

Project Development Phase

Sprint - 1

Team ID	PNT2022TMID24328
Project Name	Project - Retail Store Stock Inventory Analytics

SPRINT-1

- Data Collection
- Data Preparation

Data Collection:

1. Download the Dataset

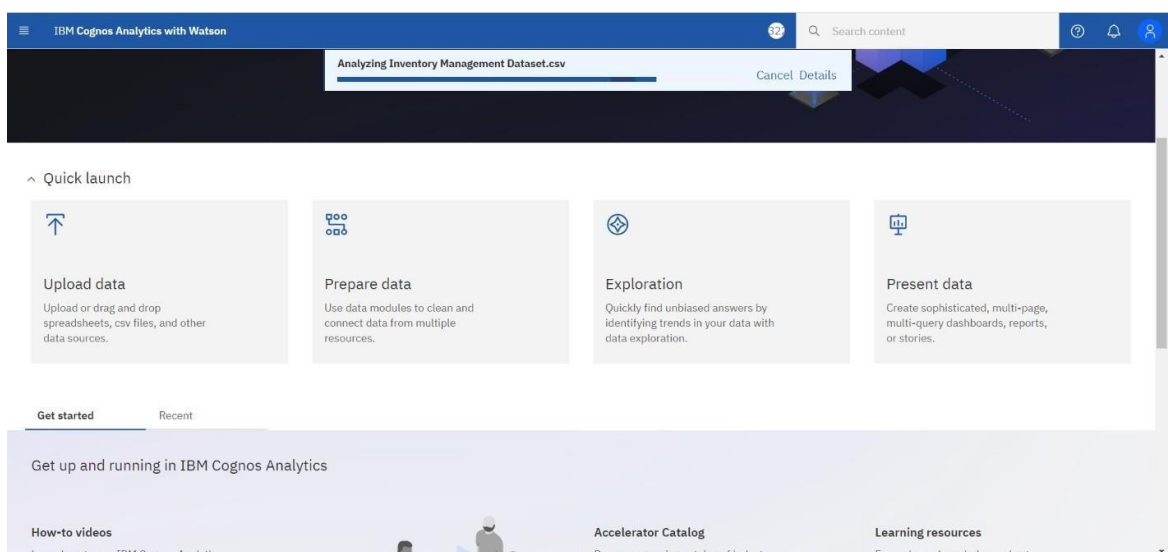
Dataset link -

<https://drive.google.com/file/d/1awFIKJ9LildnNHwGLcsqNDbbwshFHR-w/view>

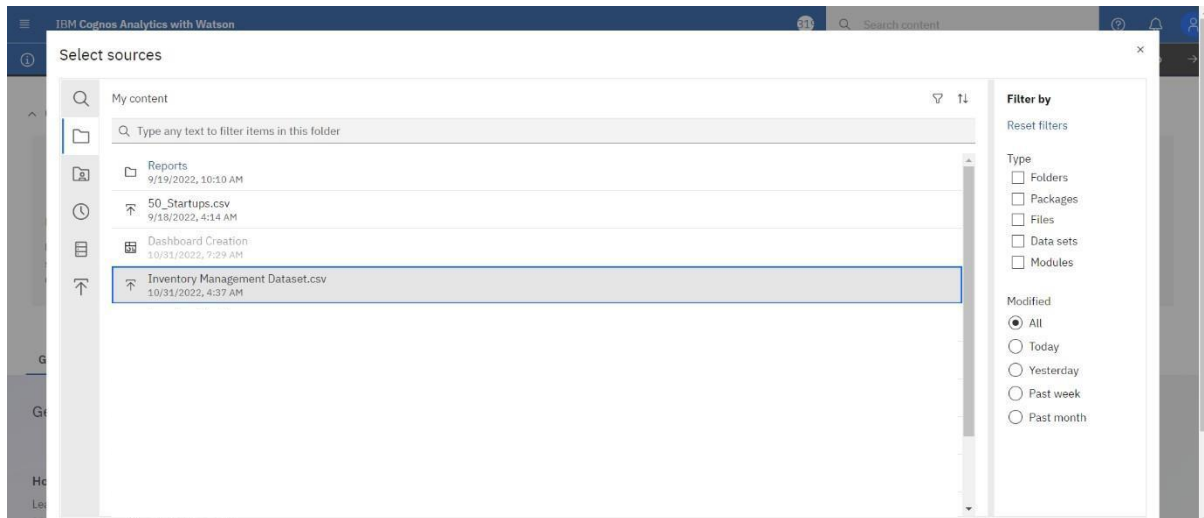
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
data	venda	estoque	preco																			
#####	0	4972	1.29																			
#####	70	4902	1.29																			
#####	59	4843	1.29																			
#####	93	4750	1.29																			
#####	96	4654	1.29																			
#####	145	4509	1.29																			
#####	179	4329	1.29																			
#####	321	4104	1.29																			
#####	125	4459	1.09																			
#####	88	5043	1.09																			
#####	188	5239	1.09																			
#####	121	5118	1.09																			
#####	134	4984	1.09																			
#####	80	4904	1.09																			
#####	82	4822	1.09																			
#####	94	4728	1.19																			
#####	159	4464	1.19																			
#####	199	4265	1.19																			
#####	104	4161	1.19																			
#####	70	4091	1.19																			
#####	127	3964	1.09																			
#####	96	3868	1.09																			
#####	75	3793	1.09																			
#####	198	3595	1.09																			
#####	168	3427	1.09																			
#####	125	3302	1.09																			
#####	86	3216	1.09																			
#####	222	2994	0.99																			

2. Load the Dataset

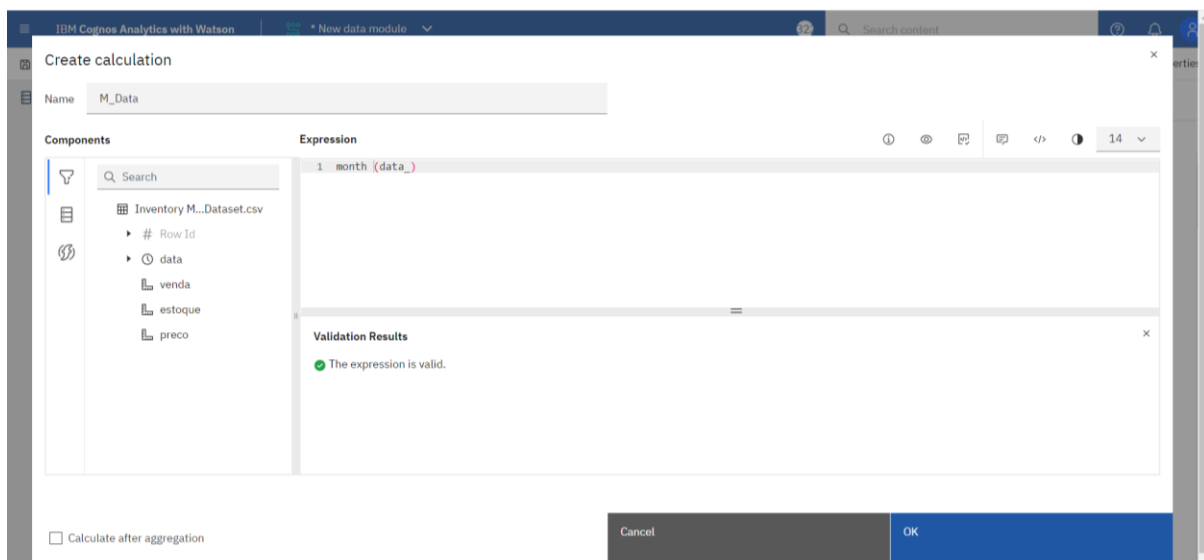
Tool Used: IBM Cognos



Data Preparation:



Month Data(M_Data):



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

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:

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:

IBM Cognos Analytics with Watson

New data module

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Search content

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👤

Properties

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🔍

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🔗

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Data module

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🕒

🔍 Search

New data module

Navigation paths

Inventory M...ataset.csv

Revenue

M_Data

Row Id

🕒 Year

Sales

Stock

Price

📊 Grid

🔗 Relationships

📄 Custom tables

11	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:

IBM Cognos Analytics with Watson

New data module

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Search content

Properties

Data module

Search

New data module

Navigation paths

Inventory M...ataset.csv

Revenue

M_Data

Row Id

Year

Sales

Stock

Price

Grid

Relationships

Custom tables

T1	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
	00000000003	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
	00000000002	11	2014-01-11	188	5239	1.09
	00000000001	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
	00000000001	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
	414.090000000000003	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
	204.920000000000002	1	11	1/11/14	188	5239	1
	111.000000000000004	1	12	1/12/14	121	5118	1

Year Format Data:

The screenshot shows the 'Data format' dialog box for the 'Year' column. The 'Format type' is set to 'Date'. The 'Date separator' is '/', the 'Date style' is 'Short', and the 'Date ordering' is 'Default'. The 'Missing value characters' field is empty. The 'Advanced options' button is visible at the bottom left, and the 'Reset properties' button is at the bottom right. The 'OK' button is at the bottom right, and the 'Cancel' button is at the bottom left.

Column: Year

Format type: Date

① Date separator: /

① Date style: Short

① Date ordering: Default

① Missing value characters: <empty>

Advanced options

Reset properties

Cancel OK

The screenshot shows the 'Data module' view in IBM Cognos Analytics. The table has 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
123.00000000000003	1	12	1/12/14	124	5110	1

Stock Format Data:

The screenshot shows the 'Data format' dialog box for the 'Stock' column. The 'Format type' is set to 'Number'. The 'Number of decimal places' is '0', the 'Negative sign symbol' is 'Default', the 'Use thousands separator' is 'No', the 'Negative sign position' is 'Default', and the 'Missing value characters' field is empty. The 'Advanced options' button is visible at the bottom left, and the 'Reset properties' button is at the bottom right. The 'OK' button is at the bottom right, and the 'Cancel' button is at the bottom left.

Column: Stock

Format type: Number

① Number of decimal places: 0

① Negative sign symbol: Default

① Use thousands separator: No

① Negative sign position: Default

① Missing value characters: <empty>

Advanced options

Reset properties

Cancel OK

IBM Cognos Analytics with Watson | * New data module | Search content

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
131.00000000000001	1	12	1/12/14	121	5110	1

Sales Format Data:

IBM Cognos Analytics with Watson | * New data module | Search content

Data module

Data format

Column: sales

Format type: * Number

① Number of decimal places * 0

① Negative sign symbol Default

① Use thousands separator * No

① Negative sign position Default

① Missing value characters <empty>

Advanced options Reset properties

Cancel OK

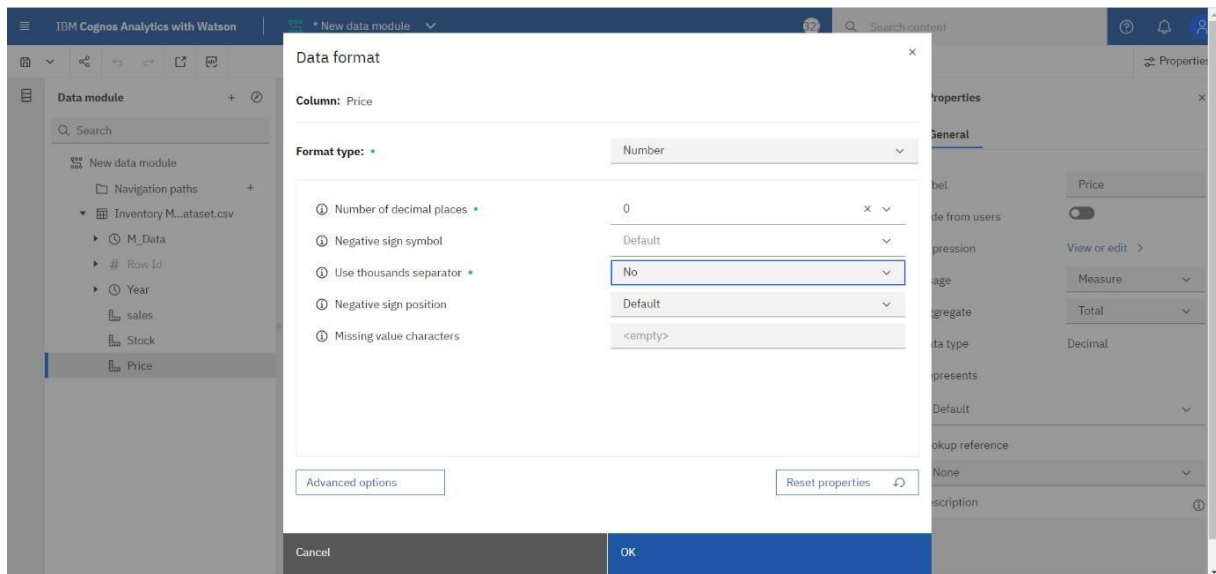
IBM Cognos Analytics with Watson | * New data module | Search content

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
131.00000000000001	1	12	1/12/14	121	5110	1

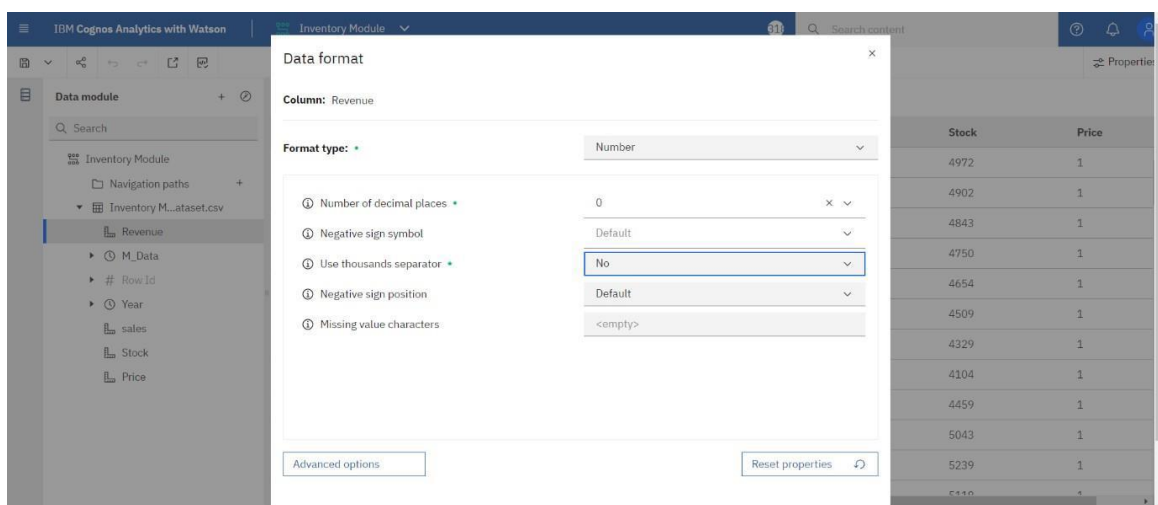
Price Format Data:



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:



IBM Cognos Analytics with Watson | Inventory Module

Search content

Properties

Data module

Search

Inventory 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	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:

IBM Cognos Analytics with Watson | Inventory Module

Search content

Properties

Data module

Search

Inventory Module

Navigation paths

Inventory M...ataset.csv

Revenue

M_Data

Row Id

Year

Sales

Stock

Price

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

Navigation paths

Label

Year

Hide from users

Expression

View or edit

Usage

Attribute

Aggregate

Count Distinct

Data type

Date

Represents

Time

Year

Lookup reference

None

Sales Properties:

IBM Cognos Analytics with Watson | Inventory Module

Search content

Properties

Data module

Search

Inventory Module

Navigation paths

Inventory M...ataset.csv

Revenue

M_Data

Row Id

Year

Sales

Stock

Price

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

Properties

General

Label

Sales

Hide from users

Expression

View or edit

Usage

Measure

Aggregate

Total

Data type

Integer

Represents

Default

Lookup reference

None

Description

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

Description:

M_Data Properties:

The screenshot displays the IBM Cognos Analytics interface. The top navigation bar includes the title 'IBM Cognos Analytics with Watson', the current module 'Inventory Module', and a search bar. The left sidebar shows the 'Data module' tree with 'Inventory Module' expanded, containing 'Navigation paths', 'Inventory M...ataset.csv', 'Revenue', and 'M_Data' (which is selected). The main area shows a table with columns: Revenue, M_Data, Row Id, Year, and sales. The 'M_Data' column is highlighted. The right sidebar shows the 'Properties' panel for the selected table, with the 'General' tab active. 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
122	1	12	1/12/14	121