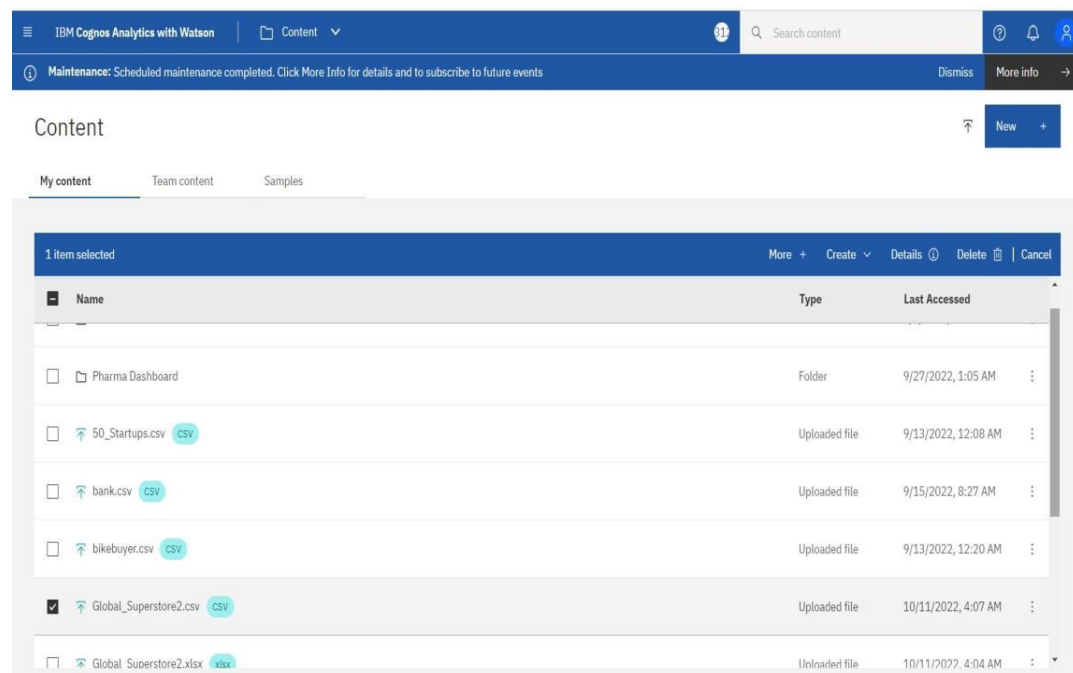
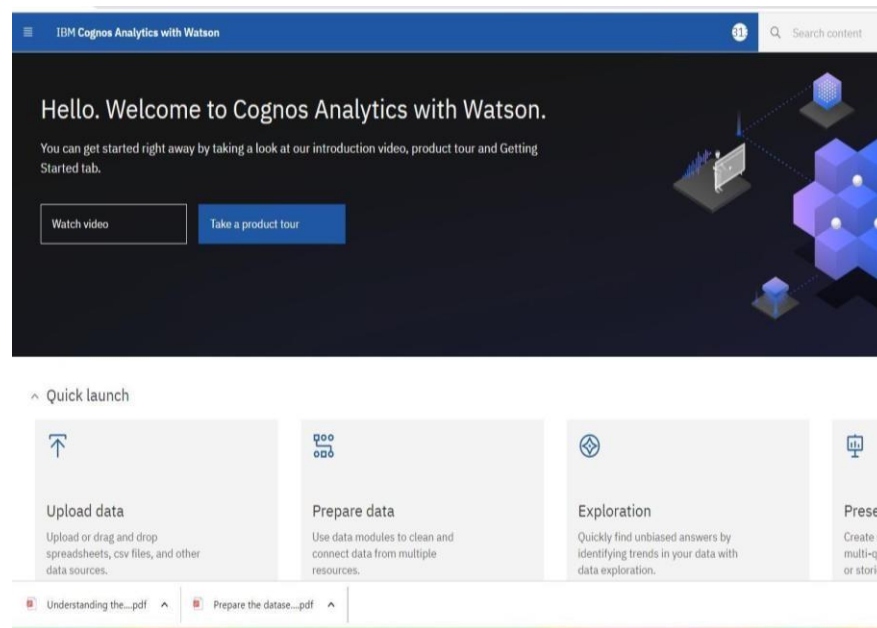


PREPARE THE DATASETS

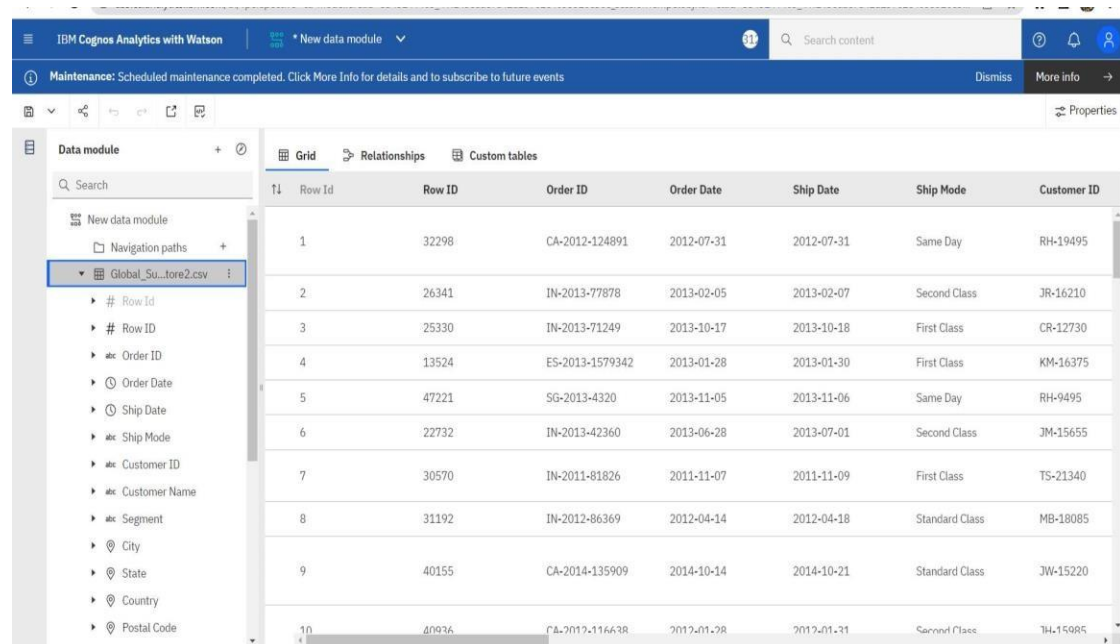
| | |
|---------------------|-----------------------------|
| Team ID | PNT2022TMID04948 |
| Project Name | Global Sales Data Analytics |

DATA PREPARATION

1. First understand and load the data.



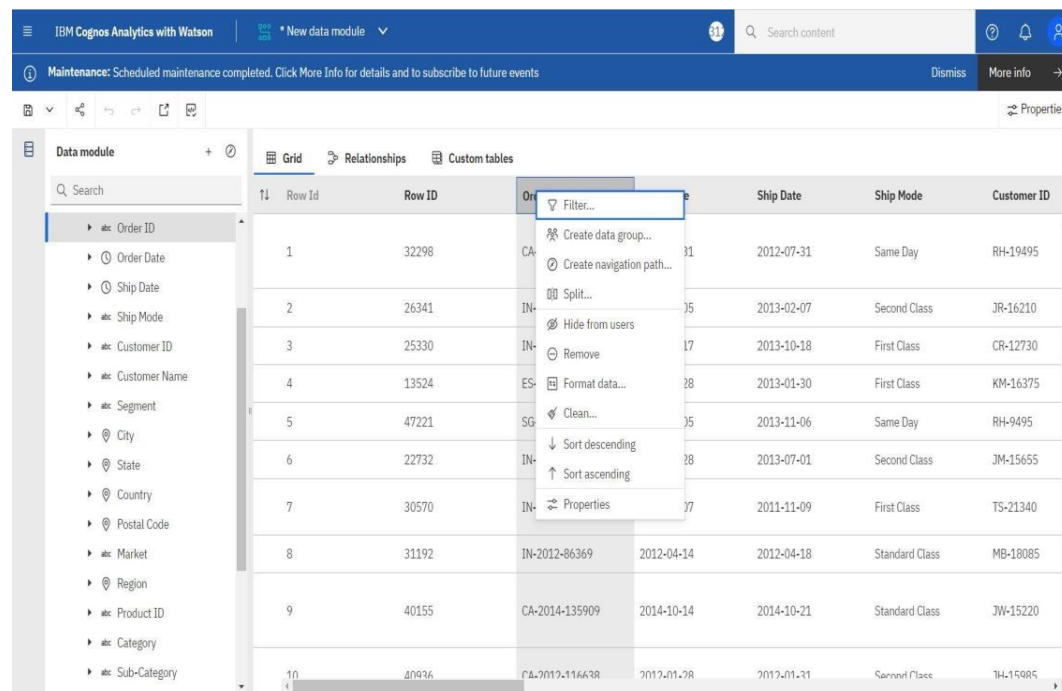
2. Since there is only single file, there need not be relationships or custom tables for the data.



The screenshot shows the IBM Cognos Analytics interface. The top navigation bar includes the logo, a search bar, and a notification banner about scheduled maintenance. The left sidebar shows the '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 main area displays a grid view of the data. The grid has columns for Row ID, Order ID, Order Date, Ship Date, Ship Mode, and Customer ID. The data is organized into rows, with the first row having Row ID 1, Order ID CA-2012-124891, Order Date 2012-07-31, Ship Date 2012-07-31, Ship Mode Same Day, and Customer ID RH-19495.

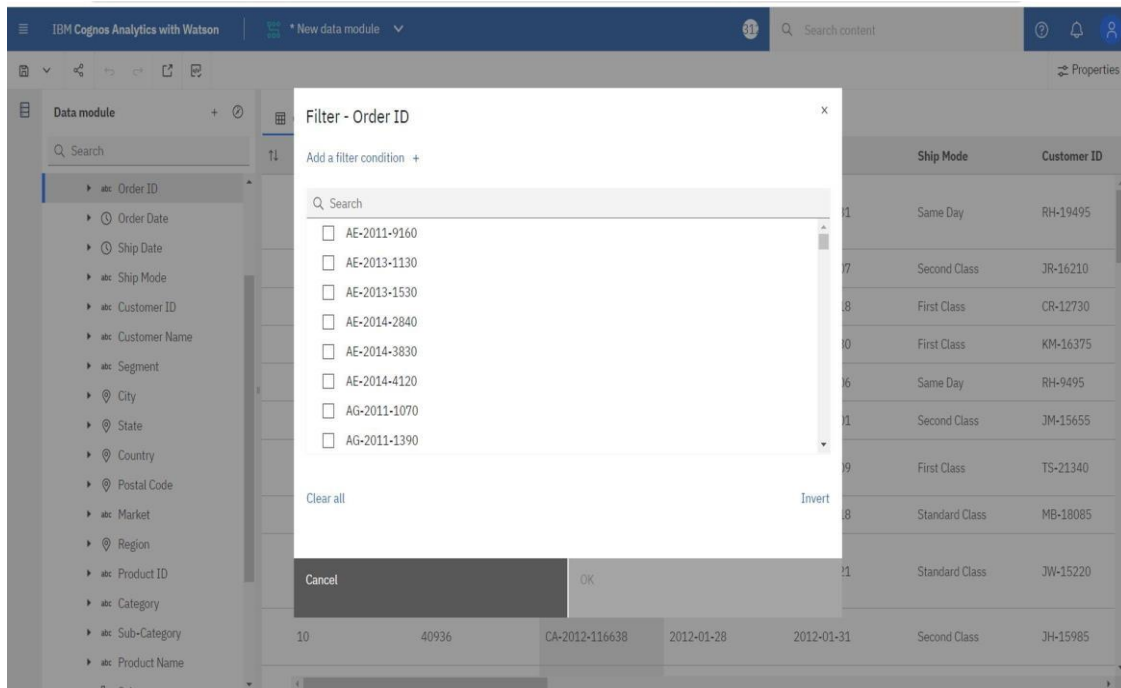
| Row ID | Order ID | Order Date | Ship Date | Ship Mode | Customer ID |
|--------|-----------------|------------|------------|----------------|-------------|
| 1 | CA-2012-124891 | 2012-07-31 | 2012-07-31 | Same Day | RH-19495 |
| 2 | IN-2013-77878 | 2013-02-05 | 2013-02-07 | Second Class | JR-16210 |
| 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 | CA-2012-116638 | 2012-01-28 | 2012-01-31 | Second Class | TH-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 |
| 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 | CA-2012-116638 | 2012-01-28 | 2012-01-31 | Second Class | TH-15085 |

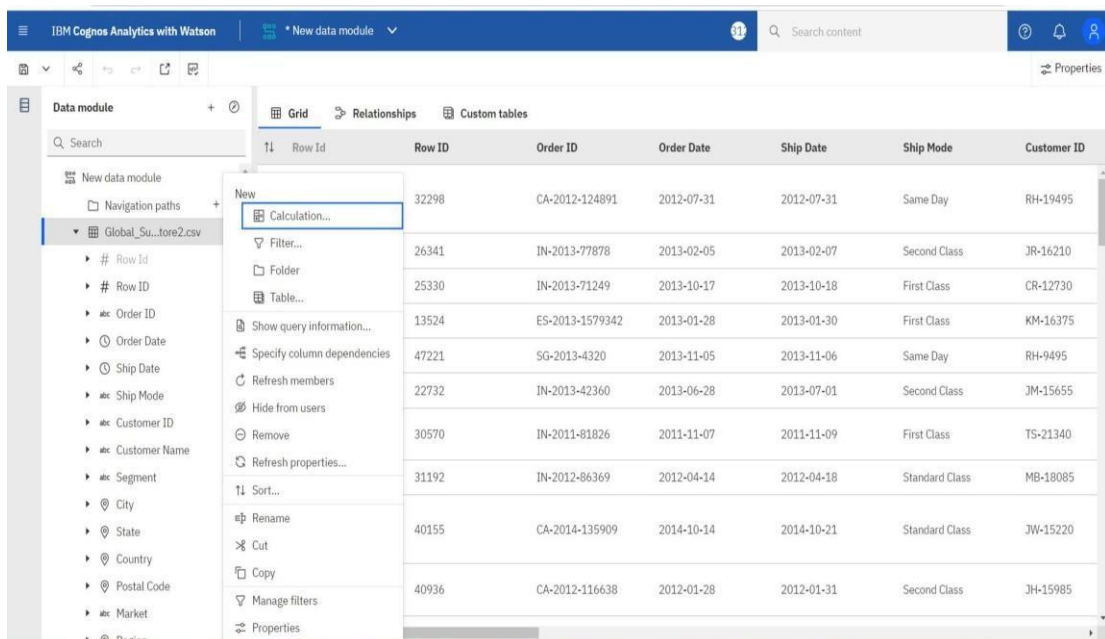


3. Once cleaned, the data is saved.

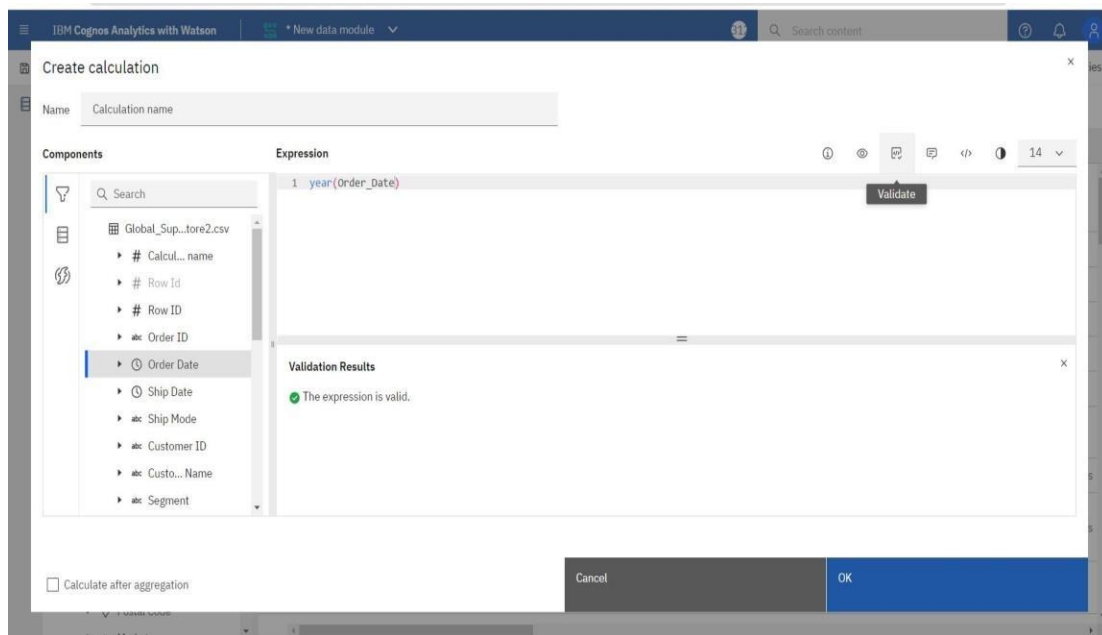
DATE CALCULATIONS AND NAVIGATION PATHS

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

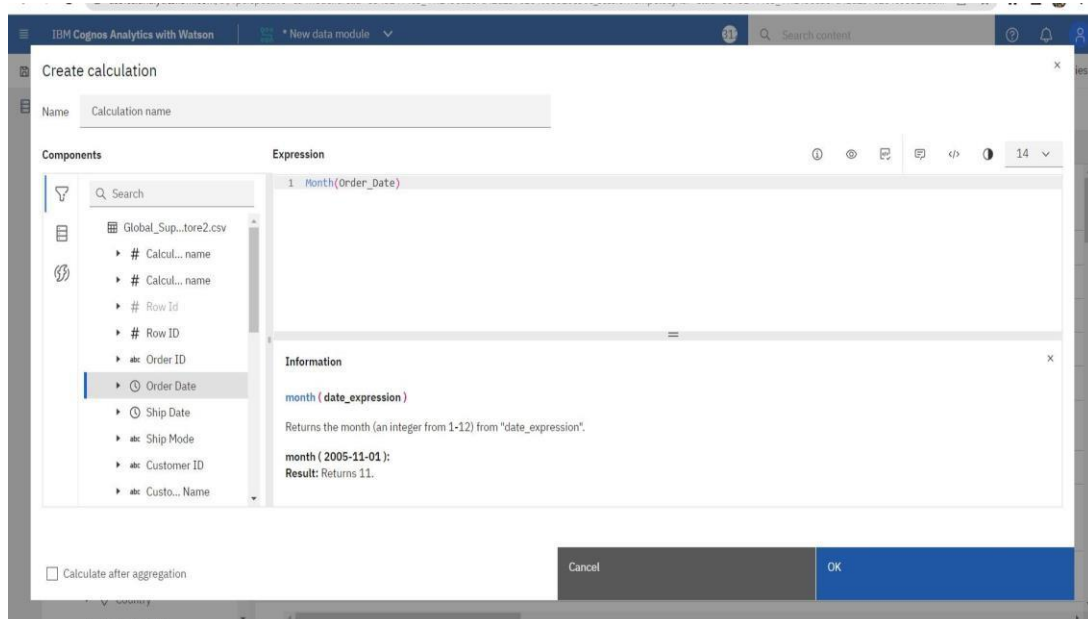
- Prepare Calculations of Year, Month, Day fields and also the related Navigation path**
- Create a Few more Calculations – Target Sales, Min Sales, Max Sales, Middle Range Sales.**



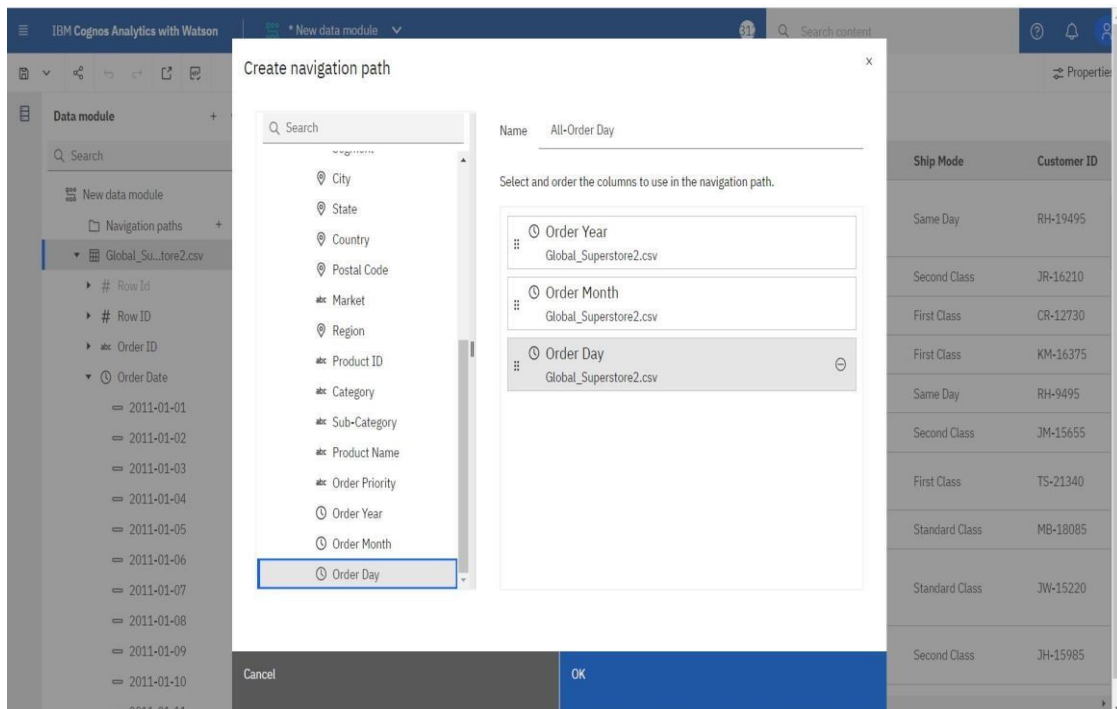
1. Right click> calculation> type expression> validate> Set Name as 'Order Year'



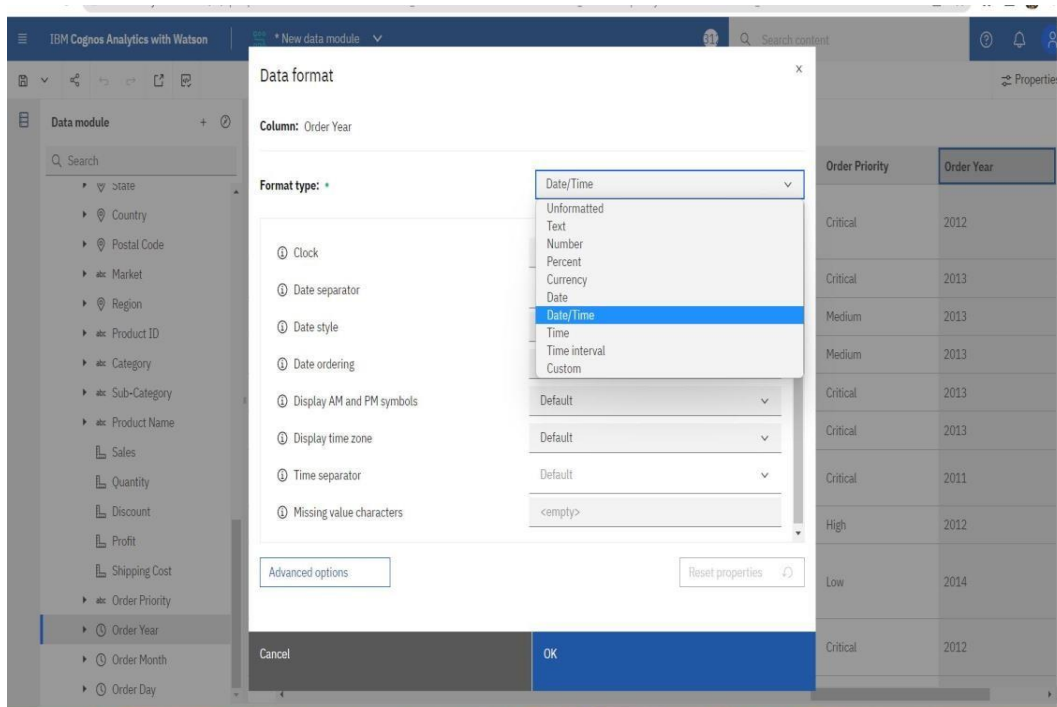
2. Similarly, 'OrderMonth', 'OrderDay' and 'All'
OrderYear -> Year (Order_Date)
OrderMonth -> Month (Order_Date)
OrderDay -> Day (Order_Date)
All -> All



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 the '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 with columns: Profit, Shipping Cost, Order Priority, Order Year, and Ord. The grid contains 11 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, and Usage. The 'Usage' dropdown is set to 'Attribute', and the 'Date' dropdown is set to 'Year'. The 'Description' field is empty.

| 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.**

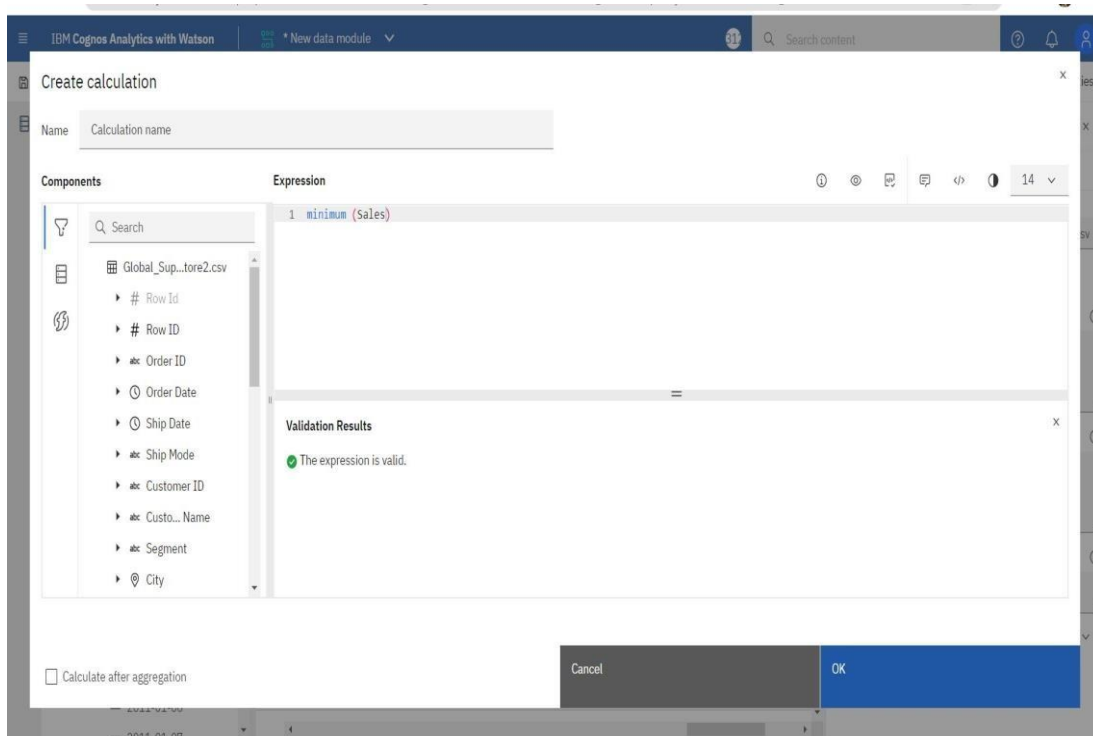
7. Similarly, calculations for Target sales, Min sales, Max Sales and Middle range sales are done

Min sales-> minimum (Sales)

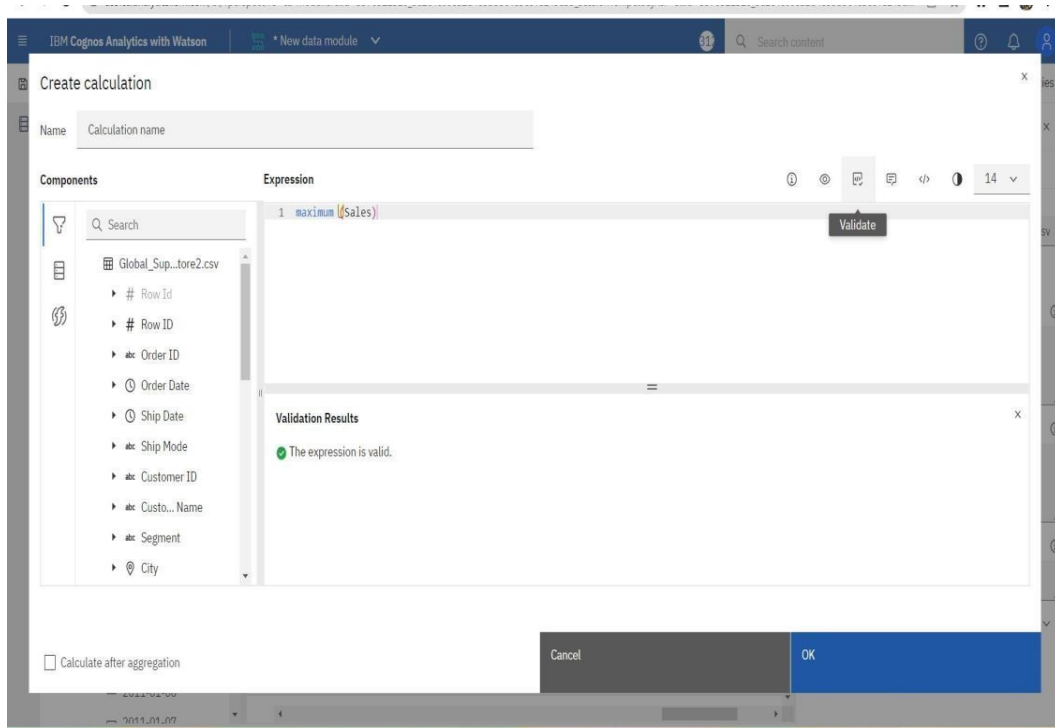
Max sales, Target sales-> maximum (Sales)

Middle range sales-> average (Sales)

Minimum(Sales)



Maximum(Sales)



Middle Range (Sales)

