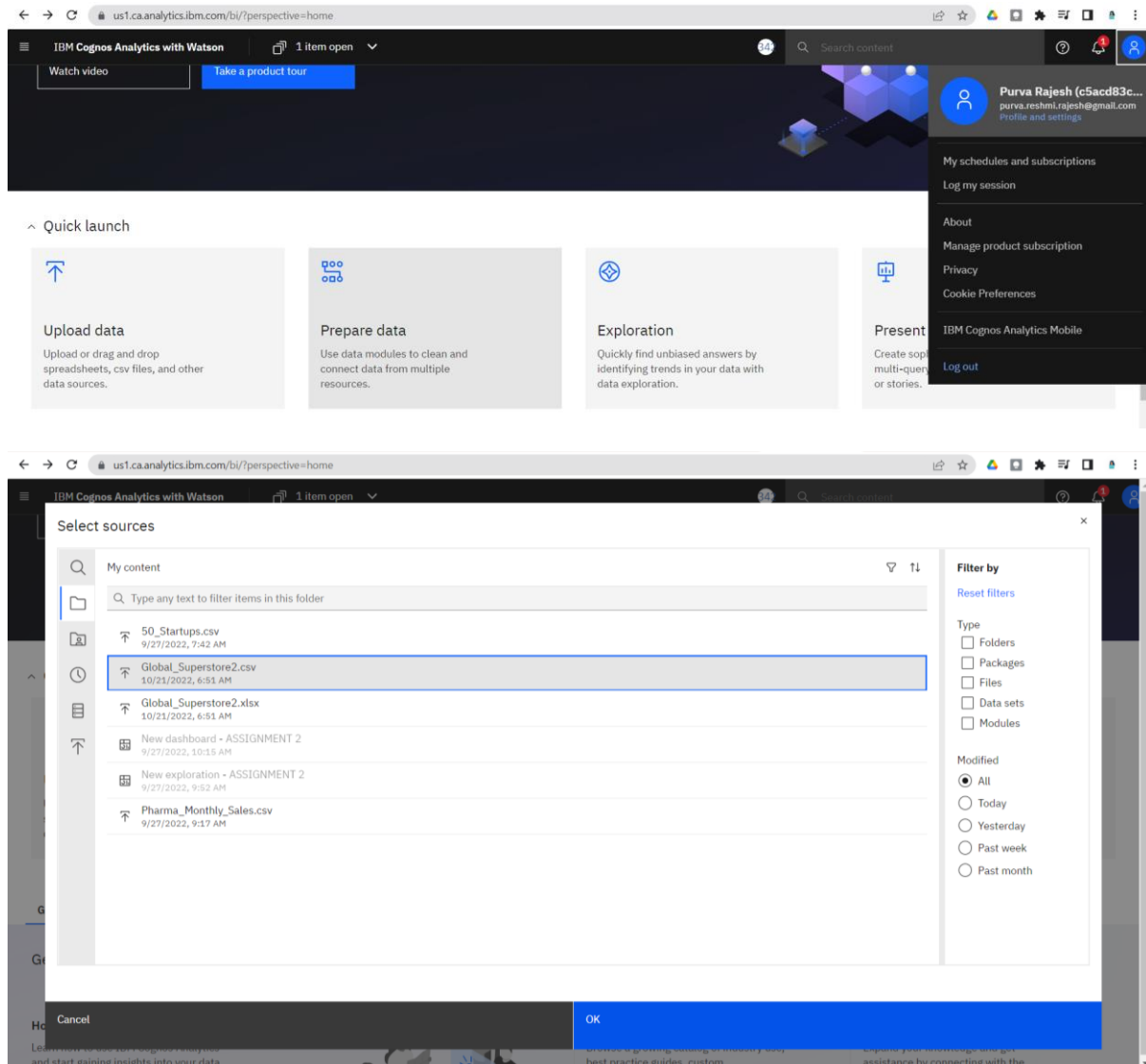


# PREPARE THE DATASET

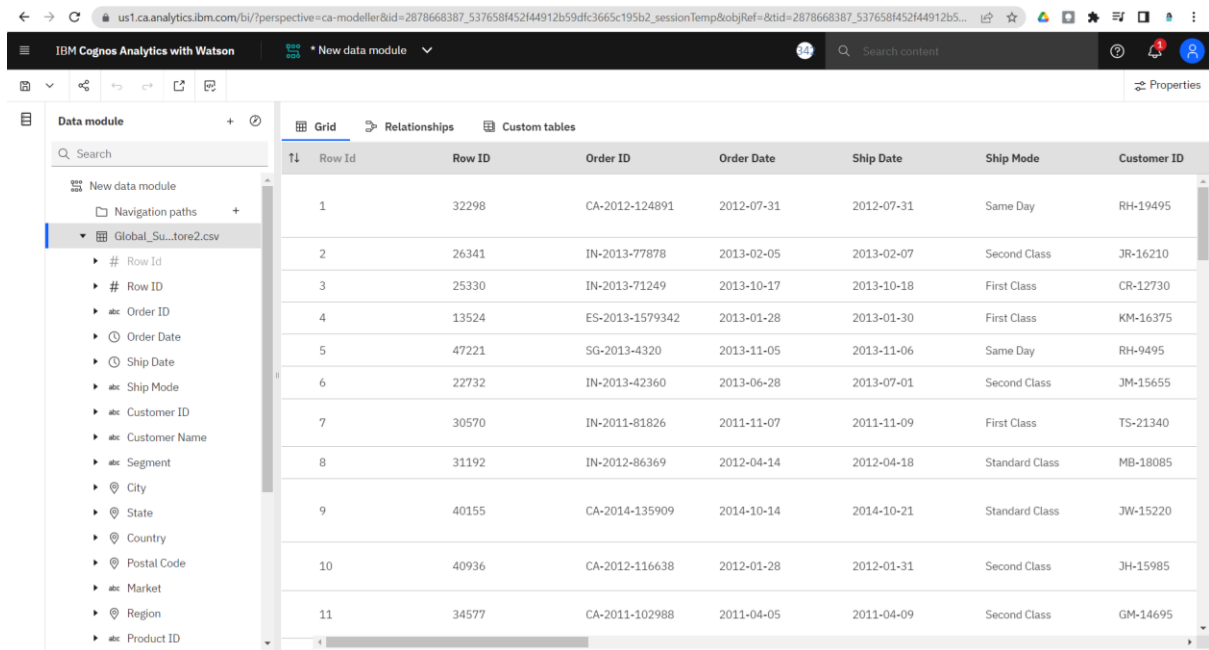
PROJECT: Global Data Sales Analytics

## DATA PREPARATION

1. First understand and load the data.



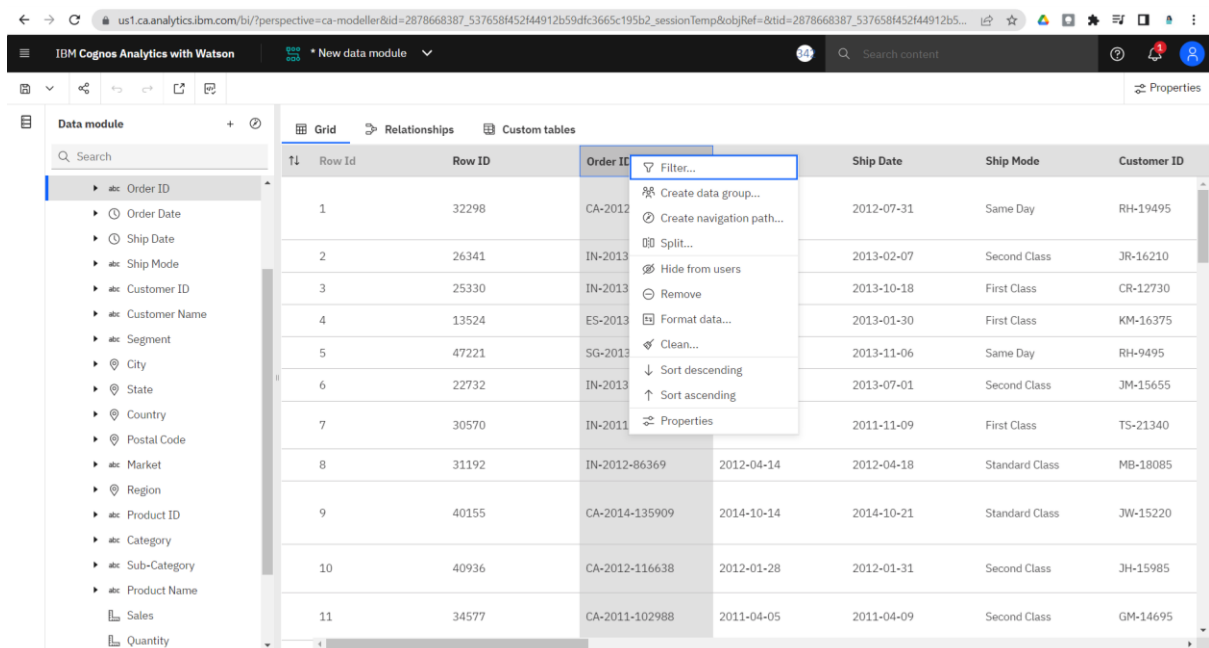
2. Since there is only single file, there need not be relationships or custom tables for the data.



The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Data module' pane displays a list of fields: Row ID, Order ID, Order Date, Ship Date, Ship Mode, Customer ID, Customer Name, Segment, City, State, Country, Postal Code, Market, Region, and Product ID. The main area shows a grid view of data with columns: Row ID, Order ID, Order Date, Ship Date, Ship Mode, and Customer ID. The data is organized into 11 rows.

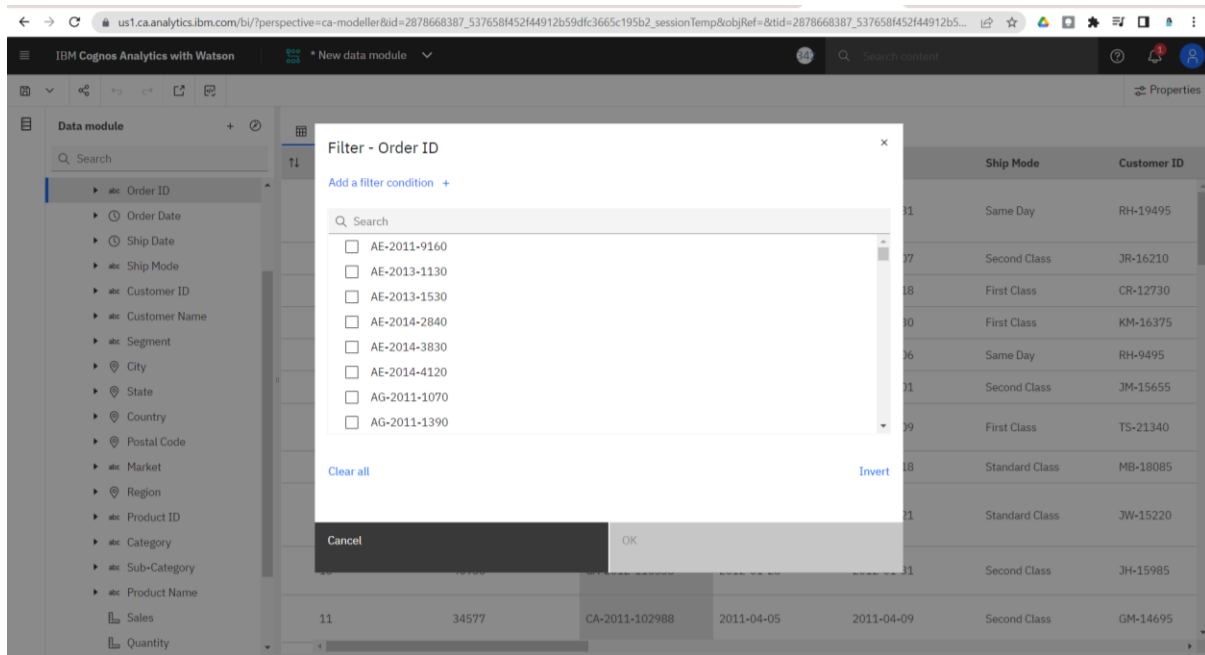
Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID
1	CA-2012-124891	2012-07-31	2012-07-31	Same Day	RH-19495
2	IN-2013-77878	2013-02-05	2013-02-07	Second Class	JR-16210
3	IN-2013-71249	2013-10-17	2013-10-18	First Class	CR-12730
4	ES-2013-1579342	2013-01-28	2013-01-30	First Class	KM-16375
5	SG-2013-4320	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	JH-15985
11	CA-2011-102988	2011-04-05	2011-04-09	Second Class	GM-14695

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 include: 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	JH-15985
11	CA-2011-102988	2011-04-05	2011-04-09	Second Class	GM-14695

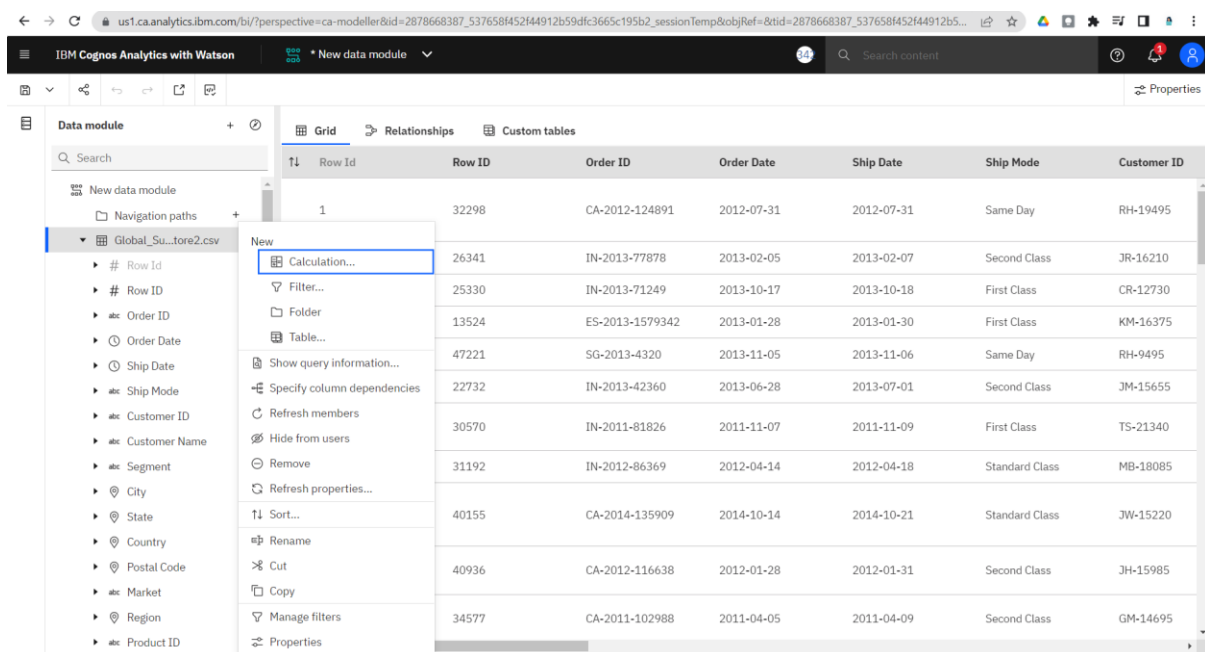


4. Once cleaned, the data is saved.

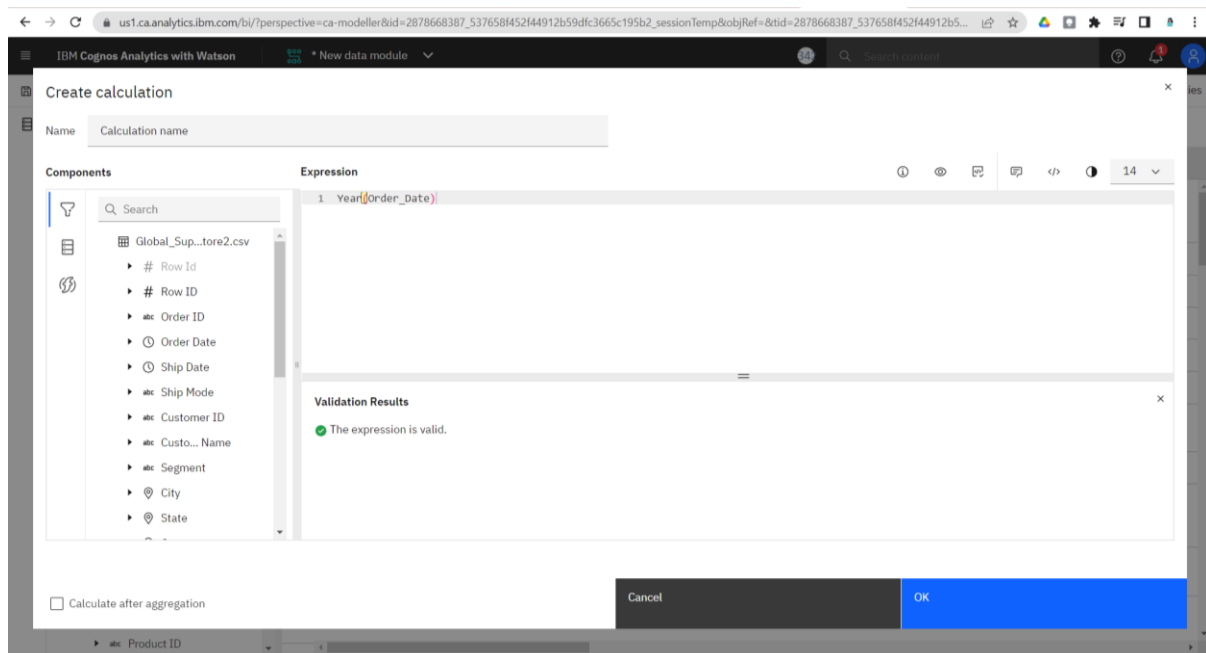
## DATE CALCULATIONS AND NAVIGATION PATHS

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&gt; calculation&gt; type expression&gt; validate&gt; Set Name as 'Order Year'



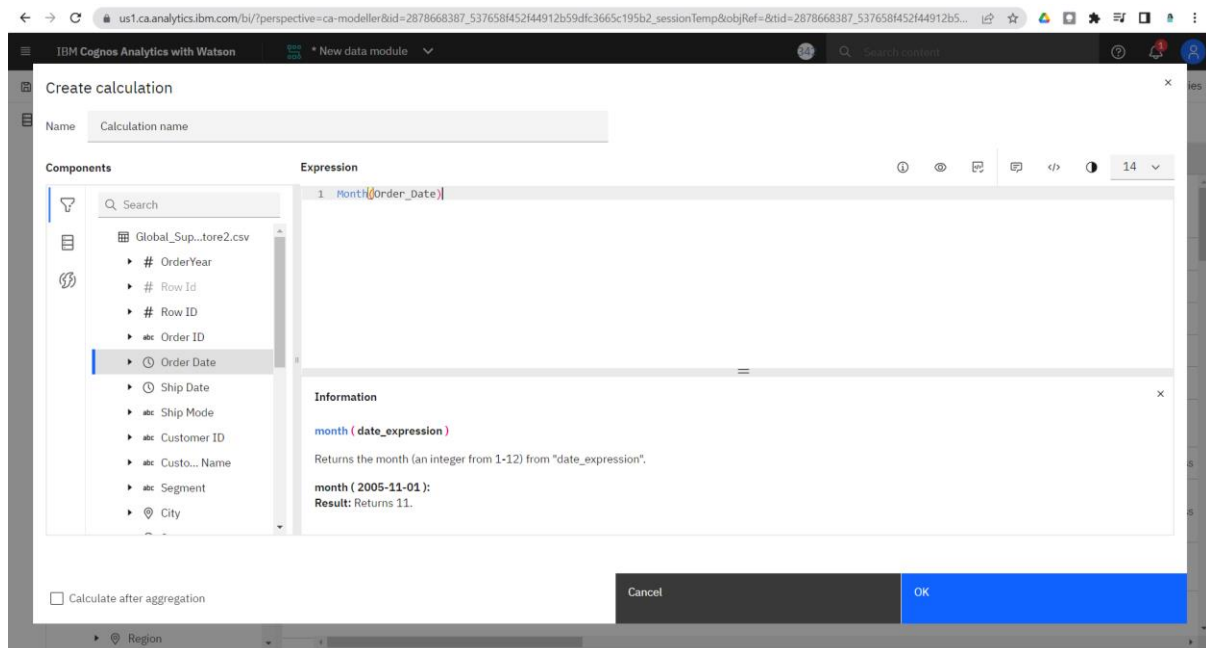
## 2. Similarly, 'OrderMonth', 'OrderDay' and 'All'

OrderYear -> Year (Order\_Date)

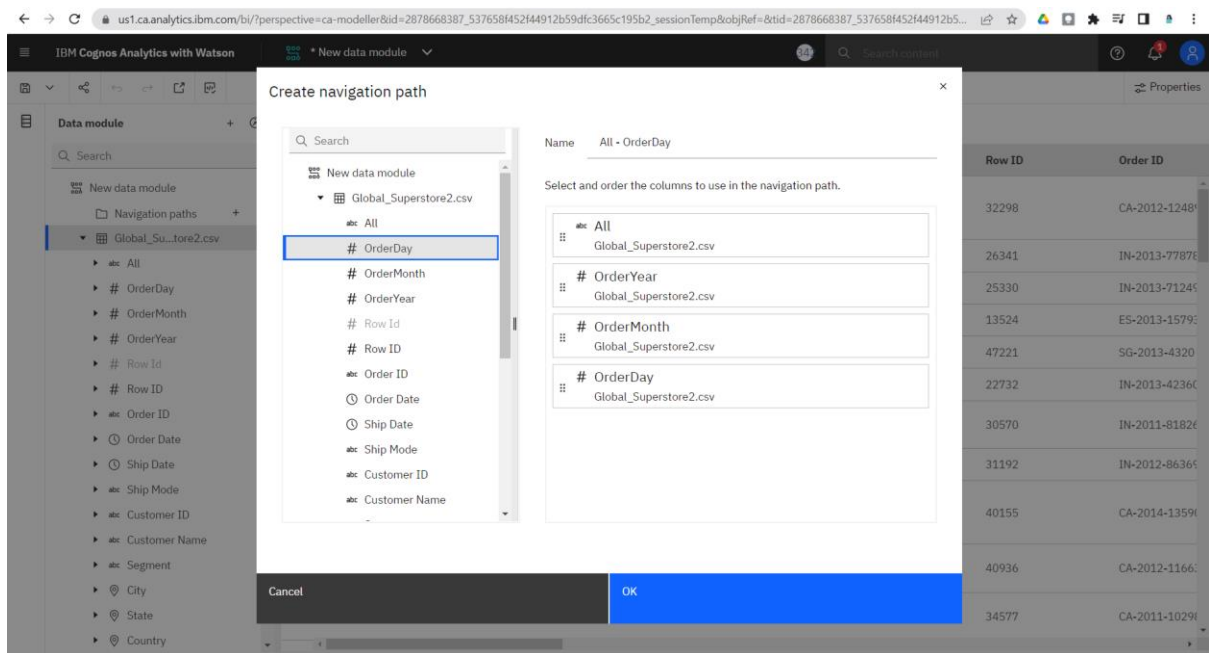
OrderMonth -> Month (Order\_Date)

OrderDay -> Day (Order\_Date)

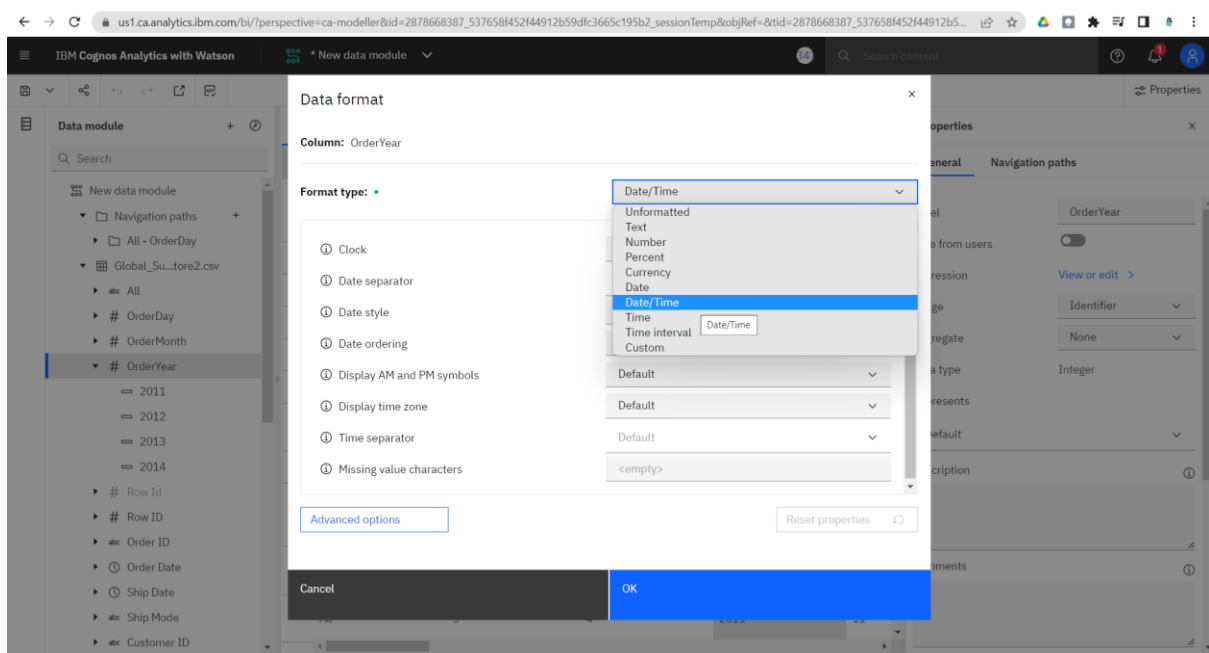
All -> All



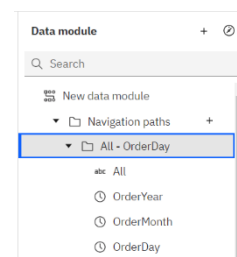
## 3. Right click on create navigation path



## 4. Data format&gt; 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, the 'Data module' pane lists various fields including 'OrderYear'. The main grid view displays data with columns: All, OrderDay, OrderMonth, OrderYear, and Row Id. The 'OrderYear' column is selected, and a dropdown menu is open, showing a hierarchy of time periods: Year, Date, Quarter, Season, Month, Week, Day, Hour, Minute, and Second. The 'Year' option is highlighted.

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)

The screenshot shows the 'Create calculation' dialog in IBM Cognos Analytics. The 'Name' field is set to 'MinSales'. The 'Expression' field contains the formula '1 minimum (Sales)'. The 'Components' pane on the left shows the data source 'Global\_Sup...tore2.csv'. A 'Validation Results' box at the bottom right shows a green checkmark and the message 'The expression is valid.' The 'Calculate after aggregation' checkbox is unchecked.

8. Hence the calculations for Target sales, Min sales, Max Sales and Middle range sales are completed.