# 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**

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| 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 | |
| 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 | |
| 3) Create a DAX measure that will show sales by ship day in comparison to order date   * Place a new table visual onto the report canvas to show the DAX measure. | |  |  | | --- | --- | | Formula | Format | | Sales By Ship Date = CALCULATE([Total Sales],USERELATIONSHIP(Cal\_tbl[Date],'Sales By Country Files'[ShipDate])) | Currency | |
| 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).   * Place a new table visual onto the report canvas to show the DAX measure. | |  |  | | --- | --- | | Formula | Format | | North American Sales =        CALCULATE(              [TotalSales],FILTER(Reseller,Reseller[ResellerCountry]="Canada"||Reseller  [ResellerCountry]="United States")              ) | Text | | North America Sales % to total = DIVIDE([US and Canada Sales],CALCULATE([Total Sales],ALL(Reseller[ResellerCountry]))) | Percentage | |
| **END** |  |