

PREPARE THE DATASETS

Team ID	PNT2022TMID35428
Project Name	Global Sales Data Analytics

DATA PREPARATION

1. First understand and load the data.

The screenshot shows the IBM Cloud dashboard. On the left, there's a sidebar with icons for Build, Watson, Watson Studio, Watson Knowledge Catalog, User access, News, and Planned maintenance. The main area has a "For you" section with tiles for "Build a web app with Watson Speech to Text", "Get Started with Watson Studio", and "IBM Watson Knowledge Catalog". Below this are sections for "User access", "News", and "Planned maintenance". A user profile for "Dharsha G" is on the right, with options to log in to CLI and API, change theme, and log out.

The screenshot shows the "Content" page of IBM Cognos Analytics with Watson. At the top, it says "1 item selected". The main area lists files: "Pharma Dashboard" (Folder), "50_Startups.csv" (Uploaded file), "bank.csv" (Uploaded file), "bikebuyer.csv" (Uploaded file), "Global_Superstore2.csv" (Selected file, CSV type), and "Global_Superstore2.xlsx" (Unloaded file). There are buttons for "More", "Create", "Details", "Delete", and "Cancel".

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 with Watson interface. On the left, a sidebar titled "Data module" lists various columns from a CSV file: Row Id, Row ID, Order ID, Order Date, Ship Date, Ship Mode, Customer ID, Customer Name, Segment, City, State, Country, and Postal Code. The "Row Id" column is currently selected. The main area displays a grid of 10 rows of data. The columns in the grid are Row Id, Row ID, Order ID, Order Date, Ship Date, Ship Mode, and Customer ID. The data includes various order details and customer IDs.

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-2012-116628	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 same IBM Cognos Analytics with Watson interface. A context menu is open over the "Order ID" column of the first row. The menu options include Filter..., Create data group..., Create navigation path..., Split..., Hide from users, Remove, Format data..., Clean..., Sort descending, Sort ascending, Properties, and a separator line.

The screenshot shows the IBM Cognos Analytics interface. A modal dialog titled "Filter - Order ID" is open, displaying a search interface with a grid of order IDs and a list of results below. The results table has columns: Row Id, Order ID, Order Date, Ship Date, Ship Mode, and Customer ID. The data includes rows for various orders, such as AE-2013-001 through AE-2013-009, and more recent ones like IN-2013-77878 and CA-2012-116638.

3. Once cleaned, the data is saved.

DATE CALCULATIONS AND NAVIGATION PATHS

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

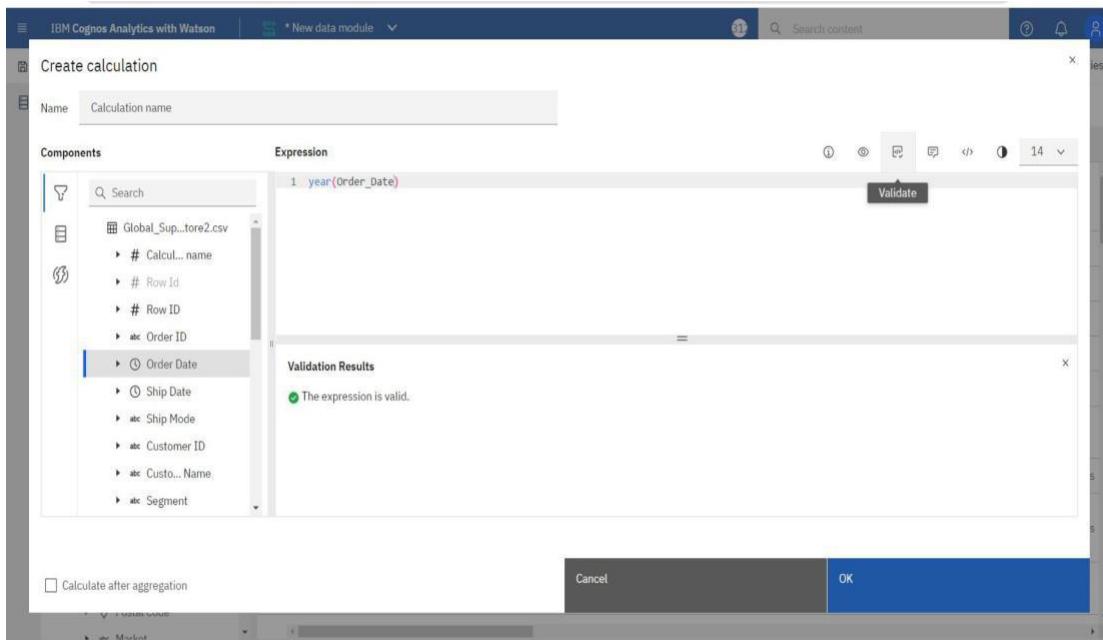
a. Prepare Calculations of Year, Month, Day fields and also the related Navigation path

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

The screenshot shows the IBM Cognos Analytics interface with a data module loaded. A context menu is open over a row in the grid, specifically over the "Row ID" column. The menu options include "New", "Calculation...", "Filter...", "Folder", "Table...", "Show query information...", "Specify column dependencies", "Refresh members", "Hide from users", "Remove", "Sort...", "Rename", "Cut", "Copy", "Manage filters", and "Properties". The main grid view shows a table with columns: Row ID, Order ID, Order Date, Ship Date, Ship Mode, and Customer ID. The data consists of several rows of order information.

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

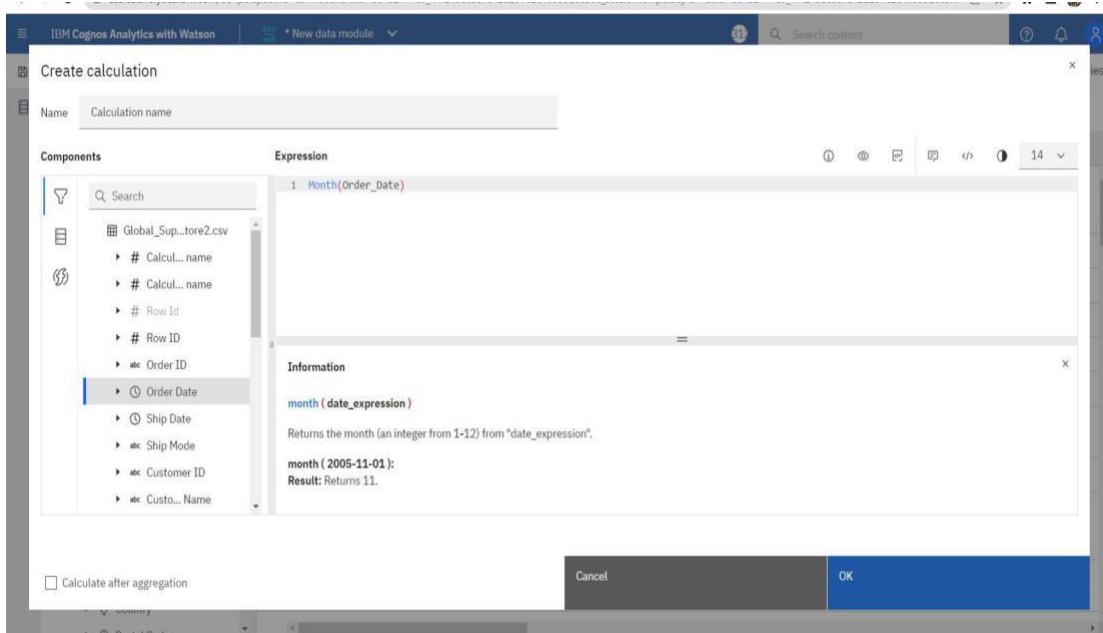
Name as



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

The screenshot shows the 'Create navigation path' dialog box. In the center, there is a list of columns from the 'Global_Superstore2.csv' data module. The 'Order Day' column is selected and highlighted with a blue border. To the right, there is a table with columns 'Ship Mode' and 'Customer ID'. The table contains several rows of data.

Ship Mode	Customer ID
Same Day	RH-19495
Second Class	JR-16210
First Class	CR-12730
First Class	KM-16375
Same Day	RH-9495
Second Class	JM-15655
First Class	TS-21340
Standard Class	MB-18085
Standard Class	JW-15220
Second Class	JH-15985

4. Data format> Date/Time

The screenshot shows the 'Data format' dialog box. The 'Format type' dropdown is set to 'Date/Time', with 'Date/Time' selected. The 'Column' dropdown is set to 'Order Year'. The background shows a table with columns 'Order Priority' and 'Order Year'.

Order Priority	Order Year
Critical	2012
Critical	2013
Medium	2013
Medium	2013
Critical	2013
Critical	2013
Critical	2011
High	2012
Low	2014
Critical	2012

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 with Watson interface. On the left, there is a navigation pane with a search bar and a tree view of data modules. The main area displays a grid of data with columns: Profit, Shipping Cost, Order Priority, and Order Year. The 'Order Year' column is selected, highlighted in blue. On the right, the 'Properties' panel is open, showing the 'General' tab. Under the 'Usage' section, the dropdown menu is set to 'Attribute', and the option 'Year' is selected and highlighted in blue. Other options in the dropdown include Date, Quarter, Season, Month, Week, Day, Hour, Minute, and Second.

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

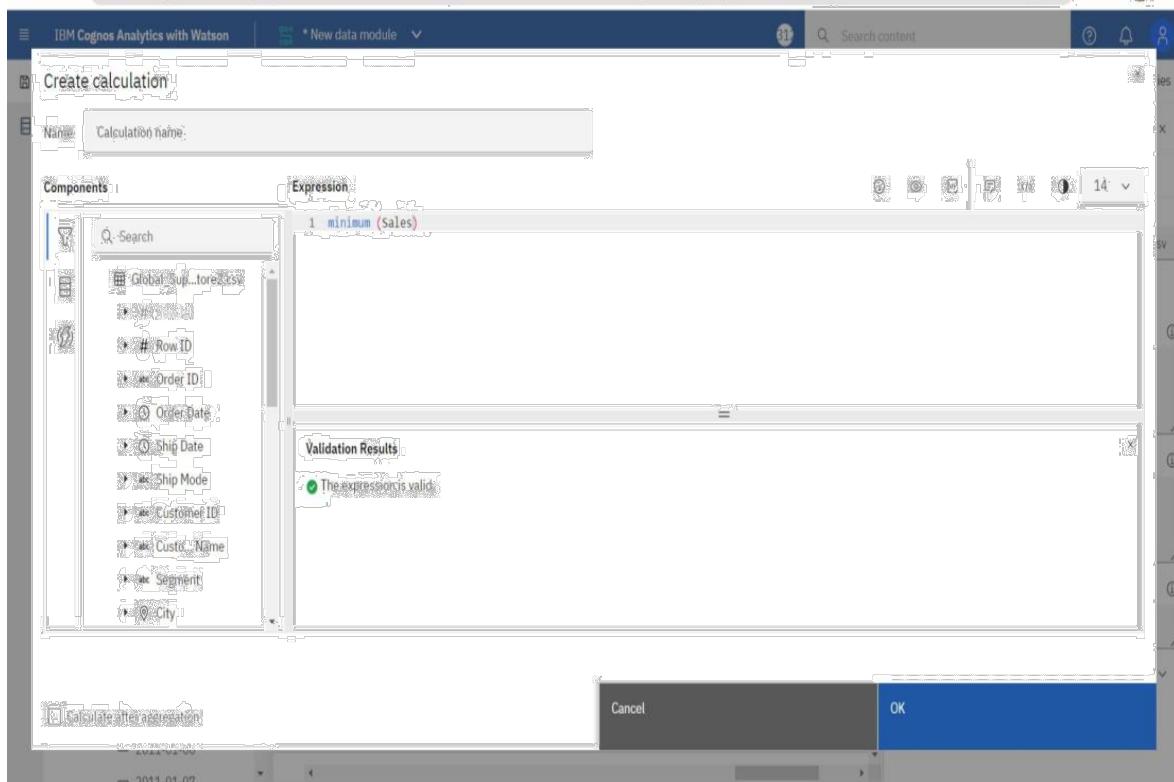
b. Create a Few more Calculations – Target Sales, Min Sales, Max Sales, Middle Range Sales.

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

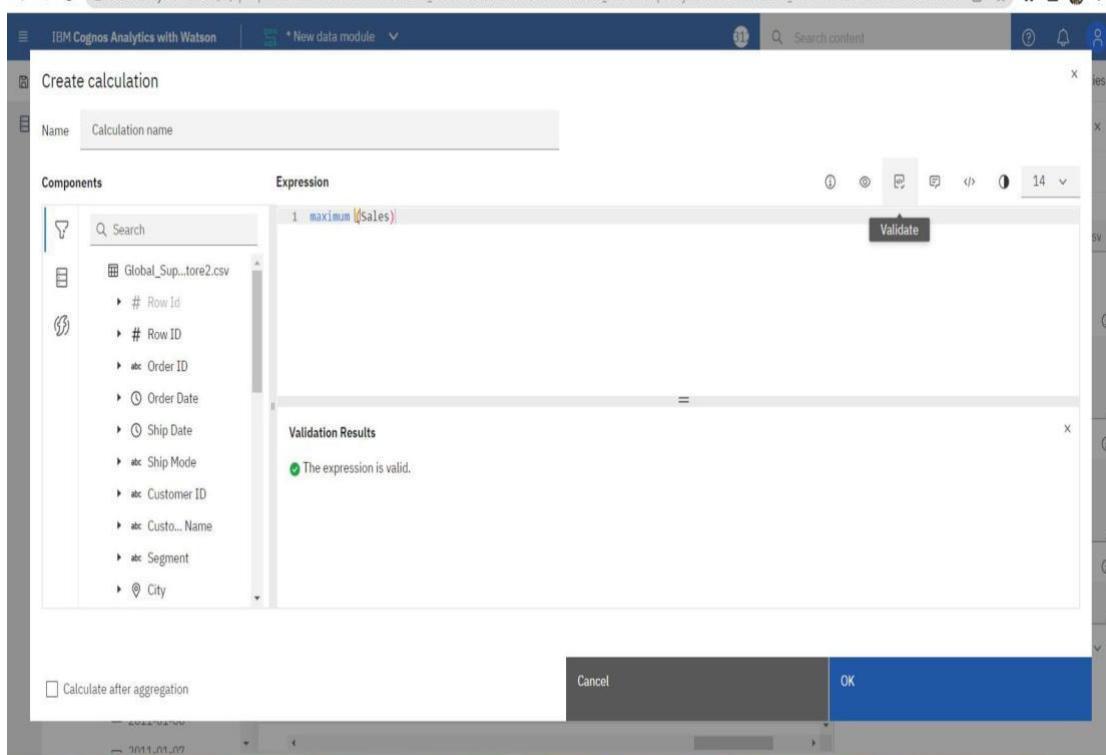
Min sales -> minimum (Sales)

Max sales, Target sales-> maximum (Sales) Middle range sales-> average (Sales)

Minimum(Sales)



Maximum(Sales)



Middle Range (Sales)

The screenshot shows the IBM Cognos Analytics with Watson interface. A modal dialog box titled "Create calculation" is open. In the "Name" field, the text "Calculation name" is entered. The "Components" pane on the left lists various data sources and objects, including "Global_Sup...tore2.csv" and numerous columns like "# Row ID", "Order ID", "Order Date", etc. The "Expression" pane contains the expression "1 average ({Sales})". Below the expression, the "Validation Results" section displays a green checkmark and the message "The expression is valid." At the bottom of the dialog, there is a checkbox labeled "Calculate after aggregation" which is unchecked. The "OK" button is highlighted in blue, while the "Cancel" button is greyed out.