

# PROJECT DEVELOPMENT PHASE

## SPRINT-III

Date	11 November 2022
Team ID	PNT2022TMID15414
Project Name	Global Sales Data Analytics
Mark	4 Mark

### DATA PREPARATION

1. First understand and load the data.

The screenshot displays the IBM Cognos Analytics with Watson Content interface. The top navigation bar includes the IBM Cognos Analytics with Watson logo, a 'Content' dropdown menu, a search bar, and user profile icons. A maintenance banner at the top states: 'Maintenance: Scheduled maintenance completed. Click More Info for details and to subscribe to future events'. The main content area is titled 'Content' and features a 'New +' button. Below the title, there are tabs for 'My content', 'Team content', and 'Samples'. The 'My content' tab is active, showing a list of files. The list has a header with columns: 'Name', 'Type', and 'Last Accessed'. The files listed are: 'Pharma Dashboard' (Folder, 9/27/2022, 1:05 AM), '50\_Startups.csv' (Uploaded file, 9/13/2022, 12:08 AM), 'bank.csv' (Uploaded file, 9/15/2022, 8:27 AM), 'bikebuyer.csv' (Uploaded file, 9/13/2022, 12:20 AM), 'Global\_Superstore2.csv' (Uploaded file, 10/11/2022, 4:07 AM), and 'Global\_Superstore2.xlsx' (Unloaded file, 10/11/2022, 4:04 AM). The 'Global\_Superstore2.csv' file is selected, indicated by a checkmark in the first column.

2. Since there is only single file, there need not be relationships or custom tables for the data.

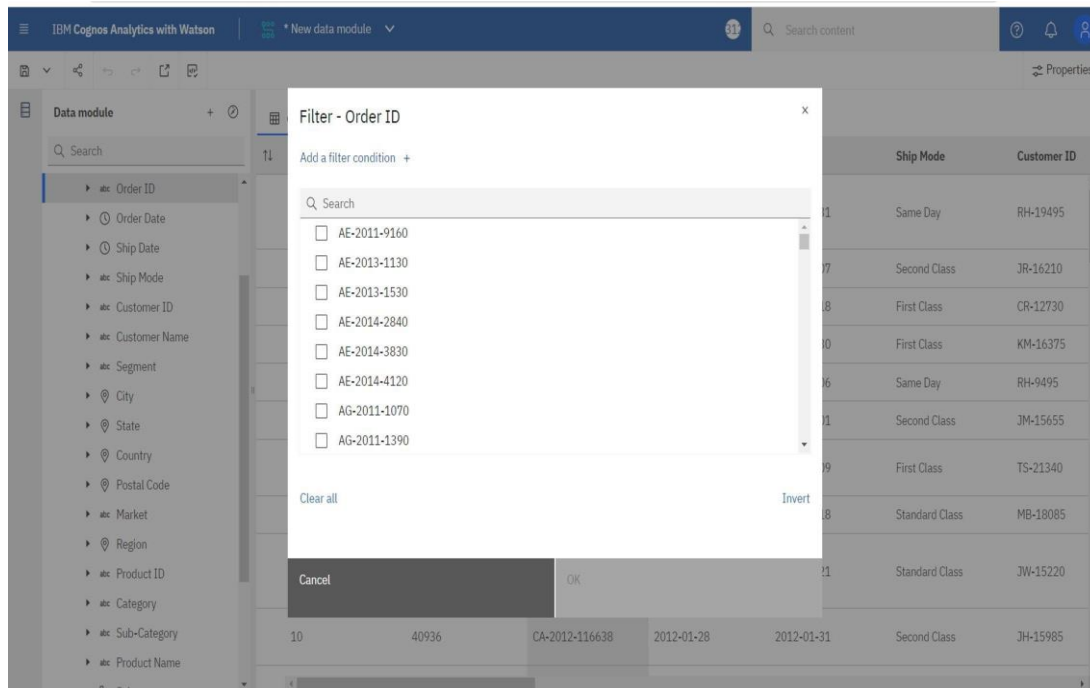
The screenshot shows the IBM Cognos Analytics interface. The top navigation bar includes the logo, a search bar, and a user profile icon. A maintenance banner is visible below the navigation bar. The main area is divided into a left sidebar and a central grid view. The sidebar, titled 'Data module', contains a search bar and a list of fields: Row ID, Order ID, Order Date, Ship Date, Ship Mode, Customer ID, Customer Name, Segment, City, State, Country, and Postal Code. The central grid view displays data from the file 'Global\_Su...tore2.csv'. The grid has columns for Row ID, Order ID, Order Date, Ship Date, Ship Mode, and Customer ID. The data is organized into 10 rows, with the first row being a header row. The data is as follows:

Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID
1	32298	CA-2012-124891	2012-07-31	Same Day	RH-19495
2	26341	IN-2013-77878	2013-02-05	Second Class	JR-16210
3	25330	IN-2013-71249	2013-10-17	First Class	CR-12730
4	13524	ES-2013-1579342	2013-01-30	First Class	KM-16375
5	47221	SG-2013-4320	2013-11-05	Same Day	RH-9495
6	22732	IN-2013-42360	2013-06-28	Second Class	JM-15655
7	30570	IN-2011-81826	2011-11-07	First Class	TS-21340
8	31192	IN-2012-86369	2012-04-14	Standard Class	MB-18085
9	40155	CA-2014-135909	2014-10-14	Standard Class	JW-15220
10	40936	CA-2012-116638	2012-01-28	Standard Class	JH-15085

3. To prepare the data, we need to verify it is clean. There must be no null values. If there are null values, there will be empty data.

The screenshot shows the IBM Cognos Analytics interface with a context menu open over the 'Order ID' column. The menu options are: Filter..., Create data group..., Create navigation path..., Split..., Hide from users, Remove, Format data..., Clean..., Sort descending, Sort ascending, and Properties. The data is the same as in the previous screenshot.

Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID
1	32298	CA-2012-124891	2012-07-31	Same Day	RH-19495
2	26341	IN-2013-77878	2013-02-05	Second Class	JR-16210
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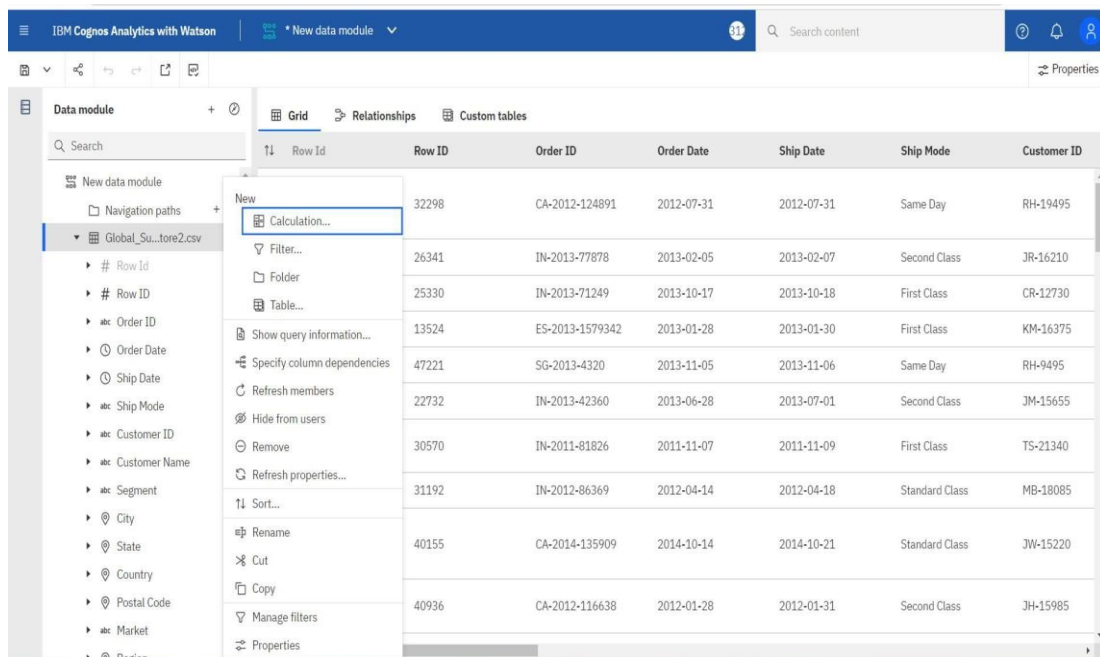
2. Once cleaned, the data is saved.

## DATE CALCULATIONS AND NAVIGATION PATHS

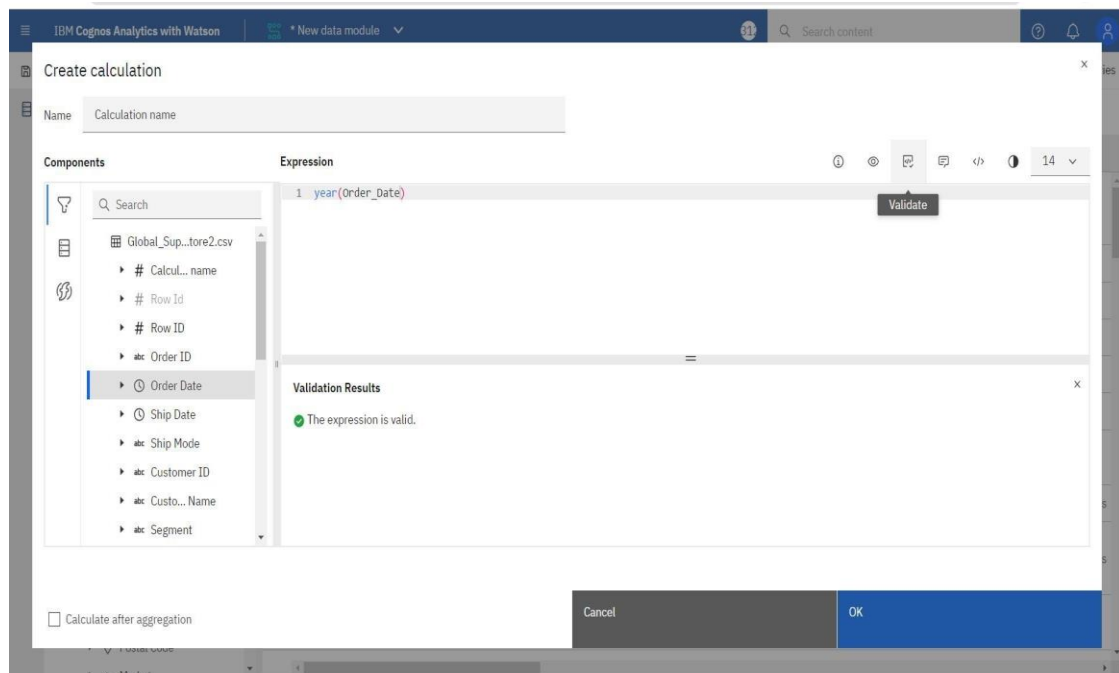
Once you load the data, we need to Prepare the data.

**a. Prepare Calculations of Year, Month, Day fields and also the related Navigation path**

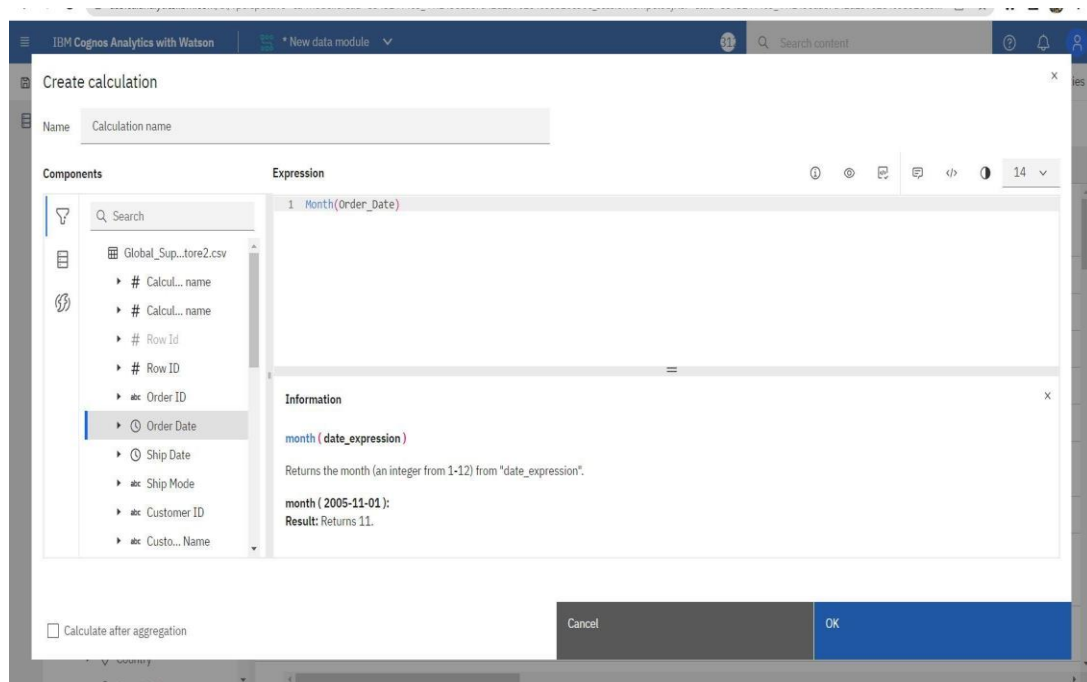
**b. Create a Few more Calculations – Target Sales, Min Sales, Max Sales, Middle Range Sales.**



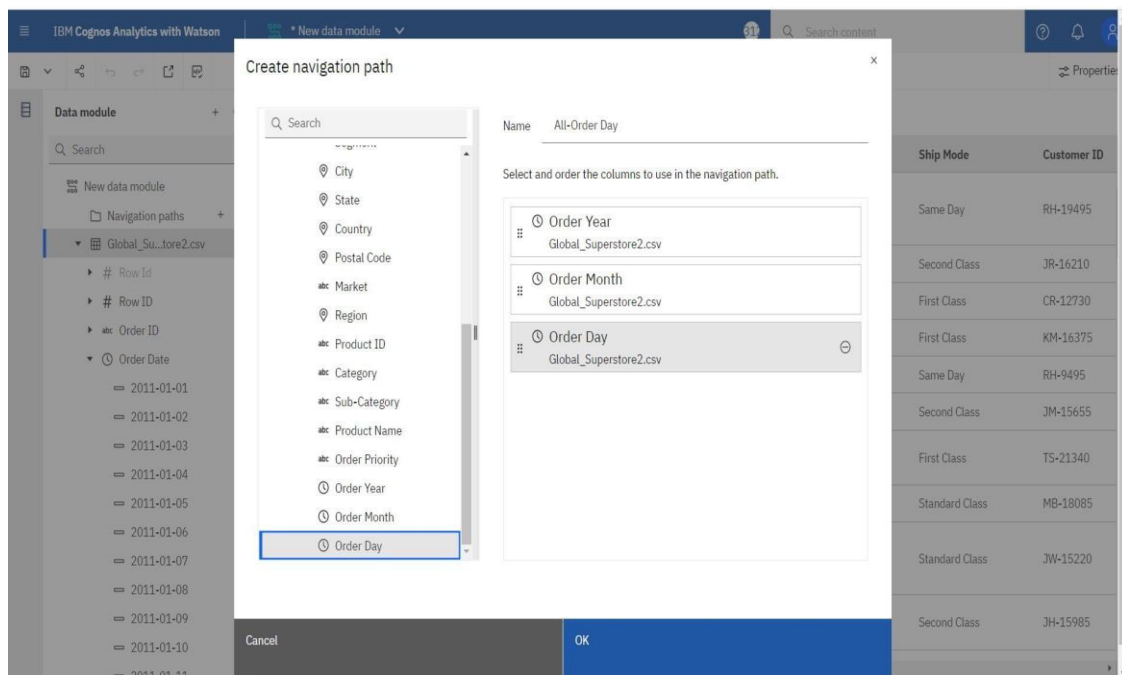
1. Right click> calculation> type expression> validate> Set Name as 'Order Year'



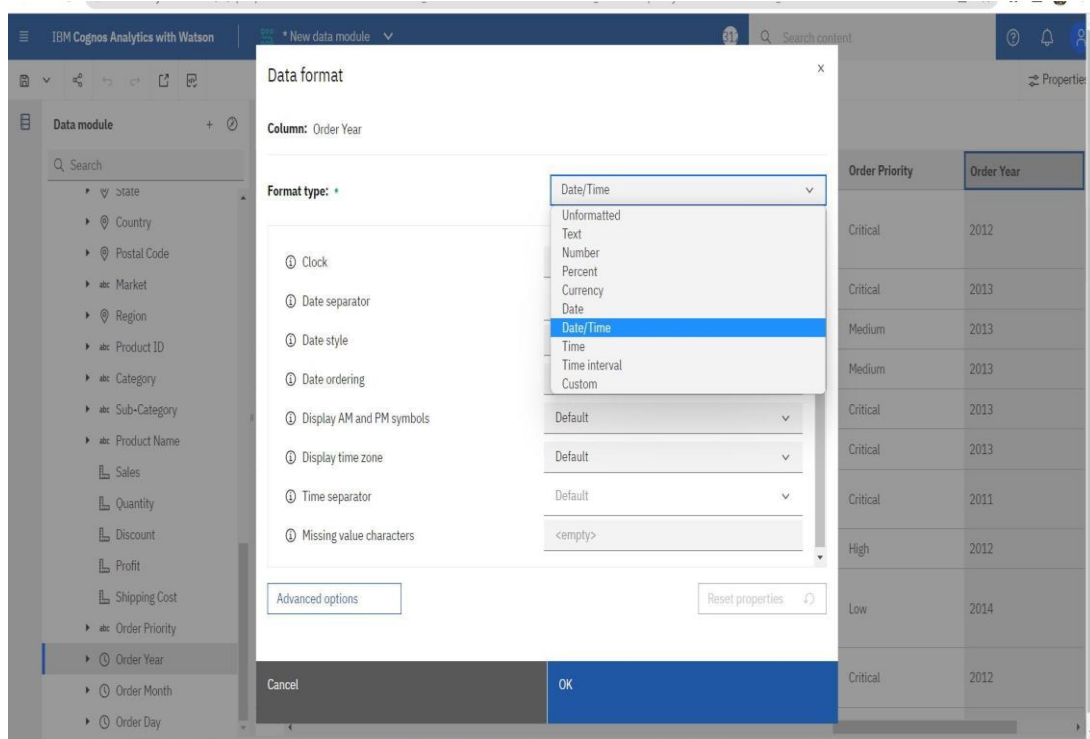
2. Similarly, 'OrderMonth', 'OrderDay' and 'All'  
OrderYear -> Year (Order\_Date)  
OrderMonth -> Month (Order\_Date)  
OrderDay -> Day (Order\_Date)  
All -> All



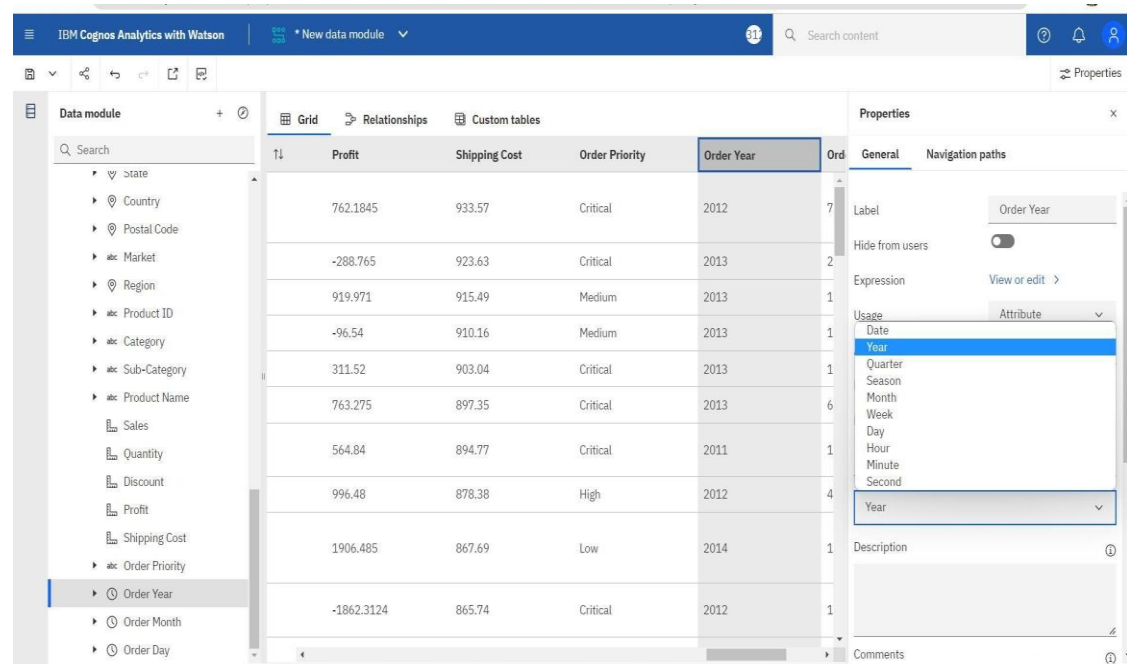
### 3. Right click on create navigation path



### 4. Data format > Date/Time



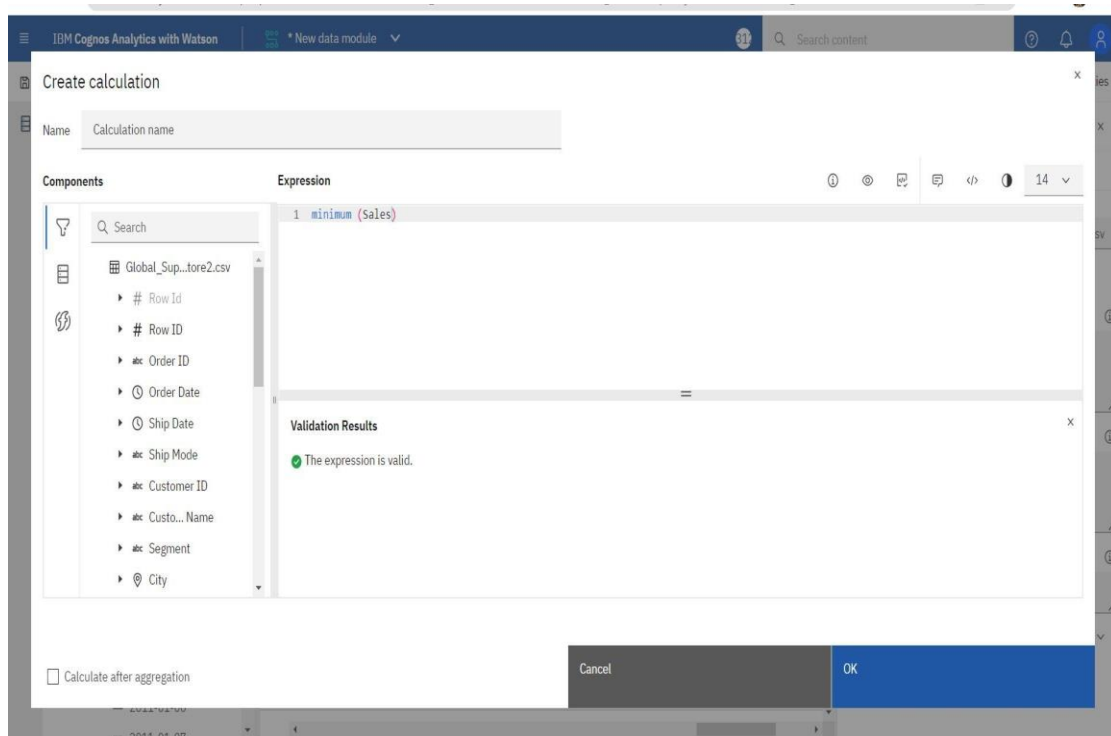
5. Properties> Usage-> Attribute  
 Aggregate-> Count Distinct  
 Data Type-> Integer  
 Represents-> Time, (Year, Month, Day Respectively)  
 Display Options-> Show Members  
 This way it becomes a Numerical data Type



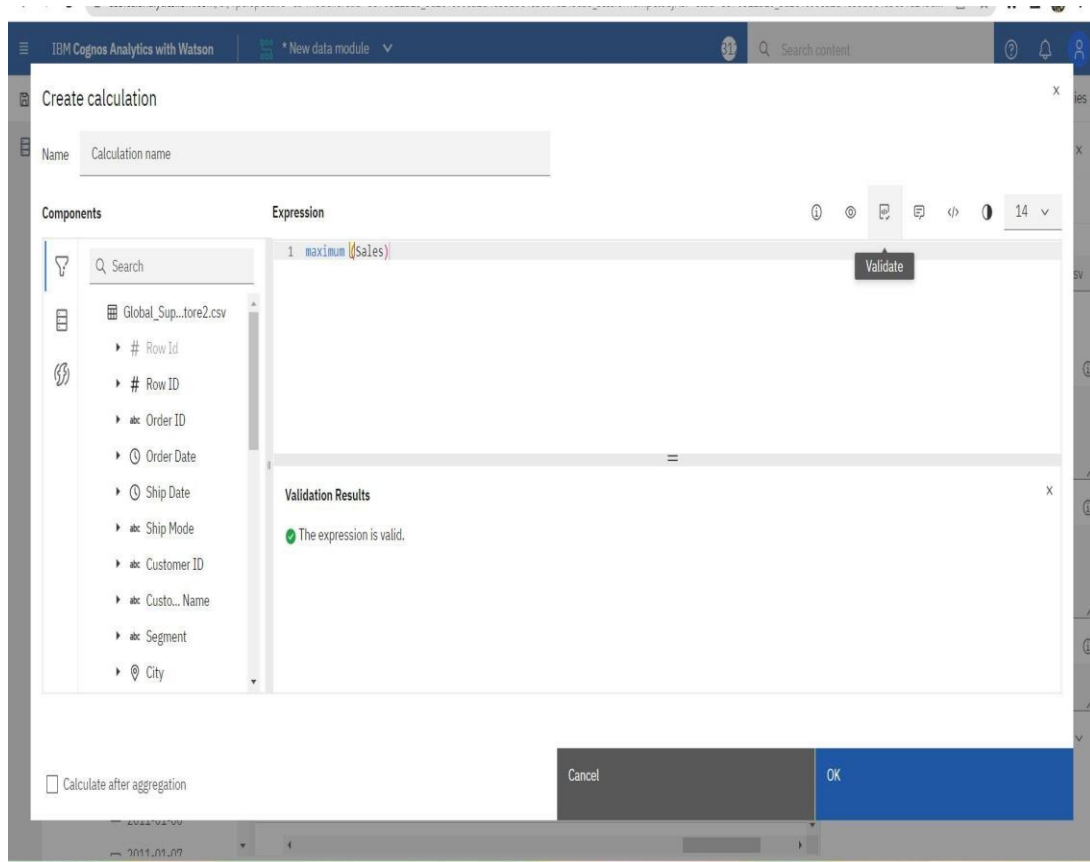
6. Hence calculations for day, month and year are completed.  
 Once you load the data, we need to Prepare the data.  
 a. Prepare Calculations of Year, Month, Day fields and also the related Navigation path  
 b. Create a Few more Calculations – Target Sales, Min Sales, Max Sales, Middle Range Sales.

7. Similarly, calculations for Target sales, Min sales, Max Sales and Middle range sales are done  
 Min sales-> minimum (Sales)  
 Max sales, Target sales-> maximum (Sales)  
 Middle range sales-> average (Sales)

**Minimum(Sales)**



## Maximum(Sales)



## Middle Range (Sales)

The screenshot shows the 'Create calculation' dialog in IBM Cognos Analytics. The 'Name' field is set to 'Calculation name'. The 'Expression' field contains the formula `1 average ([Sales])`. A 'Validate' button is located to the right of the expression field. Below the expression field, the 'Validation Results' section shows a green checkmark and the message 'The expression is valid.' The 'Components' panel on the left lists available fields from the 'Global\_Sup...tore2.csv' dataset, including Row ID, Order ID, Order Date, Ship Date, Ship Mode, Customer ID, Customer Name, Segment, and City. At the bottom, there is a checkbox for 'Calculate after aggregation' (which is unchecked), and 'Cancel' and 'OK' buttons.

IBM Cognos Analytics with Watson

\* New data module

Search content

### Create calculation

Name: Calculation name

Components

Global\_Sup...tore2.csv

- # Row Id
- # Row ID
- Order ID
- Order Date
- Ship Date
- Ship Mode
- Customer ID
- Custo... Name
- Segment
- City

Expression

1 average ([Sales])

Validate

Validation Results

The expression is valid.

☐ Calculate after aggregation

Cancel OK