

Project Development

PHASE SPRINT-1

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

SPRINT-1:

Data Collection

Data Preparation

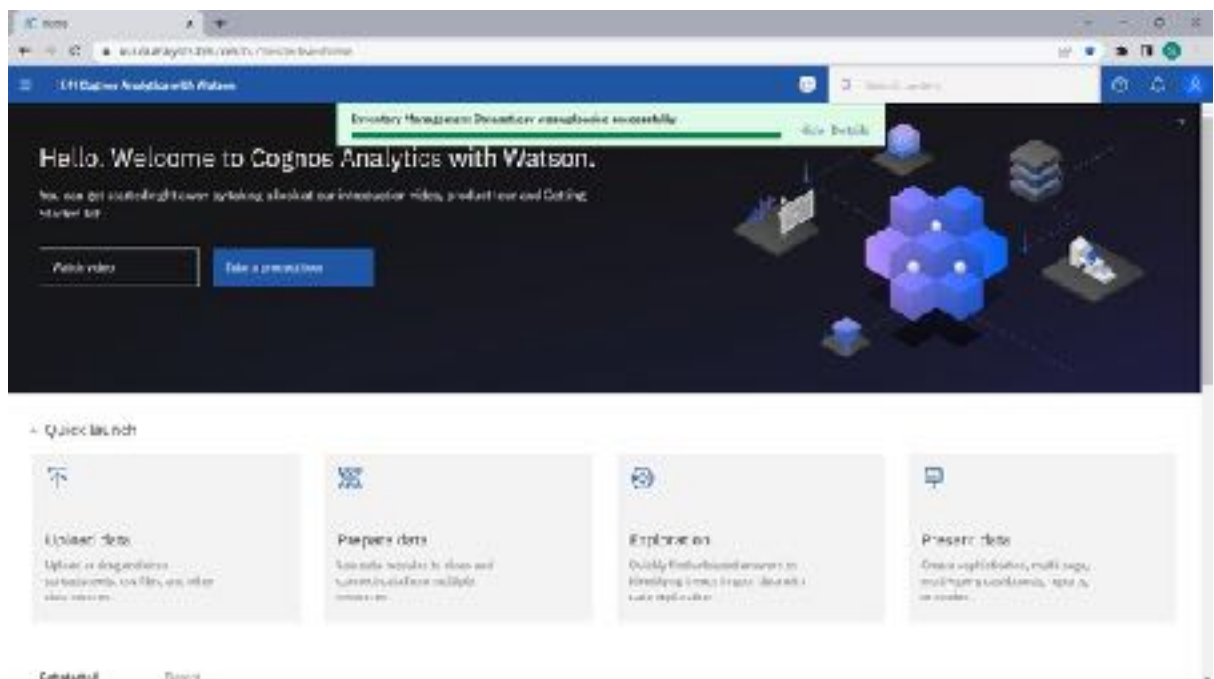
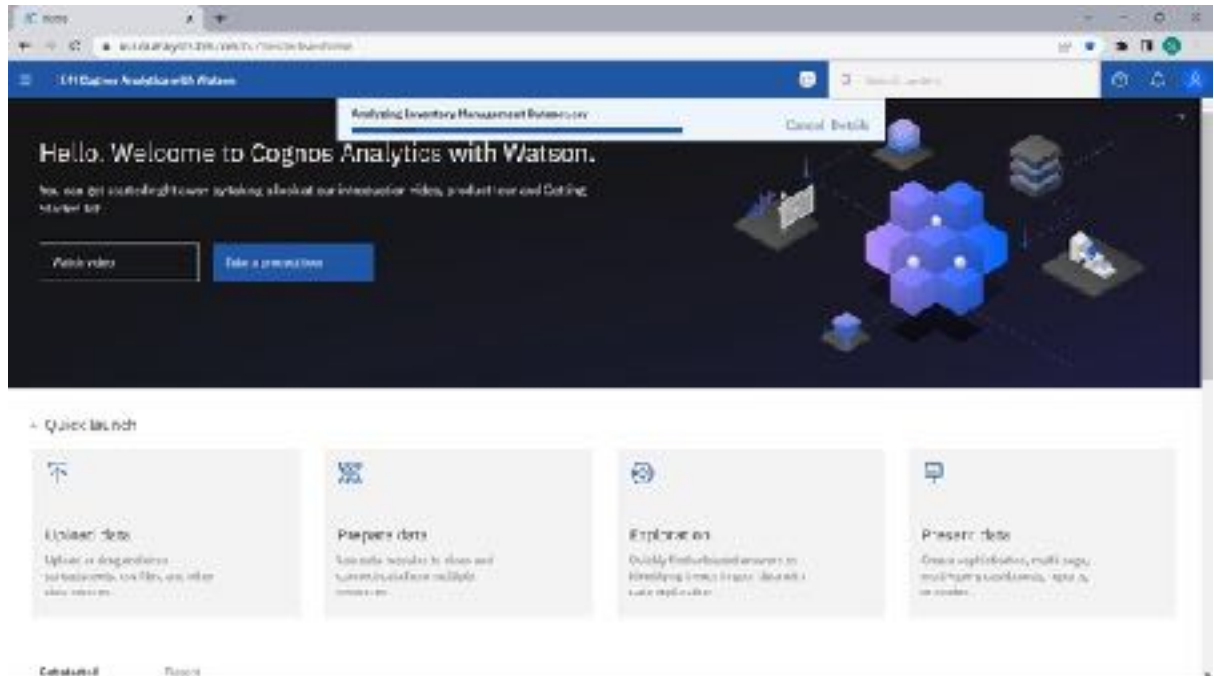
DATA COLLECTION:

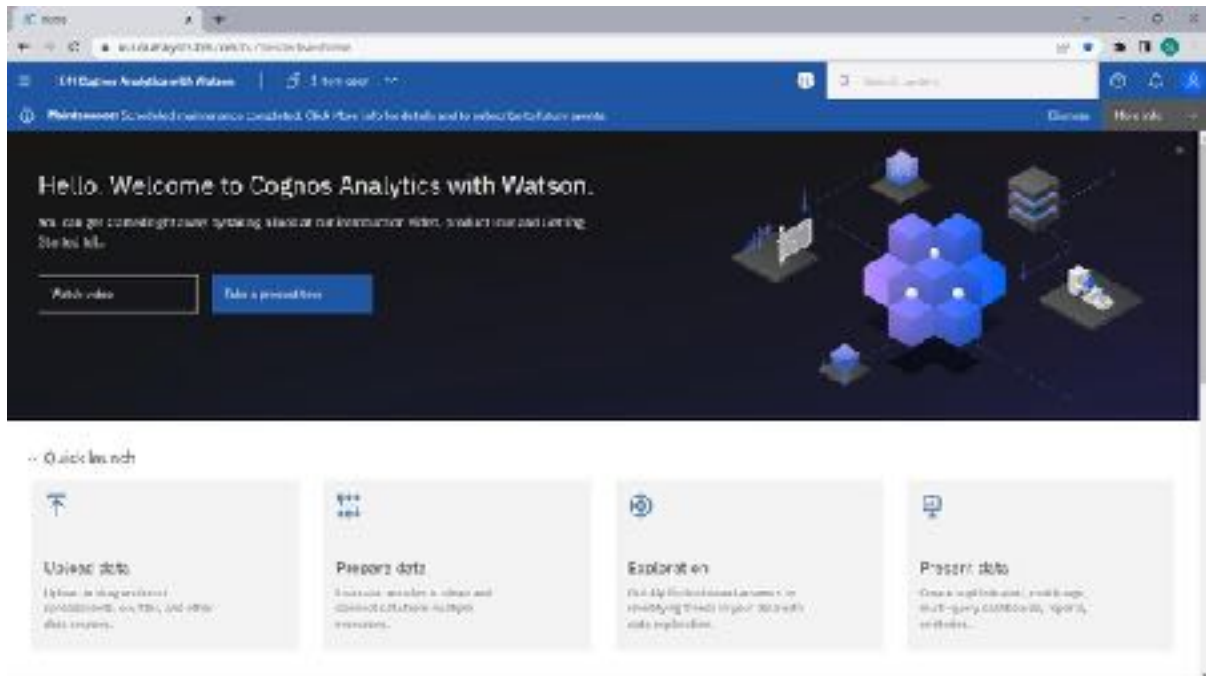
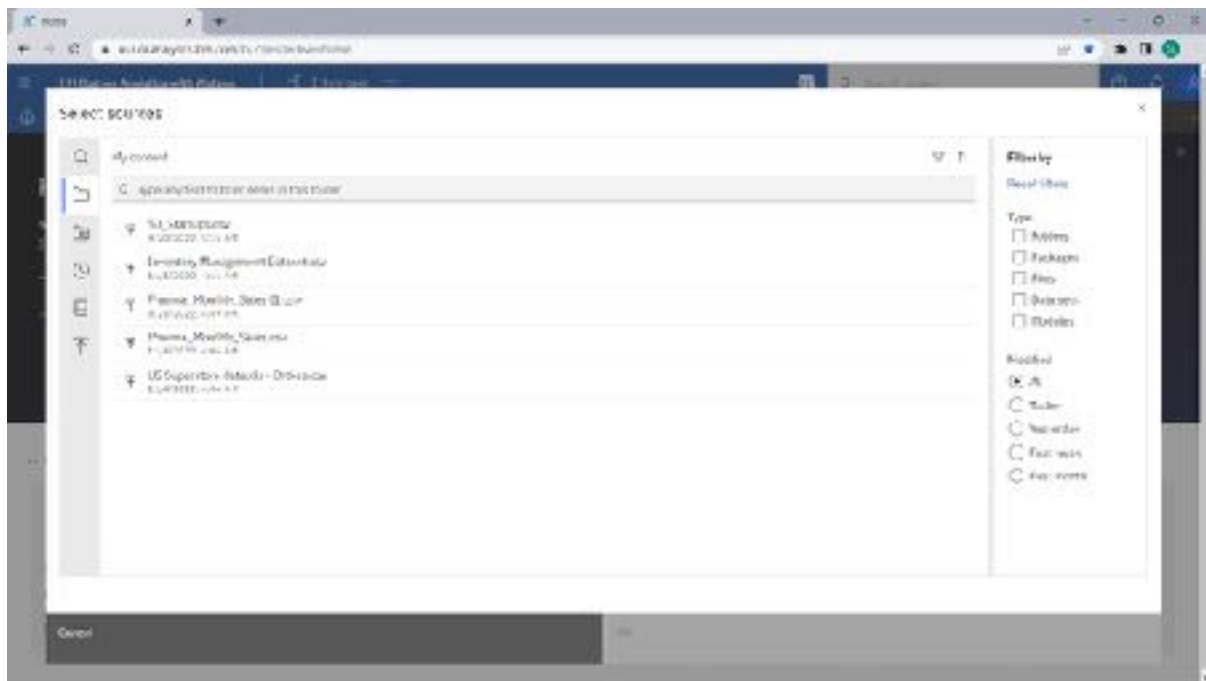
1. Download the dataset

The screenshot shows a Microsoft Excel spreadsheet titled "Inventory Management Worksheet". The spreadsheet is organized into columns labeled A through Z and rows 1 through 29. The data is organized into columns: "Date", "Vendor", "SKU", "Price", and "Quantity". The "Date" column contains dates from 1/1/2020 to 1/29/2020. The "Vendor" column contains vendor names like "ABC", "DEF", "GHI", etc. The "SKU" column contains SKUs like "10000001", "10000002", etc. The "Price" column contains prices like 1.10, 1.20, 1.30, etc. The "Quantity" column contains quantities like 100, 200, 300, etc. The spreadsheet is displayed in a standard Excel window with the ribbon at the top.

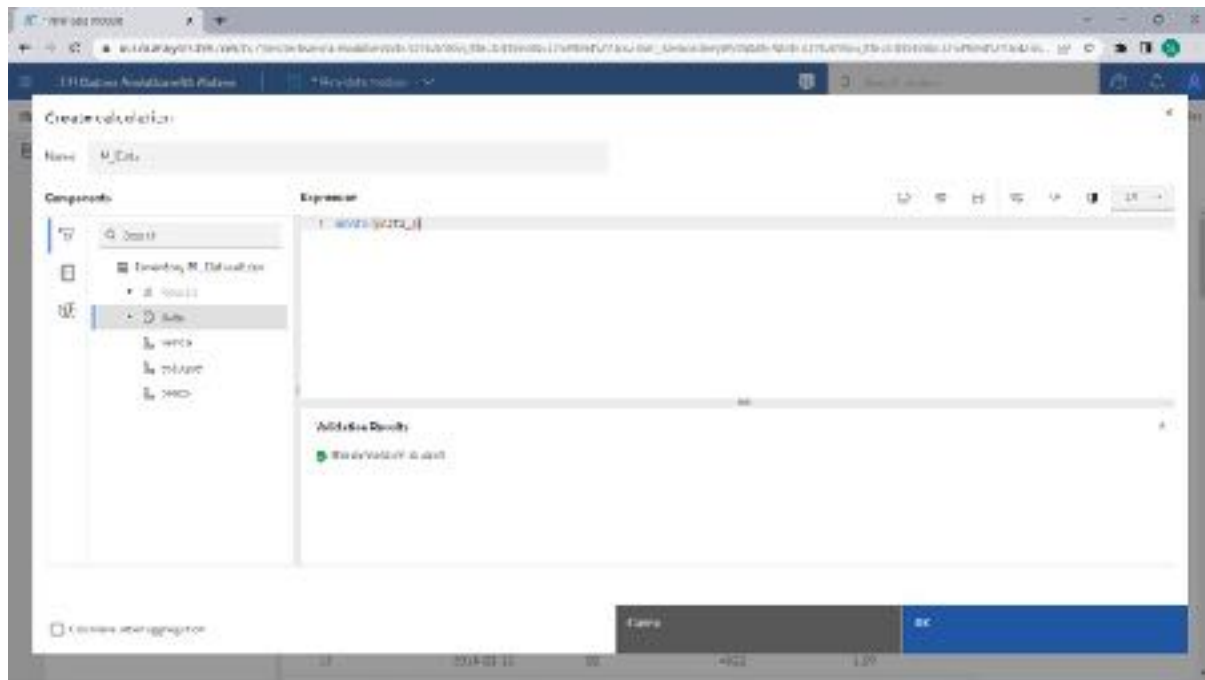
2. Loading the dataset

Tool Used – IBM Cognos Analytics





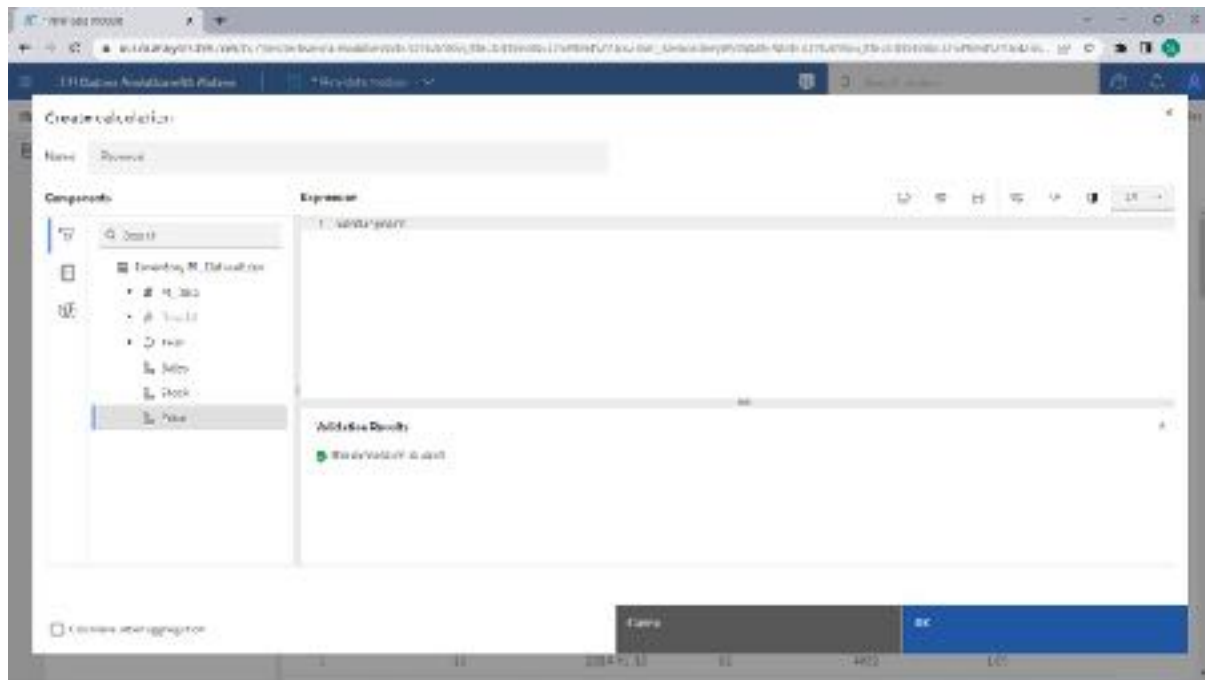
Month Data:



The screenshot shows the Tableau Desktop interface. On the left, the 'Data module' pane is visible, showing a search bar and a list of data sources. The 'Sales' data source is selected. The main view displays a table with the following columns: ID, M_Year, Sales, Units, Sales, and Price. The table contains 15 rows of data, with the 'M_Year' column highlighted. The 'Sales' column is selected, and the 'Price' column is visible in the last row.

ID	M_Year	Sales	Units	Sales	Price
1	2014-01-05	6	4772	1.21	
2	2014-01-06	19	1992	1.25	
3	2014-01-07	59	4813	1.22	
4	2014-01-08	91	2738	1.39	
5	2014-01-09	79	3494	1.21	
6	2014-01-10	115	2989	1.26	
7	2014-01-11	175	4329	1.21	
8	2014-01-12	211	4139	1.25	
9	2014-01-13	225	4459	1.05	
10	2014-01-14	265	3841	1.15	
11	2014-01-15	288	3239	1.03	
12	2014-01-16	311	3118	1.15	
13	2014-01-17	324	4184	1.01	
14	2014-01-18	369	4999	1.05	
15	2014-01-19	62	4822	1.05	

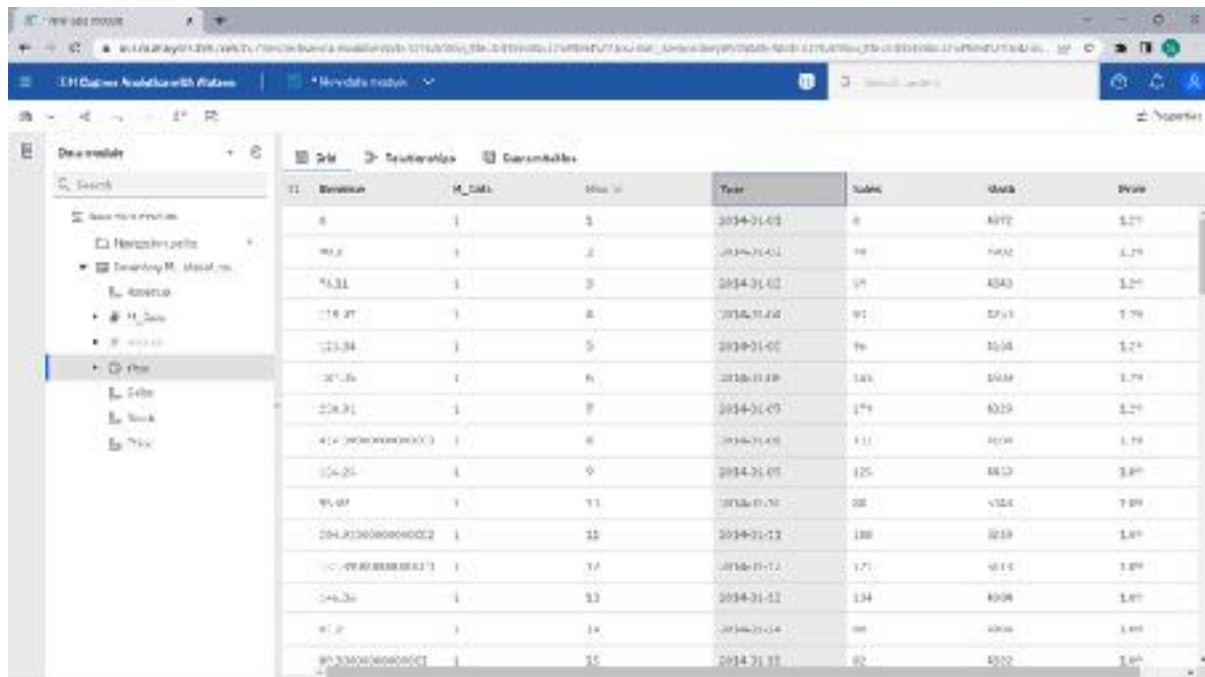
Revenue Data:



Qlik Sense interface showing the 'Data model' pane on the left and a table of data in the main view. The 'Data model' pane shows the 'Treasury M. Datawarehouse' folder expanded, with 'Revenue' selected. The table displays the following data:

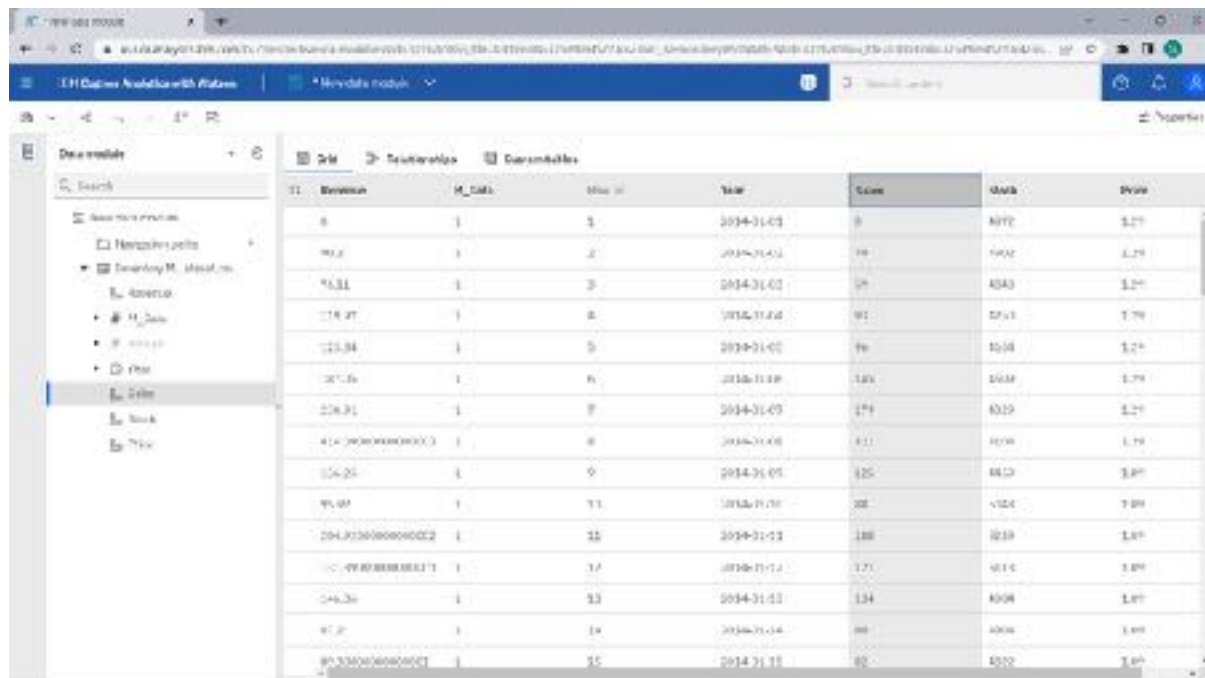
Id	Revenue	M_Cat	Max Id	Year	Index	Value	Price
1	8	1	1	2014-01-01	8	8072	1.25
2	90.2	1	2	2014-01-01	19	5602	1.25
3	93.11	1	3	2014-01-01	29	4343	1.25
4	116.27	1	4	2014-01-01	31	3733	1.75
5	123.34	1	5	2014-01-01	36	5534	1.25
6	127.56	1	6	2014-01-01	143	1639	1.75
7	128.31	1	7	2014-01-01	179	6229	1.25
8	141.00000000000001	1	8	2014-01-01	111	4039	1.75
9	154.25	1	9	2014-01-01	125	4813	1.85
10	161.67	1	10	2014-01-01	38	5124	1.85
11	164.00000000000002	1	11	2014-01-01	188	8219	1.85
12	171.49000000000001	1	12	2014-01-01	171	6114	1.85
13	174.26	1	13	2014-01-01	134	8308	1.85
14	177.2	1	14	2014-01-01	88	4004	1.85
15	181.33000000000001	1	15	2014-01-01	82	5222	1.85

Year Data:



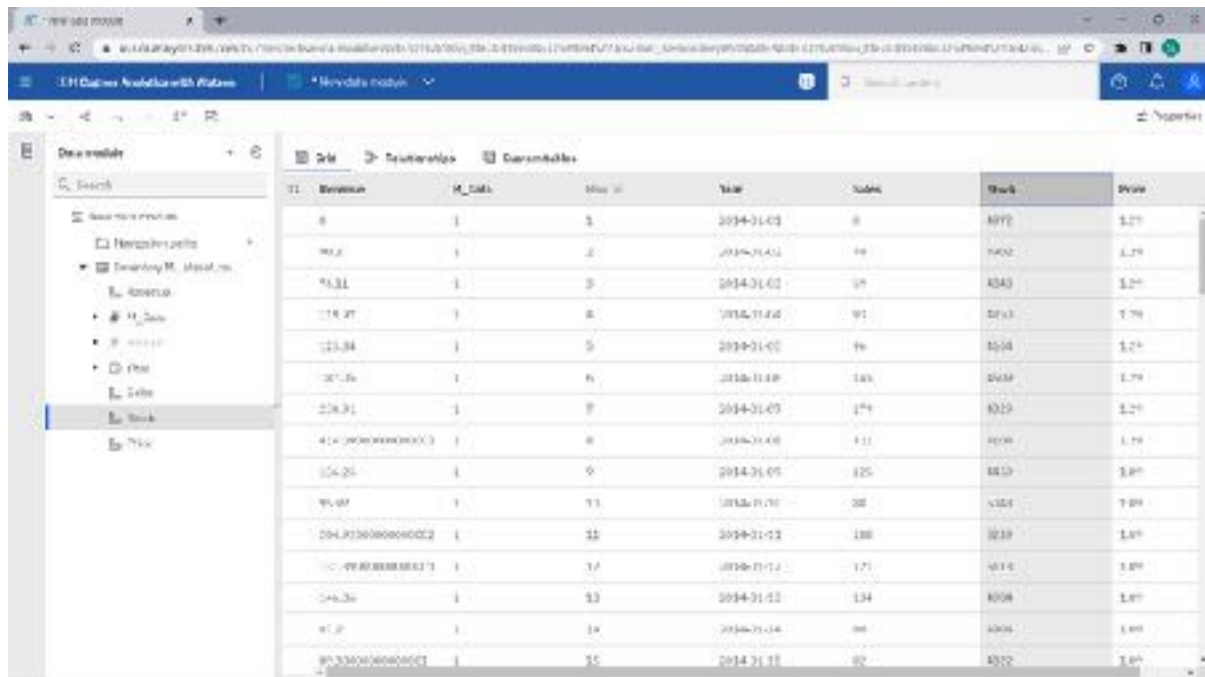
ID	Revenue	M_ID	Max ID	Year	Score	QMS	Price
1	8	1	1	2014-01-01	8	8072	1.25
2	90.2	1	2	2014-01-02	14	8082	1.25
3	93.11	1	3	2014-01-03	15	8083	1.25
4	118.27	1	4	2014-01-04	16	8084	1.25
5	123.84	1	5	2014-01-05	16	8084	1.25
6	127.16	1	6	2014-01-06	16	8084	1.25
7	228.31	1	7	2014-01-07	17	8085	1.25
8	414.26000000000003	1	8	2014-01-08	17	8085	1.25
9	124.25	1	9	2014-01-09	17	8085	1.25
10	95.67	1	10	2014-01-10	17	8085	1.25
11	204.32000000000002	1	11	2014-01-11	17	8085	1.25
12	110.49000000000001	1	12	2014-01-12	17	8085	1.25
13	146.36	1	13	2014-01-13	17	8085	1.25
14	87.2	1	14	2014-01-14	17	8085	1.25
15	80.33000000000001	1	15	2014-01-15	17	8085	1.25

Sales Data:



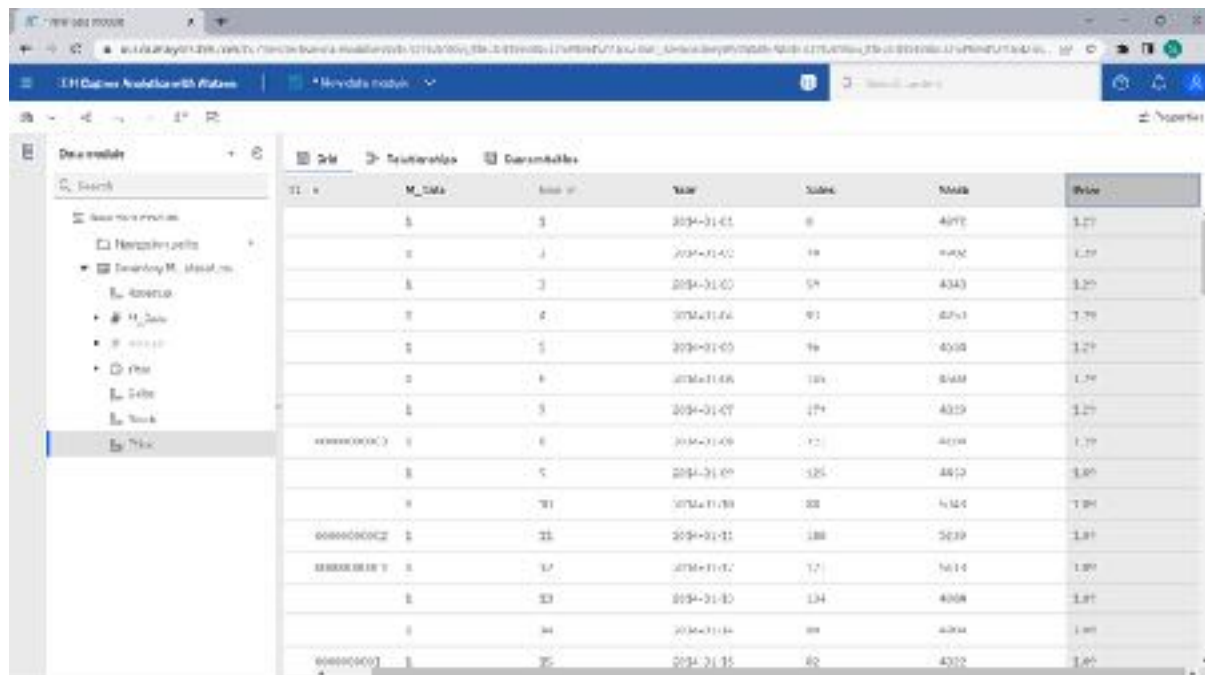
ID	Revenue	M_ID	Max ID	Year	Score	QMS	Price
1	8	1	1	2014-01-01	8	8072	1.25
2	90.2	1	2	2014-01-02	14	8082	1.25
3	93.11	1	3	2014-01-03	15	8083	1.25
4	118.27	1	4	2014-01-04	16	8084	1.25
5	123.84	1	5	2014-01-05	16	8084	1.25
6	127.16	1	6	2014-01-06	16	8084	1.25
7	228.31	1	7	2014-01-07	17	8085	1.25
8	414.26000000000003	1	8	2014-01-08	17	8085	1.25
9	124.25	1	9	2014-01-09	17	8085	1.25
10	95.67	1	10	2014-01-10	17	8085	1.25
11	204.32000000000002	1	11	2014-01-11	17	8085	1.25
12	110.49000000000001	1	12	2014-01-12	17	8085	1.25
13	146.36	1	13	2014-01-13	17	8085	1.25
14	87.2	1	14	2014-01-14	17	8085	1.25
15	80.33000000000001	1	15	2014-01-15	17	8085	1.25

Stock Data:



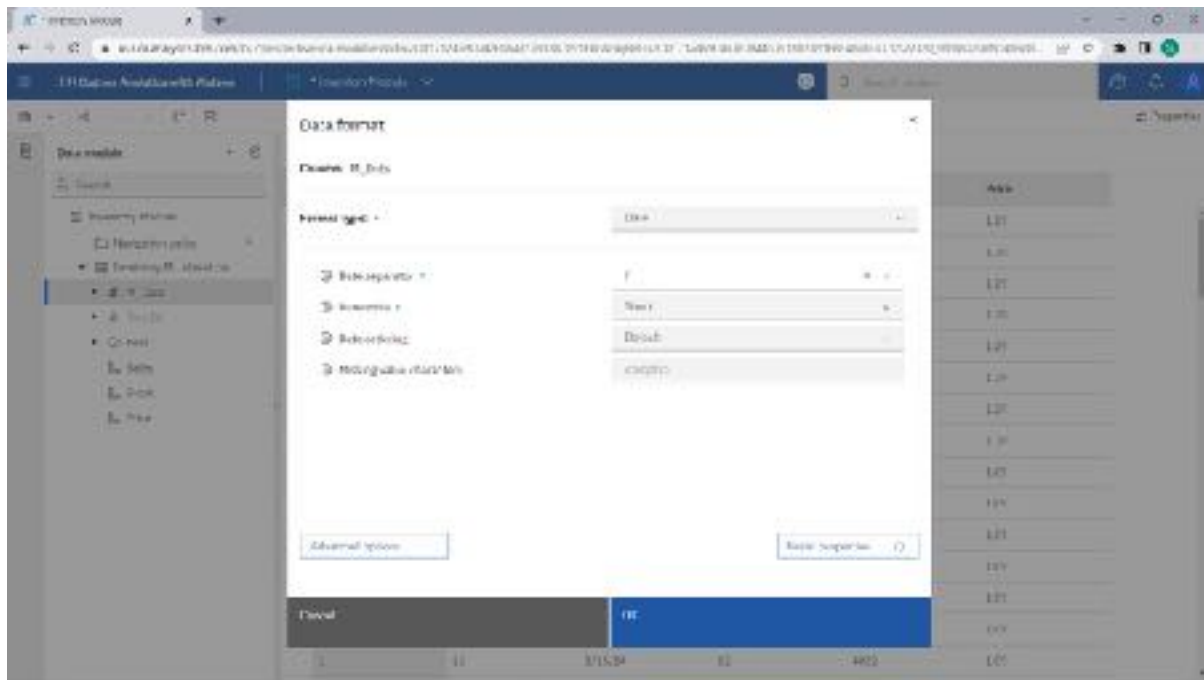
SI	Revenue	M_Cat	Year	Sum	Stock	Price
0	0	1	2014-01-01	0	4072	1.27
10.2	1	2	2014-01-01	10	4002	1.29
13.11	1	3	2014-01-01	13	4343	1.29
118.37	1	4	2014-01-01	118	4753	1.79
123.84	1	5	2014-01-01	123	4554	1.29
107.16	1	6	2014-01-01	107	4669	1.79
228.31	1	7	2014-01-01	228	4329	1.29
414.30000000000003	1	8	2014-01-01	414	4094	1.79
124.25	1	9	2014-01-01	124	4452	1.89
95.97	1	10	2014-01-01	95	4354	1.89
204.31000000000002	1	11	2014-01-01	204	4239	1.89
110.49000000000001	1	12	2014-01-01	110	4014	1.89
146.36	1	13	2014-01-01	146	4004	1.89
87.2	1	14	2014-01-01	87	4004	1.89
95.33000000000001	1	15	2014-01-01	95	4372	1.89

Price Data:



SI	M_Cat	Year	Sum	Stock	Price
0	1	2014-01-01	0	4072	1.27
0	2	2014-01-01	10	4002	1.29
0	3	2014-01-01	13	4343	1.29
0	4	2014-01-01	118	4753	1.79
0	5	2014-01-01	123	4554	1.29
0	6	2014-01-01	107	4669	1.79
0	7	2014-01-01	228	4329	1.29
0	8	2014-01-01	414	4094	1.79
0	9	2014-01-01	124	4452	1.89
0	10	2014-01-01	95	4354	1.89
0	11	2014-01-01	204	4239	1.89
0	12	2014-01-01	110	4014	1.89
0	13	2014-01-01	146	4004	1.89
0	14	2014-01-01	87	4004	1.89
0	15	2014-01-01	95	4372	1.89

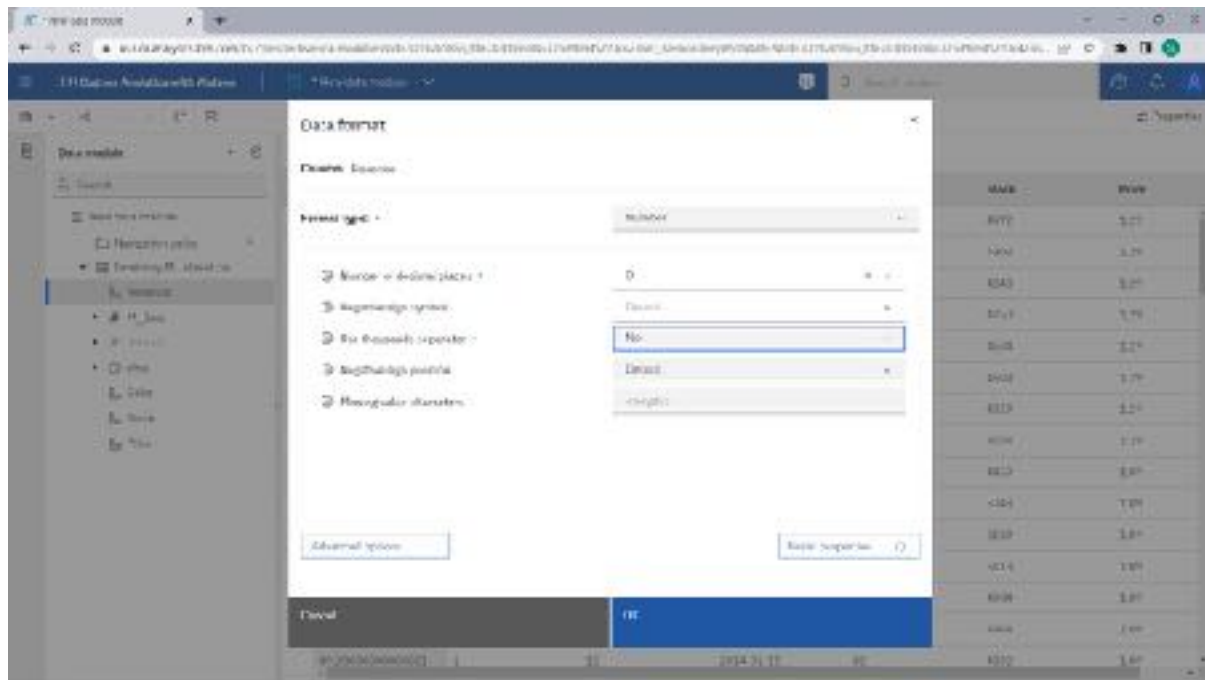
Month Format Data:



The screenshot shows the 'Eli Games Analytics with Python' application with a table of data. The table has columns: ID, Month, Year, Sales, Revenue, and Profit. The data is sorted by Year, then Month, then Sales. The table shows data for the years 2014, 2015, and 2016.

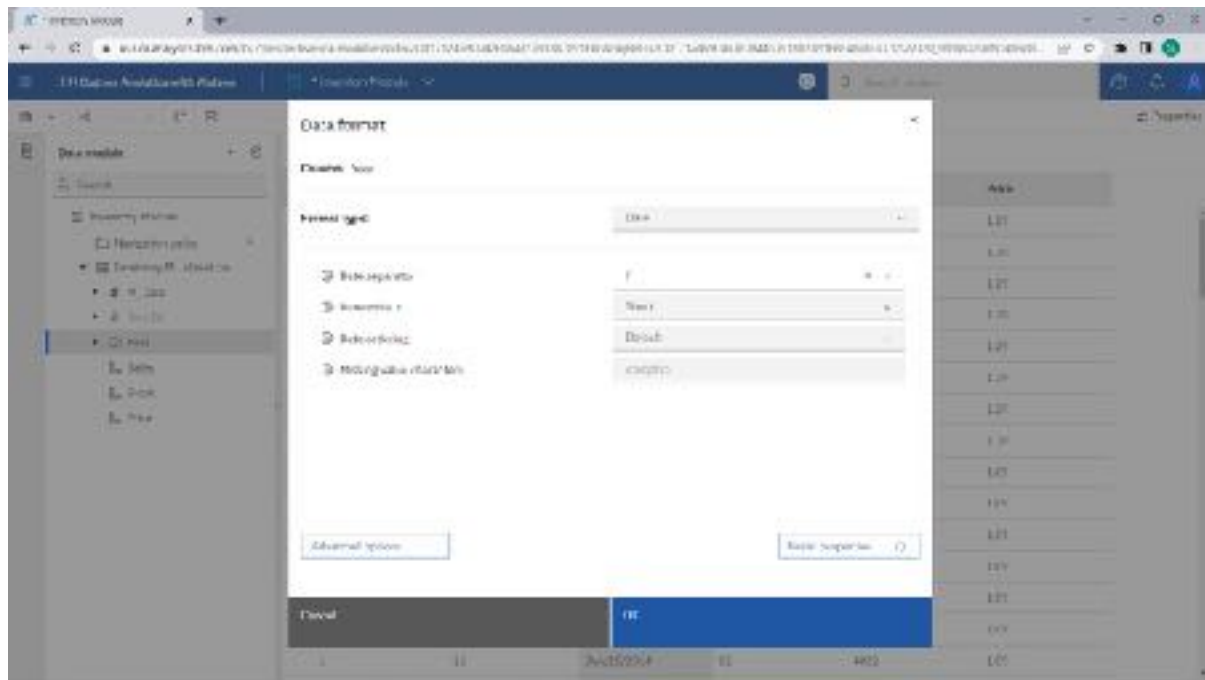
ID	Month	Year	Sales	Revenue	Profit
1	1	2014	8	4972	3
1	2	2014	79	4402	3
1	3	2014	90	4945	3
1	4	2014	41	3793	3
1	5	2014	76	4054	3
1	6	2014	45	3409	1
1	7	2014	179	4329	3
1	8	2014	171	4194	3
1	9	2014	125	4402	3
1	10	2014	80	4344	3
1	11	2014	188	3339	3
1	12	2014	11	3438	3
1	1	2015	124	4194	3
1	2	2015	40	4064	3
1	3	2015	82	4205	3

Revenue Format Data:



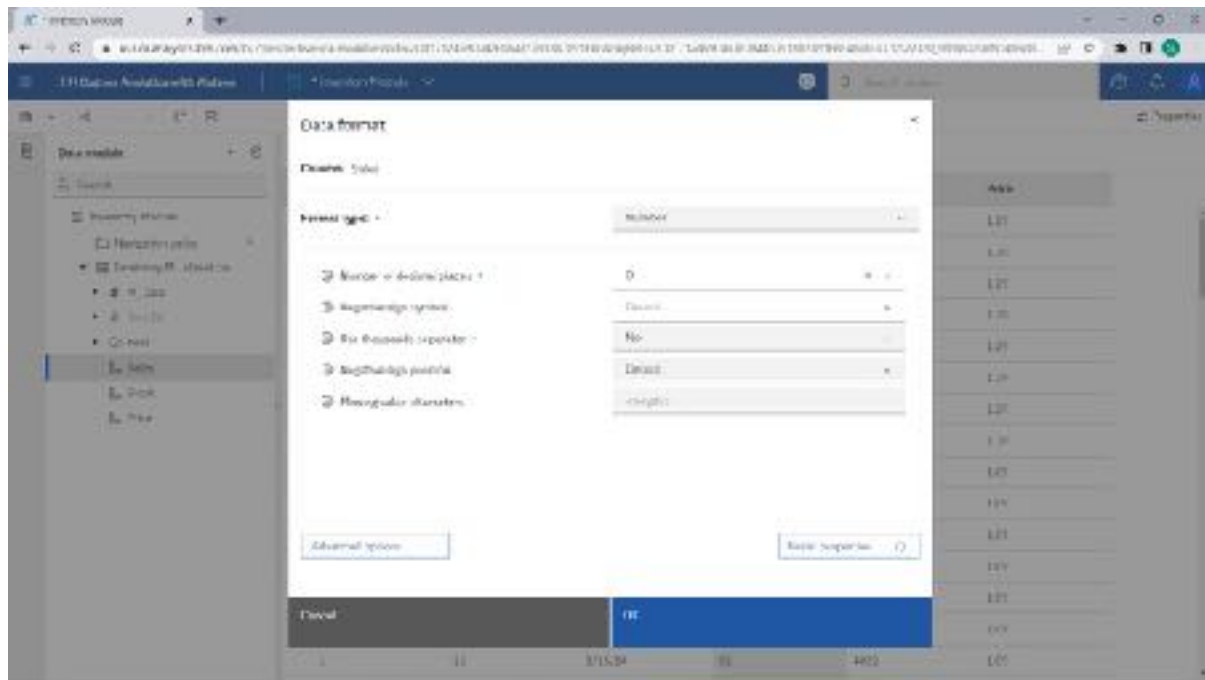
ID	Revenue	M_Cat	M_Cat	Year	Sales	Sales	Price
5	1	1	1	10/14	8	8072	1
90	1	2	2	10/14	14	1402	1
91	1	3	3	10/14	15	1403	1
108	1	4	4	10/14	11	1103	1
124	1	5	5	10/14	16	1604	1
121	1	6	6	10/14	143	1408	1
122	1	7	7	10/14	179	1709	1
414	1	8	8	10/14	111	1109	1
123	1	9	9	10/14	125	1209	1
96	1	11	11	10/14	188	1808	1
120	1	12	12	10/14	188	1809	1
127	1	13	13	10/14	171	1704	1
124	1	13	13	10/14	134	1308	1
97	1	14	14	10/14	88	8804	1
95	1	15	15	10/14	82	8202	1

Year Format Data:



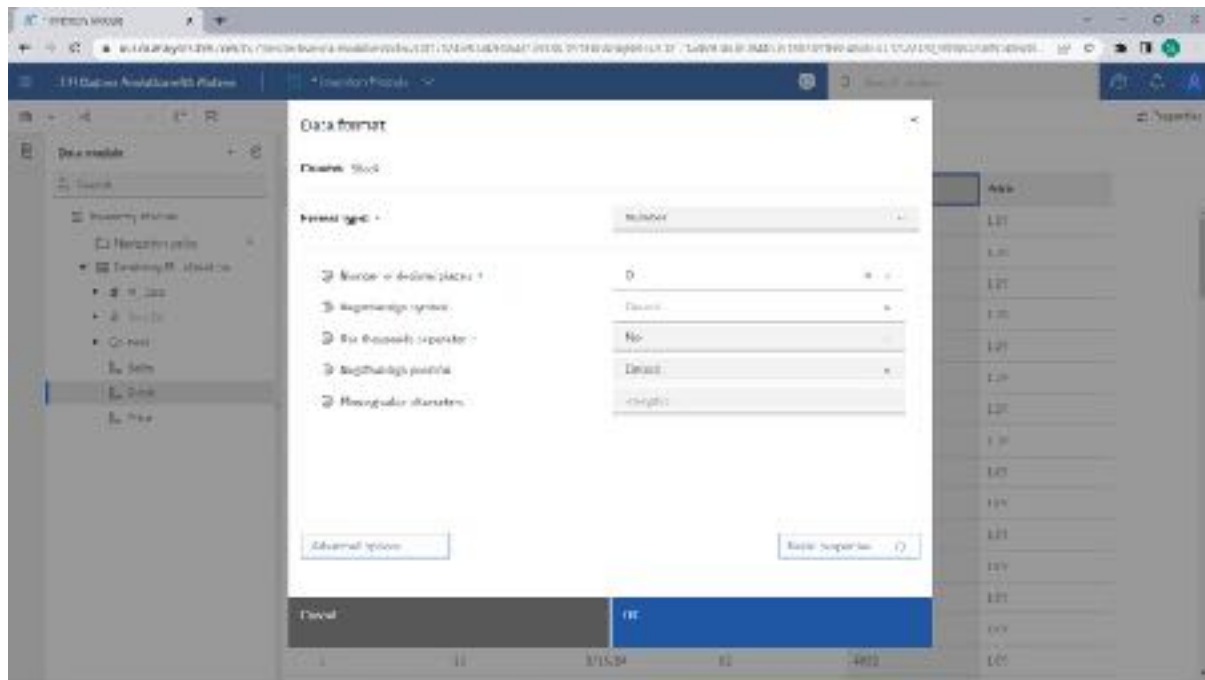
Year	Score	Year	Score	Year	Score	Year	Score
2014	1	2014	2	2014	3	2014	4
2014	5	2014	6	2014	7	2014	8
2014	9	2014	10	2014	11	2014	12
2014	13	2014	14	2014	15	2014	16
2014	17	2014	18	2014	19	2014	20
2014	21	2014	22	2014	23	2014	24
2014	25	2014	26	2014	27	2014	28
2014	29	2014	30	2014	31	2014	32
2014	33	2014	34	2014	35	2014	36
2014	37	2014	38	2014	39	2014	40
2014	41	2014	42	2014	43	2014	44
2014	45	2014	46	2014	47	2014	48
2014	49	2014	50	2014	51	2014	52
2014	53	2014	54	2014	55	2014	56
2014	57	2014	58	2014	59	2014	60
2014	61	2014	62	2014	63	2014	64
2014	65	2014	66	2014	67	2014	68
2014	69	2014	70	2014	71	2014	72
2014	73	2014	74	2014	75	2014	76
2014	77	2014	78	2014	79	2014	80
2014	81	2014	82	2014	83	2014	84
2014	85	2014	86	2014	87	2014	88
2014	89	2014	90	2014	91	2014	92
2014	93	2014	94	2014	95	2014	96
2014	97	2014	98	2014	99	2014	100

Sales Format Data:



SI	Revenue	M_Cat	Max SI	Year	Score	QMS	Price
8	1	1	1	1/1/14	8	1072	1
10	1	1	2	1/1/14	14	1002	1
15	1	1	3	1/1/14	15	1043	1
17	1	1	4	1/1/14	17	1015	1
18	1	1	5	1/1/14	18	1034	1
21	1	1	6	1/1/14	21	1038	1
22	1	1	7	1/1/14	22	1029	1
41	1	1	8	1/1/14	41	1039	1
12	1	1	9	1/1/14	12	1012	1
16	1	1	11	1/1/14	16	1024	1
20	1	1	12	1/1/14	20	1019	1
17	1	1	13	1/1/14	17	1014	1
24	1	1	13	1/1/14	24	1008	1
47	1	1	14	1/1/14	47	1004	1
50	1	1	15	1/1/14	50	1012	1

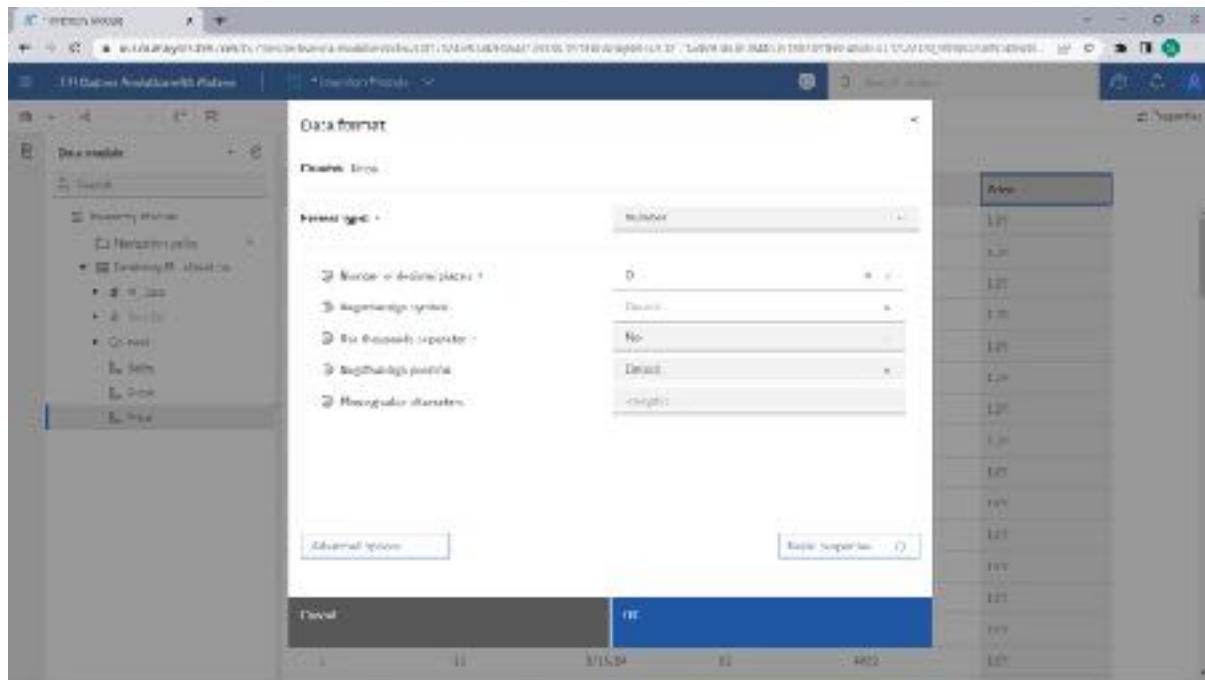
Stock Format Data:



The screenshot displays the 'Inventory Items' table in the Microsoft Dynamics 365 Finance application. The table lists various inventory items with columns for Item ID, Description, M. Date, Max. St., Unit, Units, Stock, and Price. The 'Stock' column is highlighted, showing the current stock levels for each item.

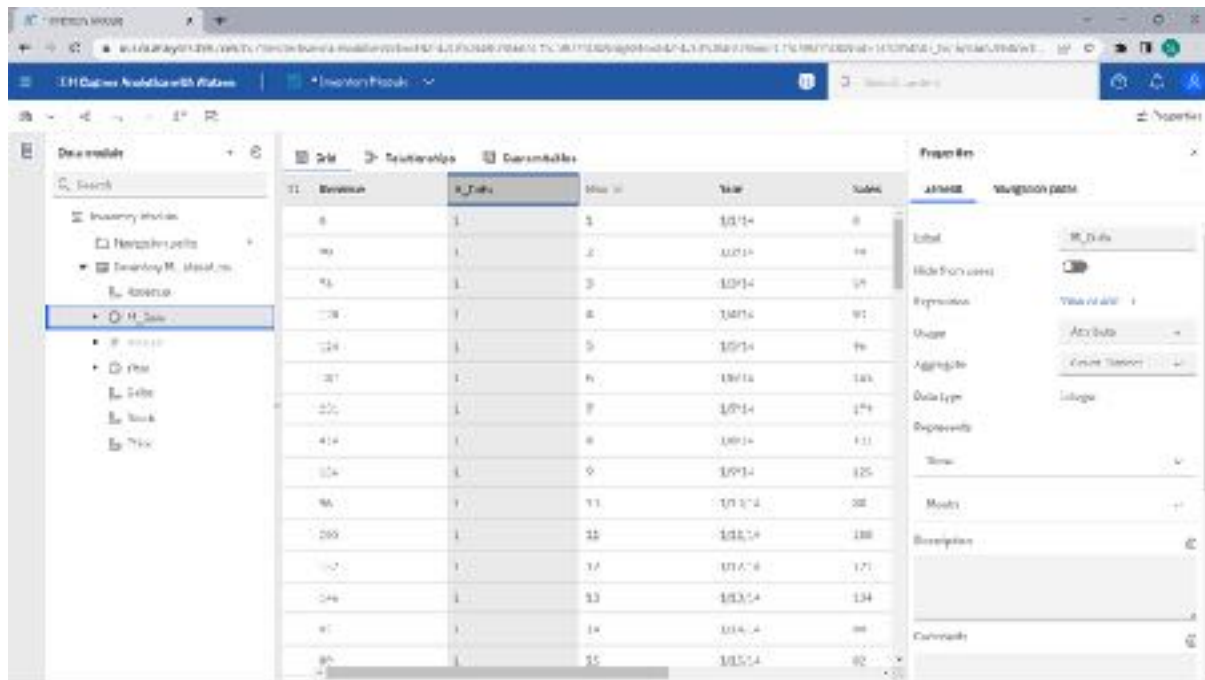
Item ID	Description	M. Date	Max. St.	Unit	Units	Stock	Price
1	Item 1	1/1/14	1	1	1	1000	1
2	Item 2	2/1/14	2	2	2	2000	2
3	Item 3	3/1/14	3	3	3	3000	3
4	Item 4	4/1/14	4	4	4	4000	4
5	Item 5	5/1/14	5	5	5	5000	5
6	Item 6	6/1/14	6	6	6	6000	6
7	Item 7	7/1/14	7	7	7	7000	7
8	Item 8	8/1/14	8	8	8	8000	8
9	Item 9	9/1/14	9	9	9	9000	9
10	Item 10	10/1/14	10	10	10	10000	10
11	Item 11	11/1/14	11	11	11	11000	11
12	Item 12	12/1/14	12	12	12	12000	12
13	Item 13	1/1/15	13	13	13	13000	13
14	Item 14	2/1/15	14	14	14	14000	14
15	Item 15	3/1/15	15	15	15	15000	15

Price Format Data:



11	M_Data	Year	Sales	Profit	Price
1	1	1974	8	4972	1
2	2	1974	19	4902	1
3	3	1974	59	4343	1
4	4	1974	91	4763	1
5	5	1974	76	4508	1
6	6	1974	106	5168	1
7	7	1974	179	4329	1
8	8	1974	121	4094	1
9	9	1974	125	4812	1
10	10	1974	88	5144	1
11	11	1974	188	5039	1
12	12	1974	171	5614	1
13	13	1974	134	4908	1
14	14	1974	89	4304	1
15	15	1974	82	4212	1

Month Data Properties:

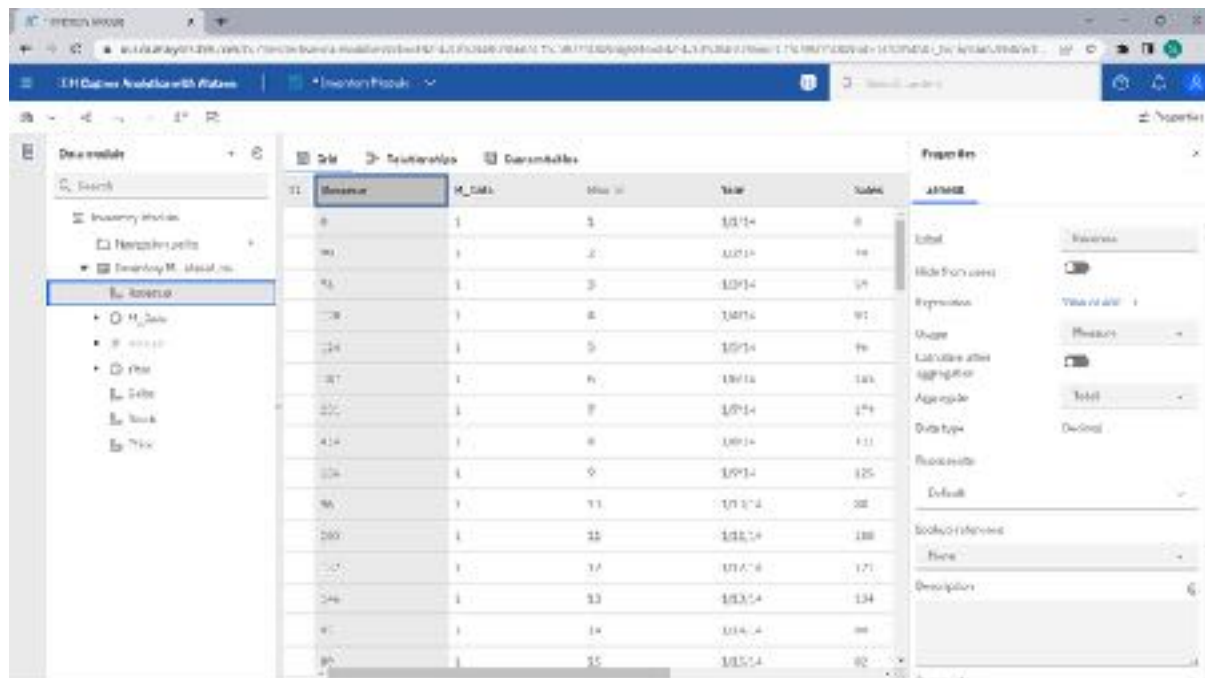


The screenshot shows the Microsoft Power BI Desktop interface. The 'Data model' pane on the left lists the tables in the model, with 'Month Data' selected. The main view displays a table with the following data:

ST	Revenue	M_Units	Month	Year	Units
8	1	1	1	1/1/14	8
90	1	1	2	2/1/14	90
93	1	1	3	3/1/14	93
128	1	1	4	4/1/14	91
124	1	1	5	5/1/14	96
187	1	1	6	6/1/14	183
225	1	1	7	7/1/14	179
414	1	1	8	8/1/14	411
124	1	1	9	9/1/14	125
96	1	1	11	11/1/14	98
289	1	1	12	12/1/14	288
127	1	1	17	1/1/15	171
146	1	1	13	1/1/15	134
91	1	1	14	1/1/15	99
86	1	1	15	1/1/15	82

The 'Properties' pane on the right shows the 'Month Data' table's properties, including 'Label', 'Hide from users', 'Expression', 'Usage', 'Aggregate', 'Data type', 'Expression', 'Time', 'Model', 'Description', and 'Comments'.

Revenue Data Properties:

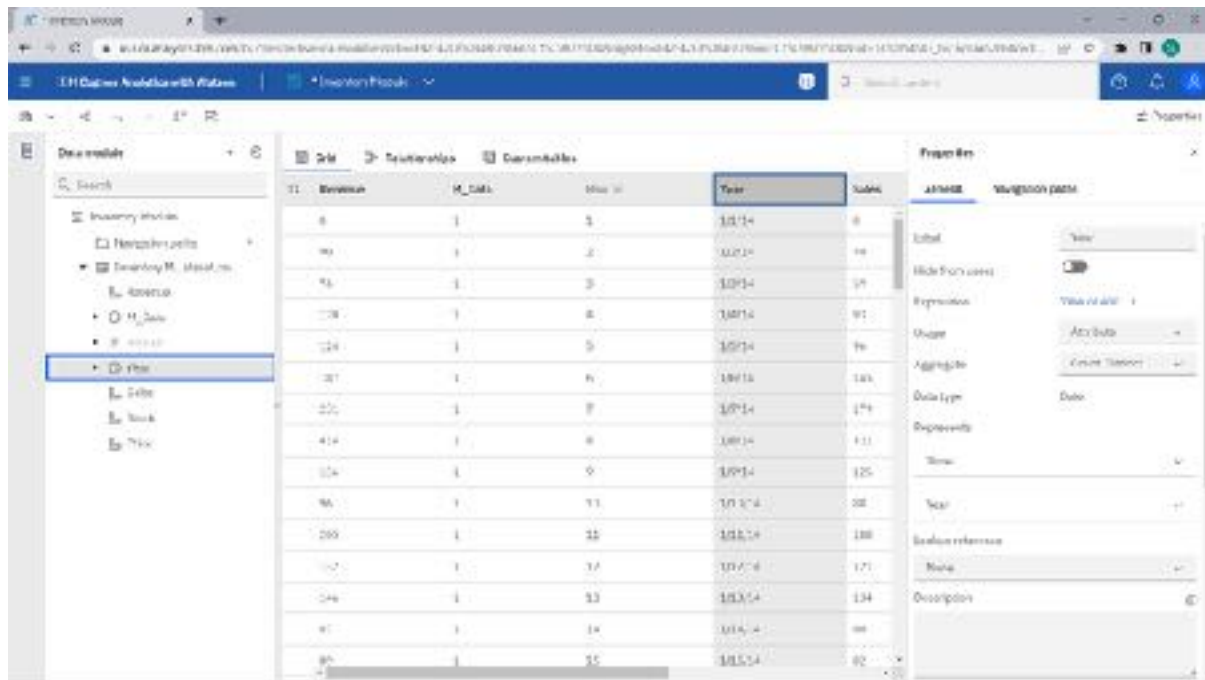


The screenshot shows the Microsoft Power BI Desktop interface. The 'Data model' pane on the left lists the tables in the model, with 'Revenue Data' selected. The main view displays a table with the following data:

ST	Revenue	M_Units	Month	Year	Units
8	1	1	1	1/1/14	8
90	1	1	2	2/1/14	90
93	1	1	3	3/1/14	93
128	1	1	4	4/1/14	91
124	1	1	5	5/1/14	96
187	1	1	6	6/1/14	183
225	1	1	7	7/1/14	179
414	1	1	8	8/1/14	411
124	1	1	9	9/1/14	125
96	1	1	11	11/1/14	98
289	1	1	12	12/1/14	288
127	1	1	17	1/1/15	171
146	1	1	13	1/1/15	134
91	1	1	14	1/1/15	99
86	1	1	15	1/1/15	82

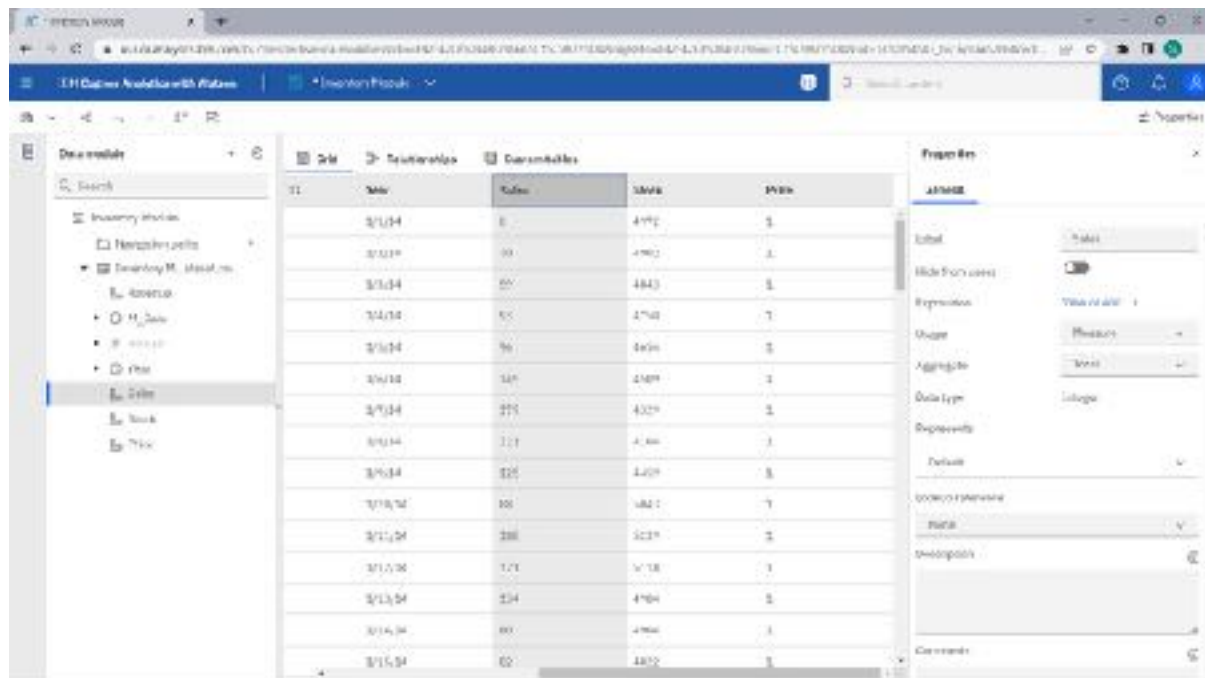
The 'Properties' pane on the right shows the 'Revenue Data' table's properties, including 'Label', 'Hide from users', 'Expression', 'Usage', 'Aggregate', 'Data type', 'Expression', 'Time', 'Model', 'Description', and 'Comments'.

Year Data Format:



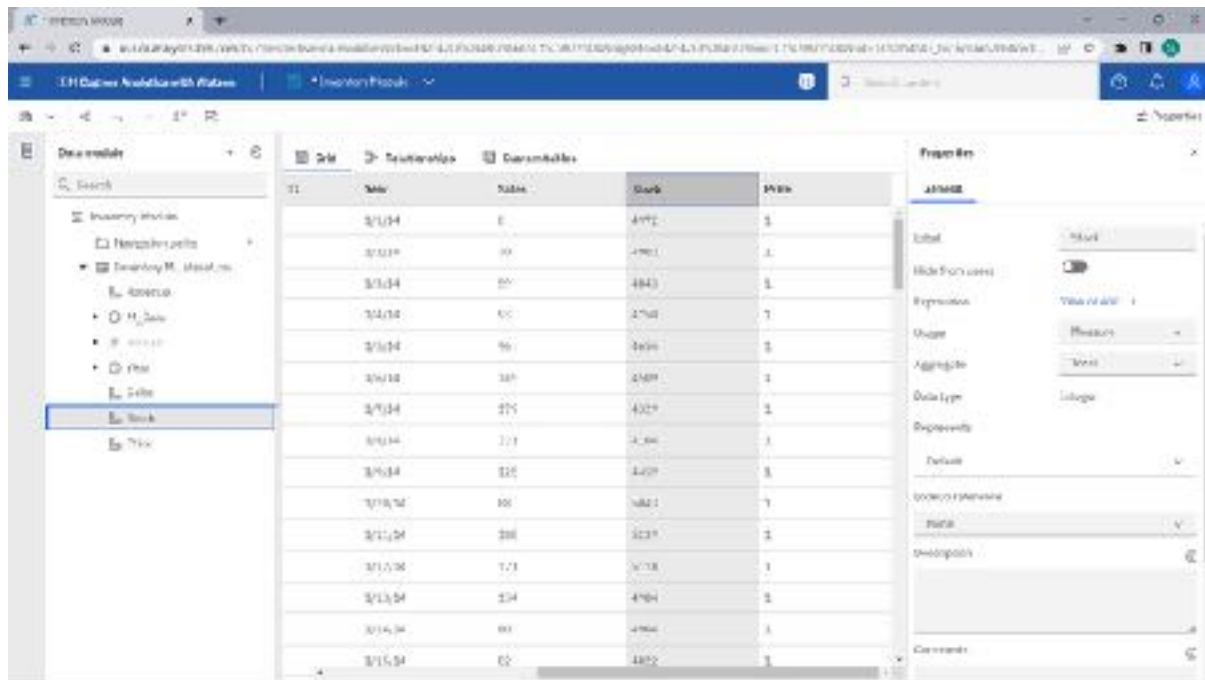
ID	Revenue	M_Date	Max ID	Year	Sales
8	1	1	1	1/1/14	8
10	1	1	2	1/2/14	10
13	1	1	3	1/3/14	13
17	1	1	4	1/4/14	17
22	1	1	5	1/5/14	22
27	1	1	6	1/6/14	27
33	1	1	7	1/7/14	33
41	1	1	8	1/8/14	41
54	1	1	9	1/9/14	54
66	1	1	10	1/10/14	66
80	1	1	11	1/11/14	80
99	1	1	12	1/12/14	99
127	1	1	13	1/1/15	127
156	1	1	14	1/2/15	156
187	1	1	15	1/3/15	187
219	1	1	16	1/4/15	219
252	1	1	17	1/5/15	252
286	1	1	18	1/6/15	286
321	1	1	19	1/7/15	321
357	1	1	20	1/8/15	357
394	1	1	21	1/9/15	394
432	1	1	22	1/10/15	432
471	1	1	23	1/11/15	471
511	1	1	24	1/12/15	511
552	1	1	25	1/1/16	552

Sales Data Format:



Date	Sales	Sales	Sales	Sales
1/1/14	8	4172	5	
1/2/14	10	4182	2	
1/3/14	13	4183	5	
1/4/14	17	4188	7	
1/5/14	22	4190	5	
1/6/14	27	4189	2	
1/7/14	33	4329	2	
1/8/14	41	4188	2	
1/9/14	54	4209	5	
1/10/14	66	4211	7	
1/11/14	80	4239	5	
1/12/14	99	4239	5	
1/1/15	127	4188	2	
1/2/15	156	4188	5	
1/3/15	187	4188	5	
1/4/15	219	4188	5	
1/5/15	252	4188	5	
1/6/15	286	4188	5	
1/7/15	321	4188	5	
1/8/15	357	4188	5	
1/9/15	394	4188	5	
1/10/15	432	4188	5	
1/11/15	471	4188	5	
1/12/15	511	4188	5	
1/1/16	552	4188	5	

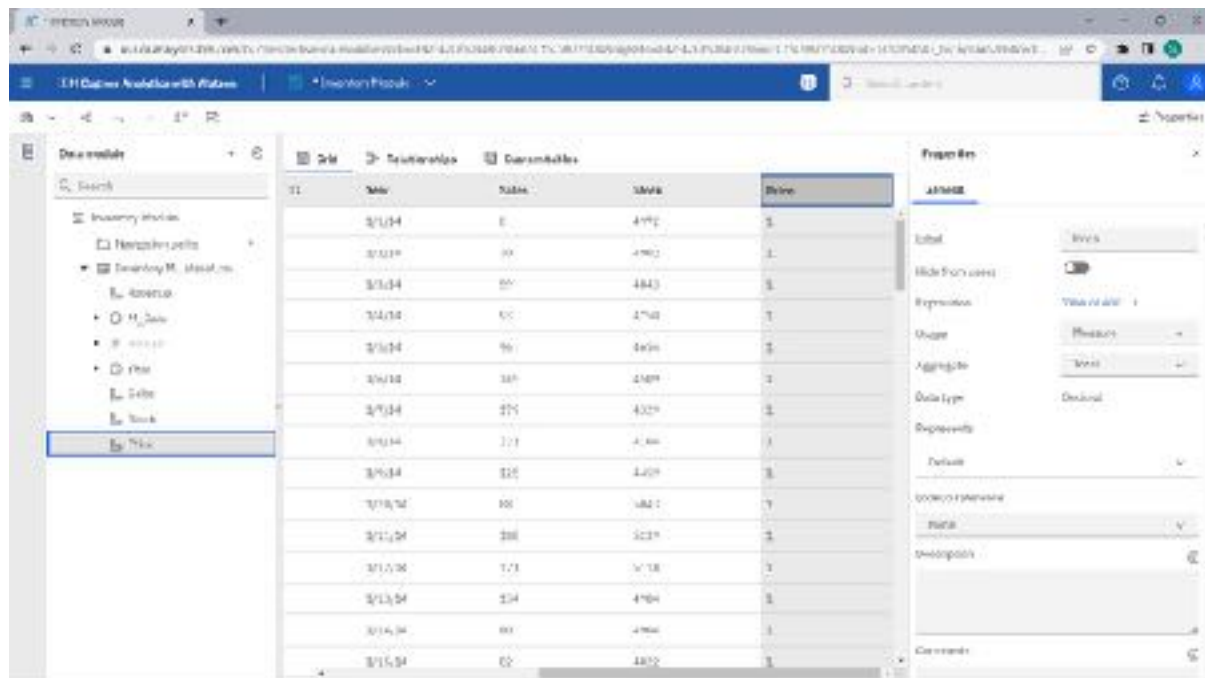
Stock Data Properties:



The screenshot shows the 'Data modeler' interface with the 'Stock' model selected in the 'Properties' pane. The 'Total' expression is set to 'Sum' and the 'Aggregation' is set to 'Measure'. The 'Data type' is 'Integer'.

ST	Date	Value	Price
1	2/1/14	1	4772
1	2/2/14	10	4761
1	2/3/14	20	4843
1	2/4/14	10	4748
1	2/5/14	96	4636
1	2/6/14	38	4589
1	2/7/14	271	4329
1	2/8/14	221	4284
1	2/9/14	125	4209
1	2/10/14	100	4821
1	2/11/14	288	5239
1	2/12/14	173	5138
1	2/13/14	134	4764
1	2/14/14	80	4764
1	2/15/14	62	4872

Price Data Properties:



The screenshot shows the 'Data modeler' interface with the 'Price' model selected in the 'Properties' pane. The 'Total' expression is set to 'Sum' and the 'Aggregation' is set to 'Measure'. The 'Data type' is 'Decimal'.

ST	Date	Value	Price
1	2/1/14	1	4772
1	2/2/14	10	4761
1	2/3/14	20	4843
1	2/4/14	10	4748
1	2/5/14	96	4636
1	2/6/14	38	4589
1	2/7/14	271	4329
1	2/8/14	221	4284
1	2/9/14	125	4209
1	2/10/14	100	4821
1	2/11/14	288	5239
1	2/12/14	173	5138
1	2/13/14	134	4764
1	2/14/14	80	4764
1	2/15/14	62	4872