

PREPARE THE DATASETS

| | |
|--------------|-----------------------------|
| Team ID | PNT2022TMID07570 |
| Project Name | Global Sales Data Analytics |

DATA PREPARATION

1. First understand and load the data.

IBM Cognos Analytics with Watson

Hello. Welcome to Cognos Analytics with Watson.

You can get started right away by taking a look at our introduction video, product tour and Getting Started tab.

Watch video Take a product tour

Quick launch

- Upload data: Upload or drag and drop spreadsheets, csv files, and other data sources.
- Prepare data: Use data modules to clean and connect data from multiple resources.
- Exploration: Quickly find unbiased answers by identifying trends in your data with data explor...
- Present data: Create sophisticated, multi-page, multi-query dashboards, reports, or stori...

IBM Cognos Analytics with Watson

Content

Maintenance: Scheduled maintenance completed. Click More Info for details and to subscribe to future events

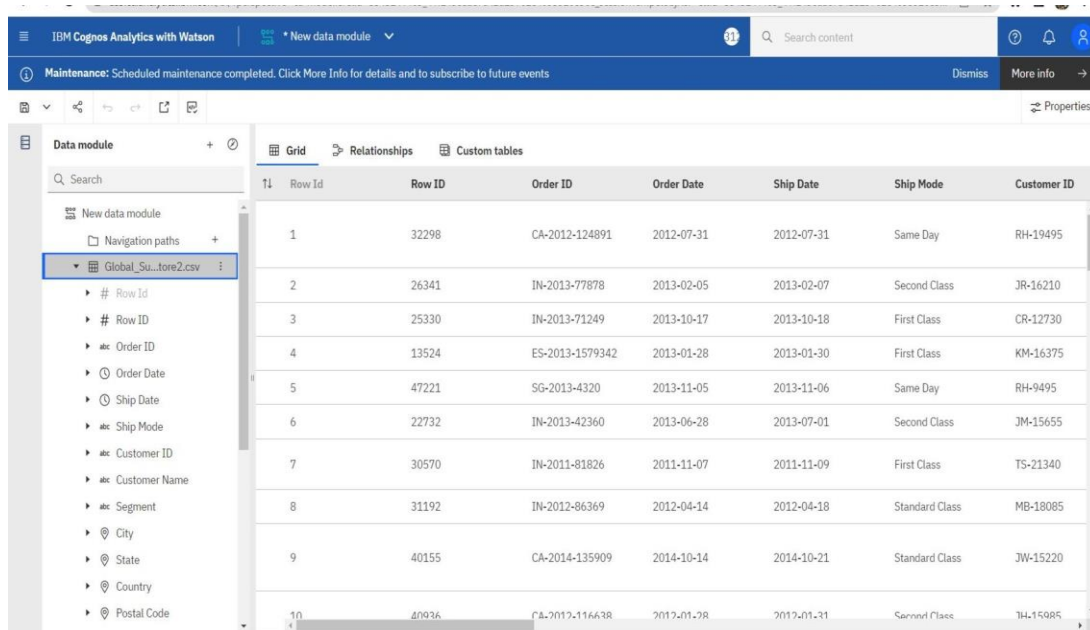
Content

My content Team content Samples

1 item selected

| Name | Type | Last Accessed |
|-------------------------|---------------|---------------------|
| 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 |
| Global Superstore2.xlsx | Unloaded file | 10/11/2022, 4:04 AM |

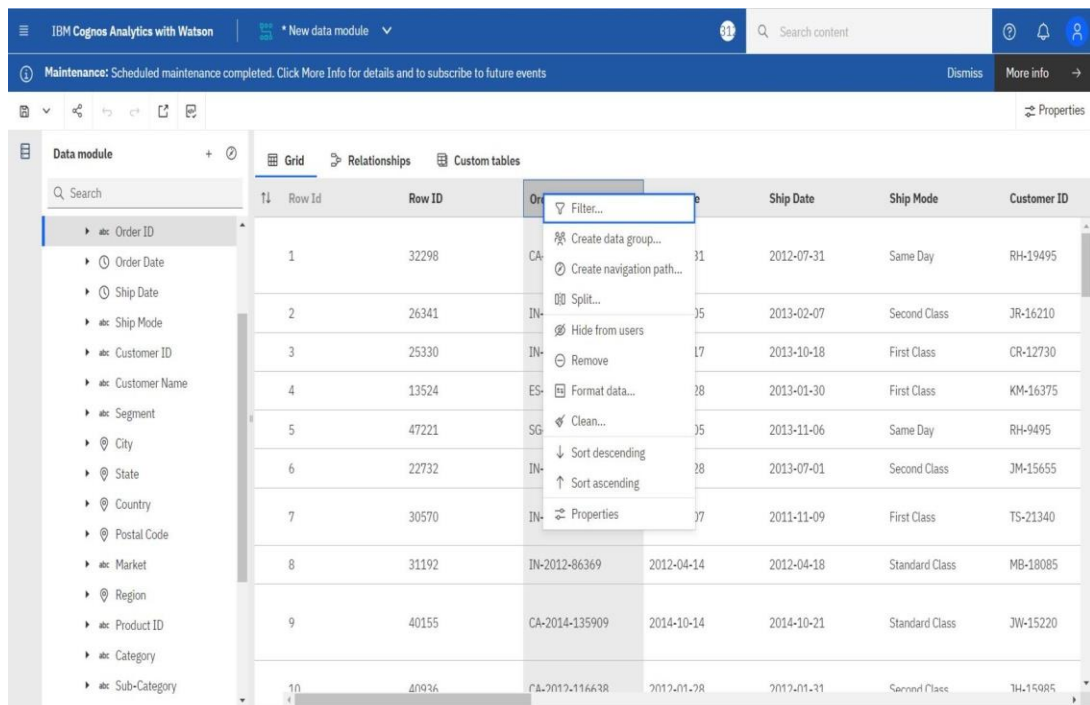
2. Since there is only single file, there need not be relationships or custom tables for the data.



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 message is displayed below the navigation bar. The main area is divided into a left sidebar and a central grid. The sidebar shows a 'Data module' with 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 displays a table with 10 rows and 7 columns: Row ID, Order ID, Order Date, Ship Date, Ship Mode, and Customer ID. The data is sorted by Row ID in ascending order.

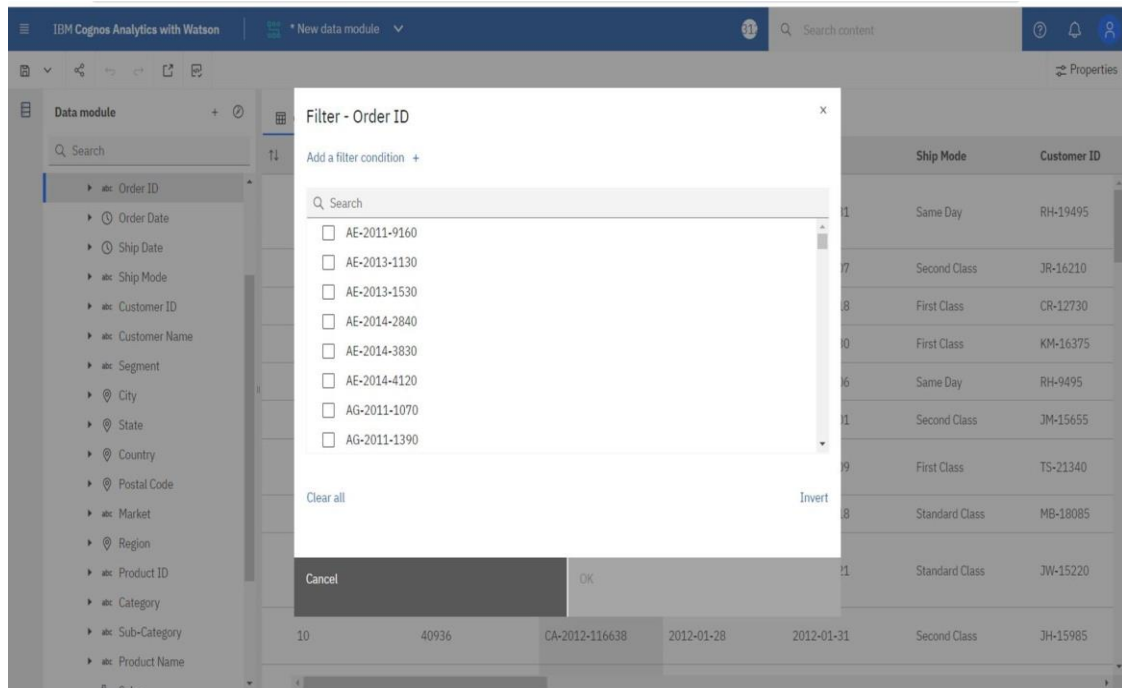
| Row ID | Order ID | Order Date | Ship Date | Ship Mode | Customer ID |
|--------|-----------------|------------|------------|----------------|-------------|
| 1 | CA-2012-124891 | 2012-07-31 | 2012-07-31 | Same Day | RH-19495 |
| 2 | IN-2013-77878 | 2013-02-05 | 2013-02-07 | Second Class | JR-16210 |
| 3 | IN-2013-71249 | 2013-10-17 | 2013-10-18 | First Class | CR-12730 |
| 4 | ES-2013-1579342 | 2013-01-28 | 2013-01-30 | First Class | KM-16375 |
| 5 | SG-2013-4320 | 2013-11-05 | 2013-11-06 | Same Day | RH-9495 |
| 6 | IN-2013-42360 | 2013-06-28 | 2013-07-01 | Second Class | JM-15655 |
| 7 | IN-2011-81826 | 2011-11-07 | 2011-11-09 | First Class | TS-21340 |
| 8 | IN-2012-86369 | 2012-04-14 | 2012-04-18 | Standard Class | MB-18085 |
| 9 | CA-2014-135909 | 2014-10-14 | 2014-10-21 | Standard Class | JW-15220 |
| 10 | IN-2012-116638 | 2012-01-28 | 2012-01-31 | Second 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 table is the same as in the previous screenshot.

| Row ID | Order ID | Order Date | Ship Date | Ship Mode | Customer ID |
|--------|-----------------|------------|------------|----------------|-------------|
| 1 | CA-2012-124891 | 2012-07-31 | 2012-07-31 | Same Day | RH-19495 |
| 2 | IN-2013-77878 | 2013-02-05 | 2013-02-07 | Second Class | JR-16210 |
| 3 | IN-2013-71249 | 2013-10-17 | 2013-10-18 | First Class | CR-12730 |
| 4 | ES-2013-1579342 | 2013-01-28 | 2013-01-30 | First Class | KM-16375 |
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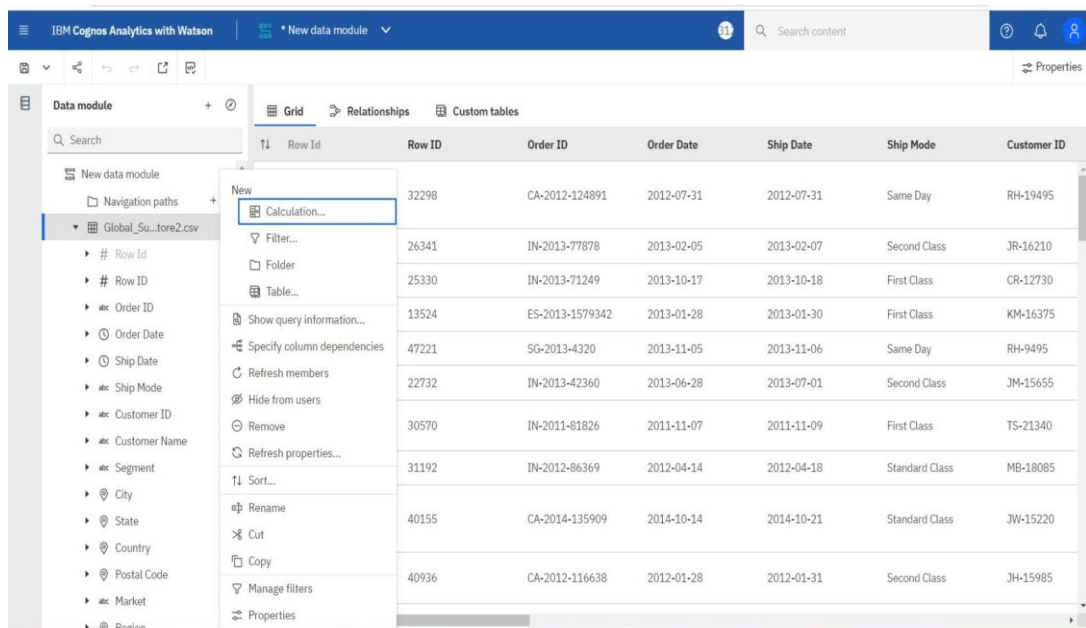
3. Once cleaned, the data is saved.

DATE CALCULATIONS AND NAVIGATION PATHS

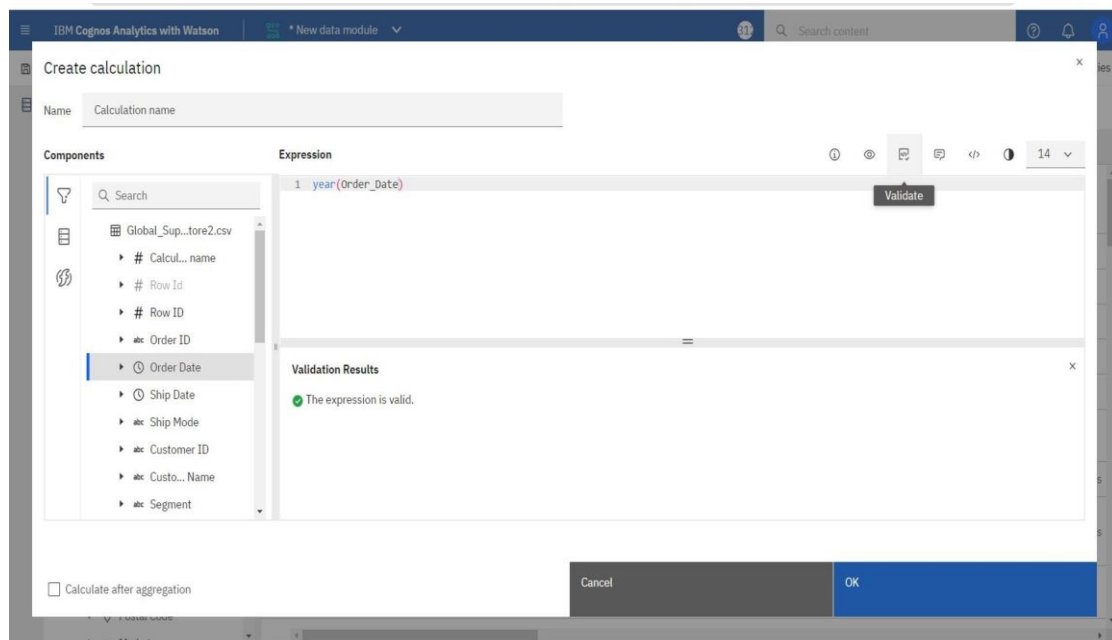
Once you load the data, we need to Prepare the data.

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

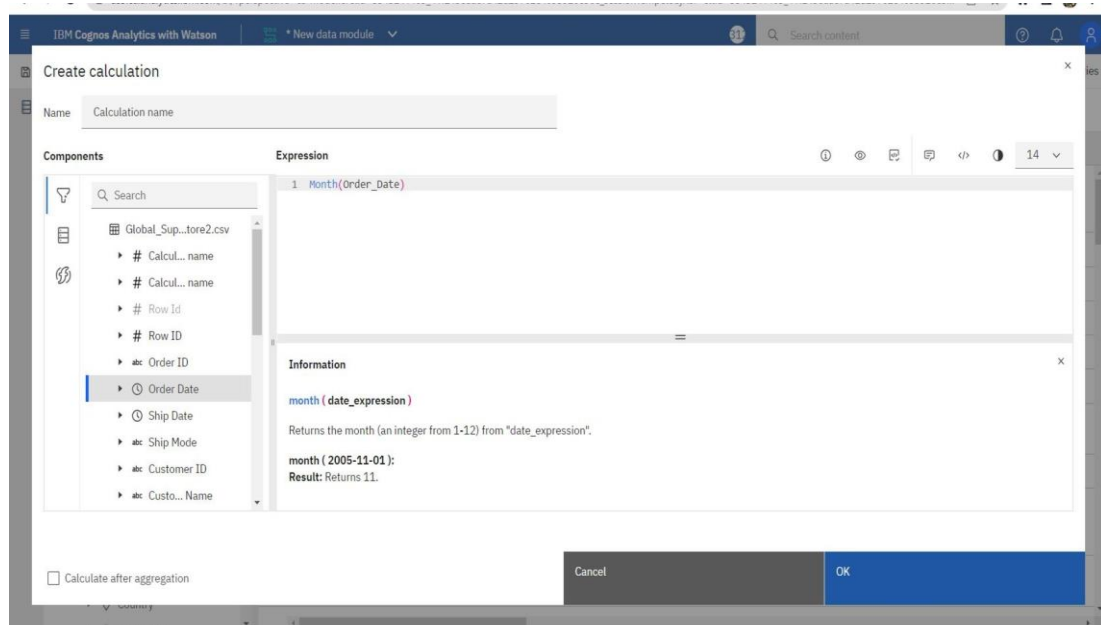
b. Create a Few more Calculations – Target Sales, Min Sales, Max Sales, Middle Range Sales.



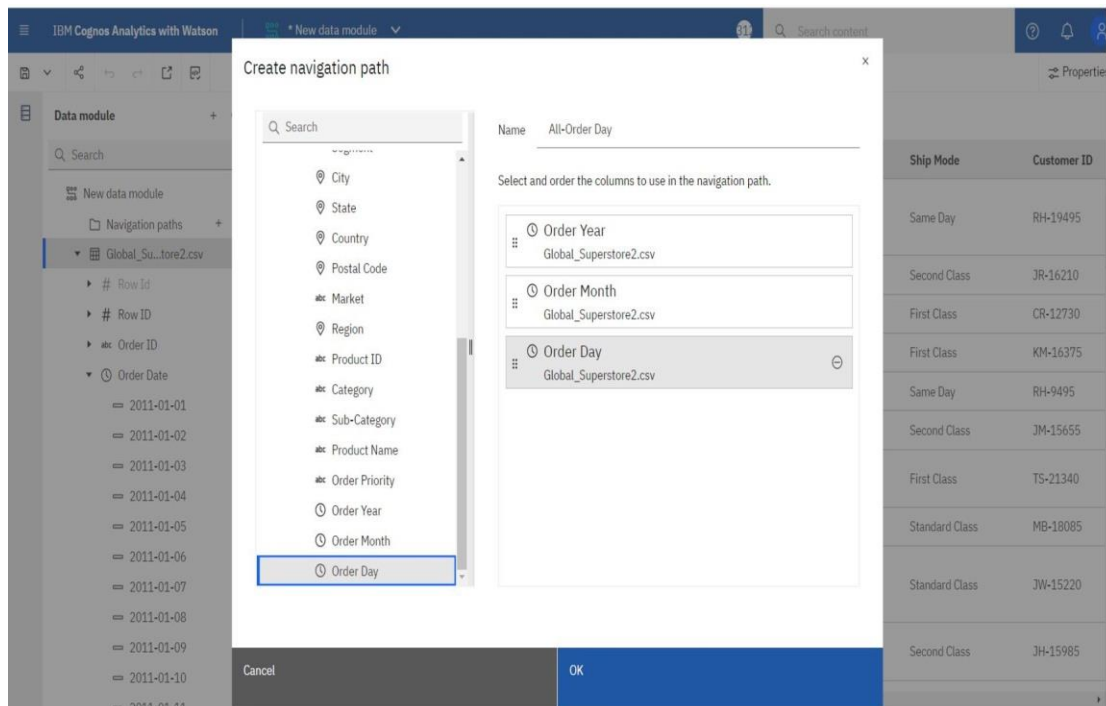
1. Right click> calculation> type expression> validate> Set Name as 'Order Year'



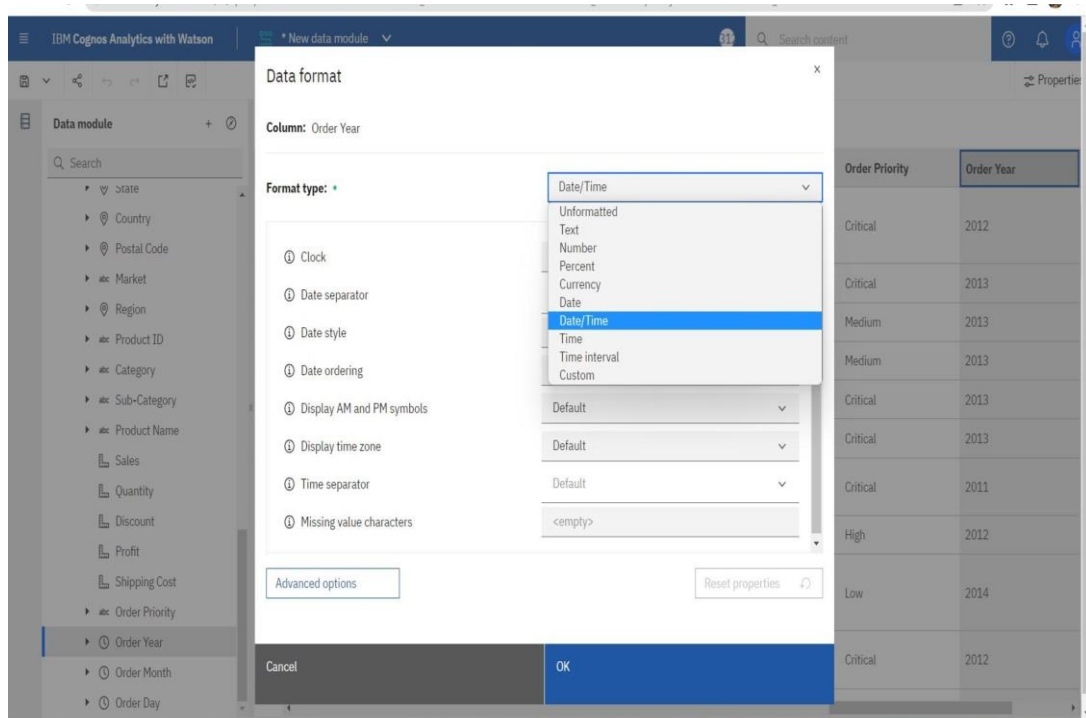
2. Similarly, 'OrderMonth', 'OrderDay' and 'All'
OrderYear -> Year (Order_Date)
OrderMonth -> Month (Order_Date)
OrderDay -> Day (Order_Date)
All -> All



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

The screenshot shows the IBM Cognos Analytics interface. On the left is a 'Data module' pane with a search bar and a tree view of data sources including State, Country, Postal Code, Market, Region, Product ID, Category, Sub-Category, Product Name, Sales, Quantity, Discount, Profit, Shipping Cost, Order Priority, Order Year, Order Month, and Order Day. The 'Order Year' field is selected. The main area displays a grid of data with columns: Profit, Shipping Cost, Order Priority, Order Year, and Ord. The grid contains 10 rows of data. On the right, the 'Properties' panel is open for the 'Order Year' field. It shows the 'General' tab with fields for Label, Hide from users, Expression, Usage, and Description. The 'Usage' dropdown is set to 'Attribute', and the 'Date' dropdown is set to 'Year'.

| Profit | Shipping Cost | Order Priority | Order Year | Ord |
|------------|---------------|----------------|------------|-----|
| 762.1845 | 933.57 | Critical | 2012 | 7 |
| -288.765 | 923.63 | Critical | 2013 | 2 |
| 919.971 | 915.49 | Medium | 2013 | 1 |
| -96.54 | 910.16 | Medium | 2013 | 1 |
| 311.52 | 903.04 | Critical | 2013 | 1 |
| 763.275 | 897.35 | Critical | 2013 | 6 |
| 564.84 | 894.77 | Critical | 2011 | 1 |
| 996.48 | 878.38 | High | 2012 | 4 |
| 1906.485 | 867.69 | Low | 2014 | 1 |
| -1862.3124 | 865.74 | Critical | 2012 | 1 |

6. Hence calculations for day, month and year are completed.

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

- Prepare Calculations of Year, Month, Day fields and also the related Navigation path
- Create a Few more Calculations – Target Sales, Min Sales, Max Sales, Middle Range Sales.**

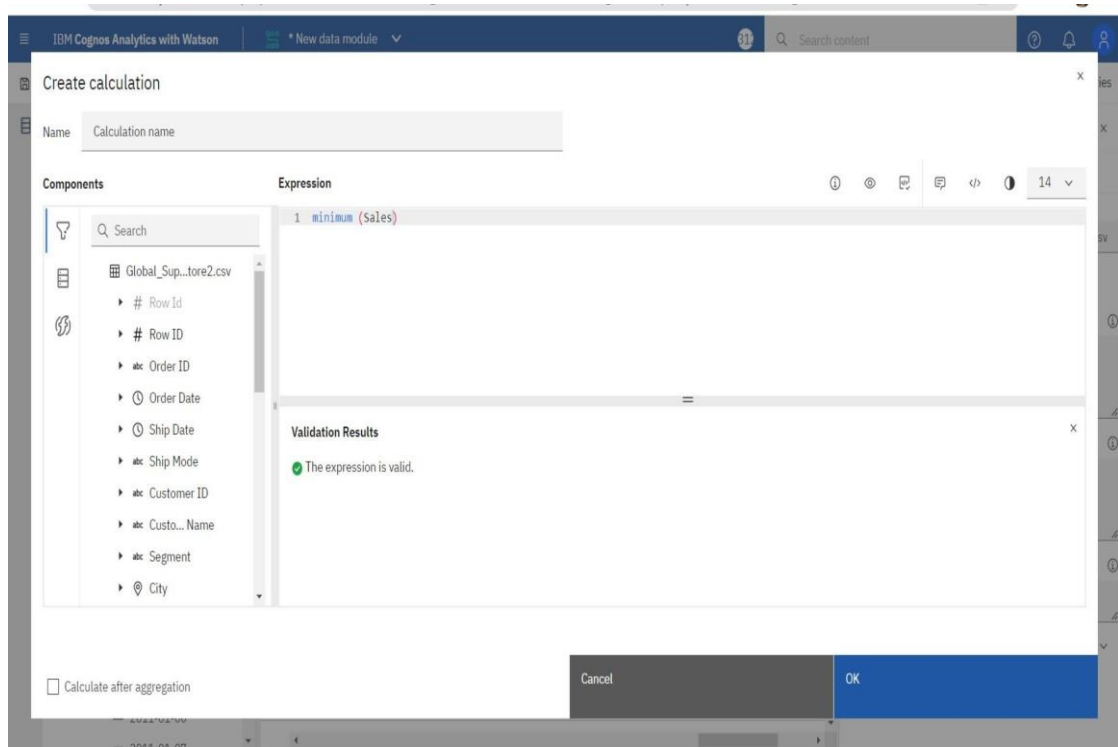
7. Similarly, calculations for Target sales, Min sales, Max Sales and Middle range sales are done

Min sales-> minimum (Sales)

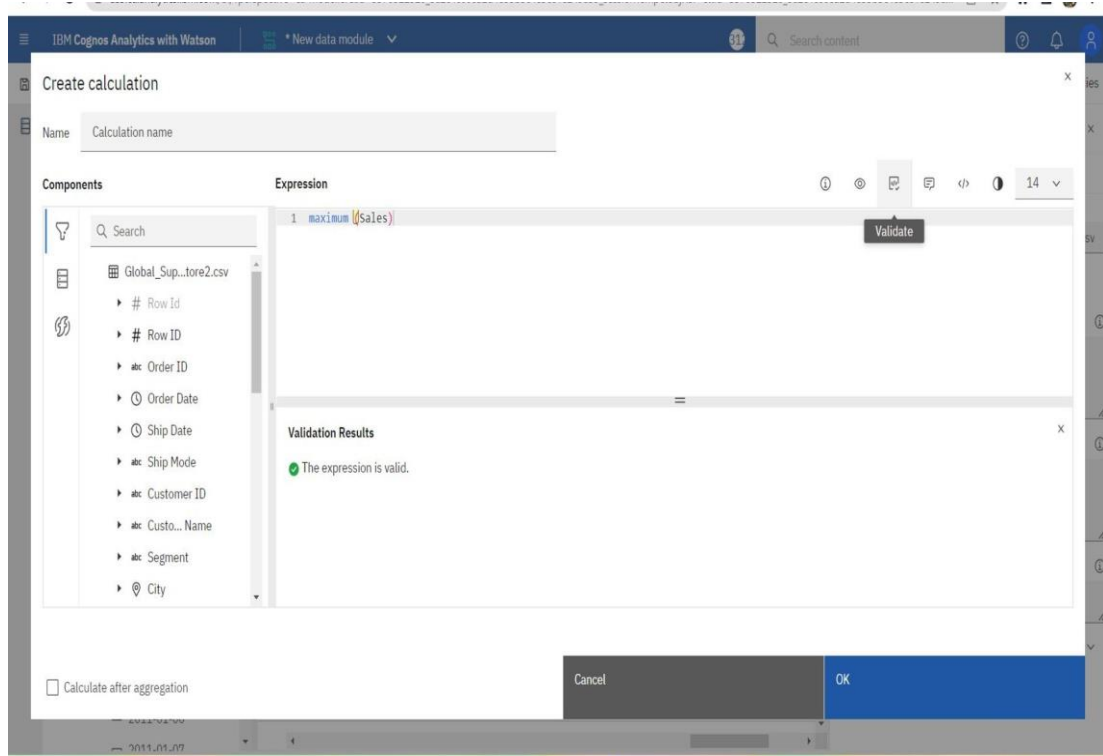
Max sales, Target sales-> maximum (Sales)

Middle range sales-> average (Sales)

Minimum(Sales)



Maximum(Sales)



Middle Range (Sales)

