

FINAL DELIVERABLES

Data Collection & Preparation

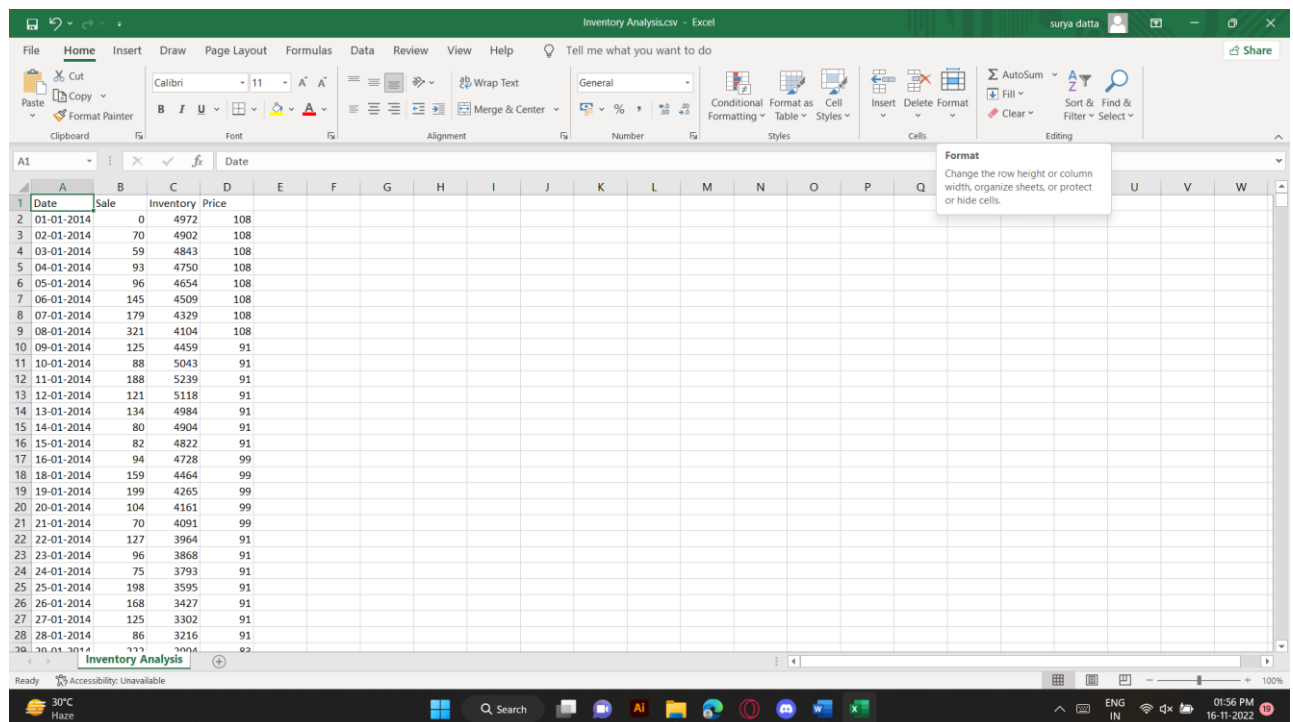
Team ID	PNT2022TMD34942
Project Name	Project – Retail Store Stock Inventory Analytics

DATA COLLECTION:

1. Download the dataset

Dataset link –

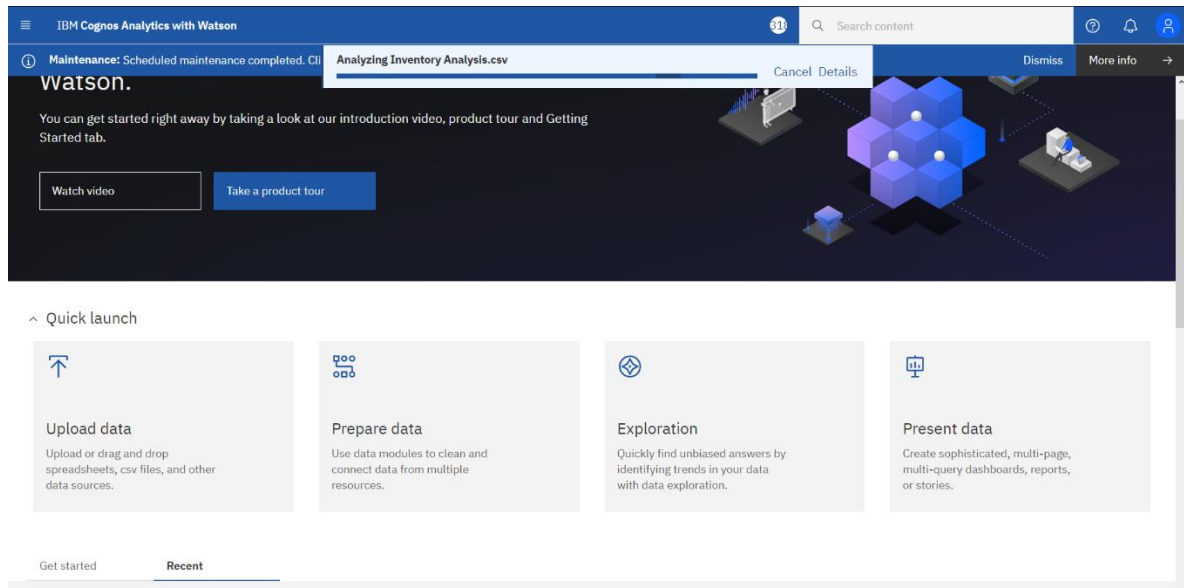
https://drive.google.com/drive/folders/1o4BfwwR0A58IV-YhvhyIDl4pImLeI2C6?usp=share_link



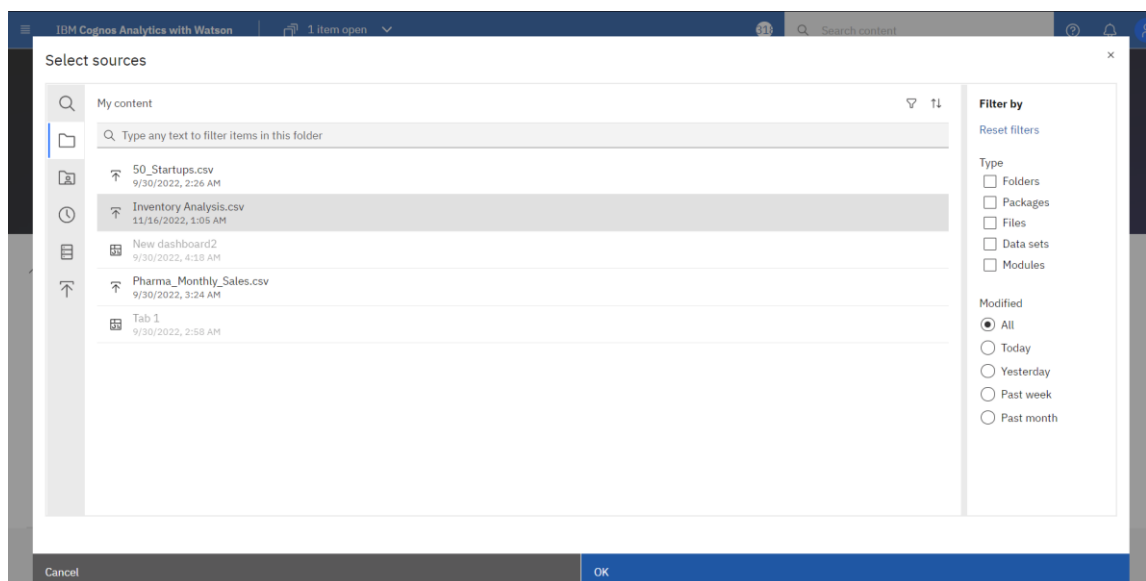
Date	Sale	Inventory	Price
01-01-2014	0	4972	108
02-01-2014	70	4902	108
03-01-2014	59	4843	108
04-01-2014	93	4750	108
05-01-2014	96	4654	108
06-01-2014	145	4509	108
07-01-2014	179	4329	108
08-01-2014	321	4104	108
09-01-2014	125	4459	91
10-01-2014	88	5043	91
11-01-2014	188	5239	91
12-01-2014	121	5118	91
13-01-2014	134	4984	91
14-01-2014	80	4904	91
15-01-2014	82	4822	91
16-01-2014	94	4728	99
18-01-2014	159	4464	99
19-01-2014	199	4265	99
20-01-2014	104	4161	99
21-01-2014	70	4091	99
22-01-2014	127	3964	91
23-01-2014	96	3868	91
24-01-2014	75	3793	91
25-01-2014	198	3595	91
26-01-2014	168	3427	91
27-01-2014	125	3302	91
28-01-2014	86	3216	91
29-01-2014	77	3194	91

2. Loading the dataset

Tool Used – IBM Cognos Analytics



DATA PREPERATION :



Month Data:

IBM Cognos Analytics with Watson

New data module

Search content

IBM Cognos Analytics with Watson

Create calculation

M_Data

Components

Search

New data module

Inventory ...lysis.csv

Row Id

Date

Sale

Inventory

Price

Expression

1 month(Inventory_Analysis_csv.Date_)

Validation Results

The expression is valid.

Calculate after aggregation

Cancel

OK

IBM Cognos Analytics with Watson

New data module

Search content

IBM Cognos Analytics with Watson

Grid Relationships Custom tables

Data module

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Revenue	Month_data	Row Id	Date	Sale	Inventory	Price
0	1	1	2014-01-01	0	4972	108
7560	1	2	2014-01-02	70	4902	108
6372	1	3	2014-01-03	59	4843	108
10044	1	4	2014-01-04	93	4750	108
10368	1	5	2014-01-05	96	4654	108
15660	1	6	2014-01-06	145	4509	108
19332	1	7	2014-01-07	179	4329	108
34668	1	8	2014-01-08	321	4104	108
11375	1	9	2014-01-09	125	4459	91
8008	1	10	2014-01-10	88	5043	91
17108	1	11	2014-01-11	188	5239	91
11011	1	12	2014-01-12	121	5118	91
12194	1	13	2014-01-13	134	4984	91
7280	1	14	2014-01-14	80	4904	91

Revenue Data:

IBM Cognos Analytics with Watson

New data module

Search content

?

🔔

👤

Create calculation

Name

Revenue

Components

Expression

🔍 Search

Inventory Analysis.csv

Month_data

Row Id

🕒 Date

📄 Sale

📄 Inventory

📄 Price

🕒 Date1

1

Sale*Price

Validation Results

🟢 The expression is valid.

☐ Calculate after aggregation

Cancel

OK

IBM Cognos Analytics with Watson

New data module

Search content

?

🔔

👤

🔍 Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

🕒 Date

📄 Sale

📄 Inventory

📄 Price

🕒 Date1

Grid

Relationships

Custom tables

Row Id	Revenue	Month_data	Row Id	Date	Sale	Inventory	Price
1	0	1	1	2014-01-01	0	4972	108
2	7560	1	2	2014-01-02	70	4902	108
3	6372	1	3	2014-01-03	59	4843	108
4	10044	1	4	2014-01-04	93	4750	108
5	10368	1	5	2014-01-05	96	4654	108
6	15660	1	6	2014-01-06	145	4509	108
7	19332	1	7	2014-01-07	179	4329	108
8	34668	1	8	2014-01-08	321	4104	108
9	11375	1	9	2014-01-09	125	4459	91
10	8008	1	10	2014-01-10	88	5043	91
11	17108	1	11	2014-01-11	188	5239	91
12	11011	1	12	2014-01-12	121	5118	91
13	12194	1	13	2014-01-13	134	4984	91
14	7280	1	14	2014-01-14	80	4904	91

Date Data:

The screenshot shows the IBM Cognos Analytics interface. The top navigation bar includes the logo, 'IBM Cognos Analytics with Watson', a dropdown menu for 'New data module', a search bar, and user controls. The left sidebar shows a 'Data module' tree with 'Inventory Analysis.csv' expanded, and 'Date' selected under the '# Date' category. The main area displays a table with columns: Revenue, Month_data, Row Id, Date, Sale, Inventory, and Price. The table contains 14 rows of data for January 2014.

Revenue	Month_data	Row Id	Date	Sale	Inventory	Price
0	1	1	2014-01-01	0	4972	108
7560	1	2	2014-01-02	70	4902	108
6372	1	3	2014-01-03	59	4843	108
10044	1	4	2014-01-04	93	4750	108
10368	1	5	2014-01-05	96	4654	108
15660	1	6	2014-01-06	145	4509	108
19332	1	7	2014-01-07	179	4329	108
34668	1	8	2014-01-08	321	4104	108
11375	1	9	2014-01-09	125	4459	91
8008	1	10	2014-01-10	88	5043	91
17108	1	11	2014-01-11	188	5239	91
11011	1	12	2014-01-12	121	5118	91
12194	1	13	2014-01-13	134	4984	91
7280	1	14	2014-01-14	80	4904	91

Sales Data:

The screenshot shows the IBM Cognos Analytics interface. The top navigation bar includes the logo, 'IBM Cognos Analytics with Watson', a dropdown menu for 'New data module', a search bar, and user controls. The left sidebar shows a 'Data module' tree with 'Inventory Analysis.csv' expanded, and 'Sale' selected under the '# Date' category. The main area displays a table with columns: Revenue, Month_data, Row Id, Date, Sale, Inventory, and Price. The table contains 14 rows of data for January 2014.

Revenue	Month_data	Row Id	Date	Sale	Inventory	Price
0	1	1	2014-01-01	0	4972	108
7560	1	2	2014-01-02	70	4902	108
6372	1	3	2014-01-03	59	4843	108
10044	1	4	2014-01-04	93	4750	108
10368	1	5	2014-01-05	96	4654	108
15660	1	6	2014-01-06	145	4509	108
19332	1	7	2014-01-07	179	4329	108
34668	1	8	2014-01-08	321	4104	108
11375	1	9	2014-01-09	125	4459	91
8008	1	10	2014-01-10	88	5043	91
17108	1	11	2014-01-11	188	5239	91
11011	1	12	2014-01-12	121	5118	91
12194	1	13	2014-01-13	134	4984	91
7280	1	14	2014-01-14	80	4904	91

Inventory Data:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Grid

Relationships

Custom tables

Revenue	Month_data	Row Id	Date	Sale	Inventory	Price
0	1	1	2014-01-01	0	4972	108
7560	1	2	2014-01-02	70	4902	108
6372	1	3	2014-01-03	59	4843	108
10044	1	4	2014-01-04	93	4750	108
10368	1	5	2014-01-05	96	4654	108
15660	1	6	2014-01-06	145	4509	108
19332	1	7	2014-01-07	179	4329	108
34668	1	8	2014-01-08	321	4104	108
11375	1	9	2014-01-09	125	4459	91
8008	1	10	2014-01-10	88	5043	91
17108	1	11	2014-01-11	188	5239	91
11011	1	12	2014-01-12	121	5118	91
12194	1	13	2014-01-13	134	4984	91
7280	1	14	2014-01-14	80	4904	91

Price Data:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Grid

Relationships

Custom tables

Month_data	Row Id	Date	Sale	Inventory	Price
1	1	2014-01-01	0	4972	108
1	2	2014-01-02	70	4902	108
1	3	2014-01-03	59	4843	108
1	4	2014-01-04	93	4750	108
1	5	2014-01-05	96	4654	108
1	6	2014-01-06	145	4509	108
1	7	2014-01-07	179	4329	108
1	8	2014-01-08	321	4104	108
1	9	2014-01-09	125	4459	91
1	10	2014-01-10	88	5043	91
1	11	2014-01-11	188	5239	91
1	12	2014-01-12	121	5118	91
1	13	2014-01-13	134	4984	91
1	14	2014-01-14	80	4904	91

Month Format Data:

Data format [X]

Column: Month_data

Format type: Date [v]

① Date separator: - [X v]

① Date style: Short [v]

① Date ordering: Default [v]

① Missing value characters: <empty>

Advanced options [v] Reset properties [v]

Cancel OK

Inventory	Price
1972	108
1902	108
1843	108
1750	108
1654	108
1509	108
1329	108
1104	108
1459	91
1043	91
1239	91
1118	91
1984	91
1904	91

The screenshot displays the IBM Cognos Analytics interface. On the left, a sidebar shows the 'Data module' structure for 'New data module', including 'Navigation paths', 'Inventory Analysis.csv', and a list of fields: Revenue, # Month_data, # Row Id, Date, Sale, Inventory, Price, and Date1. The main area shows a table view of the 'Month_data' field, displaying 14 rows of data for January 2014. The table has columns for Row Id, Date, Sale, Inventory, and Price. The 'Date' column shows dates from 2014-January-1 to 2014-January-14. The 'Sale' column shows values ranging from 59 to 145. The 'Inventory' column shows values ranging from 4843 to 5239. The 'Price' column shows values ranging from 91 to 108.

Row Id	Date	Sale	Inventory	Price
1	2014-January-1	0	4972	108
2	2014-January-2	70	4902	108
3	2014-January-3	59	4843	108
4	2014-January-4	93	4750	108
5	2014-January-5	96	4654	108
6	2014-January-6	145	4509	108
7	2014-January-7	179	4329	108
8	2014-January-8	321	4104	108
9	2014-January-9	125	4459	91
10	2014-January-10	88	5043	91
11	2014-January-11	188	5239	91
12	2014-January-12	121	5118	91
13	2014-January-13	134	4984	91
14	2014-January-14	80	4904	91

Revenue Format Data:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Data module

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Column: Revenue

Format type: Number

Number of decimal places: 0

Negative sign symbol: Default

Use thousands separator: No

Negative sign position: Default

Missing value characters: <empty>

Advanced options

Reset properties

Cancel

OK

Inventory	Price
4972	108
4902	108
4843	108
4750	108
4654	108
4509	108
4329	108
4104	108
4459	91
5043	91
5239	91
5118	91
4984	91
4904	91

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Data module

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

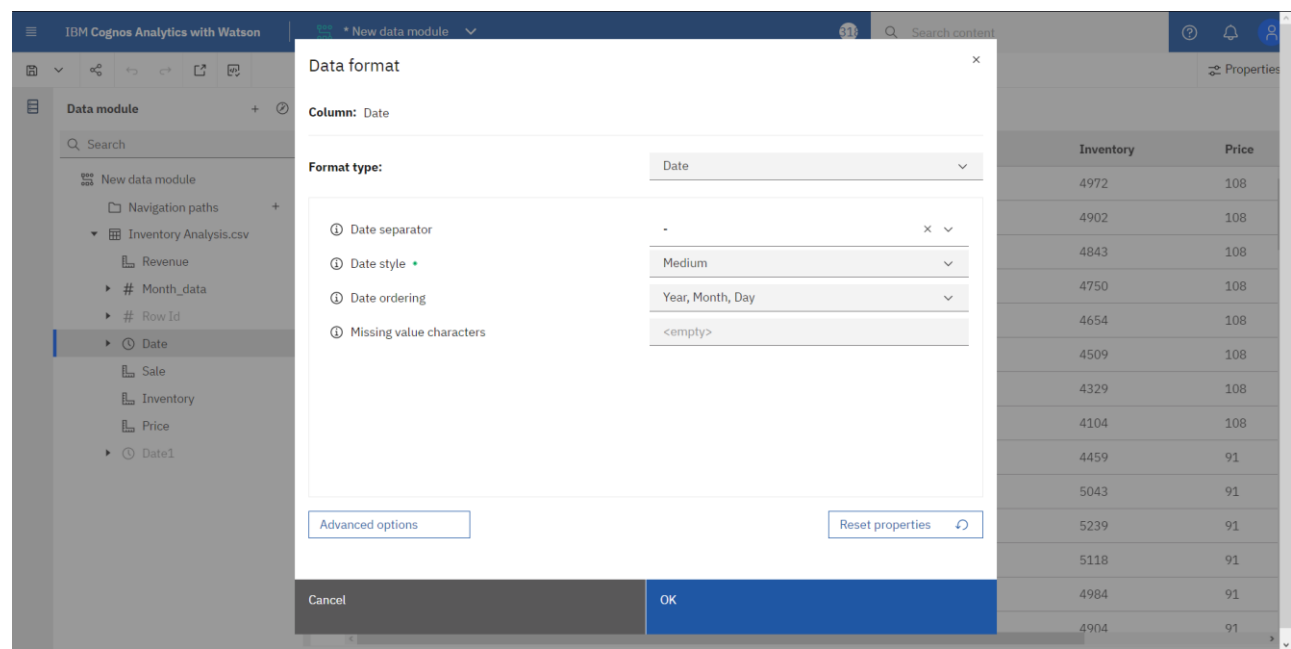
Grid

Relationships

Custom tables

	Revenue	Month_data	Row Id	Date	Sale	Inventory	Price
1	0	1	1	2014-January-1	0	4972	108
2	7560	1	2	2014-January-2	70	4902	108
3	6372	1	3	2014-January-3	59	4843	108
4	10044	1	4	2014-January-4	93	4750	108
5	10368	1	5	2014-January-5	96	4654	108
6	15660	1	6	2014-January-6	145	4509	108
7	19332	1	7	2014-January-7	179	4329	108
8	34668	1	8	2014-January-8	321	4104	108
9	11375	1	9	2014-January-9	125	4459	91
10	8008	1	10	2014-January-10	88	5043	91
11	17108	1	11	2014-January-11	188	5239	91
12	11011	1	12	2014-January-12	121	5118	91
13	12194	1	13	2014-January-13	134	4984	91
14	7280	1	14	2014-January-14	80	4904	91

Year Format Data:



Revenue	Month_data	Row Id	Date	Sale	Inventory	Price
0	1	1	2014-Jan-1	0	4972	108
7560	1	2	2014-Jan-2	70	4902	108
6372	1	3	2014-Jan-3	59	4843	108
10044	1	4	2014-Jan-4	93	4750	108
10368	1	5	2014-Jan-5	96	4654	108
15660	1	6	2014-Jan-6	145	4509	108
19332	1	7	2014-Jan-7	179	4329	108
34668	1	8	2014-Jan-8	321	4104	108
11375	1	9	2014-Jan-9	125	4459	91
8008	1	10	2014-Jan-10	88	5043	91
17108	1	11	2014-Jan-11	188	5239	91
11011	1	12	2014-Jan-12	121	5118	91
12194	1	13	2014-Jan-13	134	4984	91
7280	1	14	2014-Jan-14	80	4904	91

Sales Format Data:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Data module

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Column: Sale

Format type: Number

Number of decimal places: 0

Negative sign symbol: Default

Use thousands separator: No

Negative sign position: Default

Missing value characters: <empty>

Advanced options

Reset properties

Cancel

OK

Inventory	Price
4972	108
4902	108
4843	108
4750	108
4654	108
4509	108
4329	108
4104	108
4459	91
5043	91
5239	91
5118	91
4984	91
4904	91

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Data module

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Grid

Relationships

Custom tables

Revenue	Month_data	Row Id	Date	Sale	Inventory	Price
0	1	1	2014-Jan-1	0	4972	108
7560	1	2	2014-Jan-2	70	4902	108
6372	1	3	2014-Jan-3	59	4843	108
10044	1	4	2014-Jan-4	93	4750	108
10368	1	5	2014-Jan-5	96	4654	108
15660	1	6	2014-Jan-6	145	4509	108
19332	1	7	2014-Jan-7	179	4329	108
34668	1	8	2014-Jan-8	321	4104	108
11375	1	9	2014-Jan-9	125	4459	91
8008	1	10	2014-Jan-10	88	5043	91
17108	1	11	2014-Jan-11	188	5239	91
11011	1	12	2014-Jan-12	121	5118	91
12194	1	13	2014-Jan-13	134	4984	91
7280	1	14	2014-Jan-14	80	4904	91

Inventory Format

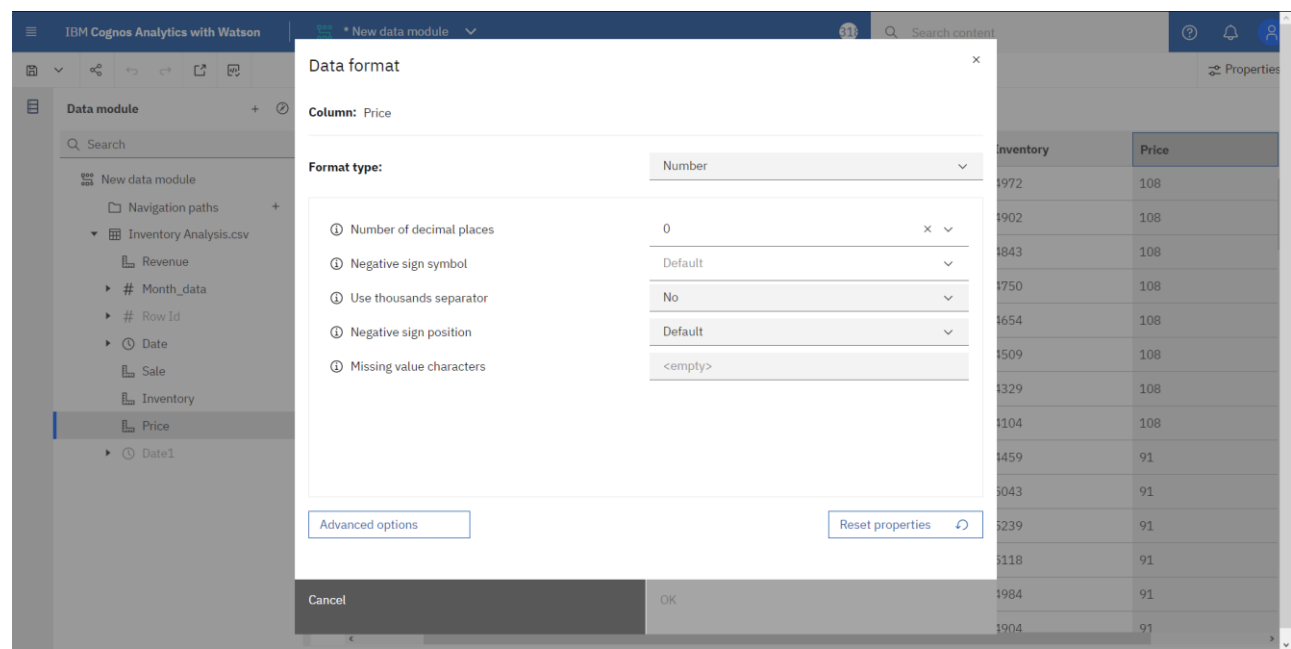
The screenshot shows the IBM Cognos Analytics interface with a 'Data format' dialog box open for the 'Inventory' column. The dialog box has a 'Format type' dropdown set to 'Number'. Below this, there are five settings: 'Number of decimal places' (0), 'Negative sign symbol' (Default), 'Use thousands separator' (No), 'Negative sign position' (Default), and 'Missing value characters' (<empty>). At the bottom of the dialog are 'Advanced options', 'Reset properties', 'Cancel', and 'OK' buttons. In the background, a table with columns 'Inventory' and 'Price' is visible, showing data rows.

Inventory	Price
4972	108
4902	108
4843	108
4750	108
4654	108
4509	108
4329	108
4104	108
4459	91
5043	91
5239	91
5118	91
4984	91
4904	91

The screenshot shows the IBM Cognos Analytics interface with a data grid view. The grid has columns: Revenue, Month_data, Row Id, Date, Sale, Inventory, and Price. The data is sorted by Row Id in ascending order. The 'Inventory' column is highlighted in blue. The 'Date' column shows dates from 2014-Jan-1 to 2014-Jan-14. The 'Price' column shows values 108 and 91.

Revenue	Month_data	Row Id	Date	Sale	Inventory	Price
0	1	1	2014-Jan-1	0	4972	108
7560	1	2	2014-Jan-2	70	4902	108
6372	1	3	2014-Jan-3	59	4843	108
10044	1	4	2014-Jan-4	93	4750	108
10368	1	5	2014-Jan-5	96	4654	108
15660	1	6	2014-Jan-6	145	4509	108
19332	1	7	2014-Jan-7	179	4329	108
34668	1	8	2014-Jan-8	321	4104	108
11375	1	9	2014-Jan-9	125	4459	91
8008	1	10	2014-Jan-10	88	5043	91
17108	1	11	2014-Jan-11	188	5239	91
11011	1	12	2014-Jan-12	121	5118	91
12194	1	13	2014-Jan-13	134	4984	91
7280	1	14	2014-Jan-14	80	4904	91

Price Format Data:



The screenshot shows the IBM Cognos Analytics interface with a data grid view. The grid has the following columns: Month_data, Row Id, Date, Sale, Inventory, and Price. The data is as follows:

Month_data	Row Id	Date	Sale	Inventory	Price
1	1	2014-Jan-1	0	4972	108
1	2	2014-Jan-2	70	4902	108
1	3	2014-Jan-3	59	4843	108
1	4	2014-Jan-4	93	4750	108
1	5	2014-Jan-5	96	4654	108
1	6	2014-Jan-6	145	4509	108
1	7	2014-Jan-7	179	4329	108
1	8	2014-Jan-8	321	4104	108
1	9	2014-Jan-9	125	4459	91
1	10	2014-Jan-10	88	5043	91
1	11	2014-Jan-11	188	5239	91
1	12	2014-Jan-12	121	5118	91
1	13	2014-Jan-13	134	4984	91
1	14	2014-Jan-14	80	4904	91

Month Data Properties:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Grid

Relationships

Custom tables

	Month_data	Row Id	Date	Sale
1	1	1	2014-Jan-1	0
	1	2	2014-Jan-2	70
	1	3	2014-Jan-3	59
	1	4	2014-Jan-4	93
	1	5	2014-Jan-5	96
	1	6	2014-Jan-6	145
	1	7	2014-Jan-7	179
	1	8	2014-Jan-8	321
	1	9	2014-Jan-9	125
	1	10	2014-Jan-10	88
	1	11	2014-Jan-11	188
	1	12	2014-Jan-12	121
	1	13	2014-Jan-13	134
	1	14	2014-Jan-14	80

Properties

General

Navigation paths

Label

Month_data

Hide from users

Expression

View or edit

Usage

Attribute

Aggregate

Count Distinct

Data type

Integer

Represents

Default

Description

Comments

Revenue Data Properties:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Grid

Relationships

Custom tables

	Revenue	Month_data	Row Id	Date	Sale
0	1	1	2014-Jan-1	0	
7560	1	2	2014-Jan-2	70	
6372	1	3	2014-Jan-3	59	
10044	1	4	2014-Jan-4	93	
10368	1	5	2014-Jan-5	96	
15660	1	6	2014-Jan-6	145	
19332	1	7	2014-Jan-7	179	
34668	1	8	2014-Jan-8	321	
11375	1	9	2014-Jan-9	125	
8008	1	10	2014-Jan-10	88	
17108	1	11	2014-Jan-11	188	
11011	1	12	2014-Jan-12	121	
12194	1	13	2014-Jan-13	134	
7280	1	14	2014-Jan-14	80	

Properties

General

Expression

View or edit

Usage

Measure

Calculate after aggregation

Aggregate

Total

Data type

Integer

Represents

Default

Lookup reference

None

Description

Comments

Date Data Format:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Grid

Relationships

Custom tables

1↓

Date

Sale

Inventory

Price

2014-Jan-1	0	4972	108
2014-Jan-2	70	4902	108
2014-Jan-3	59	4843	108
2014-Jan-4	93	4750	108
2014-Jan-5	96	4654	108
2014-Jan-6	145	4509	108
2014-Jan-7	179	4329	108
2014-Jan-8	321	4104	108
2014-Jan-9	125	4459	91
2014-Jan-10	88	5043	91
2014-Jan-11	188	5239	91
2014-Jan-12	121	5118	91
2014-Jan-13	134	4984	91
2014-Jan-14	80	4904	91

Properties

General

Navigation paths

Label

Date

Hide from users

Expression

View or edit

Usage

Attribute

Aggregate

Count Distinct

Data type

Date

Represents

Default

Lookup reference

None

Description

Data module

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Sales Data Format:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Grid

Relationships

Custom tables

1↓

Date

Sale

Inventory

Price

2014-Jan-1	0	4972	108
2014-Jan-2	70	4902	108
2014-Jan-3	59	4843	108
2014-Jan-4	93	4750	108
2014-Jan-5	96	4654	108
2014-Jan-6	145	4509	108
2014-Jan-7	179	4329	108
2014-Jan-8	321	4104	108
2014-Jan-9	125	4459	91
2014-Jan-10	88	5043	91
2014-Jan-11	188	5239	91
2014-Jan-12	121	5118	91
2014-Jan-13	134	4984	91
2014-Jan-14	80	4904	91

Properties

General

Label

Sale

Hide from users

Expression

View or edit

Usage

Measure

Aggregate

Total

Data type

Integer

Represents

Default

Lookup reference

None

Description

Data module

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Inventory Data Properties:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Data module

Search

New data module

Navigation paths

Inventory Analysis.csv

Revenue

Month_data

Row Id

Date

Sale

Inventory

Price

Date1

Grid

Relationships

Custom tables

Date	Sale	Inventory	Price
2014-Jan-1	0	4972	108
2014-Jan-2	70	4902	108
2014-Jan-3	59	4843	108
2014-Jan-4	93	4750	108
2014-Jan-5	96	4654	108
2014-Jan-6	145	4509	108
2014-Jan-7	179	4329	108
2014-Jan-8	321	4104	108
2014-Jan-9	125	4459	91
2014-Jan-10	88	5043	91
2014-Jan-11	188	5239	91
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Price Data Properties:

IBM Cognos Analytics with Watson

New data module

Search content

Properties

Data module

Search

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2014-Jan-9	125	4459	91
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Description