Lab 6 DAX Time Series

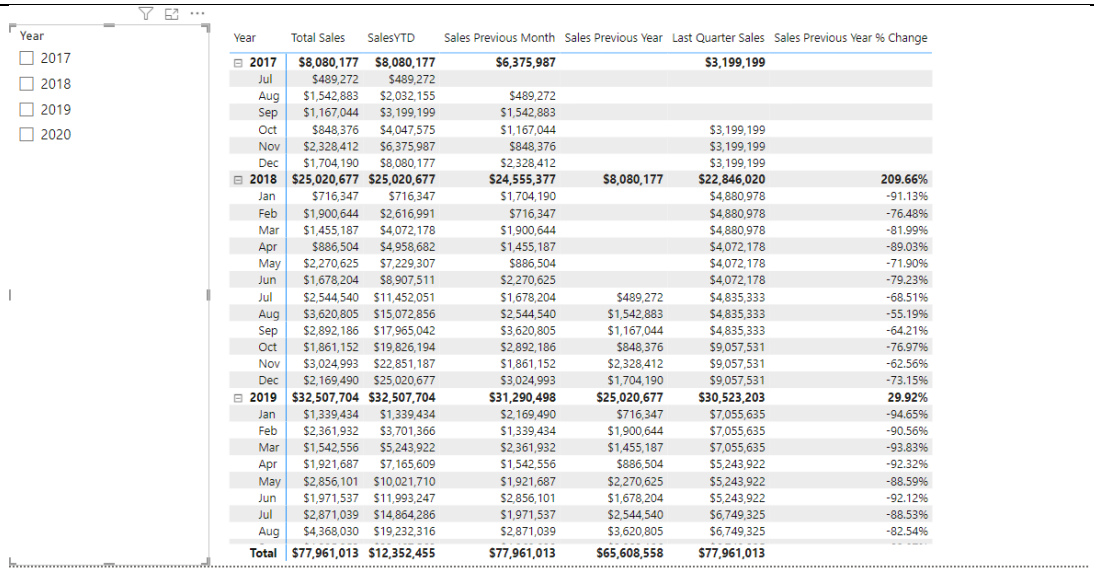
Objectives

Time: 15-20 Minutes

1. Create a DAX measure that produces the following measures.
    a. Sales for the previous year using the PREVIOUSYEAR function
    b. Sales for the previous month using the DATEADD function
    c. Sales year to date using the TOTALYTD function
    d. Last Quarter Sales using the PARALLELPERIOD function
    e. Percent change of the previous year to the current year using the variables command in the formula
    f. Percent change of the previous month to the current year using the variables command in the formula

Lab steps

Start by placing a **slicer** visual on the canvas along with a **Matrix table** visual.



Year	Total Sales	SalesYTD	Sales Previous Month	Sales Previous Year	Last Quarter Sales	Sales Previous Year % Change
2017	**$8,080,177**	**$8,080,177**	**$6,375,987**		**$3,199,199**	
Jul	$489,272	$489,272				
Aug	$1,542,883	$2,032,155	$489,272			
Sep	$1,167,044	$3,199,199	$1,542,883			
Oct	$848,376	$4,047,575	$1,167,044		$3,199,199	
Nov	$2,328,412	$6,375,987	$848,376		$3,199,199	
Dec	$1,704,190	$8,080,177	$2,328,412		$3,199,199	
2018	**$25,020,677**	**$25,020,677**	**$24,555,377**	**$8,080,177**	**$22,846,020**	**209.66%**
Jan	$716,347	$716,347	$1,704,190		$4,880,978	-91.13%
Feb	$1,900,644	$2,616,991	$716,347		$4,880,978	-76.48%
Mar	$1,455,187	$4,072,178	$1,900,644		$4,880,978	-81.99%
Apr	$886,504	$4,958,682	$1,455,187		$4,072,178	-89.03%
May	$2,270,625	$7,229,307	$886,504		$4,072,178	-71.90%
Jun	$1,678,204	$8,907,511	$2,270,625		$4,072,178	-79.23%
Jul	$2,544,540	$11,452,051	$1,678,204	$489,272	$4,835,333	-68.51%
Aug	$3,620,805	$15,072,856	$2,544,540	$1,542,883	$4,835,333	-55.19%
Sep	$2,892,186	$17,965,042	$3,620,805	$1,167,044	$4,835,333	-64.21%
Oct	$1,861,152	$19,826,194	$2,892,186	$848,376	$9,057,531	-76.97%
Nov	$3,024,993	$22,851,187	$1,861,152	$2,328,412	$9,057,531	-62.56%
Dec	$2,169,490	$25,020,677	$3,024,993	$1,704,190	$9,057,531	-73.15%
2019	**$32,507,704**	**$32,507,704**	**$31,290,498**	**$25,020,677**	**$30,523,203**	**29.92%**
Jan	$1,339,434	$1,339,434	$2,169,490	$716,347	$7,055,635	-94.65%
Feb	$2,361,932	$3,701,366	$1,339,434	$1,900,644	$7,055,635	-90.56%
Mar	$1,542,556	$5,243,922	$2,361,932	$1,455,187	$7,055,635	-93.83%
Apr	$1,921,687	$7,165,609	$1,542,556	$886,504	$5,243,922	-92.32%
May	$2,856,101	$10,021,710	$1,921,687	$2,270,625	$5,243,922	-88.59%
Jun	$1,971,537	$11,993,247	$2,856,101	$1,678,204	$5,243,922	-92.12%
Jul	$2,871,039	$14,864,286	$1,971,537	$2,544,540	$6,749,325	-88.53%
Aug	$4,368,030	$19,232,316	$2,871,039	$3,620,805	$6,749,325	-82.54%
Total	**$77,961,013**	**$12,352,455**	**$77,961,013**	**$65,608,558**	**$77,961,013**	

Sales Year-to-date measure

Create and add the following Calculations to the matrix table.

Formula	Format
`SalesYTD = TOTALYTD([Total Sales],Cal_tbl[Date])`	Currency

Year	Total Sales	SalesYTD
Oct	$1,861,152	$19,826,194
Nov	$3,024,993	$22,851,187
Dec	$2,169,490	$25,020,677
2019	**$32,507,704**	**$32,507,704**
Jan	$1,339,434	$1,339,434
Feb	$2,361,932	$3,701,366
Mar	$1,542,556	$5,243,922
Apr	$1,921,687	$7,165,609
May	$2,856,101	$10,021,710
Jun	$1,971,537	$11,993,247
Jul	$2,871,039	$14,864,286
Aug	$4,368,030	$19,232,316
Sep	$4,235,252	$23,467,568
Oct	$2,267,952	$25,735,520
Nov	$3,385,488	$29,121,008
Dec	$3,386,696	$32,507,704
2020	**$12,352,455**	**$12,352,455**

Sales Previous Year

Create and add the following Calculations to the matrix table.

Formula	Format
`Sales Previous Year = CALCULATE([Total Sales],DATEADD(Cal_tbl[Date],-1,YEAR))`	Currency

Year	Total Sales	SalesYTD	Sales Previous Year
2017	**$8,080,177**	**$8,080,177**	
Jul	$489,272	$489,272	
Aug	$1,542,883	$2,032,155	
Sep	$1,167,044	$3,199,199	
Oct	$848,376	$4,047,575	
Nov	$2,328,412	$6,375,987	
Dec	$1,704,190	$8,080,177	
2018	**$25,020,677**	**$25,020,677**	**$8,080,177**
Jan	$716,347	$716,347	
Feb	$1,900,644	$2,616,991	
Mar	$1,455,187	$4,072,178	
Apr	$886,504	$4,958,682	
May	$2,270,625	$7,229,307	
Jun	$1,678,204	$8,907,511	
Jul	$2,544,540	$11,452,051	$489,272
Aug	$3,620,805	$15,072,856	$1,542,883
Sep	$2,892,186	$17,965,042	$1,167,044
Oct	$1,861,152	$19,826,194	$848,376
Nov	$3,024,993	$22,851,187	$2,328,412
Dec	$2,169,490	$25,020,677	$1,704,190

Sales Previous Month

Create and add the following Calculations to the matrix table.

Formula	Format
`Sales Previous Month = CALCULATE([Total Sales],PREVIOUSMONTH(Cal_tbl[Date]))`	Currency

Year	Total Sales	SalesYTD	Sales Previous Year	Sales Previous Month
2017	**$8,080,177**	**$8,080,177**		
Jul	$489,272	$489,272		
Aug	$1,542,883	$2,032,155		$489,272
Sep	$1,167,044	$3,199,199		$1,542,883
Oct	$848,376	$4,047,575		$1,167,044
Nov	$2,328,412	$6,375,987		$848,376
Dec	$1,704,190	$8,080,177		$2,328,412
2018	**$25,020,677**	**$25,020,677**	**$8,080,177**	**$1,704,190**
Jan	$716,347	$716,347		$1,704,190
Feb	$1,900,644	$2,616,991		$716,347
Mar	$1,455,187	$4,072,178		$1,900,644
Apr	$886,504	$4,958,682		$1,455,187
May	$2,270,625	$7,229,307		$886,504
Jun	$1,678,204	$8,907,511		$2,270,625
Jul	$2,544,540	$11,452,051	$489,272	$1,678,204
Aug	$3,620,805	$15,072,856	$1,542,883	$2,544,540
Sep	$2,892,186	$17,965,042	$1,167,044	$3,620,805
Oct	$1,861,152	$19,826,194	$848,376	$2,892,186
Nov	$3,024,993	$22,851,187	$2,328,412	$1,861,152
Dec	$2,169,490	$25,020,677	$1,704,190	$3,024,993
2019	**$32,507,704**	**$32,507,704**	**$25,020,677**	**$2,169,490**

Sales Previous Month

Create and add the following Calculations to the matrix table.

Formula	Format
`Last Quarter Sales = CALCULATE([Total Sales],PARALLELPERIOD(Cal_tbl[Date],-1,QUARTER))`	Currency

Year	Total Sales	SalesYTD	Sales Previous Year	Sales Previous Month	Last Quarter Sales
2017	**$8,080,177**	**$8,080,177**			**$3,199,199**
Jul	$489,272	$489,272			
Aug	$1,542,883	$2,032,155		$489,272	
Sep	$1,167,044	$3,199,199		$1,542,883	
Oct	$848,376	$4,047,575		$1,167,044	$3,199,199
Nov	$2,328,412	$6,375,987		$848,376	$3,199,199
Dec	$1,704,190	$8,080,177		$2,328,412	$3,199,199
2018	**$25,020,677**	**$25,020,677**	**$8,080,177**	**$1,704,190**	**$22,846,020**
Jan	$716,347	$716,347		$1,704,190	$4,880,978
Feb	$1,900,644	$2,616,991		$716,347	$4,880,978
Mar	$1,455,187	$4,072,178		$1,900,644	$4,880,978
Apr	$886,504	$4,958,682		$1,455,187	$4,072,178
May	$2,270,625	$7,229,307		$886,504	$4,072,178
Jun	$1,678,204	$8,907,511		$2,270,625	$4,072,178
Jul	$2,544,540	$11,452,051	$489,272	$1,678,204	$4,835,333
Aug	$3,620,805	$15,072,856	$1,542,883	$2,544,540	$4,835,333
Sep	$2,892,186	$17,965,042	$1,167,044	$3,620,805	$4,835,333
Oct	$1,861,152	$19,826,194	$848,376	$2,892,186	$9,057,531
Nov	$3,024,993	$22,851,187	$2,328,412	$1,861,152	$9,057,531
Dec	$2,169,490	$25,020,677	$1,704,190	$3,024,993	$9,057,531
2019	**$32,507,704**	**$32,507,704**	**$25,020,677**	**$2,169,490**	**$30,523,203**

Sales % Change previous year.

.

Formula

```
Sales Previous Year % Change =
var CY = sum('Sales By Country Files'[Total Sales])
var PY = [Sales Last Year]
RETURN
DIVIDE(CY-PY,PY)
```

Format

Currency

Year	Total Sales	SalesYTD	Sales Previous Year	Sales Previous Month	Last Quarter Sales	Sales Previous Year % Change
2017	**$8,080,177**	**$8,080,177**			**$3,199,199**	
Jul	$489,272	$489,272				
Aug	$1,542,883	$2,032,155		$489,272		
Sep	$1,167,044	$3,199,199		$1,542,883		
Oct	$848,376	$4,047,575		$1,167,044	$3,199,199	
Nov	$2,328,412	$6,375,987		$848,376	$3,199,199	
Dec	$1,704,190	$8,080,177		$2,328,412	$3,199,199	
2018	**$25,020,677**	**$25,020,677**	**$8,080,177**	**$1,704,190**	**$22,846,020**	**209.66%**
Jan	$716,347	$716,347		$1,704,190	$4,880,978	-91.13%
Feb	$1,900,644	$2,616,991		$716,347	$4,880,978	-76.48%
Mar	$1,455,187	$4,072,178		$1,900,644	$4,880,978	-81.99%
Apr	$886,504	$4,958,682		$1,455,187	$4,072,178	-89.03%
May	$2,270,625	$7,229,307		$886,504	$4,072,178	-71.90%
Jun	$1,678,204	$8,907,511		$2,270,625	$4,072,178	-79.23%
Jul	$2,544,540	$11,452,051	$489,272	$1,678,204	$4,835,333	-68.51%
Aug	$3,620,805	$15,072,856	$1,542,883	$2,544,540	$4,835,333	-55.19%
Sep	$2,892,186	$17,965,042	$1,167,044	$3,620,805	$4,835,333	-64.21%
Oct	$1,861,152	$19,826,194	$848,376	$2,892,186	$9,057,531	-76.97%
Nov	$3,024,993	$22,851,187	$2,328,412	$1,861,152	$9,057,531	-62.56%
Dec	$2,169,490	$25,020,677	$1,704,190	$3,024,993	$9,057,531	-73.15%
2019	**$32,507,704**	**$32,507,704**	**$25,020,677**	**$2,169,490**	**$30,523,203**	**29.92%**

END