# DAX expressions used:

## Calendar Table

In order to apply slice across years, months and days a calendar table is needed. DAX provides a function called “Calendar” which needs start date and end date as its input. To create the table with dynamic start and end date, following DAX code is used.

*Calendar\_Table =*

*//Calculate Start Date*

*var start\_date = MIN(Sales\_Table[OrderDate])*

*//Calculate End Date*

*var end\_date = MAX(Sales\_Table[OrderDate])*

*RETURN*

*// Create a dynamic calendar table*

*CALENDAR ( start\_date, end\_date)*

## DAX for calculating age of the customer:

A new column is added to show age of the customer. The age is calculated as difference between birth date and date of first purchase. DAX function DATEDIFF is used

*Customer Age At the Time of First Purchase =*

*DATEDIFF( RELATED(Customer\_Table[BirthDate]), RELATED(Customer\_Table[DateFirstPurchase]), YEAR)*

## DAX for calculating Gender Ratio

A new measure in Sales table is used to calculate gender ratio. It calculates ratio of males to entire data set as shown below.

*Gender Ratio =*

*CALCULATE(COUNT(Sales\_Table[CustomerKey]), Customer\_Table[Gender] = "M") / COUNT(Sales\_Table[CustomerKey])*

## DAX for calculating Marital status

Similar to Gender ratio, the marital status percentage is calculated and displayed.

*Married Percentage =*

*CALCULATE(COUNT(Sales\_Table[CustomerKey]), Customer\_Table[MaritalStatus] = "M") / COUNT(Sales\_Table[CustomerKey])*

## DAX for calculating Average annual income

New column is created in Sales table which refers the average income column in customer table.

*Temp Income = RELATED(Customer\_Table[YearlyIncome])*