Lab 4 Advanced Calculate Function and DAX Patterns

Objectives

Time: 30 Minutes

1. Create a DAX measure that produces the percent of the total for each Reseller Country using the combination of the CALCULATE, DIVIDE, and ALL function

2. Create a DAX measure that produces the running sales total for 2019 using the CALCULATE, FILTER, and ALL function

3. Create a DAX measure that will show sales by ship day in comparison to the order date using the CALCULATE and USERELATIONSHIP function

4. Create a DAX measure that filters the total by reseller sales for North America (Canada and the United States only) including the % of total sales for North America.

Lab steps

1) Create a DAX pattern measure that produces a % to total for the reseller country

- Place a slicer visual on the page set to the year 2019.

- From the Home tab navigate to the New Measure

- Place the following measure into a table visual

Formula	Format
`% to total = DIVIDE([Total Sales],CALCULATE([Total Sales],ALL(Reseller[ResellerCountry])))`	Currency

Year

- ☐ 2017
- ☐ 2018
- ☑ 2019
- ☐ 2020
- ☐ 2021

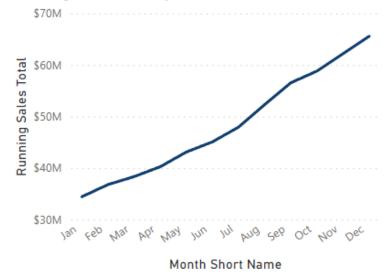| ResellerCountry	Total Sales	% to total
Australia	$857,135	2.64%
Canada	$5,641,352	17.35%
France	$2,412,417	7.42%
Germany	$1,097,898	3.38%
United Kingdom	$2,169,984	6.68%
United States	$20,328,918	62.54%
Total	**$32,507,704**	**100.00%**

2) Create a DAX pattern measure that produces the Running sales total for the year 2019

- Place a new table visual onto the report canvas to show the DAX measure.

- Place a Line chart visual onto the report canvas to show the DAX measure trend for the Running Sales Total

Formula	Format

`Running Sales Total =`
`CALCULATE([Total Sales],`
`FILTER(ALL(`
`    Cal_tbl[Date]),`
`    Cal_tbl[Date]<=MAX(Cal_tbl[Date])`
`    )`
`)`
	Currency

Running Total By Month

Month Short Name	Running Sales Total
Jan	$34,440,288
Feb	$36,802,220
Mar	$38,344,776
Apr	$40,266,463
May	$43,122,564
Jun	$45,094,101
Jul	$47,965,140
Aug	$52,333,170
Sep	$56,568,422
Oct	$58,836,374
Nov	$62,221,862
Dec	$65,608,558
Total	**$65,608,558**

Running Sales Total by Month

3) Create a DAX measure that will show sales by ship day in comparison to order date	Formula	Format
	`Sales By Ship Date = CALCULATE([Total Sales],USERELATIONSHIP(Cal_tbl[Date],'Sales By Country Files'[ShipDate]))`	Currency

- Place a new table visual onto the report canvas to show the DAX measure.

USERELATIONSHIP Ship date vs. Order Date

Year	Month Short Name	Total Sales	Sales By Ship Date
2019	Jan	$1,339,434	$1,733,685
2019	Feb	$2,361,932	$1,830,736
2019	Mar	$1,542,556	$2,110,982
2019	Apr	$1,921,687	$1,787,410
2019	May	$2,856,101	$2,322,129
2019	Jun	$1,971,537	$2,511,820
2019	Jul	$2,871,039	$2,794,115
2019	Aug	$4,368,030	$3,647,362
2019	Sep	$4,235,252	$4,486,979
2019	Oct	$2,267,952	$2,802,068
2019	Nov	$3,385,488	$3,062,685
2019	Dec	$3,386,696	$3,530,087
Total		**$32,507,704**	**$32,620,058**

5) Create a DAX measure using the FILTER function that computes the total by reseller sales for Canada and the United States only (North America Sales).	Formula	Format

	`North American Sales =`
	    `CALCULATE(`
	        `[TotalSales],FILTER(Reseller,Reseller[ResellerCountry]="Canada"||Reseller`
	        `[ResellerCountry]="United States")`
	        `)`
		Text

▪ Place a new table visual onto the report canvas to show the DAX measure.	`North America Sales % to total = DIVIDE([US and Canada Sales],CALCULATE([Total` `Sales],ALL(Reseller[ResellerCountry])))`	Percentage
	North America Sales Total Sales North America Sales North America Sales % to total $32,507,704 $25,970,270 79.89%	
END		