

Project Development Phase

Sprint - 1

Team ID	PNT2022TMID05837
Project Name	Project - Retail Store Stock Inventory Analytics

SPRINT-1

- Data Collection
- Data Preparation

Data Collection:

1. Download the Dataset

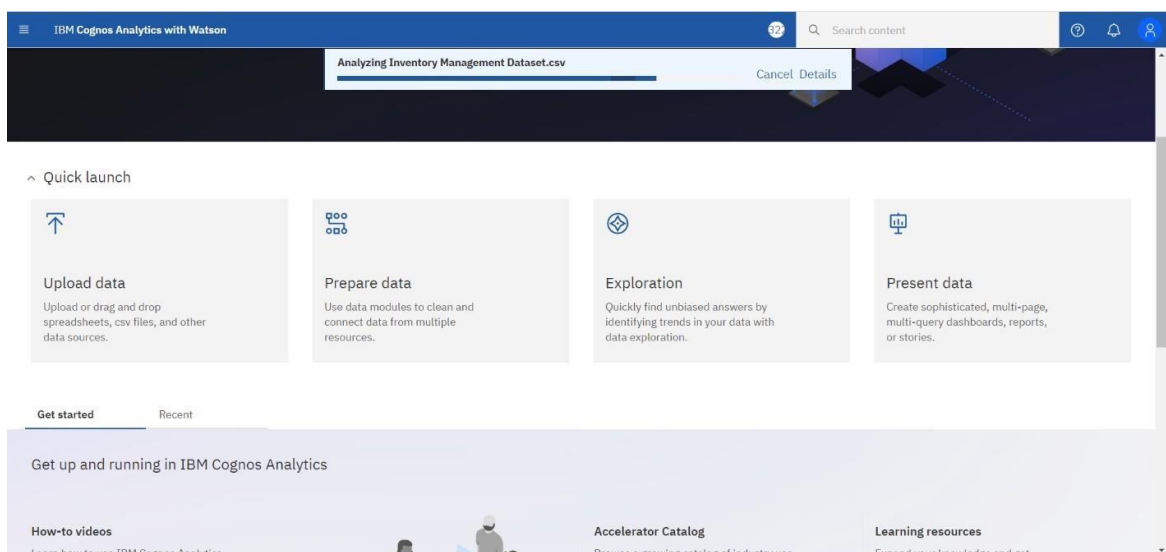
Dataset link -

<https://drive.google.com/file/d/1awFIKJ9LldnNHwGLcsqNDbbwshFHR-w/view>

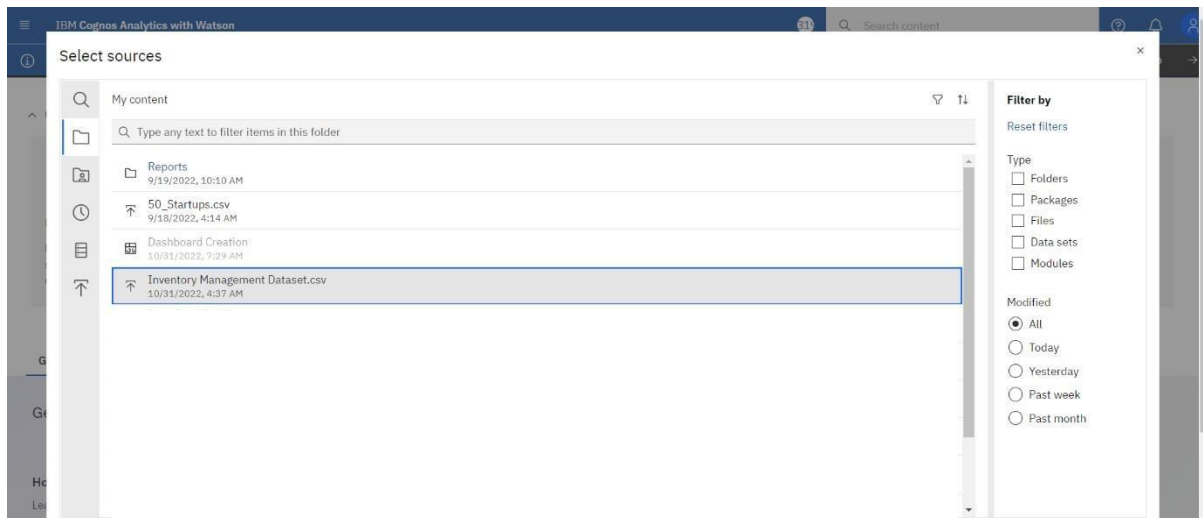
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	data	venda	estoque	preco																			
2	#####	0	4972	1.29																			
3	#####	70	4902	1.29																			
4	#####	59	4843	1.29																			
5	#####	93	4750	1.29																			
6	#####	96	4654	1.29																			
7	#####	145	4509	1.29																			
8	#####	179	4329	1.29																			
9	#####	321	4104	1.29																			
10	#####	125	4459	1.09																			
11	#####	88	5043	1.09																			
12	#####	188	5239	1.09																			
13	#####	121	5118	1.09																			
14	#####	134	4984	1.09																			
15	#####	80	4904	1.09																			
16	#####	82	4822	1.09																			
17	#####	94	4728	1.19																			
18	#####	159	4464	1.19																			
19	#####	199	4265	1.19																			
20	#####	104	4161	1.19																			
21	#####	70	4091	1.19																			
22	#####	127	3964	1.09																			
23	#####	96	3868	1.09																			
24	#####	75	3793	1.09																			
25	#####	198	3595	1.09																			
26	#####	168	3427	1.09																			
27	#####	125	3302	1.09																			
28	#####	86	3216	1.09																			
29	#####	222	2994	0.99																			

2. Load the Dataset

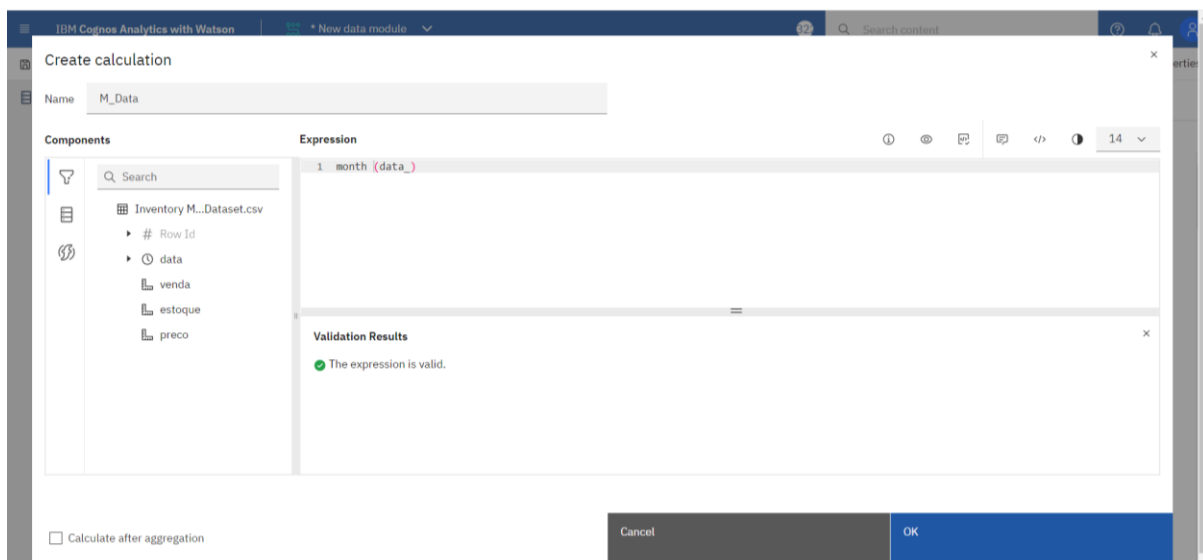
Tool Used: IBM Cognos



Data Preparation:



Month Data(M_Data):



The screenshot shows the main interface of IBM Cognos Analytics. The 'Data module' section on the left shows the 'M_Data' data module. The 'Grid' tab is selected, displaying a table with 15 rows and 7 columns: 'M_Data', 'Row Id', 'Year', 'Sales', 'Stock', and 'Price'. The table data is as follows:

M_Data	Row Id	Year	Sales	Stock	Price
1	1	2014-01-01	0	4972	1.29
1	2	2014-01-02	70	4902	1.29
1	3	2014-01-03	59	4843	1.29
1	4	2014-01-04	93	4750	1.29
1	5	2014-01-05	96	4654	1.29
1	6	2014-01-06	145	4509	1.29
1	7	2014-01-07	179	4329	1.29
1	8	2014-01-08	321	4104	1.29
1	9	2014-01-09	125	4459	1.09
1	10	2014-01-10	88	5043	1.09
1	11	2014-01-11	188	5239	1.09
1	12	2014-01-12	121	5118	1.09
1	13	2014-01-13	134	4984	1.09
1	14	2014-01-14	80	4904	1.09
1	15	2014-01-15	82	4822	1.09

Revenue Data:

Create calculation

Name

Revenue

Components

Search

Inventory M...Dataset.csv

M_Data

Row Id

Year

Sales

Stock

Price

Expression

1 venda*preco

Validation Results

The expression is valid.

Calculate after aggregation

Cancel

OK

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Data module

Search

New data module

Navigation paths

Inventory M...ataset.csv

Revenue

M_Data

Row Id

Year

Sales

Stock

Price

Revenue	M_Data	Row Id	Year	Sales	Stock	Price
0	1	1	2014-01-01	0	4972	1.29
90.3	1	2	2014-01-02	70	4902	1.29
76.11	1	3	2014-01-03	59	4843	1.29
119.97	1	4	2014-01-04	93	4750	1.29
123.84	1	5	2014-01-05	96	4654	1.29
187.05	1	6	2014-01-06	145	4509	1.29
230.91	1	7	2014-01-07	179	4329	1.29
414.09000000000003	1	8	2014-01-08	321	4104	1.29
136.25	1	9	2014-01-09	125	4459	1.09
95.92	1	10	2014-01-10	88	5043	1.09
204.92000000000002	1	11	2014-01-11	188	5239	1.09
131.89000000000001	1	12	2014-01-12	121	5118	1.09
146.06	1	13	2014-01-13	134	4984	1.09
87.2	1	14	2014-01-14	80	4904	1.09
89.38000000000001	1	15	2014-01-15	82	4822	1.09

Year Data:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Data module

Search

New data module

Navigation paths

Inventory M...ataset.csv

Revenue

M_Data

Row Id

Year

Sales

Stock

Price

Revenue	M_Data	Row Id	Year	Sales	Stock	Price
0	1	1	2014-01-01	0	4972	1.29
90.3	1	2	2014-01-02	70	4902	1.29
76.11	1	3	2014-01-03	59	4843	1.29
119.97	1	4	2014-01-04	93	4750	1.29
123.84	1	5	2014-01-05	96	4654	1.29
187.05	1	6	2014-01-06	145	4509	1.29
230.91	1	7	2014-01-07	179	4329	1.29
414.09000000000003	1	8	2014-01-08	321	4104	1.29
136.25	1	9	2014-01-09	125	4459	1.09
95.92	1	10	2014-01-10	88	5043	1.09
204.92000000000002	1	11	2014-01-11	188	5239	1.09
131.89000000000001	1	12	2014-01-12	121	5118	1.09
146.06	1	13	2014-01-13	134	4984	1.09
87.2	1	14	2014-01-14	80	4904	1.09
89.38000000000001	1	15	2014-01-15	82	4822	1.09

Stock Data:

The screenshot shows the IBM Cognos Analytics interface. The top navigation bar includes the IBM Cognos Analytics with Watson logo, a 'New data module' dropdown, a search bar, and user profile icons. The left sidebar shows a 'Data module' tree with 'Inventory M...ataset.csv' expanded, listing 'Revenue', 'M_Data', 'Row Id', 'Year', 'Sales', 'Stock', and 'Price'. The 'Stock' item is selected. The main area displays a table with columns: Revenue, M_Data, Row Id, Year, Sales, Stock, and Price. The table contains 15 rows of data for the year 2014, with Stock values ranging from 4822 to 4972 and Price values around 1.09 to 1.29.

Revenue	M_Data	Row Id	Year	Sales	Stock	Price
0	1	1	2014-01-01	0	4972	1.29
90.3	1	2	2014-01-02	70	4902	1.29
76.11	1	3	2014-01-03	59	4843	1.29
119.97	1	4	2014-01-04	93	4750	1.29
123.84	1	5	2014-01-05	96	4654	1.29
187.05	1	6	2014-01-06	145	4509	1.29
230.91	1	7	2014-01-07	179	4329	1.29
414.09000000000003	1	8	2014-01-08	321	4104	1.29
136.25	1	9	2014-01-09	125	4459	1.09
95.92	1	10	2014-01-10	88	5043	1.09
204.92000000000002	1	11	2014-01-11	188	5239	1.09
131.89000000000001	1	12	2014-01-12	121	5118	1.09
146.06	1	13	2014-01-13	134	4984	1.09
87.2	1	14	2014-01-14	80	4904	1.09
89.38000000000001	1	15	2014-01-15	82	4822	1.09

Sales Data:

The screenshot shows the IBM Cognos Analytics interface. The top navigation bar includes the IBM Cognos Analytics with Watson logo, a 'New data module' dropdown, a search bar, and user profile icons. The left sidebar shows a 'Data module' tree with 'Inventory M...ataset.csv' expanded, listing 'Revenue', 'M_Data', 'Row Id', 'Year', 'Sales', 'Stock', and 'Price'. The 'Sales' item is selected. The main area displays a table with columns: Revenue, M_Data, Row Id, Year, Sales, Stock, and Price. The table contains 15 rows of data for the year 2014, with Sales values ranging from 0 to 321 and Stock values ranging from 4822 to 4972.

Revenue	M_Data	Row Id	Year	Sales	Stock	Price
0	1	1	2014-01-01	0	4972	1.29
90.3	1	2	2014-01-02	70	4902	1.29
76.11	1	3	2014-01-03	59	4843	1.29
119.97	1	4	2014-01-04	93	4750	1.29
123.84	1	5	2014-01-05	96	4654	1.29
187.05	1	6	2014-01-06	145	4509	1.29
230.91	1	7	2014-01-07	179	4329	1.29
414.09000000000003	1	8	2014-01-08	321	4104	1.29
136.25	1	9	2014-01-09	125	4459	1.09
95.92	1	10	2014-01-10	88	5043	1.09
204.92000000000002	1	11	2014-01-11	188	5239	1.09
131.89000000000001	1	12	2014-01-12	121	5118	1.09
146.06	1	13	2014-01-13	134	4984	1.09
87.2	1	14	2014-01-14	80	4904	1.09
89.38000000000001	1	15	2014-01-15	82	4822	1.09

Price Data:

IBM Cognos Analytics with Watson | New data module

Search content

Properties

Data module

Grid Relationships Custom tables

	M_Data	Row Id	Year	Sales	Stock	Price
	1	1	2014-01-01	0	4972	1.29
	1	2	2014-01-02	70	4902	1.29
	1	3	2014-01-03	59	4843	1.29
	1	4	2014-01-04	93	4750	1.29
	1	5	2014-01-05	96	4654	1.29
	1	6	2014-01-06	145	4509	1.29
	1	7	2014-01-07	179	4329	1.29
	0000000003	8	2014-01-08	321	4104	1.29
	1	9	2014-01-09	125	4459	1.09
	1	10	2014-01-10	88	5043	1.09
	0000000002	11	2014-01-11	188	5239	1.09
	0000000001	12	2014-01-12	121	5118	1.09
	1	13	2014-01-13	134	4984	1.09
	1	14	2014-01-14	80	4904	1.09
	0000000001	15	2014-01-15	82	4822	1.09

Month Format Data:

IBM Cognos Analytics with Watson | New data module

Search content

Properties

Data module

Grid Relationships Custom tables

Data format

Column: M_Data

Format type: Date

Date separator: /

Date style: Short

Date ordering: Default

Missing value characters: <empty>

Advanced options

Reset properties

Cancel OK

IBM Cognos Analytics with Watson | New data module

Search content

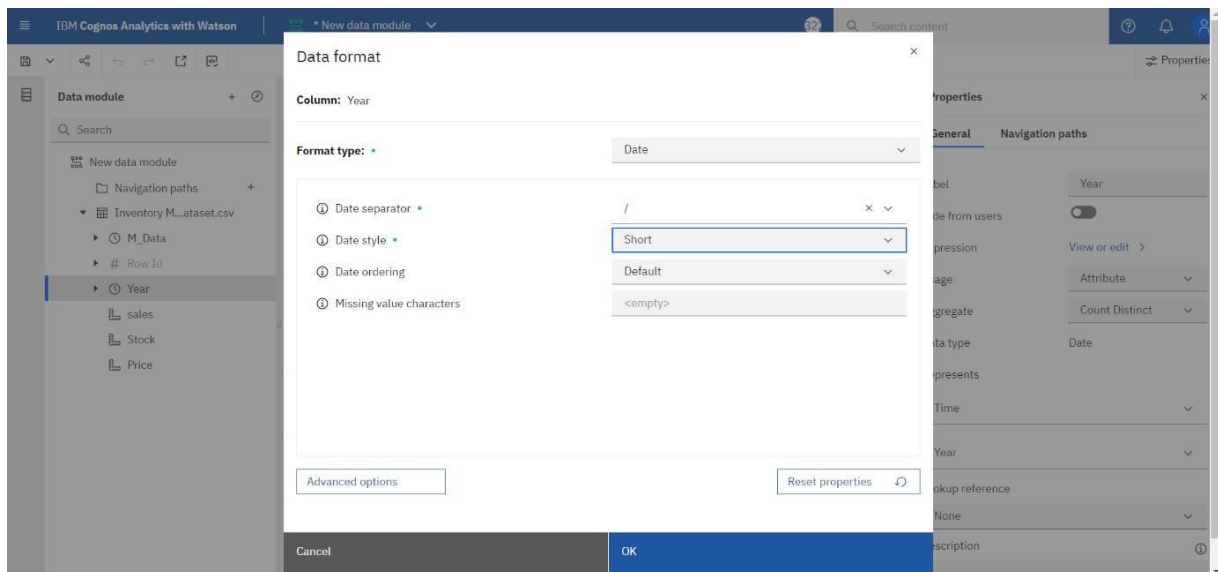
Properties

Data module

Grid Relationships Custom tables

	Revenue	M_Data	Row Id	Year	sales	Stock	Price
	0	1	1	1/1/14	0	4972	1
	90.3	1	2	1/2/14	70	4902	1
	76.11	1	3	1/3/14	59	4843	1
	119.97	1	4	1/4/14	93	4750	1
	123.84	1	5	1/5/14	96	4654	1
	187.05	1	6	1/6/14	145	4509	1
	230.91	1	7	1/7/14	179	4329	1
	414.09000000000003	1	8	1/8/14	321	4104	1
	136.25	1	9	1/9/14	125	4459	1
	95.92	1	10	1/10/14	88	5043	1
	204.92000000000002	1	11	1/11/14	188	5239	1
	111.00000000000001	1	12	1/12/14	121	5118	1

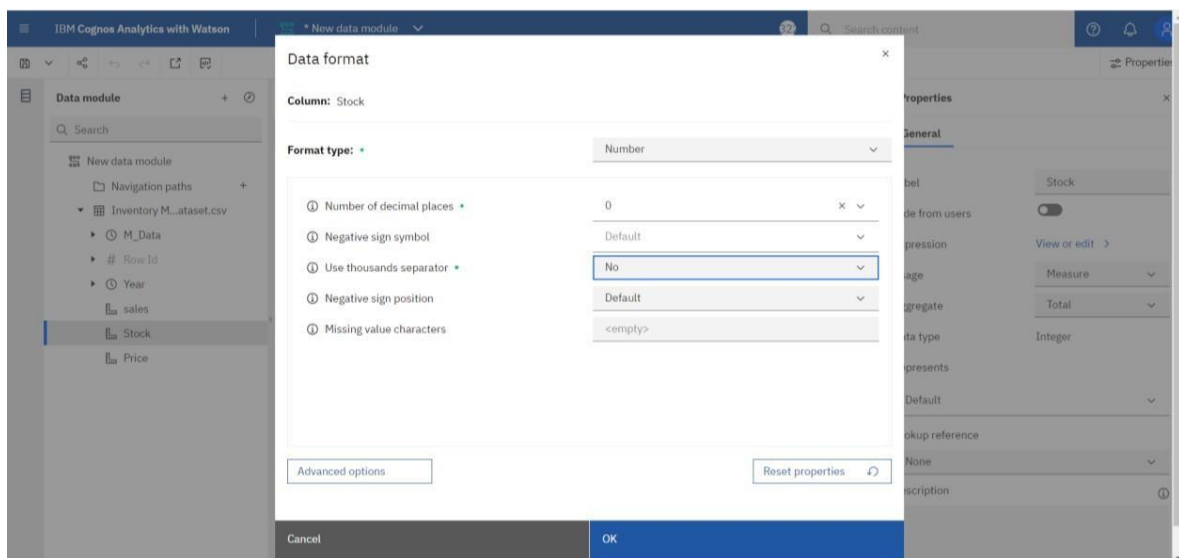
Year Format Data:



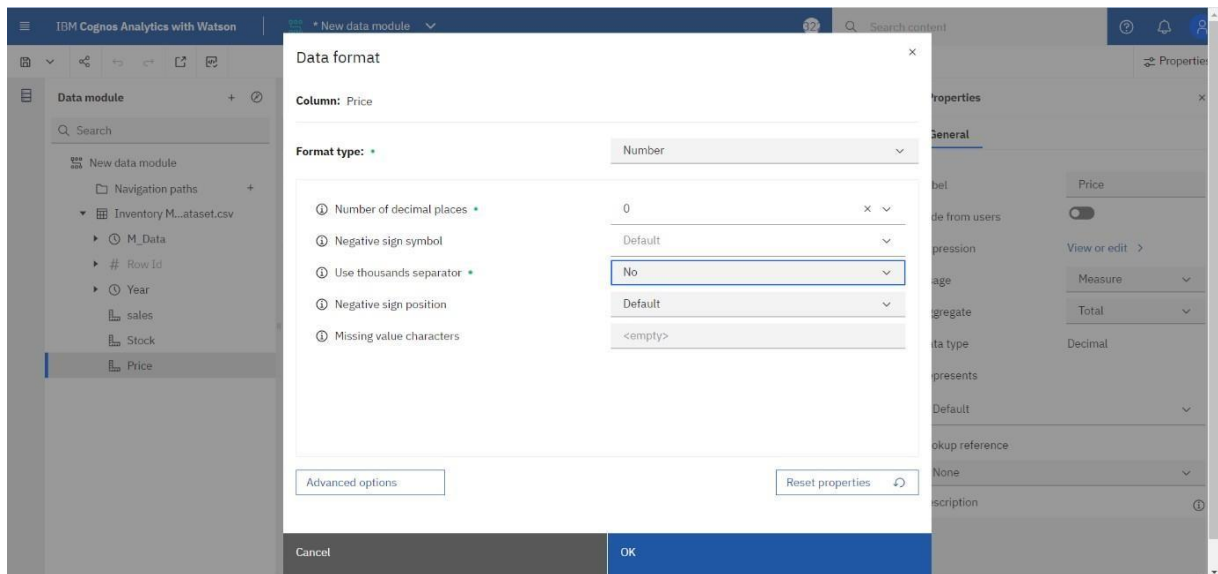
The screenshot shows a data grid with the following columns: Revenue, M_Data, Row Id, Year, sales, Stock, and Price. The data is as follows:

Revenue	M_Data	Row Id	Year	sales	Stock	Price
0	1	1	1/1/14	0	4972	1
90.3	1	2	1/2/14	70	4902	1
76.11	1	3	1/3/14	59	4843	1
119.97	1	4	1/4/14	93	4750	1
123.84	1	5	1/5/14	96	4654	1
187.05	1	6	1/6/14	145	4509	1
230.91	1	7	1/7/14	179	4329	1
414.09000000000003	1	8	1/8/14	321	4104	1
136.25	1	9	1/9/14	125	4459	1
95.92	1	10	1/10/14	88	5043	1
204.92000000000002	1	11	1/11/14	188	5239	1
131.66000000000001	1	12	1/12/14	131	5110	1

Stock Format Data:



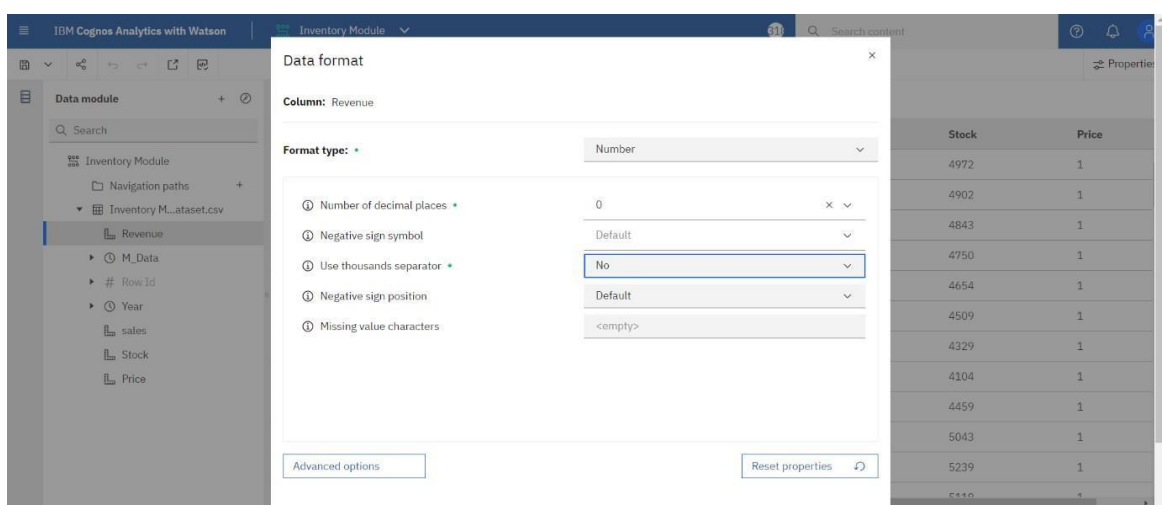
Price Format Data:



The screenshot shows the 'Grid' view of a data table. The table has columns: M_Data, Row Id, Year, sales, Stock, and Price. The data is as follows:

M_Data	Row Id	Year	sales	Stock	Price
1	1	1/1/14	0	4972	1
1	2	1/2/14	70	4902	1
1	3	1/3/14	59	4843	1
1	4	1/4/14	93	4750	1
1	5	1/5/14	96	4654	1
1	6	1/6/14	145	4509	1
1	7	1/7/14	179	4329	1
00000000003	1	1/8/14	321	4104	1
1	9	1/9/14	125	4459	1
1	10	1/10/14	88	5043	1
00000000002	1	1/11/14	188	5239	1
00000000001	1	1/12/14	121	5110	1

Revenue Format Data:



Revenue	M_Data	Row Id	Year	Sales	Stock	Price
0	1	1	1/1/14	0	4972	1
90	1	2	1/2/14	70	4902	1
76	1	3	1/3/14	59	4843	1
120	1	4	1/4/14	93	4750	1
124	1	5	1/5/14	96	4654	1
187	1	6	1/6/14	145	4509	1
231	1	7	1/7/14	179	4329	1
414	1	8	1/8/14	321	4104	1
136	1	9	1/9/14	125	4459	1
96	1	10	1/10/14	88	5043	1
205	1	11	1/11/14	188	5239	1
132	1	12	1/12/14	121	5118	1
146	1	13	1/13/14	134	4984	1
87	1	14	1/14/14	80	4904	1
89	1	15	1/15/14	82	4822	1

Year Properties:

Revenue	M_Data	Row Id	Year	sales
0	1	1	1/1/14	0
90	1	2	1/2/14	70
76	1	3	1/3/14	59
120	1	4	1/4/14	93
124	1	5	1/5/14	96
187	1	6	1/6/14	145
231	1	7	1/7/14	179
414	1	8	1/8/14	321
136	1	9	1/9/14	125
96	1	10	1/10/14	88
205	1	11	1/11/14	188
132	1	12	1/12/14	121
146	1	13	1/13/14	134
87	1	14	1/14/14	80
89	1	15	1/15/14	82

Sales Properties:

M_Data	Row Id	Year	sales
1	1	1/1/14	0
1	2	1/2/14	70
1	3	1/3/14	59
1	4	1/4/14	93
1	5	1/5/14	96
1	6	1/6/14	145
1	7	1/7/14	179
1	8	1/8/14	321
1	9	1/9/14	125
1	10	1/10/14	88
1	11	1/11/14	188
1	12	1/12/14	121
1	13	1/13/14	134
1	14	1/14/14	80
1	15	1/15/14	82

Stock Properties:

IBM Cognos Analytics with Watson | * Inventory Module

Search content

Properties

Data module

Inventory Module

Navigation paths

Inventory M...ataset.csv

Revenue

M_Data

Row Id

Year

sales

Stock

Price

Grid

Row Id	Year	sales	Stock
1	1/1/14	0	4972
2	1/2/14	70	4902
3	1/3/14	59	4843
4	1/4/14	93	4750
5	1/5/14	96	4654
6	1/6/14	145	4509
7	1/7/14	179	4329
8	1/8/14	321	4104
9	1/9/14	125	4459
10	1/10/14	88	5043
11	1/11/14	188	5239

Properties

General

Label: Stock

Hide from users: ☐

Expression: View or edit >

Usage: Measure

Aggregate: Total

Data type: Integer

Represents: Default

Lookup reference: None

Description:

Price Properties:

IBM Cognos Analytics with Watson | * Inventory Module

Search content

Properties

Data module

Inventory Module

Navigation paths

Inventory M...ataset.csv

Revenue

M_Data

Row Id

Year

sales

Stock

Price

Grid

Year	sales	Stock	Price
1/1/14	0	4972	1
1/2/14	70	4902	1
1/3/14	59	4843	1
1/4/14	93	4750	1
1/5/14	96	4654	1
1/6/14	145	4509	1
1/7/14	179	4329	1
1/8/14	321	4104	1
1/9/14	125	4459	1
1/10/14	88	5043	1
1/11/14	188	5239	1

Properties

General

Label: Price

Hide from users: ☐

Expression: View or edit >

Usage: Measure

Aggregate: Total

Data type: Decimal

Represents: Default

Lookup reference: None

Description:

Revenue Properties:

IBM Cognos Analytics with Watson | * Inventory Module

Search content

Properties

Data module

Inventory Module

Navigation paths

Inventory M...ataset.csv

Revenue

M_Data

Row Id

Year

sales

Grid

Revenue	M_Data	Row Id	Year	sales
0	1	1	1/1/14	0
90	1	2	1/2/14	70
76	1	3	1/3/14	59
120	1	4	1/4/14	93
124	1	5	1/5/14	96
187	1	6	1/6/14	145
231	1	7	1/7/14	179
414	1	8	1/8/14	321
136	1	9	1/9/14	125
96	1	10	1/10/14	88
205	1	11	1/11/14	188

Properties

General

Label: Revenue

Hide from users: ☐

Expression: View or edit >

Usage: Measure

Calculate after aggregation: ☐

Aggregate: Total

Data type: Decimal

Represents: Default

Lookup reference: None

M_Data Properties:

The screenshot displays the IBM Cognos Analytics interface. On the left, the 'Data module' pane shows a tree structure with 'Inventory Module' expanded, containing 'Navigation paths', 'Inventory M...ataset.csv', 'Revenue', and 'M_Data' (highlighted). The central 'Grid' view shows a table with columns: 'Revenue', 'M_Data', 'Row Id', 'Year', and 'sales'. The 'M_Data' column is highlighted. The right-hand 'Properties' pane is open, showing the 'General' tab for 'M_Data'. The properties include: Label (M_Data), Hide from users (toggle off), Expression (View or edit), Usage (Attribute), Aggregate (Count Distinct), Data type (Integer), Represents (Time), and Month (dropdown). The table data is as follows:

Revenue	M_Data	Row Id	Year	sales
0	1	1	1/1/14	0
90	1	2	1/2/14	70
76	1	3	1/3/14	59
120	1	4	1/4/14	93
124	1	5	1/5/14	96
187	1	6	1/6/14	145
231	1	7	1/7/14	179
414	1	8	1/8/14	321
136	1	9	1/9/14	125
96	1	10	1/10/14	88
205	1	11	1/11/14	188

Prepared Data link:

https://us3.ca.analytics.ibm.com/bi/?perspective=ca-modeller&pathRef=.my_folders%2FInventory%2BModule