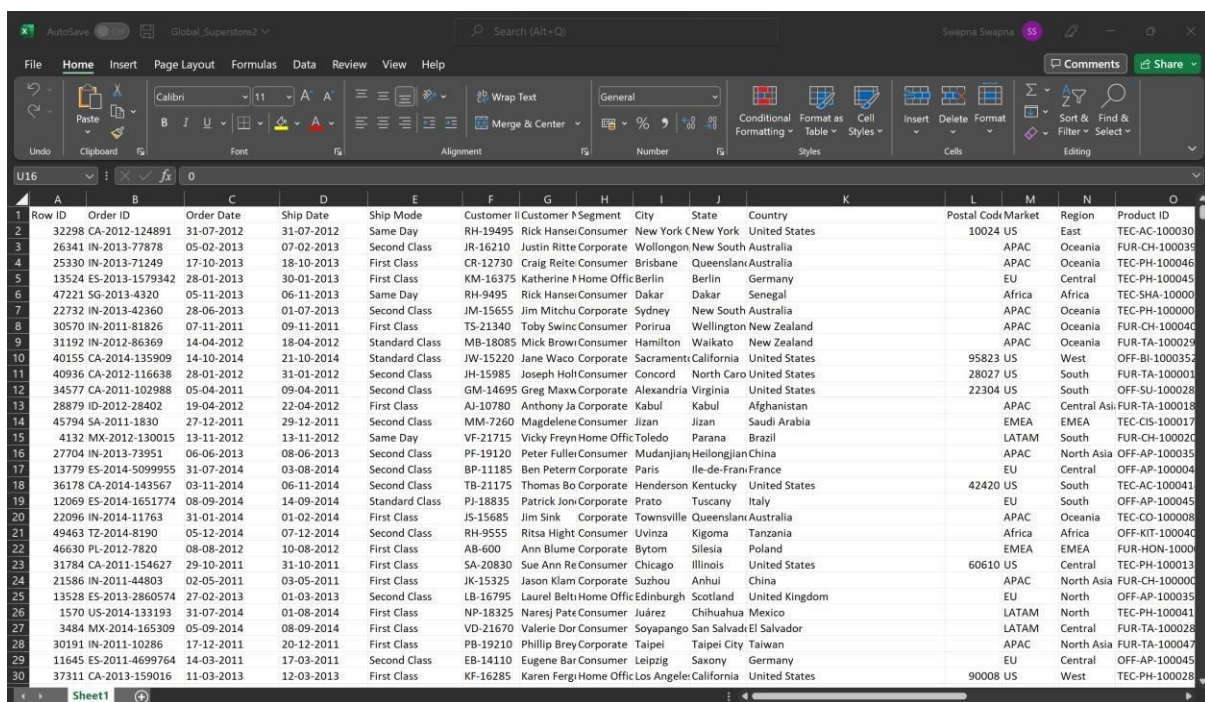


PROJECT DEVELOPMENT PHASE SPRINT

-2

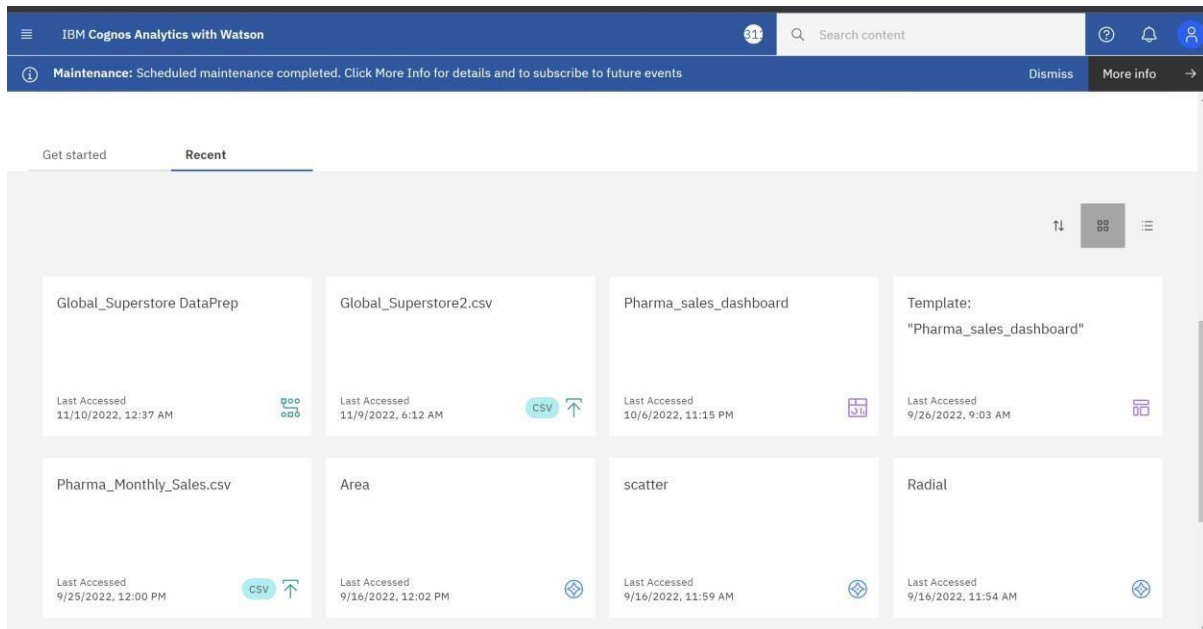
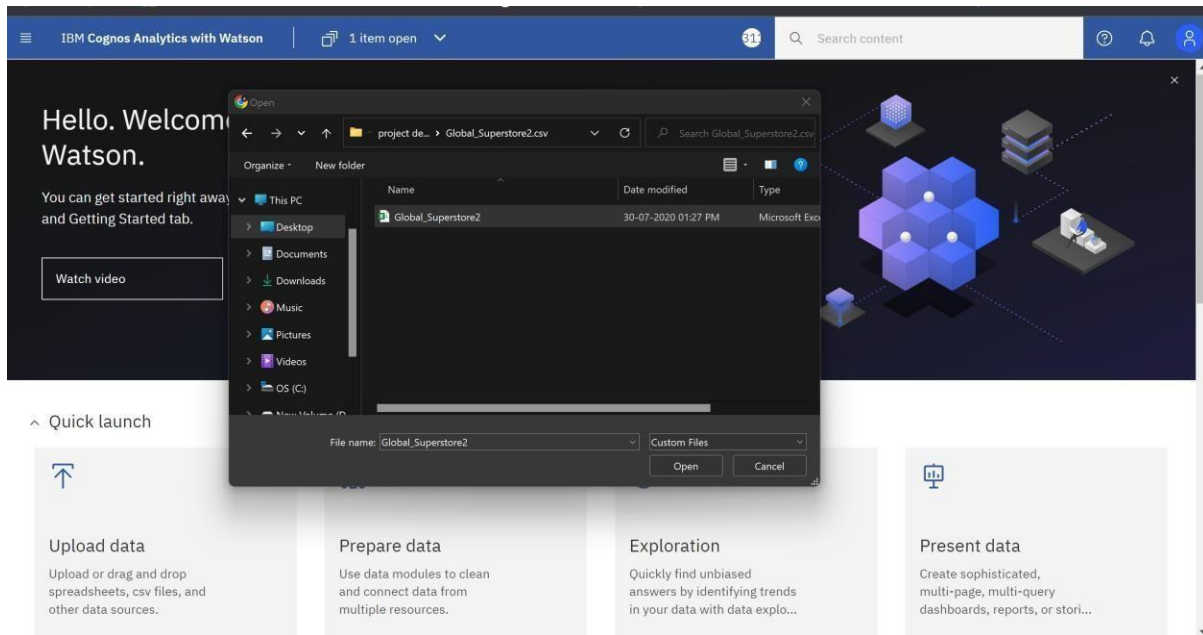
Date	14 November 2022
Team ID	PNT2022TMID00545
Project Name	Project - Global Sales Data Analytics

Dataset:



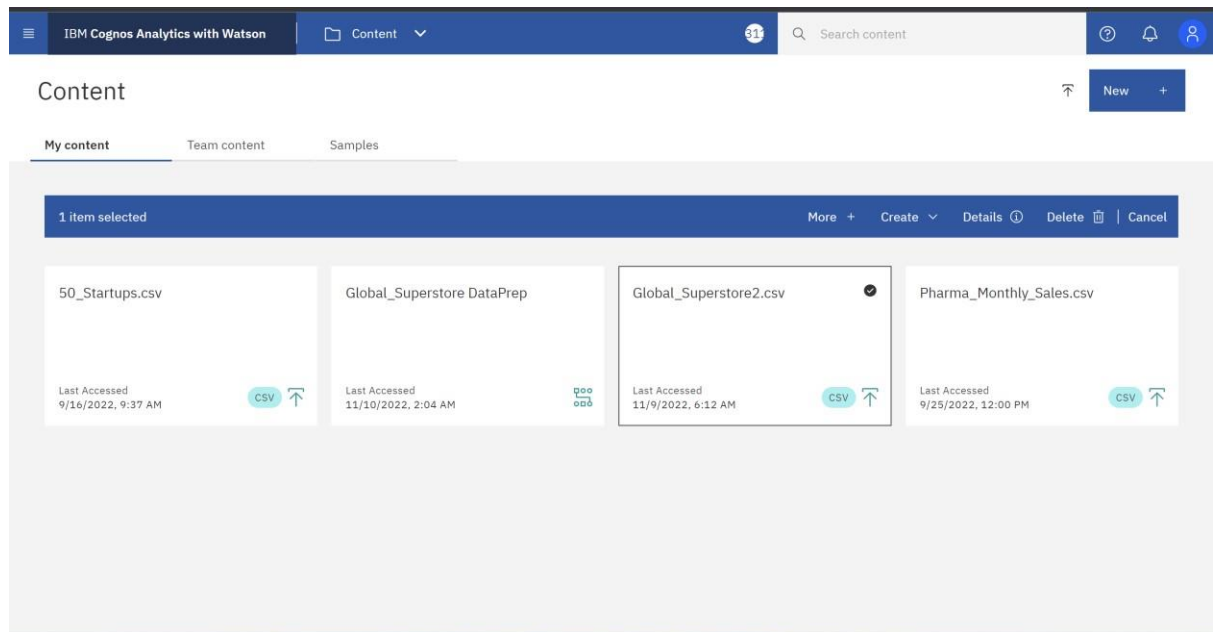
Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	City	State	Country	Postal Code	Market	Region	Product ID
1	32298 CA-2012-124891	31-07-2012	31-07-2012	Same Day	RH-19495	Rick Hanse	Consumer	New York	New York	United States	10024	US	East	TEC-AC-100030
2	26341 IN-2013-77878	05-02-2013	07-02-2013	Second Class	JR-16210	Justin Ritte	Corporate	Wollongong	New South	Australia		APAC	Oceania	FUR-CH-100030
3	25330 IN-2013-71249	17-10-2013	18-10-2013	First Class	CR-12730	Craig Reite	Consumer	Brisbane	Queensland	Australia		APAC	Oceania	TEC-PH-100046
4	13524 ES-2013-1579342	28-01-2013	30-01-2013	First Class	KM-16375	Katherine M	Home Office	Berlin	Berlin	Germany		EU	Central	TEC-PH-100045
5	47221 SG-2013-4320	05-11-2013	06-11-2013	Same Day	RH-9495	Rick Hanse	Consumer	Dakar	Dakar	Senegal		Africa	Africa	TEC-SHA-100000
6	22732 IN-2013-42360	28-06-2013	01-07-2013	Second Class	JM-15655	Jim Mitchu	Corporate	Sydney	New South	Australia		APAC	Oceania	TEC-PH-100000
7	30570 IN-2011-81826	07-11-2011	09-11-2011	First Class	TS-21340	Toby Swinc	Consumer	Porirua	Wellington	New Zealand		APAC	Oceania	FUR-CH-100040
8	31192 IN-2012-86369	14-04-2012	18-04-2012	Standard Class	MB-18085	Mick Brown	Consumer	Hamilton	Waikato	New Zealand		APAC	Oceania	FUR-TA-100029
9	40155 CA-2014-135909	14-10-2014	21-10-2014	Standard Class	JW-15220	Jane Waco	Corporate	Sacramento	California	United States	95823	US	West	OFF-BI-100035
10	40936 CA-2012-116638	28-01-2012	31-01-2012	Second Class	JH-15985	Joseph Holt	Consumer	Concord	North Caro	United States	28027	US	South	FUR-TA-100001
11	34577 CA-2011-102988	05-04-2011	09-04-2011	Second Class	GM-14695	Greg Maxw	Corporate	Alexandria	Virginia	United States	22304	US	South	OFF-SU-100028
12	28879 ID-2012-28402	19-04-2012	22-04-2012	First Class	AJ-10780	Anthony Ja	Corporate	Kabul	Kabul	Afghanistan		APAC	Central Asia	FUR-TA-100018
13	45794 SA-2011-1830	27-12-2011	29-12-2011	Second Class	MM-7260	Magdelene	Consumer	Jizan	Jizan	Saudi Arabia		EMEA	EMEA	TEC-CIS-100017
14	4132 MX-2012-130015	13-11-2012	13-11-2012	Same Day	VF-21715	Vicky Freyn	Home Office	Toledo	Parana	Brazil		LATAM	South	FUR-CH-100020
15	27704 IN-2013-73951	06-06-2013	08-06-2013	Second Class	PF-19120	Peter Fuller	Consumer	Mudanjiang	Heilongjian	China		APAC	North Asia	OFF-AP-100035
16	13779 ES-2014-509955	31-07-2014	03-08-2014	Second Class	BP-11185	Ben Petern	Corporate	Paris	Ile-de-Fran	France		EU	Central	OFF-AP-100004
17	36178 CA-2014-143567	03-11-2014	06-11-2014	Second Class	TB-21175	Thomas Bo	Corporate	Henderson	Kentucky	United States	42420	US	South	TEC-AC-100041
18	12069 ES-2014-1651774	08-09-2014	14-09-2014	Standard Class	PJ-18835	Patrick Jon	Corporate	Prato	Tuscany	Italy		EU	South	OFF-AP-100045
19	22096 IN-2014-11763	31-01-2014	01-02-2014	First Class	JS-15685	Jim Sink	Corporate	Townsville	Queensland	Australia		APAC	Oceania	TEC-CO-100008
20	49463 TZ-2014-8190	05-12-2014	07-12-2014	Second Class	RH-9555	Ritsa Hight	Consumer	Uvinza	Kigoma	Tanzania		Africa	Africa	OFF-KIT-100040
21	46630 PL-2012-7820	08-08-2012	10-08-2012	First Class	AB-600	Ann Blume	Corporate	Bytom	Silesia	Poland		EMEA	EMEA	FUR-HON-1000
22	31784 CA-2011-154627	29-10-2011	31-10-2011	First Class	SA-20830	Sue Ann Re	Consumer	Chicago	Illinois	United States	60610	US	Central	TEC-PH-100013
23	21586 IN-2011-44803	02-05-2011	03-05-2011	First Class	JK-15325	Jason Klam	Corporate	Suzhou	Anhui	China		APAC	North Asia	FUR-CH-100000
24	13528 ES-2013-2860574	27-02-2013	01-03-2013	Second Class	LB-16795	Laurel Belt	Home Office	Edinburgh	Scotland	United Kingdom		EU	North	OFF-AP-100035
25	1570 US-2014-133193	31-07-2014	01-08-2014	First Class	NP-18325	Naresj Pate	Consumer	Juárez	Chihuahua	Mexico		LATAM	North	TEC-PH-100041
26	3484 MX-2014-165309	05-09-2014	08-09-2014	First Class	VD-21670	Valerie Dor	Consumer	Soyapango	San Salvadr	El Salvador		LATAM	Central	FUR-TA-100028
27	30191 IN-2011-10286	17-12-2011	20-12-2011	First Class	PB-19210	Phillip Brey	Corporate	Taipei	Taipei City	Taiwan		APAC	North Asia	FUR-TA-100047
28	11645 ES-2011-4699764	14-03-2011	17-03-2011	Second Class	EB-14110	Eugene Bar	Consumer	Leipzig	Saxony	Germany		EU	Central	OFF-AP-100045
29	37311 CA-2013-159016	11-03-2013	12-03-2013	First Class	KF-16285	Karen Ferg	Home Office	Los Angeles	California	United States	90008	US	West	TEC-PH-100028

Uploading the dataset:



Data Preparation:

- First understand and load the dataset.



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

The screenshot shows the 'Data module' in IBM Cognos Analytics. The top navigation bar includes 'IBM Cognos Analytics with Watson', a 'New data module' dropdown, a search bar, and user icons. Below the navigation bar, a maintenance message is displayed. The 'Data module' section has tabs for 'Grid', 'Relationships', and 'Custom tables'. The 'Grid' tab is active, showing a data table with columns: 'Row Id', 'Row ID', 'Order ID', 'Order Date', 'Ship Date', 'Ship Mode', and 'Customer ID'. The table contains 10 rows of data. On the left, a 'Data module' sidebar shows a search bar and a list of fields: 'New data module', 'Navigation paths', and 'Global_Su...tore2.csv'. The 'Global_Su...tore2.csv' field is selected, and its fields are listed: '# Row Id', '# Row ID', 'Order ID', 'Order Date', 'Ship Date', 'Ship Mode', 'Customer ID', 'Customer Name', 'Segment', 'City', 'State', 'Country', and 'Postal Code'.

Row Id	Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID
1	32298	CA-2012-124891	2012-07-31	2012-07-31	Same Day	RH-19495
2	26341	IN-2013-77878	2013-02-05	2013-02-07	Second Class	JR-16210
3	25330	IN-2013-71249	2013-10-17	2013-10-18	First Class	CR-12730
4	13524	ES-2013-1579342	2013-01-28	2013-01-30	First Class	KM-16375
5	47221	SG-2013-4320	2013-11-05	2013-11-06	Same Day	RH-9495
6	22732	IN-2013-42360	2013-06-28	2013-07-01	Second Class	JM-15655
7	30570	IN-2011-81826	2011-11-07	2011-11-09	First Class	TS-21340
8	31192	IN-2012-86369	2012-04-14	2012-04-18	Standard Class	MB-18085
9	40155	CA-2014-135909	2014-10-14	2014-10-21	Standard Class	JW-15220
10	40936	CA-2012-116638	2012-01-28	2012-01-31	Second Class	JH-15085

- 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. On the left, the 'Data module' pane lists various fields: Order ID, Order Date, Ship Date, Ship Mode, Customer ID, Customer Name, Segment, City, State, Country, Postal Code, Market, Region, Product ID, Category, and Sub-Category. The main area displays a data grid with columns: Row ID, Order ID, Ship Date, Ship Mode, and Customer ID. A context menu is open over the 'Order ID' column, showing options: Filter..., Create data group..., Create navigation path..., Split..., Hide from users, Remove, Format data..., Clean..., Sort descending, Sort ascending, and Properties.

Row ID	Order ID	Ship Date	Ship Mode	Customer ID
1	32298	2012-07-31	Same Day	RH-19495
2	26341	2013-02-07	Second Class	JR-16210
3	25330	2013-10-18	First Class	CR-12730
4	13524	2013-01-30	First Class	KM-16375
5	47221	2013-11-06	Same Day	RH-9495
6	22732	2013-07-01	Second Class	JM-15655
7	30570	2011-11-09	First Class	TS-21340
8	31192	2012-04-14	Standard Class	MB-18085
9	40155	2014-10-14	Standard Class	JW-15220
10	40936	2012-01-28	Second Class	JH-15985

The screenshot shows the same IBM Cognos Analytics interface, but with a 'Filter - Order ID' dialog box open. The dialog box has a search bar and a list of order IDs with checkboxes next to them. The list includes: AE-2011-9160, AE-2013-1130, AE-2013-1530, AE-2014-2840, AE-2014-3830, AE-2014-4120, AG-2011-1070, and AG-2011-1390. There are 'Clear all' and 'Invert' buttons at the bottom of the list, and 'Cancel' and 'OK' buttons at the bottom of the dialog box.

Order ID	Ship Mode	Customer ID
AE-2011-9160	Same Day	RH-19495
AE-2013-1130	Second Class	JR-16210
AE-2013-1530	First Class	CR-12730
AE-2014-2840	First Class	KM-16375
AE-2014-3830	Same Day	RH-9495
AE-2014-4120	Second Class	JM-15655
AG-2011-1070	First Class	TS-21340
AG-2011-1390	Standard Class	MB-18085
	Standard Class	JW-15220
	Second Class	JH-15985

- Once cleaned save the data.

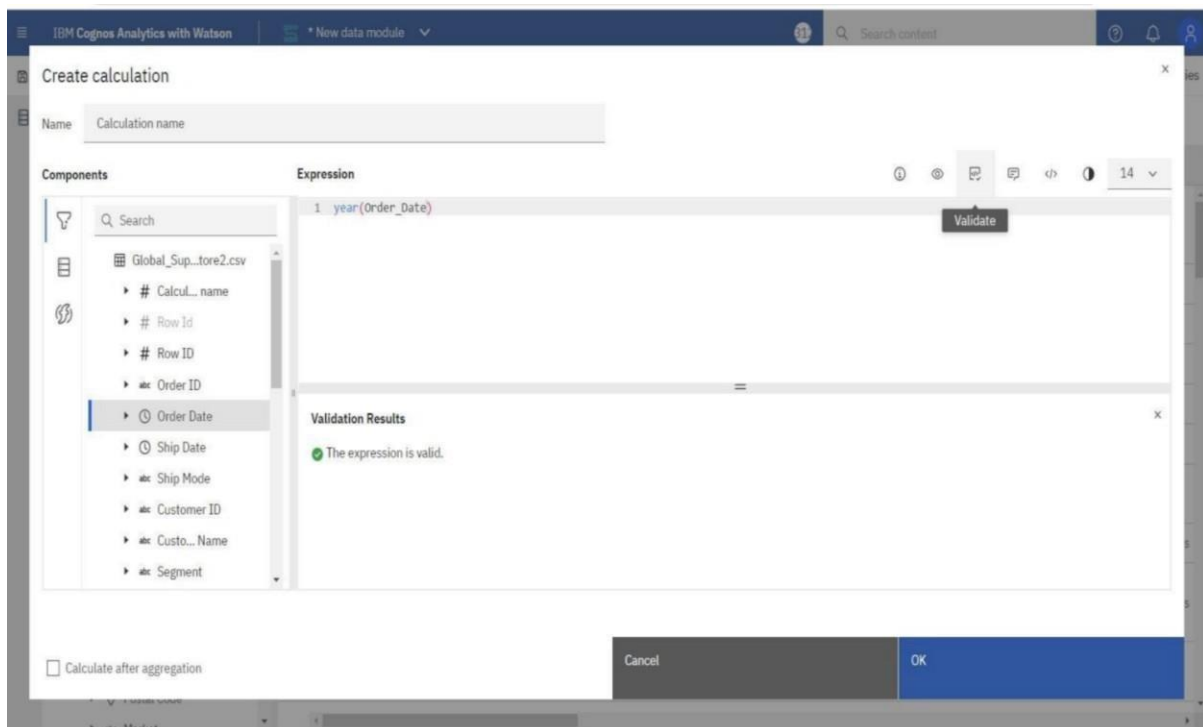
Data calculations and navigation paths:

- Once you load the data, we need to prepare the data.
- Prepare calculations of year, month, day fields and also related navigation paths.
- Create a few more calculations – Target sales, Min sales, Max sales, Middle Range sales.

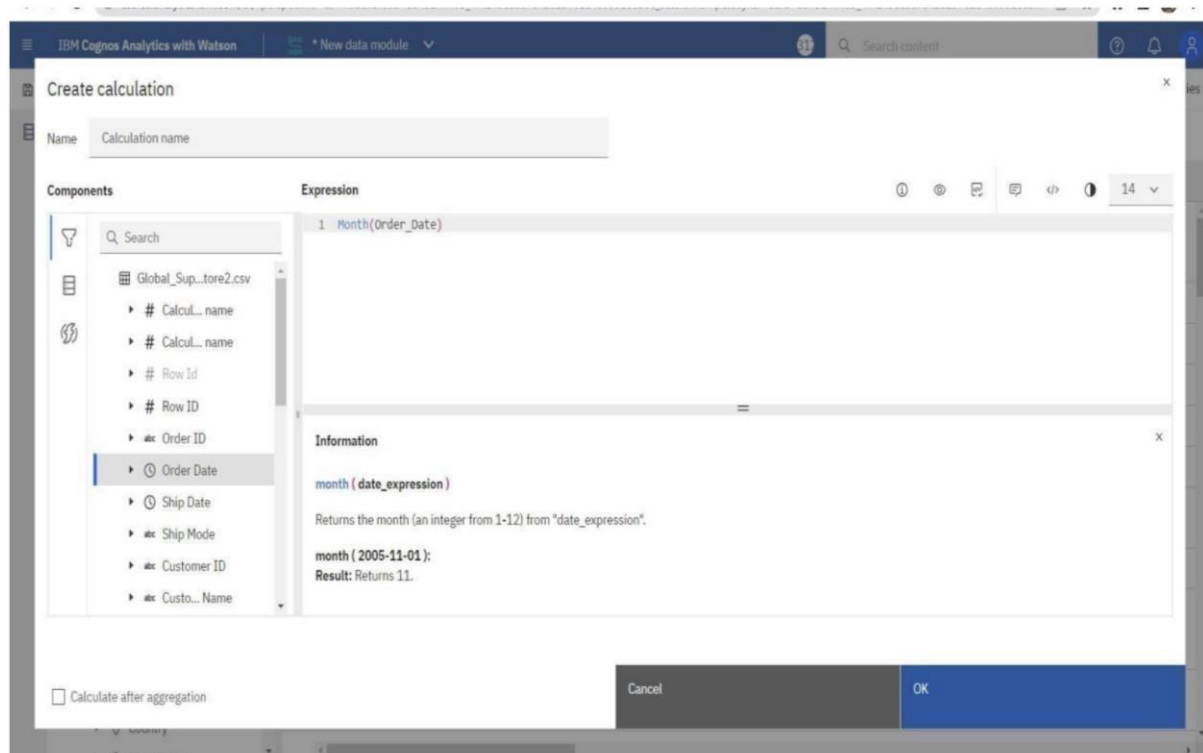
The screenshot shows the IBM Cognos Analytics interface. The top bar indicates 'IBM Cognos Analytics with Watson' and 'New data module'. The left sidebar shows a 'Data module' with a search bar and a list of fields: Row Id, Order ID, Order Date, Ship Date, Ship Mode, Customer ID, Customer Name, Segment, City, State, Country, Postal Code, Market, and Location. The main area displays a grid of data with columns: Row ID, Order ID, Order Date, Ship Date, Ship Mode, and Customer ID. A context menu is open over the grid, showing options like 'New', 'Filter...', 'Folder', 'Table...', 'Show query information...', 'Specify column dependencies', 'Refresh members', 'Hide from users', 'Remove', 'Refresh properties...', 'Sort...', 'Rename', 'Cut', 'Copy', 'Manage filters', and 'Properties'.

Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID
32298	CA-2012-124891	2012-07-31	2012-07-31	Same Day	RH-19495
26341	IN-2013-77878	2013-02-05	2013-02-07	Second Class	JR-16210
25330	IN-2013-71249	2013-10-17	2013-10-18	First Class	CR-12730
13524	ES-2013-1579342	2013-01-28	2013-01-30	First Class	KM-16375
47221	SG-2013-4320	2013-11-05	2013-11-06	Same Day	RH-9495
22732	IN-2013-42360	2013-06-28	2013-07-01	Second Class	JM-15655
30570	IN-2011-81826	2011-11-07	2011-11-09	First Class	TS-21340
31192	IN-2012-86369	2012-04-14	2012-04-18	Standard Class	MB-18085
40155	CA-2014-135909	2014-10-14	2014-10-21	Standard Class	JW-15220
40936	CA-2012-116638	2012-01-28	2012-01-31	Second Class	JH-15985

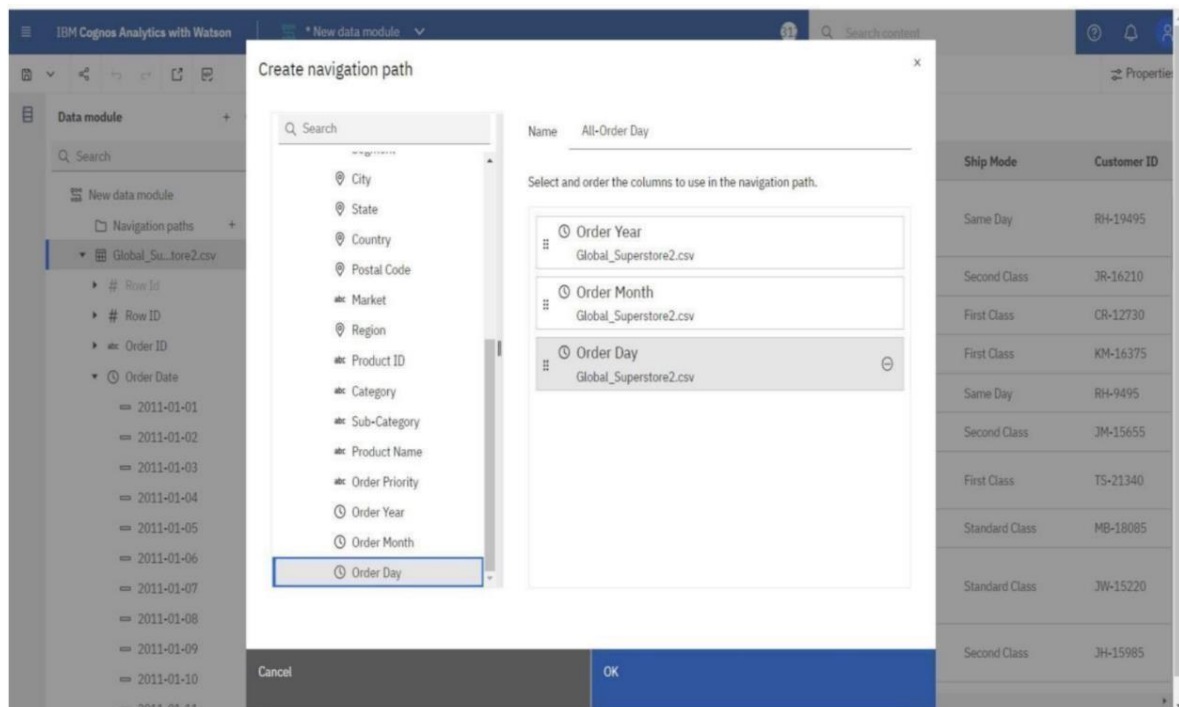
- Right click -> calculation -> type expression -> validate -> set new name as Order Year.



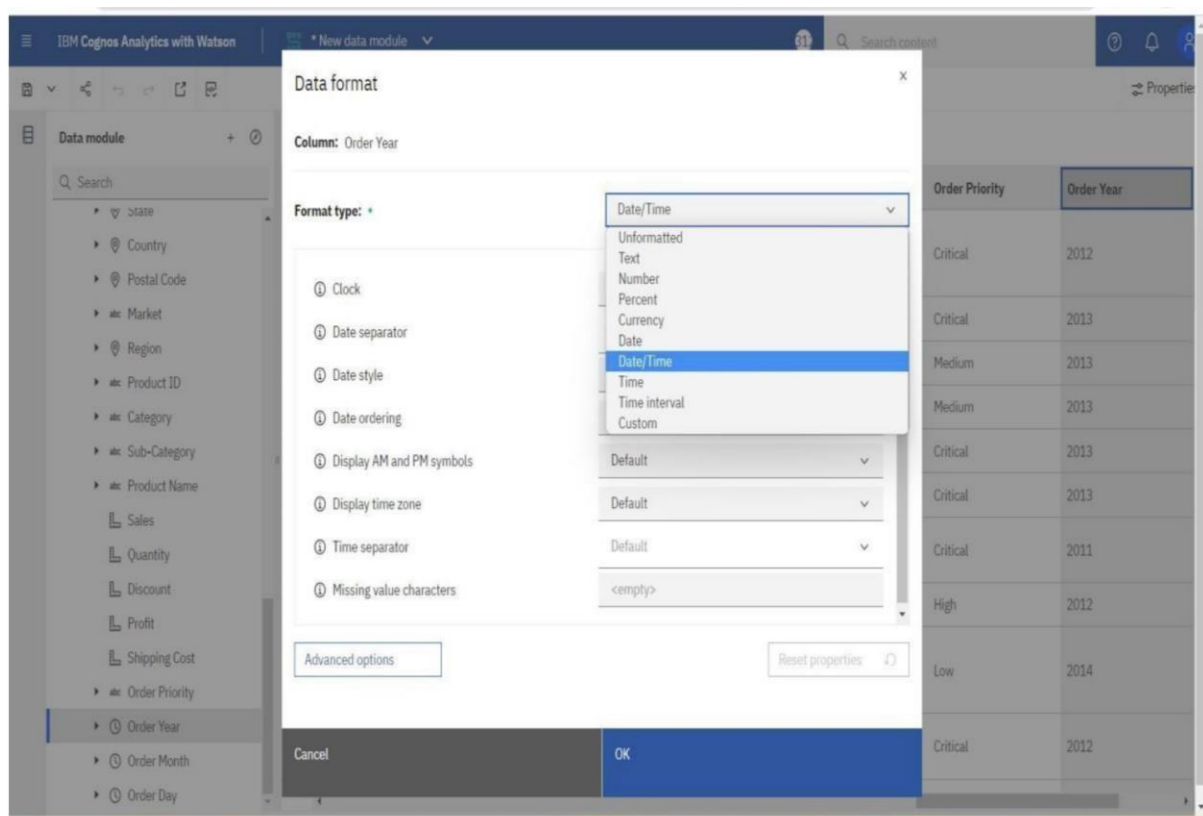
- Similarly, 'Order Month', 'Order Day' and 'All'.



- Right click on create navigation path.



- Data format -> date/Time



- 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 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 grid displays data with columns: Profit, Shipping Cost, Order Priority, Order Year, and Ord. The 'Order Year' column is highlighted. On the right, the 'Properties' panel for 'Order Year' is open, showing options for Label, Hide from users, Expression, Usage (set to Date), and a dropdown menu for time units (Year, Quarter, Season, Month, Week, Day, Hour, Minute, Second). The 'Year' option is selected in the dropdown.

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

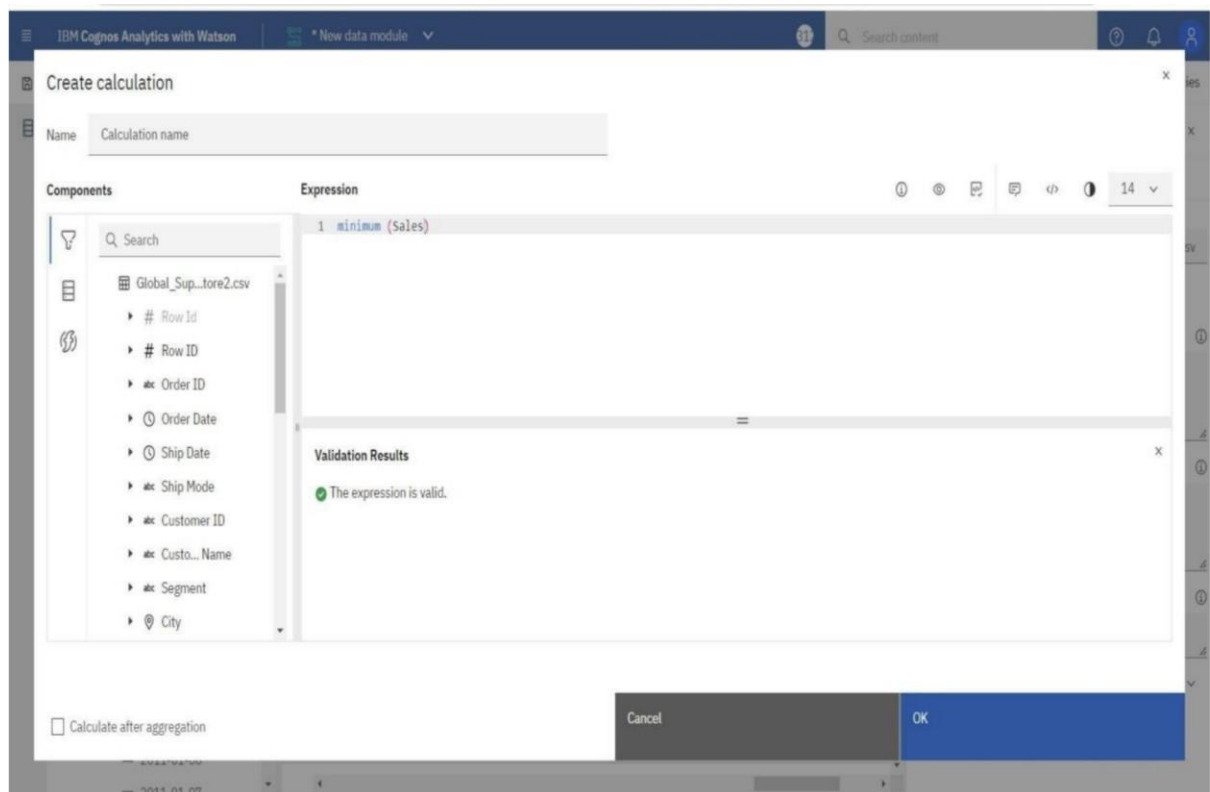
- Hence calculations for day , month and year are completed.
- Similarly calculations for Target sales, Min sales, Max sales And Middle range sales are done.

Min sales -> Minimum(sales)

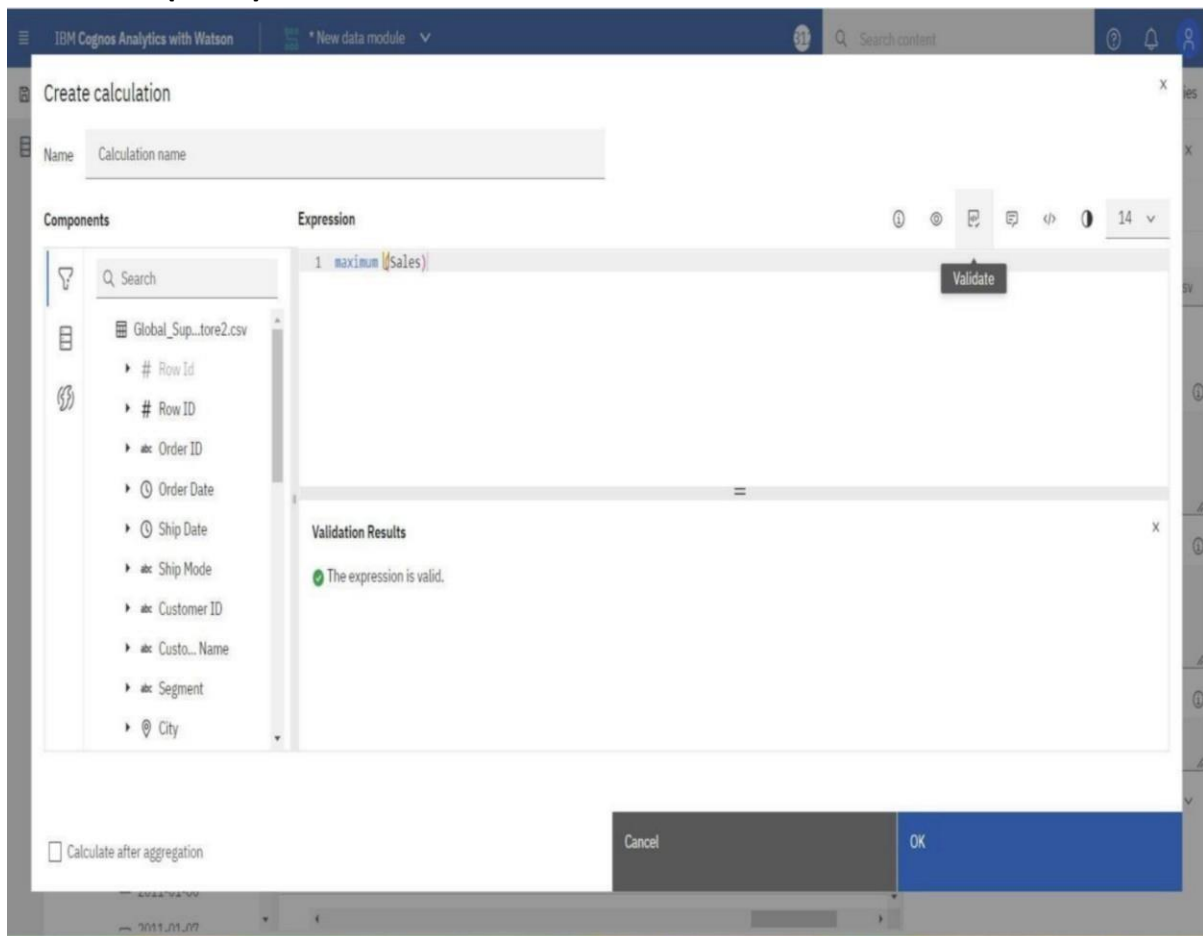
Max sales, Target sales -> Maximum(sales)

Middle range sales -> Average (sales)

Minumum(sales)



Maximum(sales)



Middle Range(sales)

