	В	C	D	E	F	(
1	Family Mont	hly Budget and	Expense Sh	eet		
2		- J 0	I			
3	Budgeted	Expense for the Month	Actual Expense	Surplus/Deficit		Projected Monthly
4	Мау	NGN 40,000	NGN 35,000	NGN 5,000		Income 1
5						Income 2
6	Housing	Budgeted Cost 💌	Actual Cost 💌	Difference 💌		Extra income
7	House Rent	NGN 5,000	NGN 5,000 🖒	NGN 0		Total monthly incom
8	Business Rent	NGN 0	NGN 0 🖒	NGN 0		
9	Phone	NGN 25,000	NGN 15,000 🏠	NGN 10,000	Insert	ctual Monthly In
0	Electricity	NGN 10,000	NGN 15,000 🤑	-NGN 5,000	Delete	ncome 1
1	Gas		\$	NGN 0	<u>R</u> ename	1come 2
2	Water and sewer			NGN C	Move or Copy	ctra income
3	Cable		⇒	NGN 0	Q View Code	otal monthly incom
4	Waste removal		4	NGN 0	Protect Sheet	
5	wantenance or		4	NGN 0	Tab Color	udgeted Income
	Supplies		\$	NGN 0	<u>H</u> ide	ctual Income - A
6	and the second se			NGN 0		ifference

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1	В		C	D	E	F		
1	Family M	onthly l	Budget an	d Expense Sł	neet			
2	Rue	lasted Experie	se for the Month	Actual Expense	Surplus/Deficit		Projected I	Mon
-	Мау	igered expens	NGN 40,000	NGN 35,000	NGN 5,000		Income 1	WON
5							Income 2	
6	Housing	- Bi	udgeted Cost 💌	Actual Cost 💌	D	Move or Copy	? ×	
7	House Rent		NGN 5,000	NGN 5,000 🖒				inc
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7	Other			4	2	ОК	Cancel	
8	Total		NGN 40,000	NGN 35,000	טטט,כ אוטא			
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n	Budgeted E May	xpense for the Month NGN 40,000	Actual Expense NGN 35,000	Surplus/Deficit NGN 5,000		Projected Monthly Income Income 1		NGN 100,000	
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ł	May Housing House Rent Business Rent Phone	NGN 40,000 Budgeted Cost V NGN 5,000	NGN 35,000 Actual Cost ▼ NGN 5,000 🖒	NGN 5,000 Difference 💌 NGN 0		Income 1 Income 2 Extra income	lonth End)	NGN 80,000 NGN 50,000	Just fill in Budgeted Exp the ones that you find r parts that you that don Also fill your Budgeted the month. Then at the
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H E E C C	May House Rent Business Rent Phone Electricity Gas Water and sewer	NGN 40,000 Budgeted Cost NGN 5,000 NGN 0 NGN 25,000	NGN 35,000 Actual Cost ▼ NGN 5,000 ↔ NGN 15,000 ↑ NGN 15,000 ↓ ☆	NGN 5,000 Difference NGN 0 NGN 0 NGN 10,000 -NGN 5,000 NGN 0 NGN 0		income 1 Income 2 Extra income Total monthly income Actual Monthly Income (filled at M Income 1	lonth End)	NGN 80,000 NGN 50,000 NGN 230,000 NGN 100,000	Just fill in Budgeted Exp the ones that you find n parts that you that don Also fill your Budgeted n the month. Then at the Actual income for that You can save a copy of t
H E E C C	May House Rent Business Rent Phone Electricity Gas Water and sewer Cable	NGN 40,000 Budgeted Cost NGN 5,000 NGN 0 NGN 25,000	NGN 35,000 Actual Cost ▼ NGN 5,000 ↔ NGN 15,000 ∯ NGN 15,000 ∯ ⇔ ⇔	NGN 5,000		income 1 Income 2 Extra income Total monthly income Actual Monthly Income (filled at M Income 1 Income 2	Ionth End)	NGN 80,000 NGN 50,000 NGN 230,000 NGN 100,000 NGN 80,000	Just fill in Budgeted Exp the ones that you find n parts that you that don Also fill your Budgeted i the month. Then at the Actual income for that i You can save a copy of you'll need it for the neu
	May Housing House Rent Business Rent Phone Electricity Gas Water and sewer Cable Waster removal	NGN 40,000 Budgeted Cost NGN 5,000 NGN 0 NGN 25,000	NGN 35,000 Actual Cost ▼ NGN 5,000 ⇔ NGN 15,000 ↑ NGN 15,000 ↓ ⇔ ⇔ ⇔	NGN 5,000		income 1 Income 2 Extra income Total monthly income Actual Monthly Income (filled at M Income 1 Income 2 Extra income Total monthly income	Ionth End)	NGN 80,000 NGN 50,000 NGN 230,000 NGN 100,000 NGN 80,000 NGN 25,000 NGN 205,000	Just fill in Budgeted Exp the ones that you find n parts that you that don Also fill your Budgeted i the month. Then at the Actual income for that i You can save a copy of you'll need it for the neu
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Inserting Sheets, Renaming Sheets and Changing Sheet Tab color

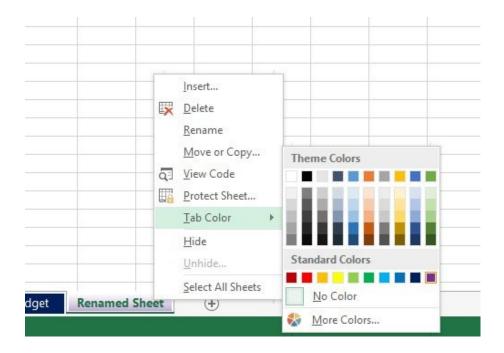
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12	Water and sewer			
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Finally, you can give it the color you want. Again, right click on the sheet name and click on Tab Color. Choose the color you want.



Freezing Panes

There will be times you have a table to 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.

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51		$f = \int f f f f f f f f f f f f f f f f f $	Jan-14			PERM	Freeze Top Row		
d.	A	В	c	D			Keep the top row the rest of the wo	visible while scrolling through rksheet.	
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	Adamawa	₩ 4,022,792,500.00	₩ 4,317,641,300.0	N 1,627,4	70,600.00	₩ 1,02	3,694,700.00	₩ 3,493,691,500.00	-
	Akwa Ibom	₩ 824,782,800.00	₩ 1,691,712,500.0	0 14,927,3	86,500.00	₩ 2,18	37,626,200.00	₦ 2,966,925,400.00	-
	Anambra	₩ 2,159,322,900.00	N 1,511,863,500.0	N 4,060,1	31,900.00	₩ 1,84	3,665,900.00	₦ 2,439,308,800.00	-
	Bauchi	N 764,748,600.00	N 3,059,451,100.0	0 N 2,879,9	85,600.00	N 3,03	2,115,500.00	₩ 2,609,030,900.00	1
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1	Cross River	₦ 2,416,592,600.00	₩ 1,971,834,600.0	₩ 1,814,1	42,400.00	₩ 4,65	8,487,000.00	₩ 745,327,000.00	
2	Delta	₦ 4,755,914,300.00	₩ 2,382,209,500.0	0 ₦ 3,361,5	14,600.00	₩ 2,06	0,298,000.00	₦ 4,671,269,900.00	4
3	Ebonyi	₦ 3,547,140,000.00	₦ 3,233,069,500.0	0 ₩ 4,883,2	53,900.00	₩ 1,06	60,164,800.00	₦ 2,926,053,500.00	
4	Edo	₦ 2,663,501,000.00	₩ 781,461,300.0	N 462,6	61,800.00	₩ 54	3,085,200.00	₦ 3,256,011,600.00	4
5	Ekiti	₦ 1,816,087,900.00	₩ 4,128,943,600.0	N 1,512,1	70,300.00	₩ 2,59	2,908,100.00	₦ 3,340,038,100.00	1
5	Enugu	N 1,409,979,200.00	₦ 2,609,372,800.0	N 1,990,€	46,300.00	₩ 3,21	9,650,200.00	N 1,893,090,400.00	
7	FCT	₦ 3,199,223,200.00	₦ 2,063,317,300.0	0 ₦ 1,829,3	81,400.00	₩ 3,70	4,640,600.00	₦ 4,980,777,000.00	ł
8	Gombe	₦ 620,111,300.00	₩ 2,201,453,200.0	0 ₦ 1,885,6	41,400.00	₩ 4,14	6,024,300.00	₦ 2,551,023,100.00	ŧ
9	Imo	₩ 2,591,742,600.00	₩ 2,521,764,800.0	₩ 2,013,9	94,900.00	₩ 4,99	4,515,700.00	₩ 3,014,428,300.00	+

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.

хI	8 5 · d			Busine	ss Data Analysis, part 1.xlsx - Ex	cel	
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4	A	В	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.

HOME INSERT PAGE LAYOUT FORMUL	AS DATA	REVIEW VIE		Analysis, part 1.xl	POWER QUERY				Michael Olafu	ni + 🖸	
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NESTLE NCOME STATEMENT						Pr	ojected valu	d values			
VGN in thousands, except per share data)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	
Revenues Cost of goods sold	N 51,742,302 31,300,680	N 68,317,303 39.956,777	N 82,726,229 46,495,387	N 97,961,260 57,368,192	N 116,707,394 66,538,762	N 137,714,725 80,083,818	N 164,102,126 94,660,140	N 194,753,691 112,028,169	N 231,258,097 133,636,694	N 274,37 158,128	
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	
elling, 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	
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	51,7 <mark>4</mark> 5,043	61,62	
nterest Income, net	(41,414)	(1,948,959)	(688,925)	(3,315,024)	(939,397)	(2,190,918)	(3,106,592)	(3,313,034)	(4,335,658)	(4,31	
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	
ncome tax expense	3,530,614	3,999,666	5,642,345	1,702,796	3,912,897	6,772,667	7,444,958	8,322,276	8,704,040	11,43	
	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 45,86	

And the assumptions far down

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FILE HOME INSERT PAGE LAYOUT FORMU	LAS DATA REVI	EW VIEW	DEVELOPER	LOAD TEST	POWER QUERY				Michael Olafusi	- 🖸 🧯
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A B C D E	F	G	н	1	J	K	L	м	N	0
7										
8 (NGN in thousands, except per share data)	2008	2009	2010	2011	2012	2013	2014	2015	2016	20
9 0 Income Statement Assumptions: 2 Revenue Growth		32.03%	21.09%	18,42%	19.14%	18.00%	19.16%	18.68%	18,74%	18.6
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
4 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
Operating Profit Margin	23.01%	23.03%	22.89%	21.96%	22.27%	22.12%	22.19%	22.15%	22.17%	22.1
ROIC	46.35%	46.49%	32.50%	37.44%	34.61%	36.03%	35.32%	35.67%	35.50%	35.5
7 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
8 ROA	28.57%	25.61%	23.42%	23.89%	25.36%	25.37%	24.73%	24.56%	24.78%	24.9
9 ROE	92.25%	92.79%	84.78%	71.07%	61.83%	80.54%	78.20%	75.29%	73.39%	73.8
0 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
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
2									1	
3 Balance Sheet Assumptions:										
4 Accounts receivable as a % of Rev.		0.04%	0.04%	11.21%	11.53%	5.70%	5.70%	6.84%	8.20%	7.6
5 Inventories as a % of Rev.		15.66%	10.27%	10.11%	7.53%	10.89%	10.89%	9.94%	9.87%	9.8
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
		0.000/	0.000	0.000/	0.0007	0.000/	0.000/	0.000/	0.000/	3.7

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.

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INCOME STATEMENT										
			1							
(NGN in thousands, except per share data)	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Revenues	N 51,742,302	N 68,317,303	N 82,726,229	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 274.3
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	158,12
Gross Profit	20,441,622	28,360,526	36,230,842	40,593,068	50,168,632	57,630,906	69, <mark>441</mark> ,986	82,725,522	97,621,403	116,24
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	54,62
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	61,62
Interest Income, net	(41.414)	(1.948,959)	(688,925)	(3.315.024)	(939.397)	(2.190.918)	(3.106.592)	(3.313.034)	(4.335.658)	(4,31
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	57,30
Income tax expense	3,530,614	3,999,666	5,642,345	1,702,796	3,912,897	6,772,667	7,444,958	8,322,276	8,704,040	11,43
	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 26 462 099	N 32,107,683	N 29 705 246	NI 45 9

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.xls	x - Excel				? 📧	- 8
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(NGN in thousands, except per share data)	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Revenues	N 51,742,302	N 68,317,303	N 82,726,229	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
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,
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,
x ASSUMPTIONS										
ASSOMPTIONS	5									
(NGN in thousands, except per share data)	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Income Statement Assumptions:										
Revenue Growth		32.03%	21.09%	18.42%	19.14%	18.00%	19.16%	18.68%	18.74%	18
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.
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.
5 Operating Profit Margin	23.01%	23.03%	22.89%	21.96%	22.27%	22.12%	22.19%	22.15%	22.17%	22.

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	В	С	D	E
1	Family Mont	hly Budget and	Expense Sh	leet
			-	
3	Budgeted	Expense for the Month	Actual Expense	Surplus/Deficit
	Мау	NGN 40,000	NGN 35,000	NGN 5,000
5	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
2	Water and sewer		\$	NGN 0
3	Cable		⇔	NGN 0
L.	Waste removal			NGN 0
5	iviaintenance or		⇔	NGN C
5	Supplies			NGN 0
7	Other		4	NGN C
3	Total	NGN 40.000	NGN 35.000	NGN 5.000

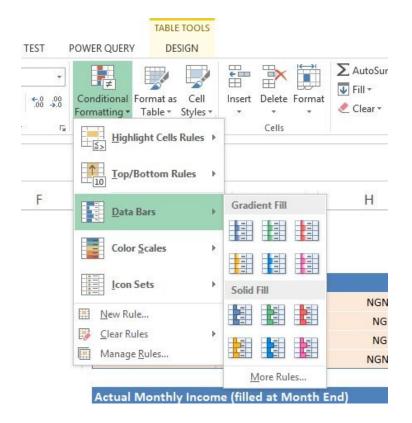
Notice the green, yellow and red arrows. They are conditional formats that let you visually see where you are spending below your budget, where you are spending exactly what you budgeted and where you are spending above your budget.

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.

Т	POWER QUERY DESIGN	
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	Manage <u>R</u> ules	Below Average	NGN 230,0
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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.

	Cilhoosin	3903	FUTIL	2011	миуни	ETTL	890
Pſ	ИТ	* : X	$\checkmark f_x$ =vlo	OKUP(A2,A5:	G24,2,FALSE)		
2	A	В	с	D	E	F	G
1	Clients\Month	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
2	Dangote	=VLOOKUP(A2,	A5:G24,2,FALSE)		1424		
3		VLOOKUP(look	up_value, table_array	, col_index_num	, [range_lookup	D	
4						-	
5			Monthly Rev	enue from Clie	ents		12
6	Clients	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
7	Mobil	₩ 4,129,000	₩ 3,695,000	₩ 2,770,000	₩4,520,000	₩ 2,223,000	₩ 3,929,000
8	Nestle	₩1,688,000	₩ 3,300,000	₩4,880,000	₩ 3,730,000	₦ 2,046,000	₩ 2,326,000
9	NBC	₩ 3,701,000	₩ 4,361,000	₩ 4,254,000	₩ 4,550,000	₩ 4,834,000	₩ 3,116,000
10	Exp Nigeria	₩ 2,587,000	₩ 4,198,000	₩ 2,146,000	₩ 1,062,000	₩ 2,341,000	₩ 4,713,000
11	Insight Nigeria	₩ 1,688,000	₩ 4,759,000	₩ 1,300,000	₩4,426,000	₩ 3,521,000	₩ 3,171,000
12	Radisson Blu	₩ 2,485,000	₩ 2,025,000	₩ 1,603,000	₩ 3,089,000	₩ 2,841,000	₩ 3,156,000
13	Guinness	₩ 2,703,000	₩1,888,000	₩1,360,000	₩1,664,000	₩ 1,097,000	₩4,920,000
4	Chevron	₩ 3,516,000	₩ 2,988,000	₩ 4,788,000	₩ 2,425,000	₩ 4,689,000	₩ 4,080,000
15	Etisalat	₩ 4,475,000	₩ 3,459,000	₩ 2,701,000	₩ 2,058,000	₩ 3,562,000	₩ 3,096,000
16	Dangote	₩1,457,000	₩ 3,241,000	₩4,441,000	₩ 1,544,000	₩ 3,749,000	₩ 3,544,000
17	Dana Group	₩ 2,984,000	₩ 1,882,000	₩ 2,898,000	₩4,618,000	₩ 2,372,000	₩ 3,723,000
18	LaFarge	₩ 2,111,000	₩ 3,293,000	₩ 1,427,000	₩ 3,953,000	₩ 1,616,000	₩ 2,885,000
9	NB	₩ 3,396,000	₩ 4,148,000	₩ 4,569,000	₩ 3,893,000	₩ 3,871,000	₩ 3,045,000
20	MTN	₩ 4,410,000	₩ 2,391,000	₩ 4,180,000	₩ 3,788,000	₩ 2,669,000	₩ 4,262,000
21	Monacom	₩ 4,190,000	₩ 2,228,000	₩ 4,615,000	₩ 2,756,000	₩ 3,123,000	₩ 1,464,000
22	ARM	₩ 4,536,000	₩ 1,412,000	₩ 4,313,000	₩ 1,130,000	₩ 3,700,000	₩ 3,196,000
10	CO 1	NI 1 CEE 000	AL 3 043 000	NI & 707 000	NL 3 763 000	NI 3 007 000	NL 3 C31 000

The formula breakdown is

	Functi	on Arguments	? ×
VLOOKUP			
Lookup_value	A2	=	= "Dangote"
Table_array	A5:G24	=	= {"Monthly Revenue from Clients",0,
Col_index_num	2	=	= 2
Range_lookup	FALSE	=	= FALSE
specify. By default, the table m	ust be sorted in an a up_value is the valu	ascending order.	value in the same row from a column you first column of the table, and can be a ing.
Formula result = # 1,457,000			
Help on this function			OK Cancel

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.

B					Alignm			
	2	• : 🗙		OKUP(A2,A5:	G24,2,FALSE)			
A	A	B	1	D	E	F	G	
1	Clients\Month	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	
2	Dangote	₩ 1,457,000						
3		~						
4		(2)						
5		I	Monthly Reve	enue from Cli	ents			
6	Clients	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	
7	Mobil	₩ 4,129,000	₩ 3,695,000	₦ 2,770,000	₩4,520,000	₩ 2,223,000	₩ 3,929,000	
8	Nestle	₩1,688,000	₩ 3,300,000	₩ 4,880,000	₩ 3,730,000	₩ 2,046,000	₩ 2,326,000	
9	NBC	₩ 3,701,000	₩4,361,000	₩4,254,000	₩ 4,550,000	₩4,834,000	₩ 3,116,000	
10	Exp Nigeria	₩ 2,587,000	₩ 4,198,000	₩ 2,146,000	₩ 1,062,000	₩ 2,341,000	₩4,713,000	
11	Insight Nigeria	₩1,688,000	₩4,759,000	₦ 1,300,000	₩4,426,000	₩ 3,521,000	₩ 3,171,000	
12	Radisson Blu	₩ 2,485,000	₩ 2,025,000	₦ 1,603,000	₩ 3,089,000	₩ 2,841,000	₩ 3,156,000	
13	Guinness	₩ 2,703,000	₩1,888,000	₩1,360,000	₦ 1,664,000	₩ 1,097,000	₩4,920,000	
14	Chevron	₩ 3,516,000	₩ 2,988,000	₩ 4,788,000	₩ 2,425,000	₩ 4,689,000	₩ 4,080,000	
15	Etisalat 🚨	₩4,475,000	₩ 3,459,000	₩ 2,701,000	₩ 2,058,000	₩ 3,562,000	₩ 3,096,000	
16	Dangote	₩ 1,457,000	₩ 3,241,000	₩ 4,441,000	₩ 1,544,000	₩ 3,749,000	₩ 3,544,000	
17	Dana Group	₩ 2,984,000	₩1,882,000	₩ 2,898,000	₩ 4,618,000	₩ 2,372,000	₩ 3,723,000	
18	LaFarge	₩ 2,111,000	₩ 3,293,000	₦ 1,427,000	₩ 3,953,000	₩ 1,616,000	₩ 2,885,000	
19	NB	₩ 3,396,000	₩4,148,000	₩4,569,000	₩ 3,893,000	₩ 3,871,000	₩ 3,045,000	
20	MTN	₩ 4,410,000	₩ 2,391,000	₩ 4,180,000	₩ 3,788,000	₩ 2,669,000	₩ 4,262,000	
21	Monacom	₩ 4,190,000	₩ 2,228,000	₩4,615,000	₩ 2,756,000	₩ 3,123,000	₩ 1,464,000	
22	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.

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20							
21							
22	Sales Bonus	5% o	f sales when sal	es is more than	N1,000	,000, otherwise no	bonus
23	Sales person	Sales	Made (NGN)	Sales Bonus (N	IGN)		
24	Peter Slow		₩ 800,000.00)	₩ 0.00		
25	Michael Olafusi Shar	4	₦ 5,000,000.00) ₩ 250,0	00.00		
26	Some Guy		₦ 2,000,000.00	100,0	00.00		
27							
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	A		В	C		D	
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21				2481 TO 10182		2.05 101 - 101 245	
22						00, otherwise no bo	nus
23		Sales		Sales Bonus (NG	N)		
24 25	Peter Slow Michael Olafusi Sharp		₩ 800,000.00 . ₩ 5,000,000.00	000,B24*0.05,0) ₩ 250,00	0.00		
26	Some Guy		₹ 2,000,000.00 ₹ 2,000,000.00	₩ 230,000			
27	Joine Guy		I		0.00		
28			Funct	ion Arguments		? ×	
29	IF						
30	Logi	cal_test	B24>1000000	FSE = F	ALSE		
31	Value	_if_true	B24*0.05	E = 4	0000		
32	Value	if_false	0	E = 0)		
33				= 0			
34	Checks whether a			one value if TRUE, and a			
35		1	Logical_test is any val	lue or expression that	can be eva	luated to TRUE or FALSE.	
36							
37	Formula result = 1	ŧ 0.00					

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.

OK

Cancel

COUNTIFS and SUMIFS

Help on this function

38

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.

1	А	В	С	D	E	F	G	Н	1	J	K	L
1 S	/N	Pizza Sold	Sales Amount	Time				Sales Report				
2	1	Meatzaa	₩ 2,500.00	8:00:01 AM			Pizza Type	Count of Sales	Sum of Sales Amount			
3	2	Extravaganza	₩ 3,000.00	8:00:02 AM			BBQ Chicken	310	₩ 620,000.00			
4	3	BBQ Chicken	₩ 2,000.00	8:00:04 AM			BBQ Philly Steak	301	₩ 752,500.00			
5	4	Extravaganza	₩ 3,000.00	8:00:07 AM			Beef Suya	314	₩ 847,800.00			
6	5	Meatzaa	₩ 2,500.00	8:00:08 AM			Chicken Bali					
7	6	Hot Veggie	₩ 2,200.00	8:00:14 AM			Chicken Feast					
8	7	BBQ Philly Steak	₩ 2,500.00	8:00:20 AM			Chicken Legend					
9	8	Chicken Feast	₩ 3,000.00	8:00:20 AM			Chicken Suya					
10	9	Meatzaa	₩ 2,500.00	8:00:22 AM			Extravaganza					
11	10	Chicken Suya	₩ 2,500.00	8:00:25 AM			Hot Pepperoni Feast					
12	11	Chicken Legend	₩ 2,800.00	8:00:26 AM			Hot Veggie					
13	12	BBQ Philly Steak	₩ 2,500.00	8:00:27 AM			Italiano					
14	13	Chicken Suya	₩ 2,500.00	8:00:29 AM			Margarita					
15	14	Chicken Feast	₩ 3,000.00	8:00:33 AM			Meatzaa					
16	15	Chicken Feast	₩ 3,000.00	8:00:33 AM			Pepperoni Feast					
17	16	Beef Suya	₩ 2,700.00	8:00:34 AM			Pepperoni Suya					
18	17	Chicken Feast	₩ 3,000.00	8:00:35 AM			Veggie Supreme					
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			= COUNTIFS(criteria_	range1, criteria1	, [criteria_range2, criter	ria2])		
22	21	Margarita	₩ 2,000.00	8:00:37 AM								
23	22	Italiano	₩ 2,000.00	8:00:40 AM			=SUMIFS(sum_range,	criteria_range1	, criteria1, [criteria_rang	ge2, criter	ia2],)	
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								
7	26	Hot Penneroni Feast	₩ 2 500 00	8-00-49 AM								

For the Count of Sales, the COUNTIFS structure is

13	l.	* : X	✓ <i>f</i> _x =c	OUNTIFS(B1:B	5001,G3)					
à	А	В	с	D	E	F	G	Н	i i		Jk
1	s/N	Pizza Sold	Sales Amount	Time				Sales Report		1	
2	1	Meatzaa	₩ 2,500.00	8:00:01 AM			Pizza Type	Count of Sales	Sum of Sales Amo	unt	
3	2	Extravaganza	₩ 3,000.00	8:00:02 AM			BBQ Chicken	L:B5001,G3)	₩ 620,00	0.00	
4	3	BBQ Chicken	₩ 2,000.00	8:00:04 AM			BBQ Philly Steak	301	₩ 752,50	0.00	
5	4	Extravaganza	₩ 3,000.00	8:00:07 AM			Beef Suya	314	₩ 847,80	0.00	
6	5	Meatzaa	₩ 2,500.00	8:00:08 AM			Chicken Bali				
7	6	Hot Veggie	₩ 2,200.00	8:00:14 AM				Function Argum	vonte		? >
В	7	BBQ Philly Steak	₩ 2,500.00	8:00:20 AM	1			Tunction Arguin	ients		
9	8	Chicken Feast	₩ 3,000.00	8:00:20 AM	COU	NTIFS					
0	9	Meatzaa	₩ 2,500.00	8:00:22 AM		Criteria	range1 B1:B5001	156	= {"Pizza Sold";"Me	atzaa";"Extra	wagan
11	10	Chicken Suya	₩ 2,500.00	8:00:25 AM		c	Criteria1 G3		= "BBQ Chicken"		
2	11	Chicken Legend	₩ 2,800.00	8:00:26 AM			1				
3	12	BBQ Philly Steak	₩ 2,500.00	8:00:27 AM							
4	13	Chicken Suya	₩ 2,500.00	8:00:29 AM							
5	14	Chicken Feast	₩ 3,000.00	8:00:33 AM							
6	15	Chicken Feast	₩ 3,000.00	8:00:33 AM					= 310		
7	16	Beef Suya	₩ 2,700.00	8:00:34 AM	Count	s the numb	er of cells specified by a g	given set of condition	is or criteria.		
8	17	Chicken Feast	₩ 3,000.00	8:00:35 AM			Criteria_range1: is	the range of cells you	want evaluated for th	e particular	condition.
9	18	Hot Veggie	₩ 2,200.00	8:00:35 AM							
0	19	Meatzaa	₩ 2,500.00	8:00:35 AM	-						
1	20	Meatzaa	₩ 2,500.00	8:00:36 AM	Formu	ila result =	310				
2	21	Margarita	₩ 2,000.00	8:00:37 AM					-	ОК	Const
	22	Italiano	₩ 2,000.00	8:00:40 AM	Help	on this func	tion			OK	Cancel
					100						
23	620	Hot Veggie	₩ 2,200.00	8:00:45 AM							

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

26 J.	A	В	C	D	E	F	G	Н	1	J	K
1 5/	/N	Pizza Sold	Sales Amount	Time				Sales Report			
2	1	Meatzaa	₩ 2,500.00	8:00:01 AM		Pizz	а Туре	Count of Sales	Sum of Sales Amount		
3	2	Extravaganza	₩ 3,000.00	8:00:02 AM		BBC	Chicken	310)01,B1:B5001,G3)		
4	3	BBQ Chicken	₩ 2,000.00	8:00:04 AM		BBC	Philly Steak	301	₩ 752,500.00		
5	4	Extravaganza	₩ 3,000.00	8:00:07 AM		Bee	f Suya	314	₩ 847,800.00		
6	5	Meatzaa	₩ 2,500.00	8:00:08 AM		Chie	ken Bali				
7	6	Hot Veggie	₩ 2,200.00	8:00:14 AM				Function Argun	ients	?	×
8	7	BBQ Philly Steak	₩ 2,500.00	8:00:20 AM	1			Tunction rugun	icito		
9	8	Chicken Feast	₩ 3,000.00	8:00:20 AM	SUMIFS						
10	9	Meatzaa	₩ 2,500.00	8:00:22 AM	1	Sum_range	C1:C5001	1	= {"Sales Amount";2500;30	00;2000;300.	
11	10	Chicken Suya	₩ 2,500.00	8:00:25 AM	Crit	teria_range1	B1:B5001	15	= {"Pizza Sold";"Meatzaa";"	Extravagan	2
12	11	Chicken Legend	₩ 2,800.00	8:00:26 AM		Criteria1	G3	1	= "BBQ Chicken"		
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		8:00:33 AM	1000				= 620000		
17		Beef Suya	₩ 2,700.00	8:00:34 AM	Adds the c	ells specified	by a given set of	conditions or criteria.			
18		Chicken Feast	₩ 3,000.00	8:00:35 AM			Sum_range: a	re the actual cells to	sum.		
19		Hot Veggie		8:00:35 AM							
20	19	Meatzaa	₩ 2,500.00	8:00:35 AM	-						
21		Meatzaa		8:00:36 AM	Formula re	sult = #62	0,000.00				
22		Margarita	₩ 2,000.00	8:00:37 AM	Help on th	is function			ОК	6	ncel
23	507	Italiano		8:00:40 AM	nep on m	is runction			UK		incer
			11 2 200 00	8:00:45 AM	25						
24	23	Hot Veggie	-	8:00:45 AM	1.4						

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.

1	A	В	С	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%	
23				

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")

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Fa	•	: 🗙 🗸 j	fx =AVERAGE	IFS(C1	:C22,B1:B22,"Airline")		
4	А	В	С	D	E	F	(
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.

	А	В	С	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				
4.2				

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.

20	Clipboard	Est.	Font	5	Alignmen
C5		• : × •	fx =IFER	ROR(B5/\$B\$9,	"-")
	A	В	С	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.

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1	A	В	С		D	E	
1	First Name	Last Name		Full Na	me		
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.

Past	L K Cut E Copy → e ≪ Format Pain	B I U		$ \begin{array}{c c} & A^* & A^* \\ \hline & A^* & A^* \\ \hline & & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & &$			
	Clipboard	5	Font	5		Aligni	nent
D2		- I X .	/ fx	=CONCATE	NATE(A2,B2)	
1	A	B	С		D		E
1	First Name	Last Name		Full Na	me		
2	Matthew	Silas		=CONC	ATENATE(A2,B2)	
3	Mark	Paul					
4	Luke	Apollo				Ĭ	
5	John	Stephen				Ĵ	
6							
7							
8							
0							

F5		- E 🗙 🦄	f _x		
1	А	В	С	D	E
1	First Name	Last Name		Full Name	5
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.

	Clipboard	E.	Font	Alignment				
PM	Т	• : X •	/ fx	f_x =CONCATENATE(A2,"",B2)				
1	A	В	С	CONCATENATE(text1, [text2], [text3], [text4],)			
1	First Name	Last Name	9	Full Name				
2	Matthew	Silas		CATENATE(A	2," ",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)

	Ciippoaru	ta i	FUIL	La I	Alignment
F9		• : X .	f _x		
1	А	В	С	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

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B3		• : X	✓ fx	=A3&" "&E	33		
2	A	В	С		D		E
1	First Name	Last Name		Full Na	me		
2	Matthew	Silas		Matthe	ew Silas		
3	Mark	Paul	1	=A3&"	"&B3		
4	Luke	Apollo					Ī
5	John	Stephen					
6							
7							
8							

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	А	В	С		D		E
1	First Name	Last Name		Full Na	Name		
2	Matthew	Silas		Matthe	Aatthew Silas		
3	Mark	Paul		Mark Pa	aul		
4	Luke	Apollo					
5	John	Stephen					Ī
6							
7							
8							
0							

Great, right?

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

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Ż	А	В	С	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					

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2	A	В	С	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			3.		+
7					
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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.

D11	T. T.	$: \times$	$\checkmark f_x$		
2	А	В	С	D	E
1	Federal Universi	ty of Tec	hnology Ak	ure	
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					
4.0			2		

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.

C5	*	1	×	✓ fx	=LEFT(A5,3)		
2	A		В	C	D	E	F
1	Federal Universi	ty o	of Tec	hnology Ak	ure		
2							
3	Matric Number			Dept	Year of Admission	Candidate Number	
4	EEE/04/2995	i.		EEE	04	2995	
5	CVE/03/1235			=LEFT(AS	5,3)		
6	ARC/01/3254						
7	MNE/05/1005						
8	PHY/00/2145						
9							
10							

	Clipboard	G.		Font	G.	Alignment
C5	•	:	\times	$\checkmark f_x$	=LEFT(A5,3)	
1	А		В	С	D	E
1	Federal Universi	ity	of Tech	nology Ak	ure	
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						
4.0						

It is a very easy to understand 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.

	Clipboard r	ă,		Font	r ₅₁	Alignment	G
PM	T	1	$\boldsymbol{\times}$	$\checkmark f_x$	=RIGHT(A5,4)		
2	A		В	С	D	E	F
1	Federal Universi	ty o	of Teck	nology Ak	ure		
2							
3	Matric Number			Dept	Year of Admission	Candidate Number	
4	EEE/04/2995	1		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							

G7	*	: 🗙	√ fx			
1	А	В	С	D	E	F
1	Federal Universit	ty of Tech	nology Ak	ure		
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).

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PM	T •	\mathbf{X}	🖌 fx	=MID(A5,5,2)		
ú.	A	В	С	D	E	F
1	Federal Universit	ty of Teo	hnology Ak	ure		
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						

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1	Α	В	С	D	E	F
1	Federal Universi	ty of Tech	nology Ak	ure		
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.

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PI	MT - : >	< 🖌 f.x	=TODAY()			
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1						
2	Today's Date	Day of Today	Month of Today	Year of Today	24	
3	=TODAY()					
4						
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1						
2	Today's Date	Day of Today	Month of Today	Year of Today		
3	Saturday, July 4, 2015					
4						
5						
6						

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

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BB	3	>	< 🖌 fx	=DAY(A3)			
4	А		В	с	D	E	F
1	Today's Date		Day of Today	Month of Today	Year of Today		
3	Saturday, July 4	, 2015	Name of Concession, Name of Street, or other Designation, or other		real of roday		
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5							
6							
7							

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2	Today's Date		Day of Today	Month of Tod	lay \	lear of	Today	
3	Saturday, July 4	, 2015	4	=MONTH(A3)				
4	2							
5								
6								

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1					
2	Today's Date	Day of Today	Month of Today	Year of Today	
3	Saturday, July 4, 20	15 4	1 7	=YEAR(A3)	1
4	and the second second second				
5					

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4	A	В	С	D	E F		G
1	Today's Date	Day of Today	Month of Today	Year of Today			
3	Saturday, July 4, 2015	4	7	2015			
4	The second second Street and State of the second seco			2 and a constant of the			
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.

CI	ipboard	Fail	Font		Fai
A3		· :)	$\times \checkmark f_x$	=TODA	AY()
1	Cali	bri - 11 -	A A \$ - 9	6 , 田	
1	P		40.000		
2 Toda	iy's D		▲ • 🗄 • 🚮	→.0 🍼	Today
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8					
9		Paste <u>Special</u> .			
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18	1000000000				
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21		Define Name		-	
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-	Saturday, July 4, 2015		umber Alignment	Font	Border	Fill	Protection			
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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.

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

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

	Function Library	
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1	A	В
1	Let us change the case of this sentence	
2		
3	LET US CHANGE THE CASE OF THIS SENTENCE	
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5	let us change the case of this sentence	
6		
7	Let Us Change The Case Of This Sentence	
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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.

They 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.

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4	А	В	с	D	E	F	G	ł
1			Internally Gen	erated Revenue	of States in Ni	geria		
2	State	Feb-14	lun-14	lan-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	
1	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	
5	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	
3	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	

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1			Internally Gen	erated Revenue	of States in Ni	geria		
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	

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.

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A	В	С	D	E	F	G	Н
		Internally Gen	erated Revenue	e of States in Nig	geria		
State	Feb-14	Jun-14	Jan-14	Mar-14	May-14	Apr-14	
lan a	₩ 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
Imo		and the second second second second second second second second second second second second second second second		H 1 175 454 800 00	₩ 2,265,644,000.00	₩ 967,327,400.00	
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	₦ 821,123,500.00 ₦ 7,319,183,000.00						

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.

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Kogi	₩ 2,734,189,600.00	₩ 2,8									00	
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FCT	₩ 2,063,317,300.00	₩ 2,5									00	
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Anambra	₩ 1,511,863,500.00	₩ 3,0									00	
Enugu	₩ 2,609,372,800.00	₩4,5									00	
Benue	₩ 1,387,315,500.00	₩ 3,6									00	
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Gombe	₩ 2,201,453,200.00	₩ 2,5	Refers to:	<i>a</i>							00	
Katsina	₩ 1,293,838,700.00	₩ 2,6	XV	=NamedR	ange!\$B\$3:\$G	\$3				1	00	
Kaduna	₦ 2,599,773,900.00	₩ 3,8		65 						1	00	
Cross River	₩ 1,971,834,600.00	₩4,:								Close	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	· · · · · · · · · · · · · · · · · · ·	$\land \checkmark Jx$	
	А	В	(
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.

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	A	В	C	D	F		F	G		Н	I	
1	Loan Amount	₦ 100,000,000.00				Fun	nction /	Argumen	ts			? ×
2	Payment period	10	PMT									
3	Interest Rate	24%		Rate	B 3			1		0.24		
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9					Rat			ate per per ents at 6%		or the loan. For	example, us	se 6%/4 for
10						quarte	ny payin	cites at over	- Tu			
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1	A	В	С
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			

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.

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5				By <u>c</u> hangi			
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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.

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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.

1	А	В	С	D	E
1	High Quality F	ull Day Excel Tra	ining		
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	Contigencies (7%)	₦ 280,000.00			
23	Gross Profit	₦ 2,120,000.00			
24					

And the underlying formulas are:

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1	А	В	С
1		High Quality Full Day Excel	Training
2		· · · · ·	
3	Cost Item	Amount	
4	Hotel Conference Room	600000	
5	Feeding per participant	12500	
6	Training Material	3000	
7	Certificate	2000	
8	Prize for best participant	100000	
9			
10	Analysis based on estimates	Figure	
11	Number of participants	40	
12	Course Fee	100000	
13	Total Feeding cost	=B11*B5	
14	Conference Room cost	=B4	
15	Training Materials cost	=B6*B11	
16	Certificate Costs	=B7*B11	
17	Prize Award cost	=B8	
18			
19	Total Revenue	=B11*B12	
20	Total Cost	=SUM(B13:B17)	
21	VAT Fee (5%)	=B19*0.05	
22	Contigencies (7%)	=B19*0.07	
23	Gross Profit	=B19-SUM(B20:B22)	Ī

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 this 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.

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Nu	mber_of_Participants 🔹 🗎 🗙	$\checkmark f_x$ 40		
a.	A	В	С	D
1	High Quality F	ull Day Excel Tra	aining	
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		

We do same for Course Fee.

Co	urse_Fee 🔹 🔹 📉	$\checkmark f_x$ 100000		
	A	В	С	D
1	High Quality F	ull Day Excel Tra	ining	
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		

And for Gross Profit.

Gro	oss_Profit 🔹 🕅 🔨	✓ f _x =B19-SU	M(B20:B22)				
2	A	В	С	D			
1	High Quality I	Full Day Excel Tra	ining				
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	₦ 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	Contigencies (7%)	₦ 280,000.00					
23	Gross Profit	₩ 2,120,000.00	_0				

Now, we launch the Scenario Manager.

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

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1	High Quality F	ull Day Excel Tra	ining											
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													
1	Prize for best participant	₩ 100,000.00												
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↓ Sort	Filter Sort & F	Advanced		ash Remo ill Duplica	ntes Validati			What-If Re Analysis ▼	lations
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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.

	E HOME INSERT PAGE LAY	OUT FORMULAS	DATA R	EVIEW	VIEW DE	VELOPER	LOAD TEST	POWER Q	UERY POW
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	А	В	С	D	E	F	G	Н	1
7	Certificate	₩ 2,000.00				E	dit Scenario		? ×
8	Prize for best participant	₦ 100,000.00		1		E	un scenario		
9					Scenario <u>n</u> ame:				
10	Analysis based on estimates	Figure			Worst				
11	Number of participants	40			Changing cells: SB\$11:SB\$12				
12	Course Fee	₩ 100,000.00		1	Ctrl+click cells to	select non-a	diacent changing	cells.	1202
13	Total Feeding cost	₦ 500,000.00			Comment:		-,		
14	Conference Room cost	₦ 600,000.00			Created by Mich	ael Olafusi o	n 7/15/2015		~
15	Training Materials cost	₦ 120,000.00							
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19	Total Revenue	₩ 4,000,000.00		1	Hi <u>d</u> e				
20	Total Cost	₦ 1,400,000.00						ОК	Cancel
21	VAT Fee (5%)	₩ 200,000.00							
22	Contigencies (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.

G H
? ×
Cancel
Cancel
Cancel
Cancel
Cancel
_

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.

В	С	D	E	F	G	Н
₦ 2,000.00						
₦ 100,000.00			Scena	rio Manage	er ?	×
Figure		S <u>c</u> enarios:				
40		Worst Probable		^	<u>A</u> dd	
₩ 100,000.00		Ideal			<u>D</u> elete	
₦ 500,000.00					Edit	
₦ 600,000.00					·	
₦ 120,000.00					<u>M</u> erge	
₩ 80,000.00				2.22	S <u>u</u> mmary	
₦ 100,000.00			-	· · · ·		
		Changing cells:	SB\$11:SBS	12		
₦ 4,000,000.00		Comment:	Created by	Michael Olafu	usi on 7/15/201	5
₦ 1,400,000.00						
₦ 200,000.00						
₦ 280,000.00				Cha		ose
₩ 2,120,000.00				<u>S</u> ho	w Ci	ose

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

10	Analysis based on estimates	Figure				
11	Number of participants	40				
12	Course Fee	₩ 100,000.00	Scena	ario Summar	v ?	×
13	Total Feeding cost	₩ 500,000.00	1.2		1	-
14	Conference Room cost	₩ 600,000.00	Report ty	ype nario <u>s</u> ummary		_
15	Training Materials cost	₩ 120,000.00		nario <u>s</u> ummary nario PivotTable	report	
16	Certificate Costs	₩ 80,000.00	Result ce			
17	Prize Award cost	₩ 100,000.00	B23			1
18			1	OK	6	
19	Total Revenue	₦ 4,000,000.00		ОК	Ca	incel
20	Total Cost	₦ 1,400,000.00				
21	VAT Fee (5%)	₩ 200,000.00				
22	Contigencies (7%)	₩ 280,000.00				
23	Gross Profit	₩ 2,120,000.00				
24						

Click on OK.

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

		*	$\times \checkmark f_x$					
1								-
2					12			
4	Α	В	С	D	E	F	G	Н
1		Scenario	Summary				7	
3				Current Values:	Worst	Probable	Ideal	
5		Changing	Cells:				55	
6			Number_of_Participants	40	20	30	40	
7			Course_Fee	₩ 100,000.00	₩ 45,000.00	₩ 70,000.00	₩ 100,000.00	
8		Result Ce	ells:	data data d	0.42	1 00 200	A Rectard and the second	
9			Gross_Profit	₩ 2,120,000.00	-₩ 258,000.00	₩ 623,000.00	₦ 2,120,000.00	
10		Notes: C	urrent Values column repre	esents values of (changing cells at	8	10	
11		time Scer	nario Summary Report was	created. Changing	ng cells for each			
12		scenario	are highlighted in gray.					
13								
14								
15								
16								
17								
18								
19								
20								
21								

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)

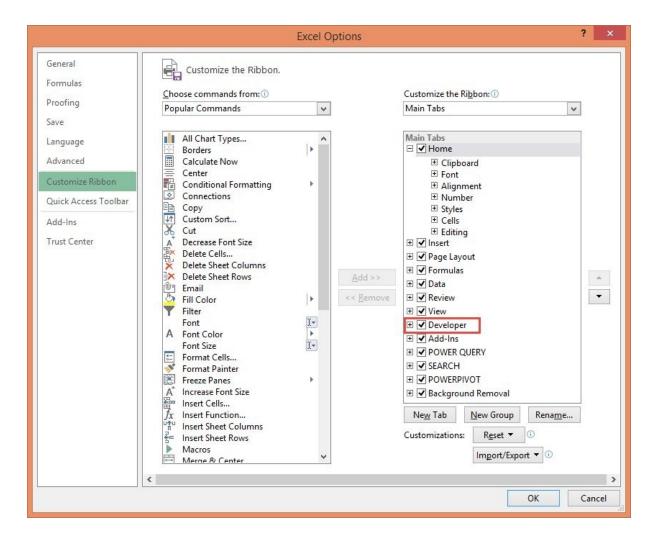
A lot of people feel making macros in Excel is extremely hard and should be left only people who make a living from doing it full-time. If you are one of such people, I have a pleasant surprise for you. Macros in Excel are very easy and in the next five minutes I will guide you into making one.

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.

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4	A	В	с	D	E	F	G	Н	I	J	К
1	XYZ	Car Deale	rship Sale	s Record for y	ear 2013	3					
2											
3	Jan-13	Toyota	Ford	Mercerdes Benz	BMW	GMC					
4	John Sparrow	54	95	46	123	139)				
5	Jane Porter	90		138	90						
6	Mark Spencer	144		74	156	54	1				
7	Kate Greitz	71		120	96					_	
8	Michael Peter	131	141	145	156	153	3				
9	Total	490	622	523	621	630)				
10											
1											
12		Toyota	Ford	Mercerdes Benz		GMC					
	John Sparrow	60		107	102						
	Jane Porter	124		147	116						
	Mark Spencer	143		77	48						
		81		122	58		2				
17	Michael Peter	148		101	160 484						
8	Total	556	649	554	484	555					
20								-			
20	Mar-13	Toyota	Ford	Mercerdes Benz	BMW	GMC					
	John Sparrow	116		94	96		;				
	Jane Porter	104		133	61						
-		104	105	155	01	02					

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

15	Mark Spencer	81	139		58
16	Kate Greitz	81	153	122	58
17	Michael Peter	148	126	101	160
18	Total	556	649	554	484
19					
20					
	Mar 12	Tousta	Ford	Marcordos Donz	DBA1A/
21	Mar-13		Ford	Mercerdes Benz	
22	John Sparrow	116	65	94	96
23	Jane Porter	104	103	133	61

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.

4	A	В	С	D	E	F	G	
1	XYZ	Car Deale	rship Sale	s Record for y	ear 2013	3		
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		
	Vid	eo 14 Re	cord Macro	+				
	NDY 🔠		terta interto					

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.

4	Α	В	С	D	E	F	G	Н
1	XYZ	Car Deale	rship Sale	s Record for y	ear 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		

Click on the macro record button.

1	XYZ	Car Deale	rship Sale	s Record for y	ear 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	121	1/11	1/15		153
9	Total		Reco	ord Macro	? ×	630
10		Macro name:				12
11		Macro1				
12	Feb-1					1C
13	John Sparrow	Shortcut key:				61
14	Jane Porter	Ctrl	*			113
15	Mark Spencer	Store macro in	n:			125
16	Kate Greitz	This Work	kbook		Y	152
17	Michael Peter	Description:				104
18	Total					555
19						
20						
21	Mar-1			01	Ground	1C
22	John Sparrow			ОК	Cancel	116
23	Jane Porter	104	103	133	61	62
REA		leo 14 Re	cord Macro	+		

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

	Reco	rd Macro	? ×
Ma	acro name:		
	SampleMacro		
	ortcut <u>k</u> ey: Ctrl+ k pre macro <u>i</u> n:		
	This Workbook		¥
De	scription:		
	This macro automatically t the company's official for		y sales table in
	L	ОК	Cancel

	ual Macros	e Relative Refer Icro Security Ie	Add-li	ns COM Insert Add-Ins - dd-Ins	Design	View Code Run Dialog	Source	Expansion Pa Refresh Data XML		Document Panel Modify	
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4	Α	В	С	D	E	F	G	Н	I.	J	K
1	XYZ	Car Deale	rship Sale	s Record for y	ear 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			Record I	Macro	~
8	Michael Peter	131	141	145	156	153		Macro name:			
9	Total	490	622	523	621	630		SampleMac	o		
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1								Ctrl+	k		
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3	John Sparrow	60	105	107	102	61		This Workb	nok		~
4	Jane Porter	124	126	147	116	113			JOK		
15	Mark Spencer	143	139	77	48	125		Description:			
6	Kate Greitz	81	153	122	58	152			automatically form y's official format		sales table in
17	Michael Peter	148	126	101	160	104			•		
	Total	556	649	554	484	555				5	
19										ОК	Cancel
20									- 10		
21	Mar-13	Toyota	Ford	Mercerdes Benz		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.

d	A	В	C	D	E	F	G	
	XYZ	Car Deale	ership Sale	s Record for y	ear 2013	3		
ſ	Ian-13	Toyota	Ford	Mercerdes Benz	BMW	GMC		
ł	John Sparrow	54			A DEFENSION AND A DEFENSION AN	139	-	
	Jane Porter	90		138	90	152		
5	Mark Spencer	144	142	74	156	54		
1	Kate Greitz	71	158	120	96	132		
8	Michael Peter	131	141	145	156	153		
5	Total	490	622	523	621	630		
d								
1								
2	Feb-13	Toyota	Ford	Mercerdes Benz	BMW	GMC		
3	John Sparrow	60	105	107	102	61		
4	Jane Porter	124	126	147	116	113		
5	Mark Spencer	143	139	77	48	125		
6	Kate Greitz	81	153	122	58	152		
7	Michael Peter	148	126	101	160	104		
8	Total	556	649	554	484	555		
9								
0								
1	Mar-13	Toyota	Ford	Mercerdes Benz	BMW	GMC		
2	John Sparrow	116	65	94	96	116		
3	Jane Porter	104	103	133	61	62		

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).

1	A	В	C	D	E	F	G
1	XYZ	Car Deale	ership Sale	s Record for y	ear 2013	3	
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	

	Α	В	C	D	E	F	G
1	XYZ	Car Deale	rship Sale	s Record for y	ear 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	
0							
11							
2	Feb-13	Toyota	Ford	Mercerdes Benz	BMW	GMC	
3	John Sparrow	60	105	107	102	61	
4	Jane Porter	124	126	147	116	113	
15	Mark Spencer	143	139	77	48	125	
6	Kate Greitz	81	153	122	58	152	
7	Michael Peter	148	126	101	160	104	
8	Total	556	649	554	484	555	
9							個
20							
1	Mar-13	Toyota	Ford	Mercerdes Benz	BMW	GMC	
2	John Sparrow	116	65	94	96	116	
- 4							

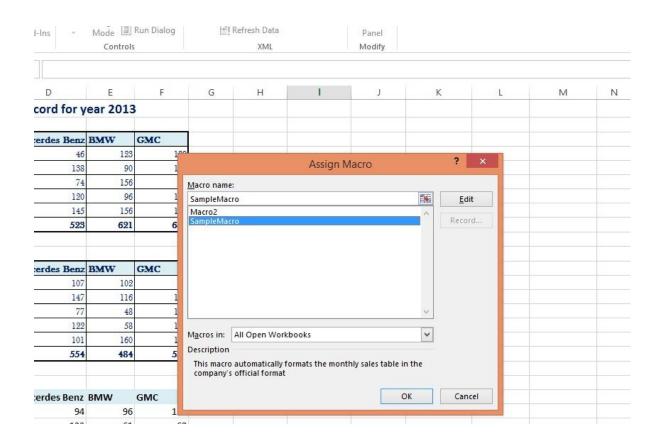
Voila! It works!

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.

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Visual Basic	Macros	ord Macro Relative Refe cro Security	rences	d-Ins COM Add-Ins	isert		Properties View Code Run Dialog	Source	Map Proper Expansion Pa Refresh Data	auks 🖳 Export	Document Panel	
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10		Ŧ	\times	f _x								
4	A	В	С	3	Activ	eX Controls	F	G	Н	I	J	K
1	XYZ	Car Deal	ership Sa	les Record								
2					۱	A 📑 📲	Ĭ					
3	Jan-13	Toyota	Ford	Mercerde	Benz	BMW	GMC					

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.

TALATE Land	8 7 8	2000	T UTICI	
Controls		XML	Modify	

	E	F	G	H	1	J	К	
y	ear 2013	1						
12	BMW	GMC		1	Run Macr	01		
16	123	139						
38		152						
74	156	54						
20	96	132						
£5	156	153						
23	621	630						
12	BMW	GMC						
07	102	61						
7		113						
7	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.

21			XV	f_x 3/1/201							
	Α	В	С	D	E	F	G	Н	l.	J	К
ļ	Jan-13	Toyota	Ford	Mercerdes Benz	BMW	GMC			Run Ma	icro!	
Jo	hn Sparrow	54	95	46	123	139			A		
Ja	ne Porter	90	86	138	90	152					
M	lark Spencer	144	142	74	156	54		2			
K	ate Greitz	71	158	120	96	132					
М	lichael Peter	131	141	145	156	153					
T	otal	490	622	523	621	630					
1	Feb-13	Toyota	Ford	Mercerdes Benz	BMW	GMC					
Jo	hn Sparrow	60	105	107	102	61					
Ja	ne Porter	124	126	147	116	113					
м	lark Spencer	143	139	77	48	125					
K	ate Greitz	81	153	122	58	152					
м	lichael Peter	148	126	101	160	104					
T	otal	556	649	554	484	555					
-											
	Mar-13	Toyota	Ford	Mercerdes Benz	BMW	GMC					
Jo	hn Sparrow	116	65	94	96	116					
Ja	ine Porter	104	103	133	61	62					
M	lark Spencer	110	63	87	128	88					
Ka	ate Greitz	74	51	45	80	144					
M	lichael Peter	79	55	164	95	51					
To	otal	483	337	523	460	461					

See the result!

	A	В	C	D	E	F	G	Н		J	К
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	Jan-13	Toyota	Ford	Mercerdes Benz	BMW	GMC			Run Ma	cro!	
John	n Sparrow	54			123						
Jane	Porter	90		(199 F.	90	152					
Mar	k Spencer	144		74	156	54					
Kate	Greitz	71	158	120	96	132					
Mich	hael Peter	131	141	145	156	153					
Tot	al	490	622	523	621	630					
0											
1											
2	Feb-13	Toyota	Ford	Mercerdes Benz	BMW	GMC					
3 John	1 Sparrow	60	105	107	102	61					
4 Jane	Porter	124	126	147	116	113					
5 Mar	k Spencer	143	139	77	48	125					
6 Kate	Greitz	81	153	122	58	152					
7 Mich	hael Peter	148	126	101	160	104					
B Tot	al	556	649	554	484	555					
9											
)											
1	Mar-13	Toyota	Ford	Mercerdes Benz	BMW	GMC					
2 John	1 Sparrow	116	65	94	96	116					
Jane	Porter	104	103	133	61	62					
4 Mar	k Spencer	110	63	87	128	88					
Kate	Greitz	74	51	45	80	144					
5 Mich	hael Peter	79	55	164	95	51					
7 Tot	-1	483	337	523	460	461					

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!