Simple application of Above()

Year	Month	Sum(Sales)	Above(Sum(Sales))
		690	-
2013	January	70	-
2013	February	80	70
2013	March	90	80
2013	Apr	60	90
2013	May	50	60
2014	January	40	-
2014	February	50	40
2014	March	60	50
2014	Apr	40	60
2014	May	30	40
2015	January	10	-
2015	February	20	10
2015	March	30	20
2015	Apr	20	30
2015	May	40	20

Use of Offset inside Above() as parameter

Year	Month	Sum(Sales)	Above(Sum(Sales))	Above(Sum(Sales),1)	Above(Sum(Sales),2)
		690	-	-	-
2013	January	70	-	-	-
2013	February	80	70	70	-
2013	March	90	80	80	70
2013	Apr	60	90	90	80
2013	May	50	60	60	90
2014	January	40	-	-	-
2014	February	50	40	40	-
2014	March	60	50	50	40
2014	Apr	40	60	60	50
2014	May	30	40	40	60
2015	January	10	-	-	-
2015	February	20	10	10	-
2015	March	30	20	20	10
2015	Apr	20	30	30	20
2015	May	40	20	20	30

Simple application of Below()

Year	Month	Sum(Sales)	Below(Sum(Sales))
		690	-
2013	January	70	80
2013	February	80	90
2013	March	90	60
2013	Apr	60	50
2013	May	50	-
2014	January	40	50
2014	February	50	60
2014	March	60	40
2014	Apr	40	30
2014	May	30	-
2015	January	10	20
2015	February	20	30
2015	March	30	20
2015	Apr	20	40
2015	May	40	-

Use of Offset inside Below() as parameter

Year	Month	Sum(Sales)	Below(Sum(Sales))	Below(Sum(Sales),1)	Below(Sum(Sales),2)
		690	-	-	-
2013	January	70	80	80	90
2013	February	80	90	90	60
2013	March	90	60	60	50
2013	Apr	60	50	50	-
2013	May	50	-	-	-
2014	January	40	50	50	60
2014	February	50	60	60	40
2014	March	60	40	40	30
2014	Apr	40	30	30	-
2014	May	30	-	-	-
2015	January	10	20	20	30
2015	February	20	30	30	20
2015	March	30	20	20	40
2015	Apr	20	40	40	-
2015	May	40	-	-	-

Using 1 as offset or using nothing is same. For this reason, "Above(Sum (Sales))" and "Above(Sum(Sales),1)", both the expressions are giving the same output. This is true for Below() function as well.

Simple application of Above()

Year	Month	Sum(Sales)	Above(Sum(Sal...
		690	-
2013	January	70	-
2013	February	80	70
2013	March	90	80
2013	Apr	60	90
2013	May	50	60
2014	January	40	-
2014	February	50	40
2014	March	60	50
2014	Apr	40	60
2014	May	30	40
2015	January	10	-
2015	February	20	10
2015	March	30	20
2015	Apr	20	30
2015	May	40	20

Use of TOTAL qualifier inside of Above()

Year	Month	Sum(Sales)	Above(TOTAL Sum(Sal...
		690	-
2013	January	70	-
2013	February	80	70
2013	March	90	80
2013	Apr	60	90
2013	May	50	60
2014	January	40	50
2014	February	50	40
2014	March	60	50
2014	Apr	40	60
2014	May	30	40
2015	January	10	30
2015	February	20	10
2015	March	30	20
2015	Apr	20	30
2015	May	40	20

Simple application of Below()

Year	Month	Sum(Sales)	Below(Sum(Sales))
		690	-
2013	January	70	80
2013	February	80	90
2013	March	90	60
2013	Apr	60	50
2013	May	50	-
2014	January	40	50
2014	February	50	60
2014	March	60	40
2014	Apr	40	30
2014	May	30	-
2015	January	10	20
2015	February	20	30
2015	March	30	20
2015	Apr	20	40
2015	May	40	-

Use of TOTAL qualifier inside of Below()

Year	Month	Sum(Sales)	Below(TOTAL Sum(Sales))
		690	-
2013	January	70	80
2013	February	80	90
2013	March	90	60
2013	Apr	60	50
2013	May	50	40
2014	January	40	50
2014	February	50	60
2014	March	60	40
2014	Apr	40	30
2014	May	30	10
2015	January	10	20
2015	February	20	30
2015	March	30	20
2015	Apr	20	40
2015	May	40	-

When we are using TOTAL qualifier inside the Above() or Below() function then the expression is working only on that particular expression column as TOTAL qualifier doesn't allow any dimension. As a result, adding TOTAL before Sum will omit first (for Above) or last(for Below) value and the calculation to be shifted one row down (for Above) or up (for Below). Here one thing must be noted that dimension grouping with TOTAL qualifier doesn't work inside above function.

Year	Month	Sum(Sales)	Above(Sum(Sales))
		690	-
2013	January	70	-
2013	February	80	70
2013	March	90	80
2013	Apr	60	90
2013	May	50	60
2014	January	40	-
2014	February	50	40
2014	March	60	50
2014	Apr	40	60
2014	May	30	40
2015	January	10	-
2015	February	20	10
2015	March	30	20
2015	Apr	20	30
2015	May	40	20

Year	Month	Sum(Sales)	Above(Sum(Sales),1,2)	RangeSum(Above (Sum(Sales),1,2))	RangeAvg(Above (Sum(Sales),1,2))	RangeSum (Above(Sum (Sales),2,2))	RangeAvg(Above (Sum(Sales),2,2))
		690	-	**0**	-	**0**	-
2013	January	70	-	0	-	0	-
2013	February	80	70	70	70	0	-
2013	March	90	80	150	75	70	70
2013	Apr	60	90	170	85	150	75
2013	May	50	60	150	75	170	85
2014	January	40	-	0	-	0	-
2014	February	50	40	40	40	0	-
2014	March	60	50	90	45	40	40
2014	Apr	40	60	110	55	90	45
2014	May	30	40	100	50	110	55
2015	January	10	-	0	-	0	-
2015	February	20	10	10	10	0	-
2015	March	30	20	30	15	10	10
2015	Apr	20	30	50	25	30	15
2015	May	40	20	50	25	50	25

Year	Month	Sum(Sales)	Below(Sum(Sales))
		690	-
2013	January	70	80
2013	February	80	90
2013	March	90	60
2013	Apr	60	50
2013	May	50	-
2014	January	40	50
2014	February	50	60
2014	March	60	40
2014	Apr	40	30
2014	May	30	-
2015	January	10	20
2015	February	20	30
2015	March	30	20
2015	Apr	20	40
2015	May	40	-

Year	Month	Sum(Sales)	Below(Sum(Sales),1,2)	RangeSum(Below (Sum(Sales),1,2))	RangeAvg(Below (Sum(Sales),1,2))	RangeSum (Below(Sum (Sales),2,2))	RangeAvg(Below (Sum(Sales),2,2))
		690	-	**0**	-	**0**	-
2013	January	70	80	170	85	150	75
2013	February	80	90	150	75	110	55
2013	March	90	60	110	55	50	50
2013	Apr	60	50	50	50	0	-
2013	May	50	-	0	-	0	-
2014	January	40	50	110	55	100	50
2014	February	50	60	100	50	70	35
2014	March	60	40	70	35	30	30
2014	Apr	40	30	30	30	0	-
2014	May	30	-	0	-	0	-
2015	January	10	20	50	25	50	25
2015	February	20	30	50	25	60	30
2015	March	30	20	60	30	40	40
2015	Apr	20	40	40	40	0	-
2015	May	40	-	0	-	0	-

Third parameter (i.e. Count) have no impact on output when used with Above() only. Its useful when used with chart range functions (e.g. RangeSum(), RangeAvg() etc.). It provides "Full Accumulation value" when RowNo() is used as the third parameter.

Simple application of Above()

Year	Month	Sum(Sales)	Above(Sum (Sales),1,2)	Above(Sum (Sales),1,3)	Above(Sum (Sales),1,4)
		690	-	-	-
2013	January	70	-	-	-
2013	February	80	70	70	70
2013	March	90	80	80	80
2013	Apr	60	90	90	90
2013	May	50	60	60	60
2014	January	40	-	-	-
2014	February	50	40	40	40
2014	March	60	50	50	50
2014	Apr	40	60	60	60
2014	May	30	40	40	40
2015	January	10	-	-	-
2015	February	20	10	10	10
2015	March	30	20	20	20
2015	Apr	20	30	30	30
2015	May	40	20	20	20

Full Accumulation using RangeSum(), Above() and RowNo()

Year	Month	Sum(Sales)	Above(Sum(Sales),1,2)	RangeSum(Above (Sum(Sales),1,2))	RangeSum(Above(Sum (Sales),1,RowNo()))	RangeSum(Above(Sum (Sales),2,RowNo()))
		690	-	**0**	**0**	**0**
2013	January	70	-	0	0	0
2013	February	80	70	70	70	0
2013	March	90	80	150	150	70
2013	Apr	60	90	170	240	150
2013	May	50	60	150	300	240
2014	January	40	-	0	0	0
2014	February	50	40	40	40	0
2014	March	60	50	90	90	40
2014	Apr	40	60	110	150	90
2014	May	30	40	100	190	150
2015	January	10	-	0	0	0
2015	February	20	10	10	10	0
2015	March	30	20	30	30	10
2015	Apr	20	30	50	60	30
2015	May	40	20	50	80	60

2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	Q1	Q2	Q3	Q4

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Sum(SalesValue)

FinYear	Month	Sum (SalesValue)	RangeSum (Above(Sum (SalesValue),1,5))	RangeAvg (Above(Sum (SalesValue),1,5))	RangeCount (Above(Sum (SalesValue),1,5))	RangeAvg (Above(Sum (SalesValue),-1,5))	RangeAvg (Below(Sum (SalesValue),1,5))	RangeMin (Above(Sum (SalesValue),1,5))	RangeMax (Above(Sum (SalesValue),1,5))
		3912812.83	**0.00**	-	**0**	-	-	-	-
2009-2010	Jan	348355.49	0.00	-	0	284,256.35	284,256.35	-	-
2009-2010	Feb	279403.79	348,355.49	348,355.49	1	307,711.72	307,711.72	348355.49	348355.49
2009-2010	Mar	225052.08	627,759.28	313,879.64	2	332,508.11	332,508.11	279403.79	348355.49
2009-2010	Apr	408586.74	852,811.36	284,270.45	3	318,676.71	318,676.71	225052.08	348355.49
2009-2010	May	240222.18	1,261,398.10	315,349.53	4	344,784.64	344,784.64	225052.08	408586.74
2009-2010	Jun	268016.95	1,501,620.28	300,324.06	5	342,965.26	342,965.26	225052.08	408586.74
2009-2010	Jul	396680.64	1,421,281.74	284,256.35	5	349,298.99	349,298.99	225052.08	408586.74
2009-2010	Aug	349034.05	1,538,558.59	307,711.72	5	349,365.23	349,365.23	225052.08	408586.74
2009-2010	Sep	339429.75	1,662,540.56	332,508.11	5	352,677.05	352,677.05	240222.18	408586.74
2009-2010	Oct	370761.81	1,593,383.57	318,676.71	5	343,634.68	343,634.68	240222.18	396680.64
2009-2010	Nov	258920.07	1,723,923.20	344,784.64	5	428,349.28	428,349.28	268016.95	396680.64
2009-2010	Dec	428349.28	1,714,826.32	342,965.26	5	-	-	258920.07	396680.64

The input String is: 100,'ABC',Null(),250,'DEF','GHI',Null(),Null(),Null(),'ABC1234','EMP1988','100ABC',999

RangeCount: 9	RangeNumericCount: 3	RangeTextCount: 6	RangeNullCount: 4	RangeMissingCount: 10

0	RangeMinString: 100	RangeMaxString: GHI99	RangeMode:	RangeOnly: 5
0	RangeMin: 100	RangeMax: 999	RangeMode: DEF	RangeOnly:
			RangeMode:	RangeOnly: abc
				RangeOnly:

Things to remember :

1) RangeCount() function can count both Numeric and String values but not Null values
2) RangeNumericCount() function can count only valid Numeric values but not String values or Null() values
3) RangeTextCount() function can count only String values but not Numeric values or Null() values
4) RangeNullCount() function can count only NULL values but not Numeric values or String values
5) RangeMissingCount() function can count Non-Numeric values (i.e. both String and NULL values) but not Numeric values
6) RangeMinString() function returns the first value in text sort order found among 1 to N arguments
7) RangeMaxString() function returns the last value in text sort order found among 1 to N arguments
8) RangeOnly(): If exactly one non-NULL value exists among the range of N expressions, that value will be returned. In all other cases, NULL is returned.
9) RangeMin() function returns the lowest numeric value found within a range 1 to N arguments. If no numeric value is found, NULL is returned.
10) RangeMax() function returns the highest numeric value found within a range 1 to N arguments. If no numeric value is found, NULL is returned.

@_FinFullYear				
2008-2009	2009-2010	2010-2011	2011-2012	2012-2013

@_FinQuarter			
Q1	Q2	Q3	Q4

@_Month											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Sum(SalesValue)

@_FinFul...	@_Month	Sum(SalesValue)	RangeSum(Above(Sum(SalesValue),1,5))	RangeAvg(Above(Sum(SalesValue),1,5))	RangeAvg(Above(Sum(SalesValue),-1,5))
		3912812.83	**0.00**	-	-
2009-2010	Jan	348355.49	0.00	-	284,256.35
2009-2010	Feb	279403.79	348,355.49	348,355.49	307,711.72
2009-2010	Mar	225052.08	627,759.28	313,879.64	332,508.11
2009-2010	Apr	408586.74	852,811.36	284,270.45	318,676.71
2009-2010	May	240222.18	1,261,398.10	315,349.53	344,784.64
2009-2010	Jun	268016.95	1,501,620.28	300,324.06	342,965.26
2009-2010	Jul	396680.64	1,421,281.74	284,256.35	349,298.99
2009-2010	Aug	349034.05	1,538,558.59	307,711.72	349,365.23
2009-2010	Sep	339429.75	1,662,540.56	332,508.11	352,677.05
2009-2010	Oct	370761.81	1,593,383.57	318,676.71	343,634.68
2009-2010	Nov	258920.07	1,723,923.20	344,784.64	428,349.28
2009-2010	Dec	428349.28	1,714,826.32	342,965.26	-

Sum(SalesValue)

@_FinFul...	@_Month	Sum(SalesValue)	RangeSum(Above(Sum(SalesValue),2,5))	RangeAvg(Above(Sum(SalesValue),2,5))	RangeAvg(Above(Sum(SalesValue),-2,5))
		3912812.83	**0.00**	-	-
2009-2010	Jan	348355.49	0.00	-	307,711.72
2009-2010	Feb	279403.79	0.00	-	332,508.11
2009-2010	Mar	225052.08	348,355.49	348,355.49	318,676.71
2009-2010	Apr	408586.74	627,759.28	313,879.64	344,784.64
2009-2010	May	240222.18	852,811.36	284,270.45	342,965.26
2009-2010	Jun	268016.95	1,261,398.10	315,349.53	349,298.99
2009-2010	Jul	396680.64	1,501,620.28	300,324.06	349,365.23
2009-2010	Aug	349034.05	1,421,281.74	284,256.35	352,677.05
2009-2010	Sep	339429.75	1,538,558.59	307,711.72	343,634.68
2009-2010	Oct	370761.81	1,662,540.56	332,508.11	428,349.28
2009-2010	Nov	258920.07	1,593,383.57	318,676.71	-
2009-2010	Dec	428349.28	1,723,923.20	344,784.64	-