

Project Development Phase Sprint - 1

Team ID	PNT2022TMID46684
Project Name	Project - Retail Store Stock Inventory Analytics

Sprint-1

- Data Collection
- Data Preparation

Data Collection:

1. Download the Dataset

Dataset link

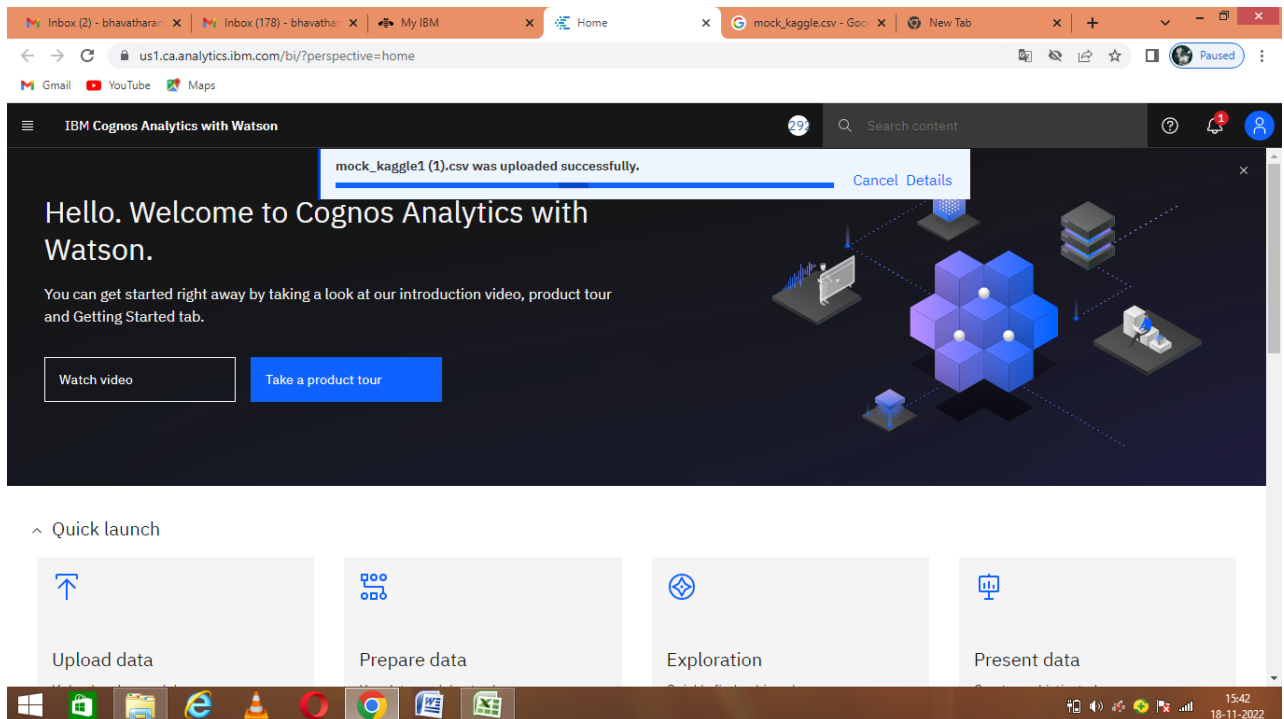
<https://drive.google.com/file/d/1awFIKJ9LildnNHwGLcsqNDbbwshFHR-w/view>

The screenshot shows a Microsoft Excel spreadsheet titled "mock_kaggle1". The data is organized into columns: A (date), B (venda), C (estoque), and D (preco). The rows contain numerical data for sales, stock, and price over time.

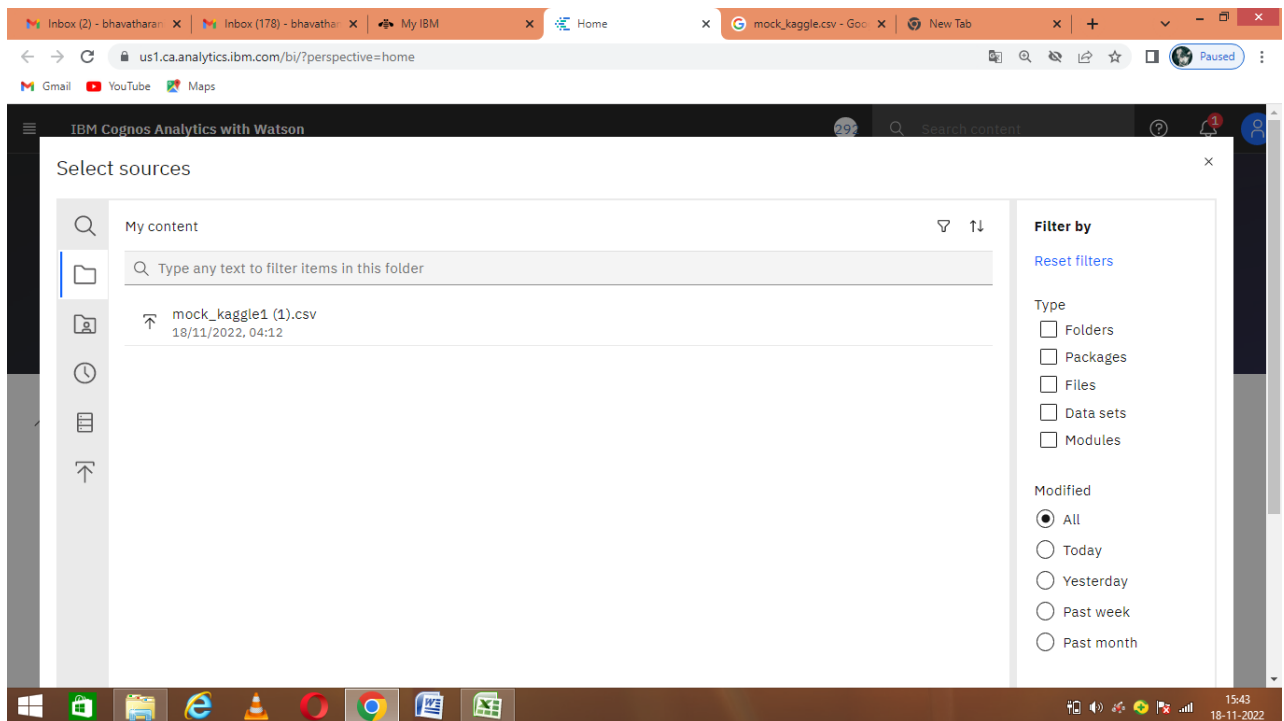
	A	B	C	D
1	data	venda	estoque	preco
2	#####	0	4972	1.29
3	#####	70	4902	1.29
4	#####	59	4843	1.29
5	#####	93	4750	1.29
6	#####	96	4654	1.29
7	#####	145	4509	1.29
8	#####	179	4329	1.29
9	#####	321	4104	1.29
10	#####	125	4459	1.09
11	#####	88	5043	1.09
12	#####	188	5239	1.09
13	#####	121	5118	1.09
14	1/13/2014	134	4984	1.09
15	1/14/2014	80	4904	1.09
16	1/15/2014	82	4822	1.09
17	1/16/2014	94	4728	1.19
18	1/18/2014	159	4464	1.19
19	1/19/2014	199	4265	1.19
20	1/20/2014	104	4161	1.19
21	1/21/2014	70	4091	1.19
22	1/22/2014	127	3964	1.09
23	1/23/2014	96	3868	1.09
24	1/24/2014	75	3793	1.09
25	1/25/2014	198	3595	1.09

2. Load the Dataset

Tool Used: IBM Cognos



Data Preparation:



MonthData (M_Data):

IBM Cognos Analytics with Watson

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=2878668387_7bd1bcb58dc94901a88baadf7691709b_sessionTemp&objRef=&tid=2878668387_7bd1bcb...

Learn More

Edit calculation

Name: M_Data

Components

- inventory data set.csv
 - Revenue
 - # M_Data
 - # Row Id
 - data
 - venda
 - estoque
 - preco

Expression

1 month (data_)

Validate

Validation Results

The expression is valid.

Data visualization...pdf | Sprint-1 (Team ID...pdf | Show all

12:21 19-11-2022

IBM Cognos Analytics with Watson

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=2878668387_7bd1bcb58dc94901a88baadf7691709b_sessionTemp&objRef=&tid=2878668387_7bd1bcb...

Learn More

Properties

Data module

- New data module
- Navigation paths
- inventory data set.csv
 - # M_Data
 - # Row Id
 - data
 - venda
 - estoque
 - preco

Grid

M_Data	Row Id	data	venda	estoque	preco
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

Data visualization...pdf | Sprint-1 (Team ID...pdf | Show all

12:18 19-11-2022

Revenue Data:

The screenshot shows the 'Create calculation' dialog in IBM Cognos Analytics. The 'Name' field is set to 'Revenue'. The 'Expression' field contains the formula 'venda * preco'. A 'Validate' button is visible. Below the expression field, the 'Validation Results' section shows a green checkmark and the message 'The expression is valid.'.

Components

- inventory data set.csv
 - # M_Data
 - # Row Id
 - data
 - venda
 - estoque
 - preco

Expression

```
1 venda * preco
```

Validation Results

- ✓ The expression is valid.

The screenshot shows the 'Data module' view in IBM Cognos Analytics. The 'Data module' is named 'Revenue'. The table displays the following data:

	Revenue	M_Data	Row Id	year	sales	stock
0		1	1	1/1/14	0	4972
90		1	2	1/2/14	70	4902
76		1	3	1/3/14	59	4843
120		1	4	1/4/14	93	4750
124		1	5	1/5/14	96	4654
187		1	6	1/6/14	145	4509
231		1	7	1/7/14	179	4329
414		1	8	1/8/14	321	4104
136		1	9	1/9/14	125	4459
96		1	10	1/10/14	88	5043
205		1	11	1/11/14	188	5239

Year data:

The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Data module' pane displays a tree structure under 'inventory data set.csv' with 'year' selected. The main area shows a table with columns: 'Revenue', 'M_Data', 'Row Id', 'year', 'venda', and 'estoque'. The table contains 10 rows of data for the year 2014.

Revenue	M_Data	Row Id	year	venda	estoque
	1	1	2014-01-01	0	4972
	1	2	2014-01-02	70	4902
1	1	3	2014-01-03	59	4843
97	1	4	2014-01-04	93	4750
84	1	5	2014-01-05	96	4654
05	1	6	2014-01-06	145	4509
91	1	7	2014-01-07	179	4329
09000000000003	1	8	2014-01-08	321	4104
25	1	9	2014-01-09	125	4459
2	1	10	2014-01-10	88	5043

Stock Data:

The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Data module' pane displays a tree structure under 'inventory data set.csv' with 'stack' selected. The main area shows a table with columns: 'Row Id', 'year', 'venda', 'stack', and 'preco'. The table contains 10 rows of data for the year 2014.

Row Id	year	venda	stack	preco
1	2014-01-01	0	4972	1.29
2	2014-01-02	70	4902	1.29
3	2014-01-03	59	4843	1.29
4	2014-01-04	93	4750	1.29
5	2014-01-05	96	4654	1.29
6	2014-01-06	145	4509	1.29
7	2014-01-07	179	4329	1.29
8	2014-01-08	321	4104	1.29
9	2014-01-09	125	4459	1.09
10	2014-01-10	88	5043	1.09

Sales Data:

IBM Cognos Analytics with Watson

Search content

Properties

Data module

Search

New data module

Navigation paths

inventory data set.csv

Revenue

M_Data

Row Id

year

sales

stock

preco

Grid

Relationships

Custom tables

Row Id	year	sales	stock	preco
1	2014-01-01	0	4972	1.29
2	2014-01-02	70	4902	1.29
3	2014-01-03	59	4843	1.29
4	2014-01-04	93	4750	1.29
5	2014-01-05	96	4654	1.29
6	2014-01-06	145	4509	1.29
7	2014-01-07	179	4329	1.29
8	2014-01-08	321	4104	1.29
9	2014-01-09	125	4459	1.09
10	2014-01-10	88	5043	1.09

Price Data:

IBM Cognos Analytics with Watson

Search content

Properties

Data module

Search

New data module

Navigation paths

inventory data set.csv

Revenue

M_Data

Row Id

year

sales

stock

price

Grid

Relationships

Custom tables

Row Id	year	sales	stock	price
1	2014-01-01	0	4972	1.29
2	2014-01-02	70	4902	1.29
3	2014-01-03	59	4843	1.29
4	2014-01-04	93	4750	1.29
5	2014-01-05	96	4654	1.29
6	2014-01-06	145	4509	1.29
7	2014-01-07	179	4329	1.29
8	2014-01-08	321	4104	1.29
9	2014-01-09	125	4459	1.09
10	2014-01-10	88	5043	1.09

Month Format Data:

The screenshot shows the IBM Cognos Analytics web interface. A 'Data format' dialog box is open for the 'M_Data' column. The dialog has a 'Format type' dropdown set to 'Date'. Below it, there are four settings: 'Date separator' (set to '/'), 'Date style' (set to 'Short'), 'Date ordering' (set to 'Default'), and 'Missing value characters' (set to '<empty>'). At the bottom of the dialog are 'Advanced options' and 'Reset properties' buttons. In the background, a table with columns 'stock' and 'price' is visible, showing data for various dates in January 2014.

stock	price
4972	1.29
4902	1.29
4843	1.29
4750	1.29
4654	1.29
4509	1.29
4329	1.29
4104	1.29
4459	1.09
5043	1.09
5239	1.09

The screenshot shows the IBM Cognos Analytics web interface in 'Data module' view. A table is displayed with columns: 'M_Data', 'Row Id', 'year', 'sales', 'stock', and 'price'. The table contains 11 rows of data, representing daily sales and stock prices for January 2014. The 'M_Data' column contains the date in YYYY-MM-DD format.

M_Data	Row Id	year	sales	stock	price
2014-01-01	1	2014-01-01	0	4972	1.29
2014-01-02	2	2014-01-02	70	4902	1.29
2014-01-03	3	2014-01-03	59	4843	1.29
2014-01-04	4	2014-01-04	93	4750	1.29
2014-01-05	5	2014-01-05	96	4654	1.29
2014-01-06	6	2014-01-06	145	4509	1.29
2014-01-07	7	2014-01-07	179	4329	1.29
2014-01-08	8	2014-01-08	321	4104	1.29
2014-01-09	9	2014-01-09	125	4459	1.09
2014-01-10	10	2014-01-10	88	5043	1.09
2014-01-11	11	2014-01-11	188	5239	1.09

Year Format Data:

The screenshot shows the IBM Cognos Analytics interface with a 'Data format' dialog box open for the 'year' column. The dialog box has a 'Format type' dropdown set to 'Date'. Below it, there are three sections: 'Date separator' with a dropdown set to '/', 'Date style' with a dropdown set to 'Short', and 'Date ordering' with a dropdown set to 'Default'. There is also a 'Missing value characters' field set to '<empty>'. At the bottom of the dialog, there are buttons for 'Advanced options' and 'Reset properties'.

Column: year

Format type: Date

Date separator: /

Date style: Short

Date ordering: Default

Missing value characters: <empty>

Advanced options Reset properties

The screenshot shows the IBM Cognos Analytics interface with a data table displayed. 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	1.29
1	2	1/2/14	70	4902	1.29
1	3	1/3/14	59	4843	1.29
1	4	1/4/14	93	4750	1.29
1	5	1/5/14	96	4654	1.29
1	6	1/6/14	145	4509	1.29
1	7	1/7/14	179	4329	1.29
1	8	1/8/14	321	4104	1.29
1	9	1/9/14	125	4459	1.09
1	10	1/10/14	88	5043	1.09
1	11	1/11/14	188	5239	1.09

Stock Format Data:

The screenshot shows the IBM Cognos Analytics interface with a 'Data format' dialog box open for the 'stock' column. The dialog allows configuring the format of the data. The 'Format type' is set to 'Number'. The 'Number of decimal places' is set to 0. The 'Negative sign symbol' is set to 'Default'. The 'Use thousands separator' is set to 'No'. The 'Negative sign position' is set to 'Default'. The 'Missing value characters' are set to '<empty>'. The background shows a table with columns 'stock' and 'price'.

Column: stock

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

stock	price
972	1.29
902	1.29
843	1.29
750	1.29
654	1.29
509	1.29
329	1.29
104	1.29
459	1.09
043	1.09
239	1.09

The screenshot shows the IBM Cognos Analytics interface with the 'Data module' view. The table displays data for the 'stock' and 'price' columns. The 'stock' column is highlighted with a blue border. The table has columns: T1, M_Data, Row Id, year, sales, stock, and price. The data is organized into rows, with the 'stock' column values ranging from 972 to 239 and the 'price' column values ranging from 1.29 to 1.09.

Data module

Grid Relationships Custom tables

T1	M_Data	Row Id	year	sales	stock	price
1		1	1/1/14	0	4972	1.29
1		2	1/2/14	70	4902	1.29
1		3	1/3/14	59	4843	1.29
1		4	1/4/14	93	4750	1.29
1		5	1/5/14	96	4654	1.29
1		6	1/6/14	145	4509	1.29
1		7	1/7/14	179	4329	1.29
1		8	1/8/14	321	4104	1.29
1		9	1/9/14	125	4459	1.09
1		10	1/10/14	88	5043	1.09
1		11	1/11/14	188	5239	1.09

Sales Format Data:

The screenshot shows the IBM Cognos Analytics interface with a 'Data format' dialog box open for the 'sales' column. The dialog box has a 'Format type' dropdown set to 'Number'. Below this, there are several options with dropdown menus: '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' and 'Reset properties' buttons. The background shows a data table with columns 'stock' and 'price'.

stock	price
972	1.29
902	1.29
843	1.29
750	1.29
654	1.29
509	1.29
329	1.29
104	1.29
459	1.09
043	1.09
239	1.09

The screenshot shows the IBM Cognos Analytics interface with the 'Grid' view of the data table. The table has columns 'M_Data', 'Row Id', 'year', 'sales', 'stock', and 'price'. The 'sales' column is highlighted. The data is as follows:

M_Data	Row Id	year	sales	stock	price
1	1	1/1/14	0	4972	1.29
1	2	1/2/14	70	4902	1.29
1	3	1/3/14	59	4843	1.29
1	4	1/4/14	93	4750	1.29
1	5	1/5/14	96	4654	1.29
1	6	1/6/14	145	4509	1.29
1	7	1/7/14	179	4329	1.29
1	8	1/8/14	321	4104	1.29
1	9	1/9/14	125	4459	1.09
1	10	1/10/14	88	5043	1.09
1	11	1/11/14	188	5239	1.09

Price Format Data:

The screenshot shows the IBM Cognos Analytics interface with the 'Data format' dialog open for the 'price' column. The dialog is titled 'Data format' and has a close button (X) in the top right corner. The 'Column' is set to 'price'. The 'Format type' is set to 'Number'. The dialog lists several formatting options:

- Number of decimal places: 0
- Negative sign symbol: Default
- Use thousands separator: No
- Negative sign position: Default
- Missing value characters: <empty>

At the bottom of the dialog, there are two buttons: 'Advanced options' and 'Reset properties'.

The background shows a data table with columns 'price', 'stock', and 'sales'. The 'price' column contains values like 1.29, 1.09, and 1.09.

The screenshot shows the IBM Cognos Analytics interface with the 'Data format' dialog open for the 'Revenue' column. The dialog is titled 'Data format' and has a close button (X) in the top right corner. The 'Column' is set to 'Revenue'. The 'Format type' is set to 'Number'. The dialog lists several formatting options:

- Number of decimal places: 0
- Negative sign symbol: Default
- Use thousands separator: No
- Negative sign position: Default
- Missing value characters: <empty>

At the bottom of the dialog, there are two buttons: 'Advanced options' and 'Reset properties'.

The background shows a data table with columns 'Revenue', 'stock', and 'sales'. The 'Revenue' column contains values like 4972, 4902, 4843, 4750, 4654, 4509, 4329, 4104, 4459, 5043, and 5239.

Revenue Format Data:

The screenshot shows the 'Data format' dialog box for the 'Revenue' 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 set to 'No'. The 'Negative sign position' is 'Default'. The 'Missing value characters' are '<empty>'. There are buttons for 'Advanced options' and 'Reset properties'.

Stock	Price
4972	1
4902	1
4843	1
4750	1
4654	1
4509	1
4329	1
4104	1
4459	1
5043	1
5239	1
5110	1

Year Properties:

The screenshot shows the 'Year' column properties in the 'Properties' panel. The 'Label' is 'Year'. The 'Hide from users' toggle is off. The 'Expression' is 'View or edit >'. The 'Usage' is 'Attribute'. The 'Aggregate' is 'Count Distinct'. The 'Data type' is 'Date'. The 'Represents' is 'Time'. The 'Year' is '1/10/14'. The 'Lookup reference' is 'None'.

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

Sales Properties:

The screenshot shows the IBM Cognos Analytics interface with the 'Inventory Module' selected. The 'Data module' pane on the left lists 'sales' as the selected module. The central 'Grid' pane displays a table with columns: T1, M_Data, Row Id, Year, and sales. The 'Properties' pane on the right shows the 'General' tab for the 'sales' module.

T1	M_Data	Row Id	Year	sales
1	1	1	1/1/14	0
1	1	2	1/2/14	70
1	1	3	1/3/14	59
1	1	4	1/4/14	93
1	1	5	1/5/14	96
1	1	6	1/6/14	145
1	1	7	1/7/14	179
1	1	8	1/8/14	321
1	1	9	1/9/14	125
1	1	10	1/10/14	88
1	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:

The screenshot shows the IBM Cognos Analytics interface with the 'Inventory Module' selected. The 'Data module' pane on the left lists 'Stock' as the selected module. The central 'Grid' pane displays a table with columns: T1, Row Id, Year, sales, and Stock. The 'Properties' pane on the right shows the 'General' tab for the 'Stock' module.

T1	Row Id	Year	sales	Stock
1	1	1/1/14	0	4972
2	2	1/2/14	70	4902
3	3	1/3/14	59	4843
4	4	1/4/14	93	4750
5	5	1/5/14	96	4654
6	6	1/6/14	145	4509
7	7	1/7/14	179	4329
8	8	1/8/14	321	4104
9	9	1/9/14	125	4459
10	10	1/10/14	88	5043
11	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:

The screenshot shows the IBM Cognos Analytics interface with the 'Inventory Module' selected. The 'Data module' pane on the left lists 'Price' as the selected module. The central 'Grid' pane displays a table with columns: T1, Year, sales, Stock, and Price. The 'Properties' pane on the right shows the 'General' tab for the 'Price' module.

T1	Year	sales	Stock	Price
1	1/1/14	0	4972	1
1	1/2/14	70	4902	1
1	1/3/14	59	4843	1
1	1/4/14	93	4750	1
1	1/5/14	96	4654	1
1	1/6/14	145	4509	1
1	1/7/14	179	4329	1
1	1/8/14	321	4104	1
1	1/9/14	125	4459	1
1	1/10/14	88	5043	1
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 WatsonInventory Module11Search content

GridRelationshipsCustom tables

T1	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	
433	1	12	1/12/14	134	

Properties

General

LabelRevenue

Hide from users

ExpressionView or edit

UsageMeasure

Calculate after aggregation

AggregateTotal

Data typeDecimal

Represents

Default

Lookup referenceNone

M_Data Properties:

IBM Cognos Analytics with Watson | Inventory Module

Search content

Data module

Inventory Module

Navigation paths

Inventory M...ataset.csv

Revenue

M_Data

Row Id

Year

sales

Revenue

M_Data

Row Id

Year

sales

Stock

Price

Grid Relationships Custom tables

Revenue

M_Data

Row Id

Year

sales

Properties

General Navigation paths

Label

M_Data

Hide from users

Expression

View or edit

Usage

Attribute

Aggregate

Count Distinct

Data type

Integer

Represents

Time

Month

Description

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://us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=2878668387_7bd1bcb58dc94901a88baadf7691709b_sessionTemp&objRef=&tid=2878668387_7bd1bcb58dc94901a88baadf7691709b_sessionTemp