

BASIC EXCEL: VLOOKUP, PIVOT TABLE, SQL BIG DATA & DAX FORMULAS

Last week, I learned about excel from 'ExcellIsFun' YouTube Channel. This channel has many courses about Excel, but for now I took Basic Excel for Data Analysis. There are 10 parts in this course, every part has an excel file that can be follow when the video plays and a homework excel file to be done. I took this course because I want to be more proficient using Microsoft Excel. When in college, I only use Ms. Excel for very basic things like doing sum, average, maximum, and minimum formula, also visualizing the data using scatter or bar chart. This article will tell you what I've got from this course.



[\(https://maubelajarapa.com/workshop/business-career-upgrade/belajar-dasar-microsoft-excel-dengan-cepat-mudah/\)](https://maubelajarapa.com/workshop/business-career-upgrade/belajar-dasar-microsoft-excel-dengan-cepat-mudah/)

1. VLOOKUP

Vlookup is a basic excel function which used to perform a vertical lookup by searching for a value in the column of a table and returning in the value from a reference table based on a key word. The formula is

=VLOOKUP(lookup value, table array, column index number, [range lookup])

- Lookup value is a value that I need to search for in the column of the first table.
- Table array is two or more columns in reference table.
- Column index number is a number of the column in reference table that the matching value must be returned.
- Range lookup is an optional value, 1 is TRUE to find an approximate match, 0 is FALSE to find an exact match, TRUE is default.

This file contains of two tables, Revenue and Sales Rep table. Revenue table has 5 columns; date, sales rep, customer, revenue, each column has 1999 data. This revenue table is the first table for vlookup. Sales Rep table has 4 columns that shown in this picture below

Sales Rep	Start Date	Pension Plan	Region
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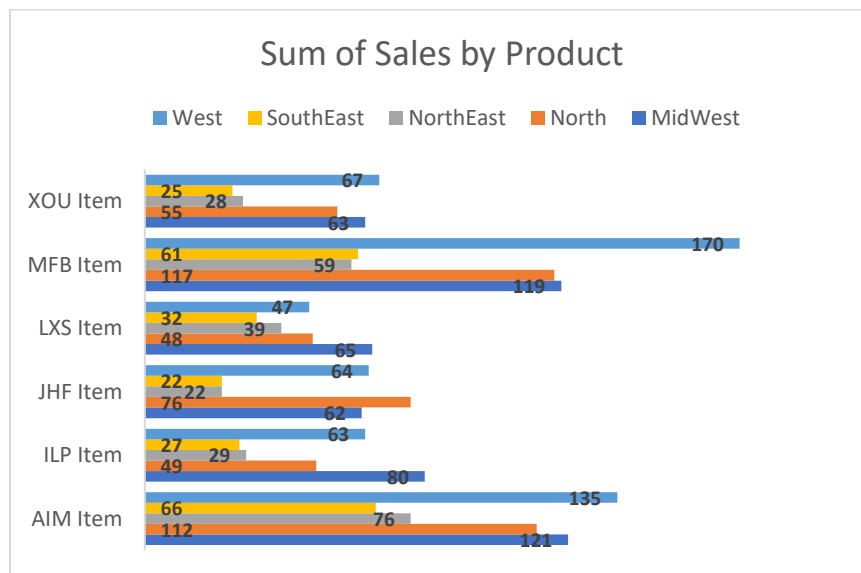
I want to add 'Region' column in the first table by using vlookup function. The Sales Rep column is in Revenue and Sales Rep table, so the sales rep column in Revenue table is the lookup value. Table array is the first row in the first column until the last row in the last column in Sales Rep table. Because I am searching for region and the position of region column in Sales Rep table is the fourth column, so the column index number is 4. Range lookup is filled by 0 because I want to find an exact match.

2. PIVOT TABLE

After get Region data by using vlookup function, I made Pivot Table that counts how many sales there were for each Product in each Region in the same sheet as the data. PivotTable is an interactive table that shows summary of the data and calculating every needed item by using the calculation method as needed.

Count of Sales Rep	Region					
Product	MidWest	North	NorthEast	SouthEast	West	Grand Total
AIM Item	121	112	76	66	135	510
ILP Item	80	49	29	27	63	248
JHF Item	62	76	22	22	64	246
LXS Item	65	48	39	32	47	231
MFB Item	119	117	59	61	170	526
XOU Item	63	55	28	25	67	238
Grand Total	510	457	253	233	546	1999

Those pivot table can be seen clearly by bar chart below

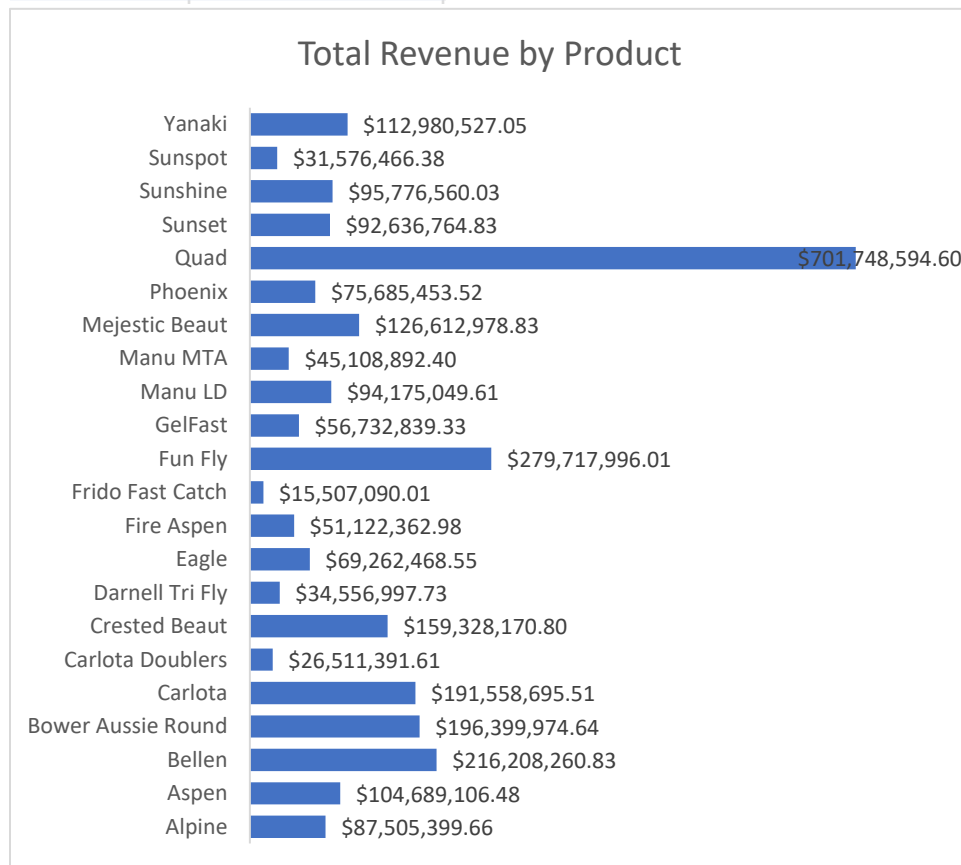


We can know that MFB Item is the most product has been sold in total among all product. Highest amount of sold product is in West Region. If the company sell more MFB Item product in West Region, it will generate more income.

3. SQL BIG DATA & DAX FORMULAS

In this part, I imported data from SQL Database which I got the database from the video. The data is quite big, it contains around 7,7M row data in amount. I also use dax formulas to finish this project. Dax formulas is used to define custom calculations for calculated columns and for measures. The dax formulas will show up in PivotTable list in the fact table as a formula. Here I measured Total Revenue by dax formulas and created Pivot Table & Chart for Total Revenue by Product.

Product	Total Revenue SUMX
Alpine	\$87,505,399.66
Aspen	\$104,689,106.48
Bellen	\$216,208,260.83
Bower Aussie Rour	\$196,399,974.64
Carlota	\$191,558,695.51
Carlota Doublers	\$26,511,391.61
Crested Beaut	\$159,328,170.80
Darnell Tri Fly	\$34,556,997.73
Eagle	\$69,262,468.55
Fire Aspen	\$51,122,362.98
Frido Fast Catch	\$15,507,090.01
Fun Fly	\$279,717,996.01
Gelfast	\$56,732,839.33
Manu LD	\$94,175,049.61
Manu MTA	\$45,108,892.40
Mejestic Beaut	\$126,612,978.83
Phoenix	\$75,685,453.52
Quad	\$701,748,594.60
Sunset	\$92,636,764.83
Sunshine	\$95,776,560.03
Sunspot	\$31,576,466.38
Yanaki	\$112,980,527.05
Grand Total	\$2,865,402,041.39



By total Revenue of \$701,748,594.60, Quad is the highest total revenue among all product. The difference in numbers of total revenue between the Quad and other products is quite far.

<https://www.kelasexcel.id/2017/12/tutorial-pivot-table-excel.html>

<https://www.techonthenet.com/excel/formulas/vlookup.php#:~:text=The%20VLOOKUP%20function%20performs%20a,as%20a%20Lookup%20Reference%20Function.>

<https://support.microsoft.com/en-us/office/data-analysis-expressions-dax-in-power-pivot-bab3fbe3-2385-485a-980b-5f64d3b0f730>