

# Project Development

## PHASE SPRINT-1

Team ID	PNT2022TMID22771
Project Name	Project – Retail Store Stock Inventory Analytics

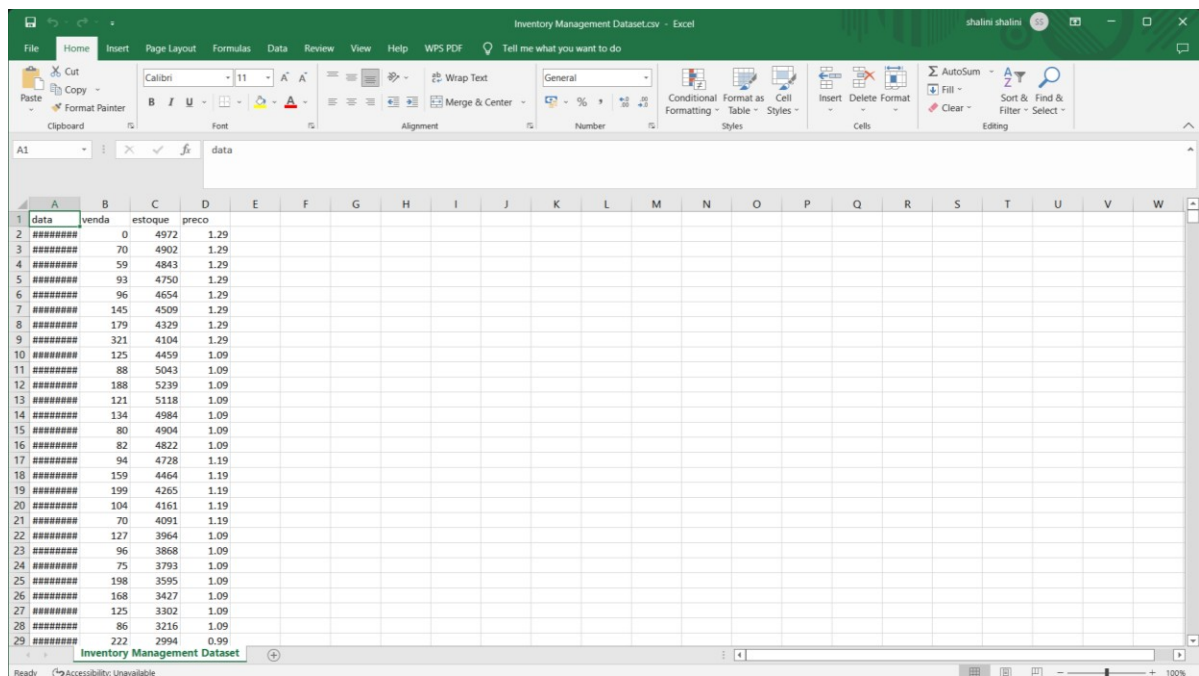
### SPRINT-1:

Data Collection

Data Preparation

### DATA COLLECTION:

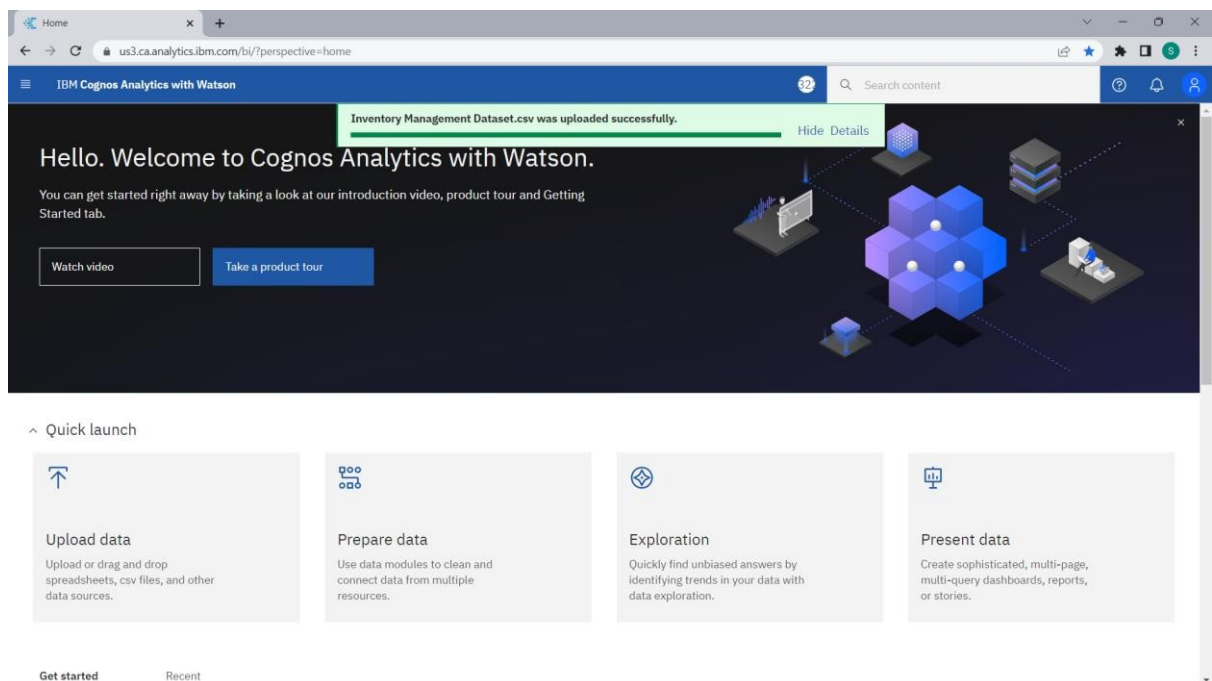
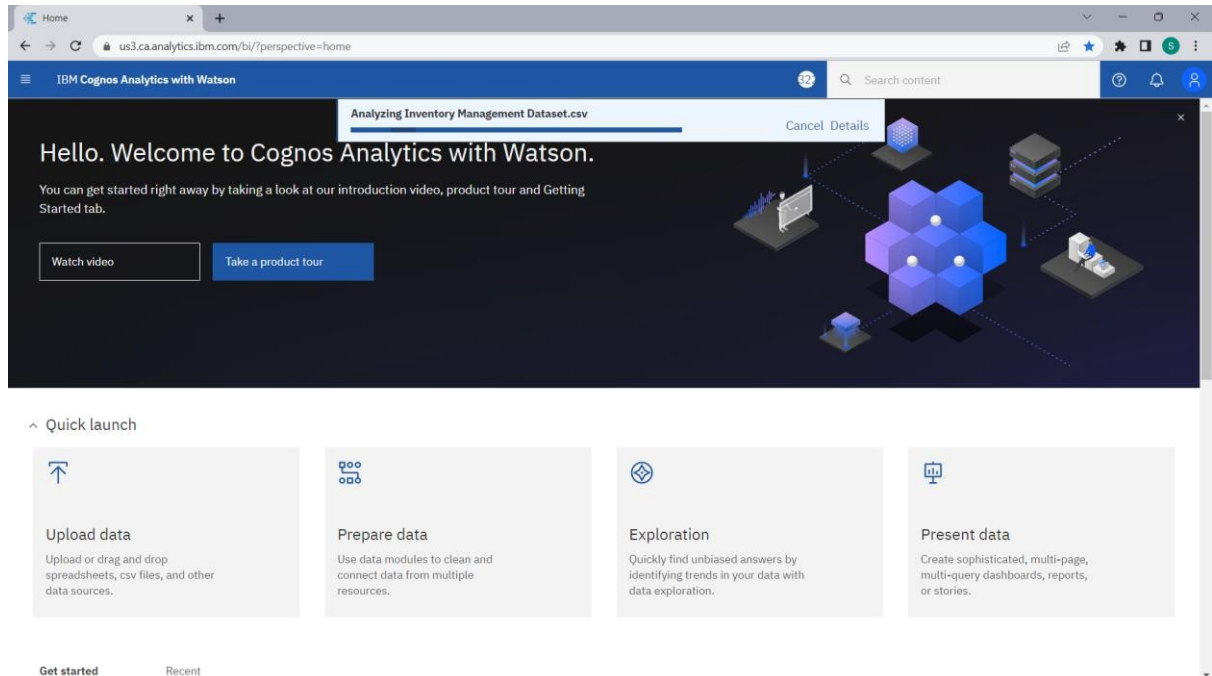
#### 1. Download the dataset

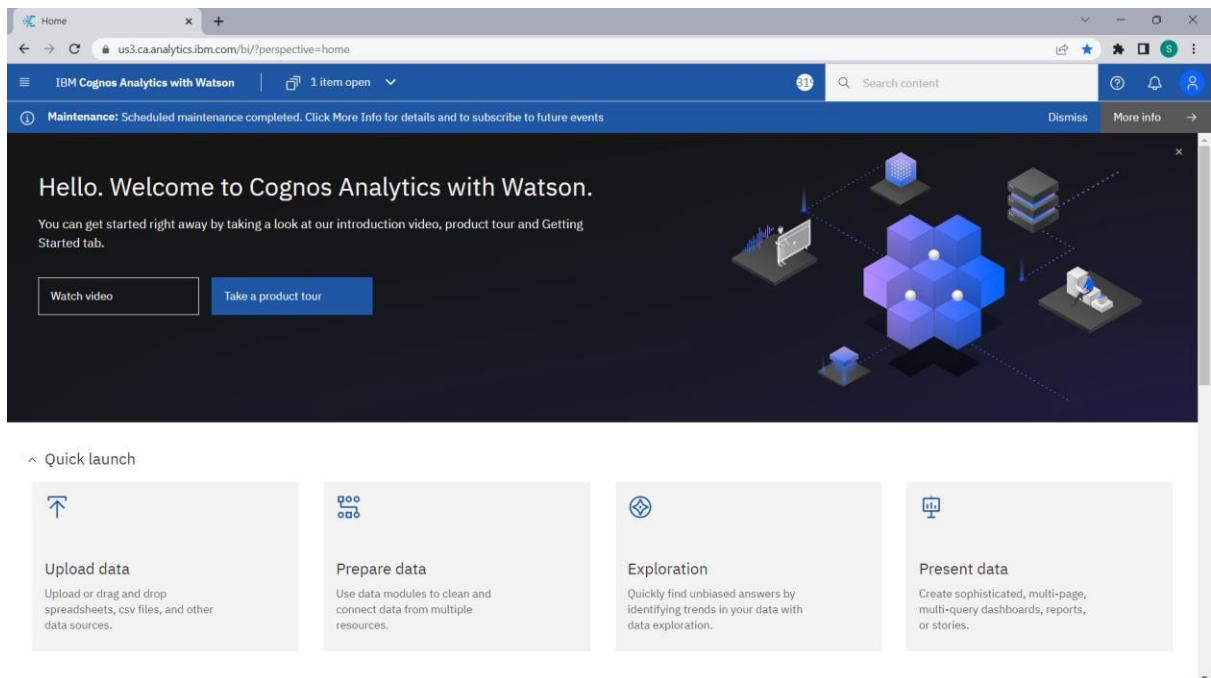
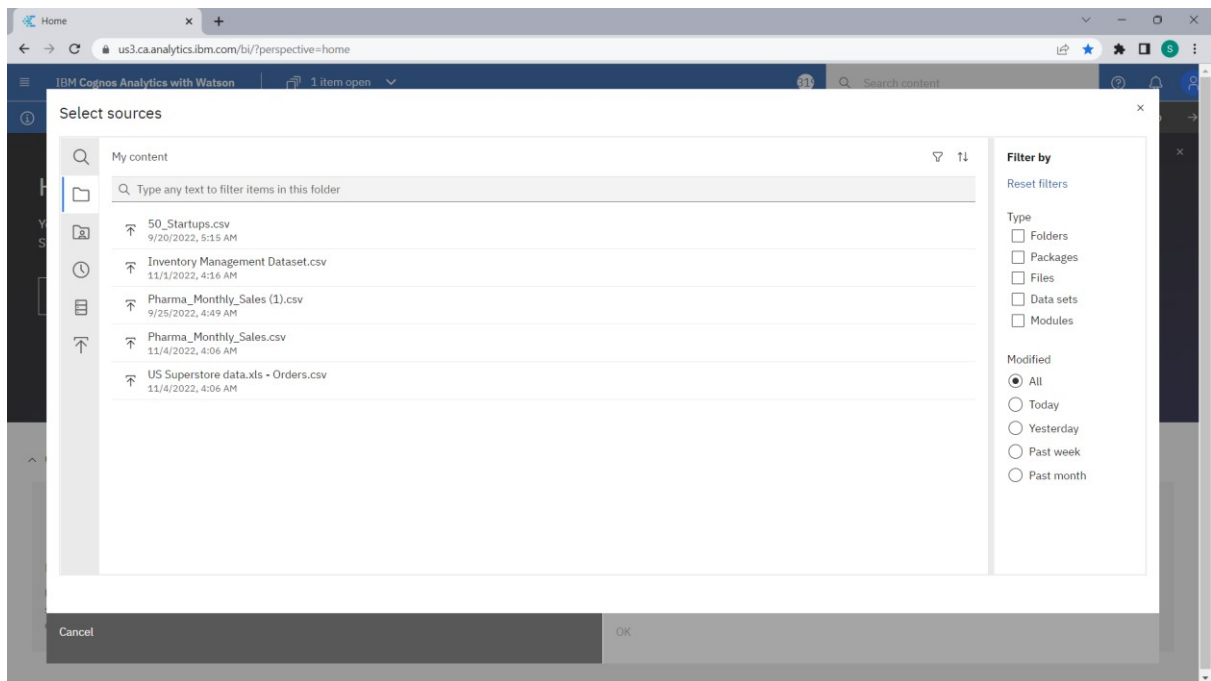


data	venda	estoque	preco
#####	0	4972	1.29
#####	70	4902	1.29
#####	59	4843	1.29
#####	93	4750	1.29
#####	96	4654	1.29
#####	145	4509	1.29
#####	179	4329	1.29
#####	321	4104	1.29
#####	125	4459	1.09
#####	88	5043	1.09
#####	188	5239	1.09
#####	121	5118	1.09
#####	134	4984	1.09
#####	80	4904	1.09
#####	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. Loading the dataset

### Tool Used – IBM Cognos Analytics





## Month Data:

**Create calculation**

Name: M\_Data

Expression: month([data\_])

Components:

- Inventory M...Dataset.csv
  - # Row Id
  - data
  - venda
  - estoque
  - preco

Validation Results:

- The expression is valid.

☐ Calculate after aggregation

Cancel OK

**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
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

Expression: `venda*preco`

Components:

- Inventory M...Dataset.csv
  - # M\_Data
  - # Row Id
  - Year
  - Sales
  - Stock
  - Price

Validation Results: The expression is valid.

☐ Calculate after aggregation

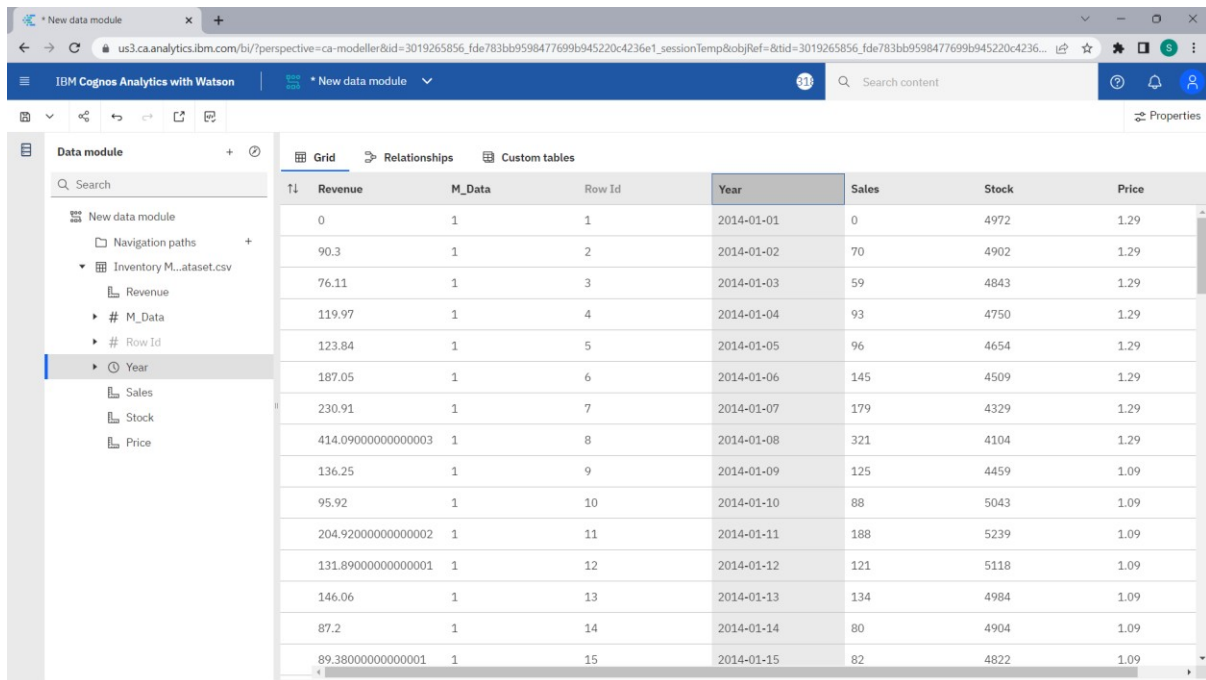
Cancel OK

**Data module**

Grid Relationships Custom tables

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

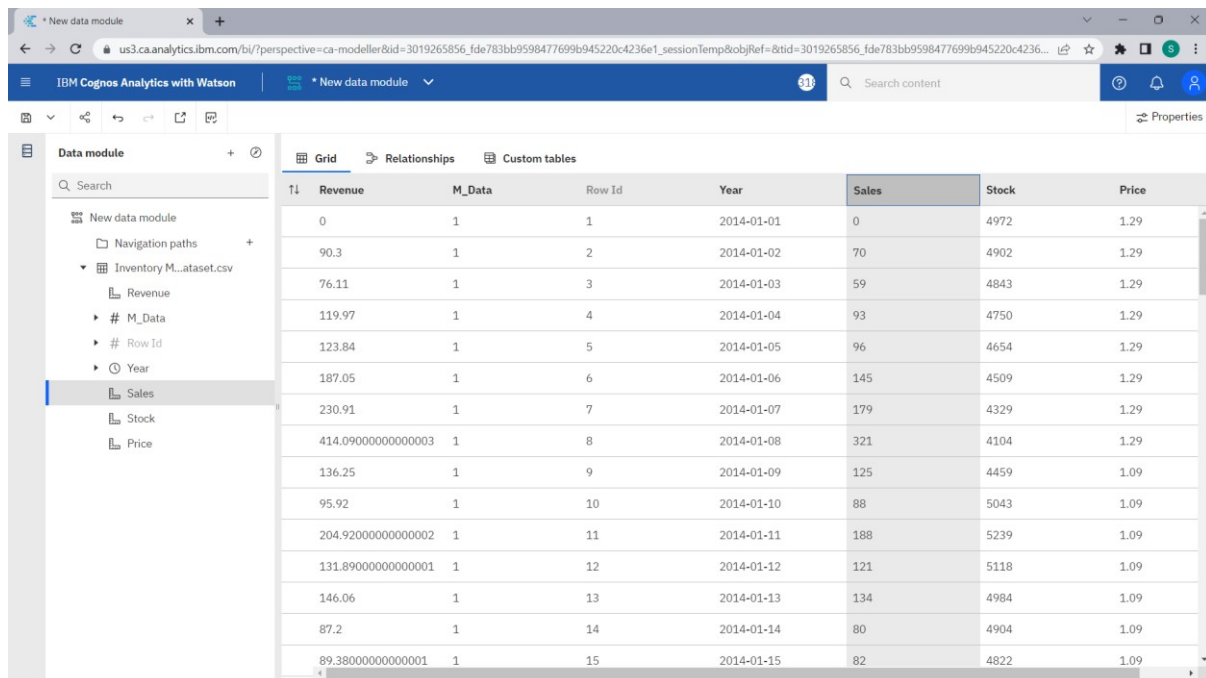
## Year Data:



The screenshot shows the IBM Cognos Analytics interface. The left sidebar displays a tree view of data modules, with 'Year' selected under 'Inventory M...ataset.csv'. The main area shows a table with columns: Revenue, M\_Data, Row Id, Year, Sales, Stock, and Price. The table contains 15 rows of data, with the 'Year' column showing dates from 2014-01-01 to 2014-01-15.

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 left sidebar displays a tree view of data modules, with 'Sales' selected under 'Inventory M...ataset.csv'. The main area shows a table with columns: Revenue, M\_Data, Row Id, Year, Sales, Stock, and Price. The table contains 15 rows of data, with the 'Sales' column showing values from 0 to 82.

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 with the 'Stock' data module selected. The table displays 15 rows of data with columns: Revenue, M\_Data, Row Id, Year, Sales, Stock, and Price. The 'Stock' column is highlighted in the table header.

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:

The screenshot shows the IBM Cognos Analytics interface with the 'Price' data module selected. The table displays 15 rows of data with columns: M\_Data, Row Id, Year, Sales, Stock, and Price. The 'Price' column is highlighted in the table header.

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	1	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	1	2014-01-11	188	5239	1.09
0000000001	1	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	1	2014-01-15	82	4822	1.09

## Month Format Data:

The screenshot shows the IBM Cognos Analytics interface with the 'Data format' dialog box open for the 'M\_Data' column. The dialog box has the following settings:

- Column: M\_Data
- Format type: Date
- Date separator: /
- Date style: Short
- Date ordering: Default
- Missing value characters: <empty>

Buttons at the bottom of the dialog include 'Advanced options', 'Reset properties', 'Cancel', and 'OK'.

Row Id	Year	Sales	Stock	Price
1	1/1/14	82	4822	1.09

The screenshot shows the IBM Cognos Analytics interface with a data grid view. The grid displays data for the 'M\_Data' column, showing a sequence of dates from 1/1/14 to 1/15/14, along with corresponding Sales, Stock, and Price values.

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
1	8	1/8/14	321	4104	1
1	9	1/9/14	125	4459	1
1	10	1/10/14	88	5043	1
1	11	1/11/14	188	5239	1
1	12	1/12/14	121	5118	1
1	13	1/13/14	134	4984	1
1	14	1/14/14	80	4904	1
1	15	1/15/14	82	4822	1



## Revenue Format Data:

The screenshot shows the 'Data format' dialog box for the 'Revenue' column in IBM Cognos Analytics. 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>'. The 'Advanced options' button is visible. The background shows a table with columns 'Stock' and 'Price'.

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
5118	1.09
4984	1.09
4904	1.09
4822	1.09

The screenshot shows the 'Inventory Module' in IBM Cognos Analytics. The 'Data module' is 'Inventory M...atase.csv'. The 'Revenue' column is selected. The table displays data for 'Revenue', 'M\_Data', 'Row Id', 'Year', 'Sales', 'Stock', and '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 Format Data:

The screenshot shows the 'Data format' dialog box in IBM Cognos Analytics. The 'Column' is 'Year'. The 'Format type' is 'Date'. The 'Date separator' is '/', the 'Date style' is 'Short', the 'Date ordering' is 'Default', and the 'Missing value characters' are '<empty>'. The dialog has 'Advanced options', 'Reset properties', 'Cancel', and 'OK' buttons.

1	15	Jan/15/2014	82	4822	1.09
					1.29
					1.29
					1.29
					1.29
					1.29
					1.29
					1.29
					1.09
					1.09
					1.09
					1.09
					1.09
					1.09
					1.09
					1.09
					1.09
					1.09

The screenshot shows the 'Grid' view of a table 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	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

## Sales Format Data:

**Data format**

Column: Sales

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

Price
1.29
1.29
1.29
1.29
1.29
1.29
1.29
1.29
1.09
1.09
1.09
1.09
1.09
1.09
1.09
1.09
1.09
1.09

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

## Stock Format Data:

The screenshot shows the IBM Cognos Analytics interface with the 'Data format' dialog box open for the 'Stock' column. The dialog box has a 'Column: Stock' header and a 'Format type' dropdown set to 'Number'. Below this, there are several 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. The background shows a table with columns 'Price' and 'Stock'.

Price
1.29
1.29
1.29
1.29
1.29
1.29
1.29
1.09
1.09
1.09
1.09
1.09
1.09
1.09
1.09
1.09
1.09

The screenshot shows the IBM Cognos Analytics interface with a data grid view. The grid 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	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

## Price Format Data:

The screenshot shows the 'Data format' dialog box in IBM Cognos Analytics. The 'Column' is 'Price'. The 'Format type' is 'Number'. The 'Number of decimal places' is set to 0. The 'Negative sign symbol' is 'Default'. The 'Use thousands separator' is 'No'. The 'Negative sign position' is 'Default'. The 'Missing value characters' are '<empty>'. The 'Advanced options' button is visible. The background shows a table with a 'Price' column containing values like 1.29, 1.09, and 4822.

Column: Price

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

The screenshot shows the 'Grid' view of a table in IBM Cognos Analytics. 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
1	8	1/8/14	321	4104	1
1	9	1/9/14	125	4459	1
1	10	1/10/14	88	5043	1
1	11	1/11/14	188	5239	1
1	12	1/12/14	121	5118	1
1	13	1/13/14	134	4984	1
1	14	1/14/14	80	4904	1
1	15	1/15/14	82	4822	1

## Month Data Properties:

The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Data module' pane lists the 'Inventory Module' and its contents, including 'M\_Data'. The central 'Grid' pane displays a table with columns: Revenue, M\_Data, Row Id, Year, and Sales. The 'M\_Data' column is highlighted. On the right, the 'Properties' pane is open, showing the 'General' tab for the 'M\_Data' measure. 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 menu). The 'Description' and 'Comments' fields are also visible.

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

## Revenue Data Properties:

The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Data module' pane lists the 'Inventory Module' and its contents, including 'Revenue'. The central 'Grid' pane displays a table with columns: Revenue, M\_Data, Row Id, Year, and Sales. The 'Revenue' column is highlighted. On the right, the 'Properties' pane is open, showing the 'General' tab for the 'Revenue' measure. The properties include: Label (Revenue), Hide from users (toggle off), Expression (View or edit), Usage (Measure), Calculate after aggregation (toggle off), Aggregate (Total), Data type (Decimal), Represents (Default), Lookup reference (None), and Description. The 'Comments' field is also visible.

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

## Year Data Format:

The screenshot shows the IBM Cognos Analytics interface with the 'Inventory Module' selected. The 'Data module' pane on the left lists 'Year' as the selected module. The main grid displays a table with columns: Revenue, M\_Data, Row Id, Year, and Sales. The 'Properties' pane on the right shows the 'General' tab for the 'Year' module, with fields like Label, Hide from users, Expression, Usage, Aggregate, Data type, Represents, Time, Year, Lookup reference, and 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
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 Data Format:

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 main grid displays a table with columns: Year, Sales, Stock, and Price. The 'Properties' pane on the right shows the 'General' tab for the 'Sales' module, with fields like Label, Hide from users, Expression, Usage, Aggregate, Data type, Represents, Default, Lookup reference, and Description.

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
1/12/14	121	5118	1
1/13/14	134	4984	1
1/14/14	80	4904	1
1/15/14	82	4822	1

## Stock Data Properties:

The screenshot displays the IBM Cognos Analytics interface for the 'Inventory Module'. The 'Data module' pane on the left shows a tree view with 'Inventory M...ataset.csv' expanded, and 'Stock' selected. The main grid shows a table with columns: Year, Sales, Stock, and Price. The 'Properties' pane on the right shows the 'General' tab for the 'Stock' measure.

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
1/12/14	121	5118	1
1/13/14	134	4984	1
1/14/14	80	4904	1
1/15/14	82	4822	1

**Properties - General**

- Label: Stock
- Hide from users: ☐
- Expression: [View or edit](#)
- Usage: Measure
- Aggregate: Total
- Data type: Integer
- Represents:   
Default:   
Lookup reference: None
- Description:   
Comments:

## Price Data Properties:

The screenshot displays the IBM Cognos Analytics interface for the 'Inventory Module'. The 'Data module' pane on the left shows a tree view with 'Inventory M...ataset.csv' expanded, and 'Price' selected. The main grid shows a table with columns: Year, Sales, Stock, and Price. The 'Properties' pane on the right shows the 'General' tab for the 'Price' measure.

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
1/12/14	121	5118	1
1/13/14	134	4984	1
1/14/14	80	4904	1
1/15/14	82	4822	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:   
Comments: