Introduction to Tableau
Data visualization(DV) and Visual Analytics(VA)

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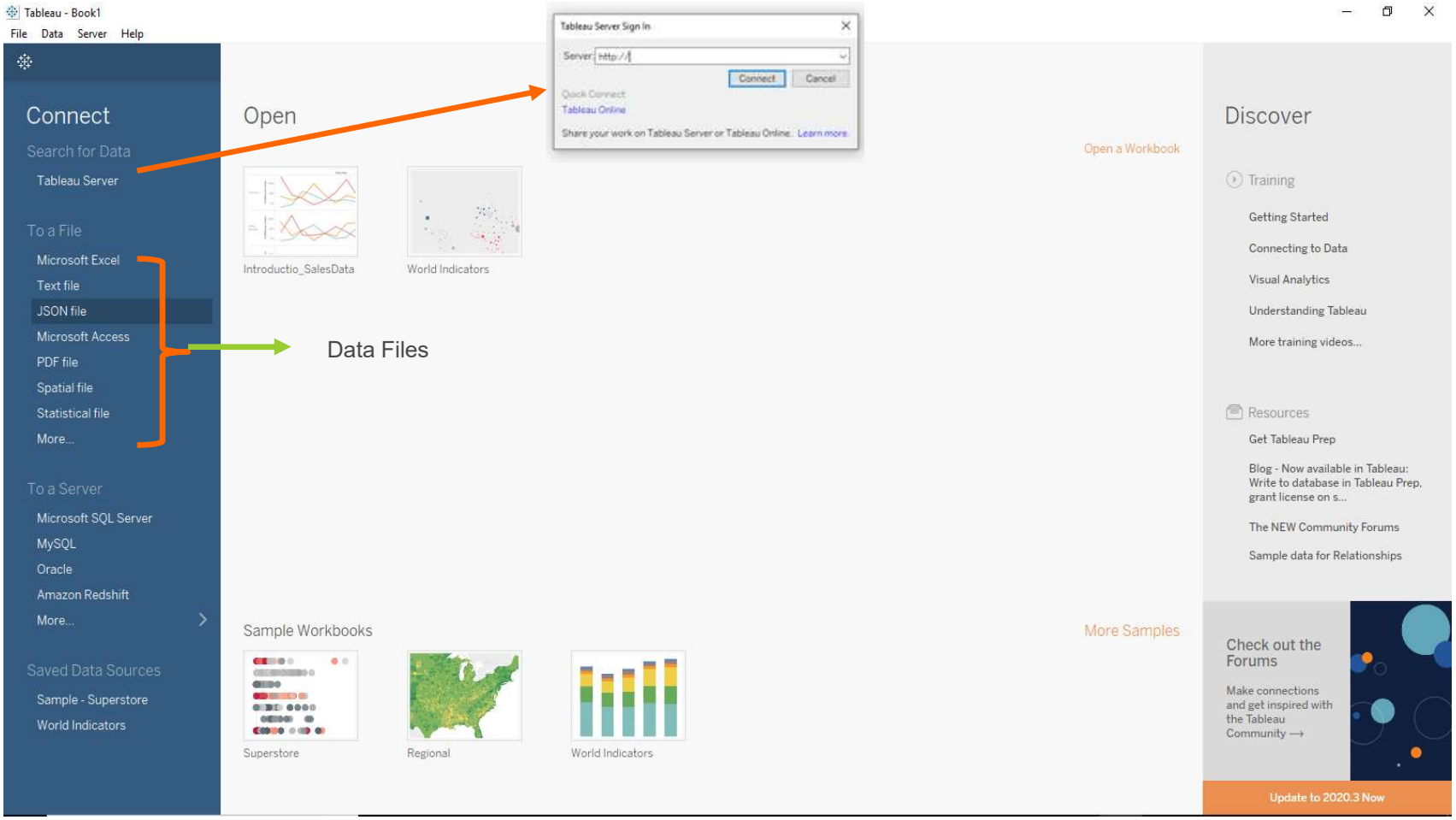
Difference between DV and VA

- Data visualization:
  - a graphical depiction of data, such as dashboard or report
    - present views of data that answer “what,”
    - Provide answers to finite set of questions
    - Provide interactivity to investigate “what” questions.
    - It helps to tell a story about your data, and to identify problems and issues.
- Visual analytics
  - a method for exploring data visually, in real-time
    - The power of asking why
    - Dynamic, iterative process
    - Find answers, and build stories in your data.

Difference between DV and VA

Capabilities	Data Visualization	Visual Analytics
Answers and shows “what.”	✓	✓
Shows data points, problems, issues, or key indicators.	✓	✓
Presents a specific view of a data set. Gives you and users a snapshot of data to answer a specific set of questions.	✓	✓
A visual presentation of data, such as a dashboard or a report. Great device for communicating insights and telling stories about data.	✓	✓
Supports interactivity (filter dimensions, highlight values of interest, change view based on categories)	✓	✓
Supports deeper analysis and exploration for asking “why” questions.		✓
Offers advanced analytics.		✓
A journey through your data that doesn’t require you to know what chart type or template you need, or where you are going.		✓
Unifies the steps of querying, exploring and visualization data into a single process.		✓
Fast, intuitive, free form exploration of data that lets you quickly create many different views of your data.		✓
Helps you think visually to explore problems, issues, and questions. Leads to unexpected insights and finding outliers in your data.		✓
Helps you share key insights and collaborate with colleagues on the data.		✓

Getting Started



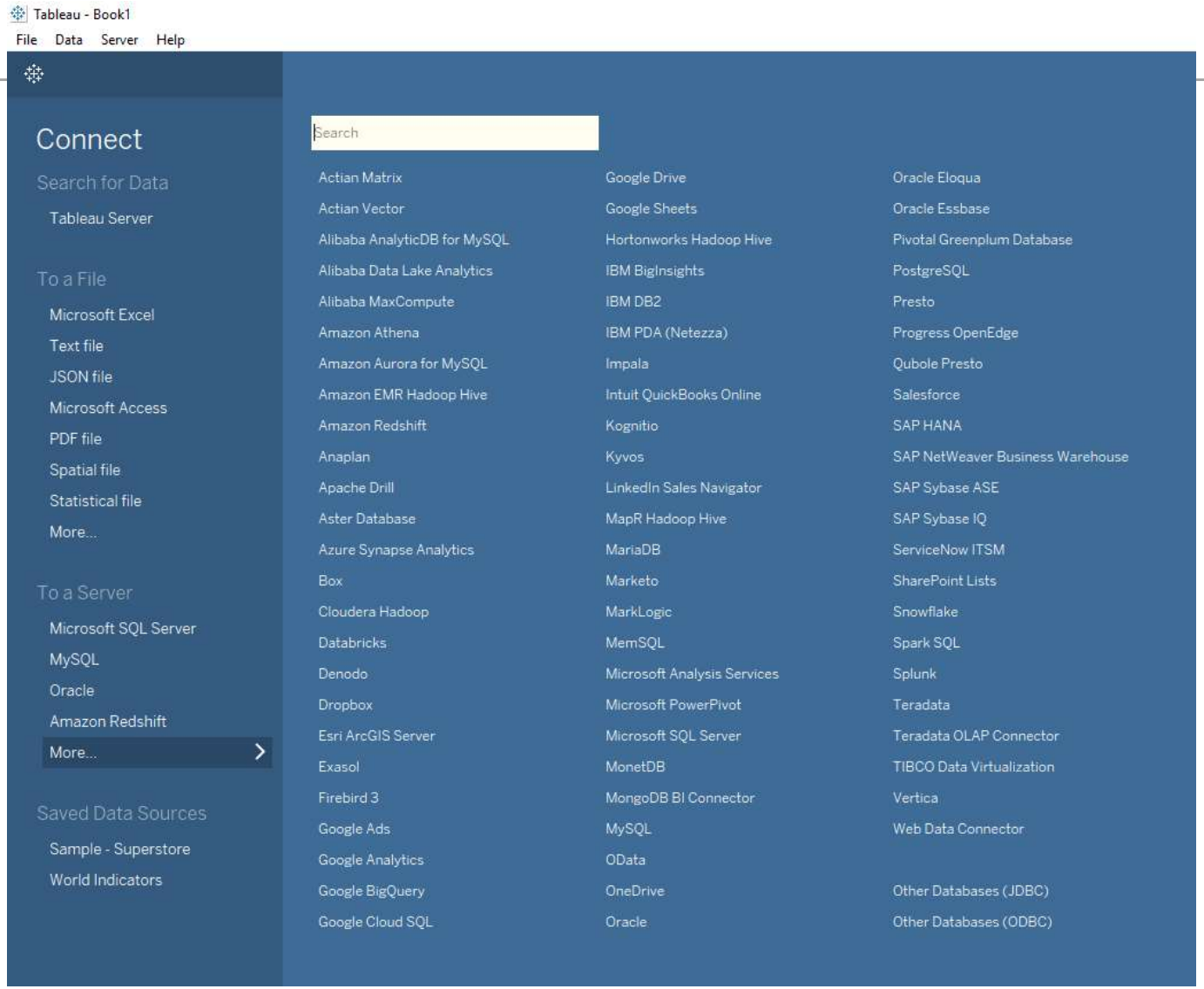
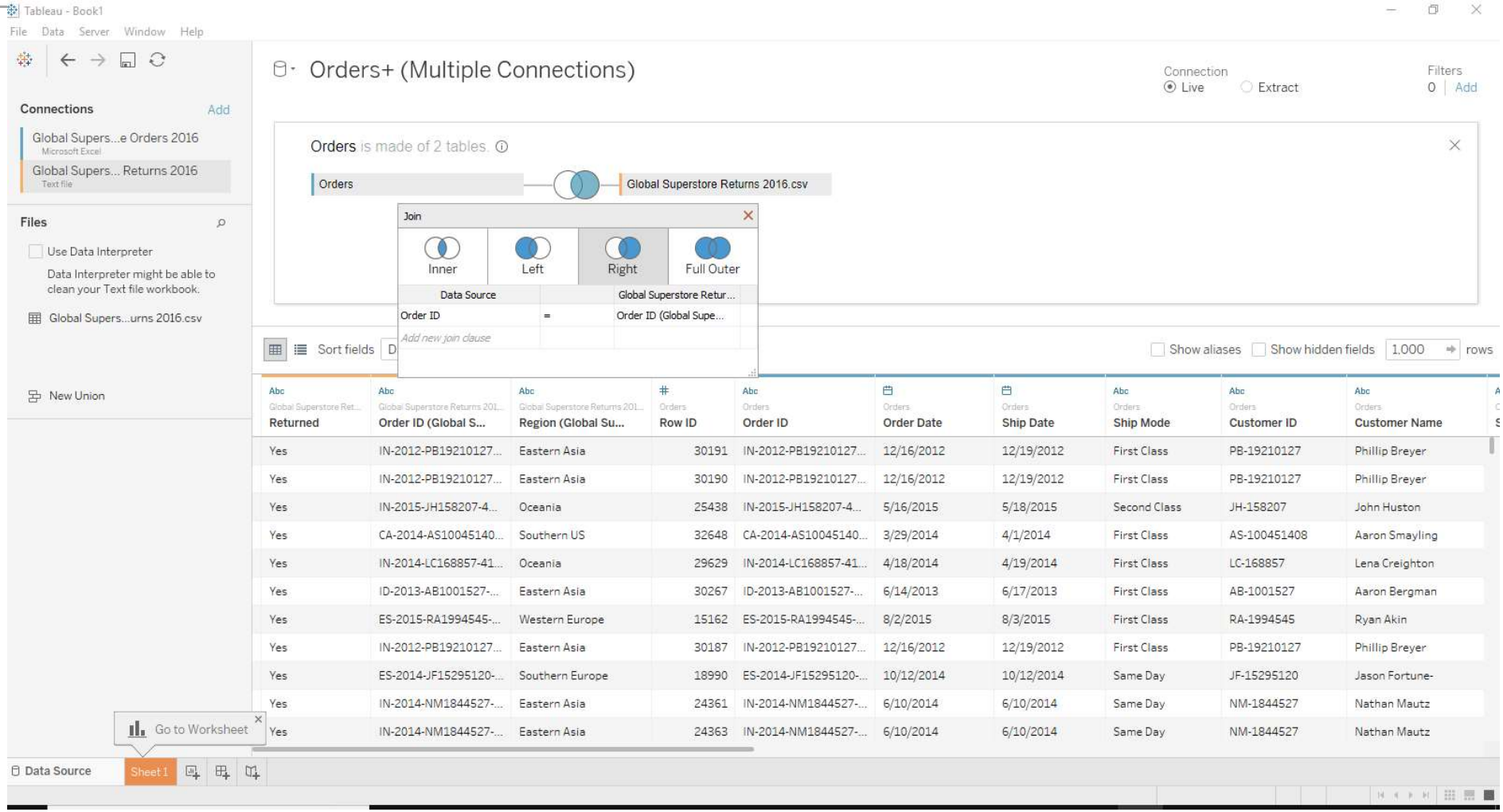
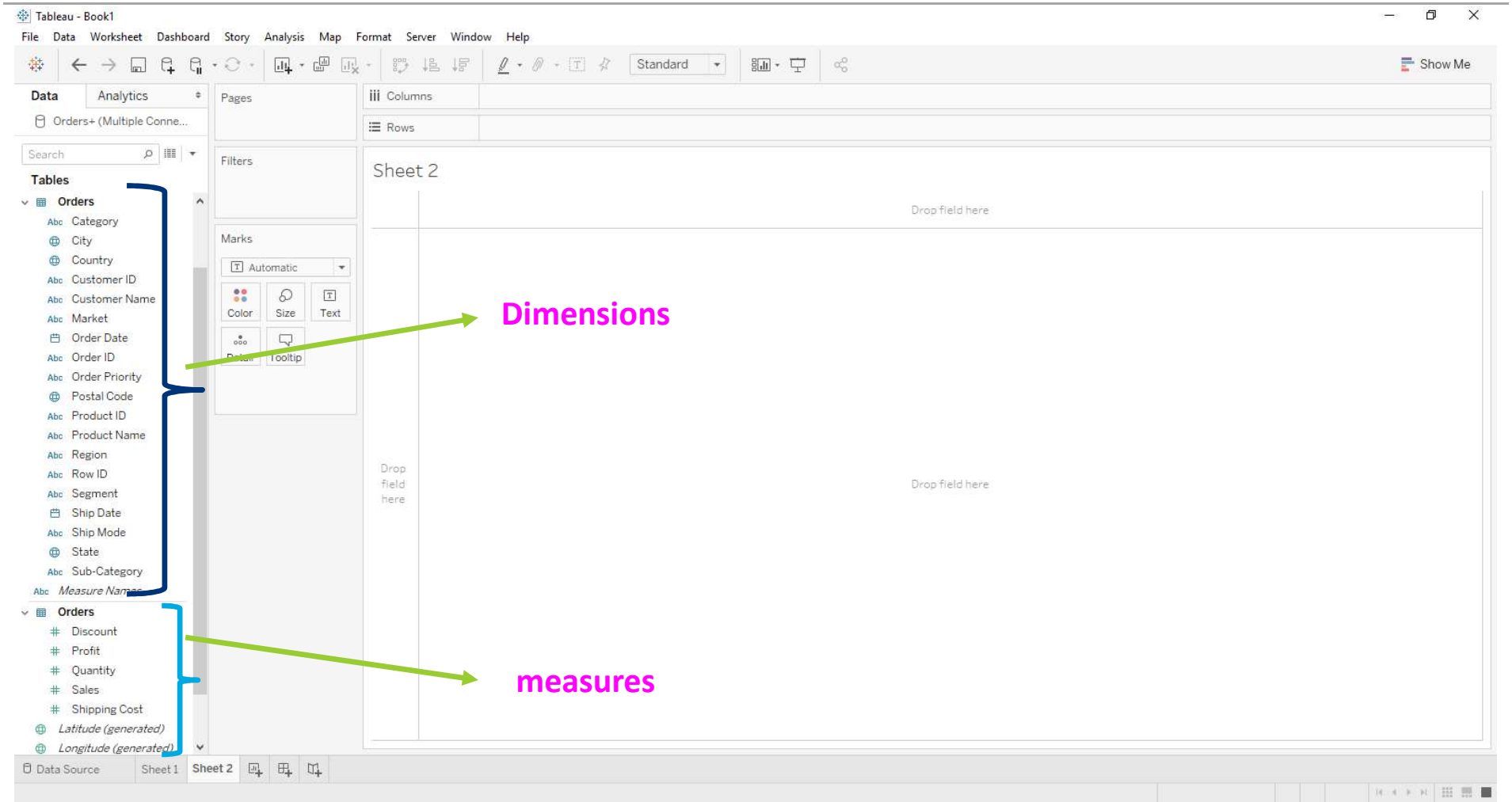


Tableau - Book1
File Data Server Help
Connect
Search for Data
Tableau Server
To a File
Microsoft Excel
Text file
JSON file
Microsoft Access
PDF file
Spatial file
Statistical file
More...
To a Server
Microsoft SQL Server
MySQL
Oracle
Amazon Redshift
More...
Saved Data Sources
Sample - Superstore
World Indicators
Search
Actian Matrix
Actian Vector
Alibaba AnalyticDB for MySQL
Alibaba Data Lake Analytics
Alibaba MaxCompute
Amazon Athena
Amazon Aurora for MySQL
Amazon EMR Hadoop Hive
Amazon Redshift
Anaplan
Apache Drill
Aster Database
Azure Synapse Analytics
Box
Cloudera Hadoop
Databricks
Denodo
Dropbox
Esri ArcGIS Server
Exasol
Firebird 3
Google Ads
Google Analytics
Google BigQuery
Google Cloud SQL
Google Drive
Google Sheets
Hortonworks Hadoop Hive
IBM BigInsights
IBM DB2
IBM PDA (Netezza)
Impala
Intuit QuickBooks Online
Kognitio
Kyvos
LinkedIn Sales Navigator
MapR Hadoop Hive
MariaDB
Marketo
MarkLogic
MemSQL
Microsoft Analysis Services
Microsoft PowerPivot
Microsoft SQL Server
MonetDB
MongoDB BI Connector
MySQL
OData
OneDrive
Oracle
Oracle Eloqua
Oracle Essbase
Pivotal Greenplum Database
PostgreSQL
Presto
Progress OpenEdge
Qubole Presto
Salesforce
SAP HANA
SAP NetWeaver Business Warehouse
SAP Sybase ASE
SAP Sybase IQ
ServiceNow ITSM
SharePoint Lists
Snowflake
Spark SQL
Splunk
Teradata
Teradata OLAP Connector
TIBCO Data Virtualization
Vertica
Web Data Connector
Other Databases (JDBC)
Other Databases (ODBC)

Joining Data



About the Data pane



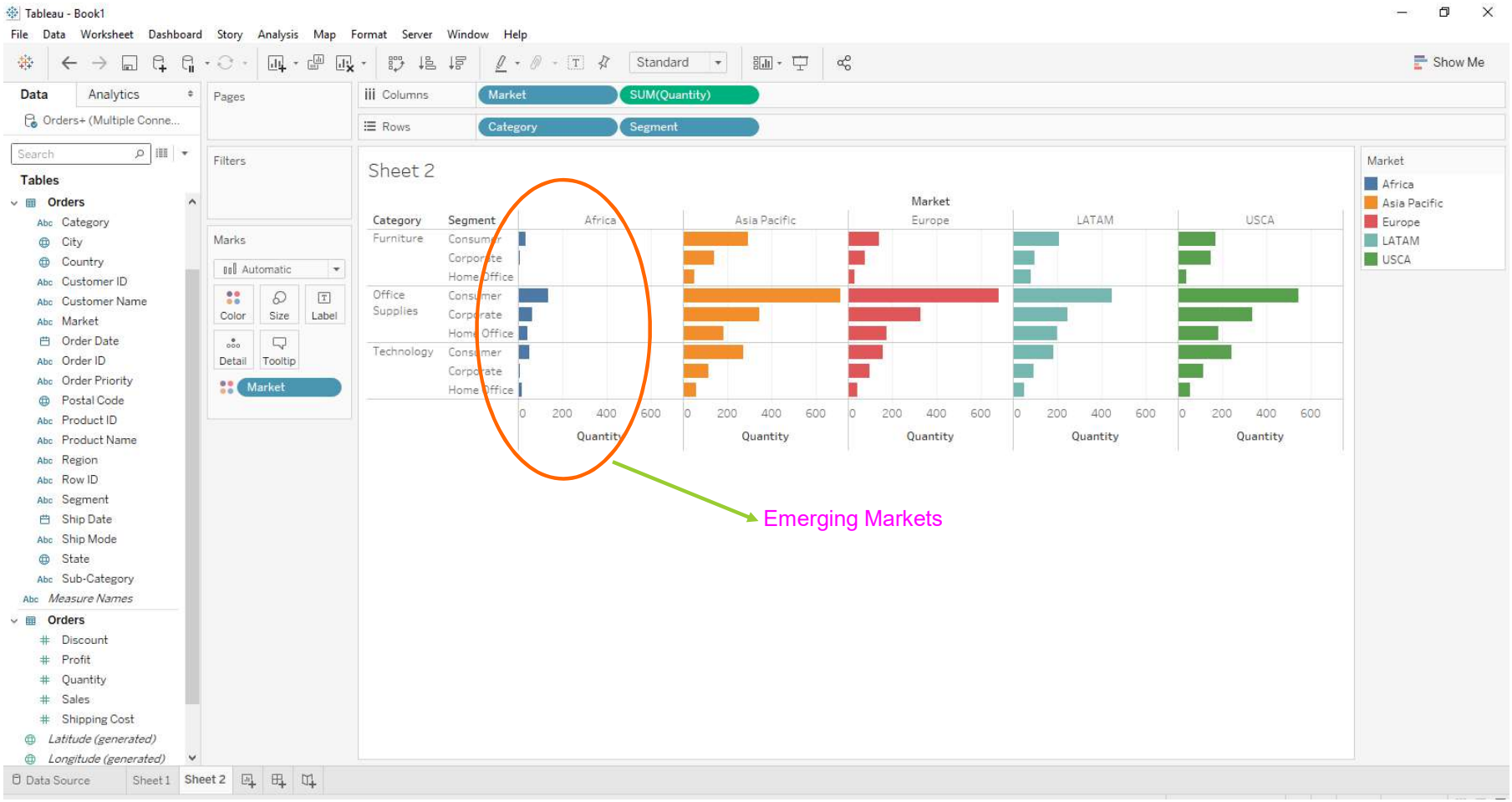


Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
Data
Analytics
Orders+ (Multiple Conne...
Search
Tables
Orders
Category
City
Country
Customer ID
Customer Name
Market
Order Date
Order ID
Order Priority
Postal Code
Product ID
Product Name
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Ship Date
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Measure Names
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Columns
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Sheet 2
Market
Africa
Asia Pacific
Europe
LATAM
USCA
Category
Segment
Furniture
Office Supplies
Technology
Consumer
Corporate
Home Office
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600
Quantity
Market
Africa
Asia Pacific
Europe
LATAM
USCA
Emerging Markets
Data Source
Sheet 1
Sheet 2

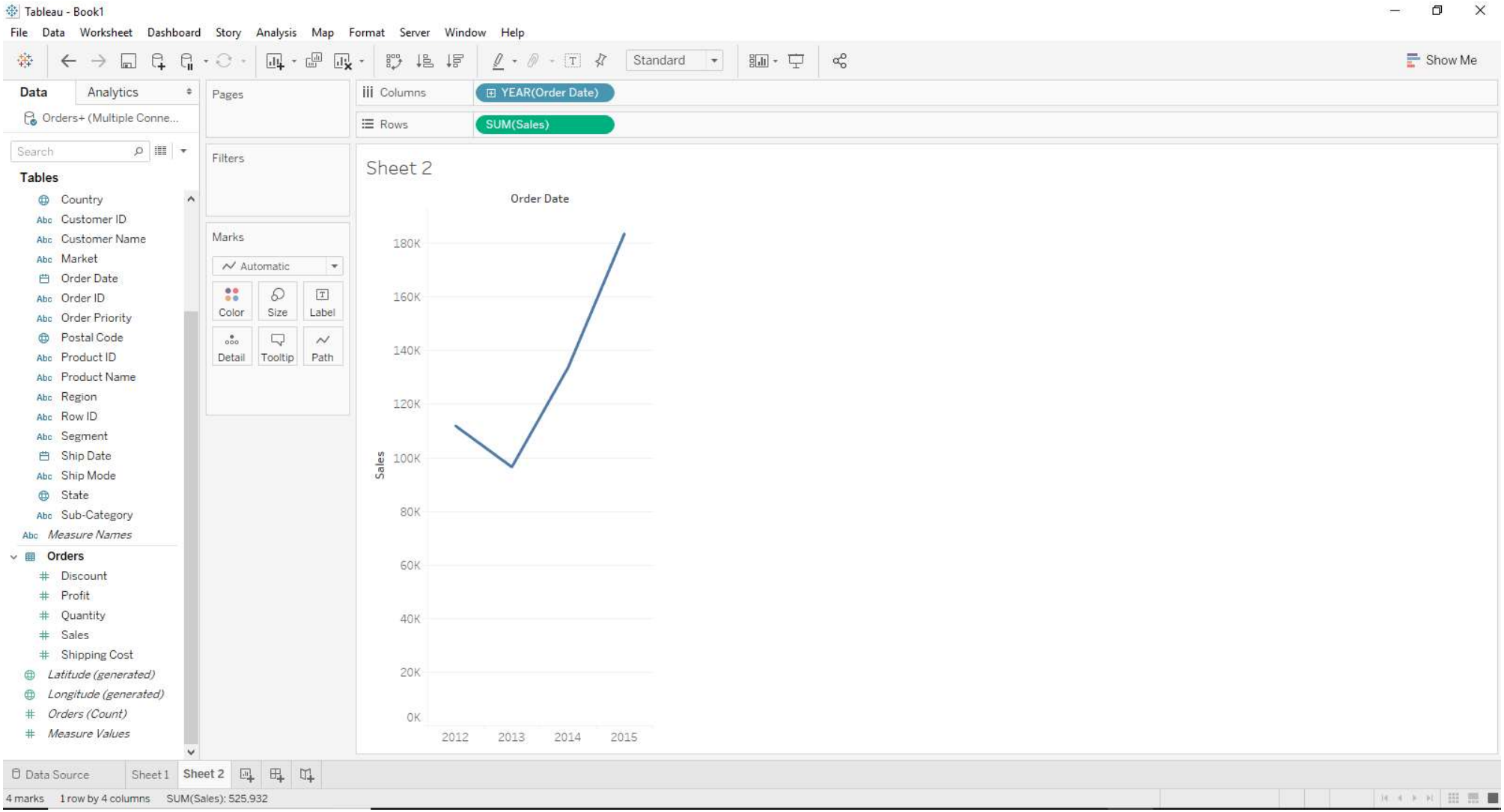
Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
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State
Sub-Category
Measure Names
Orders
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Filters
Marks
Automatic
Color
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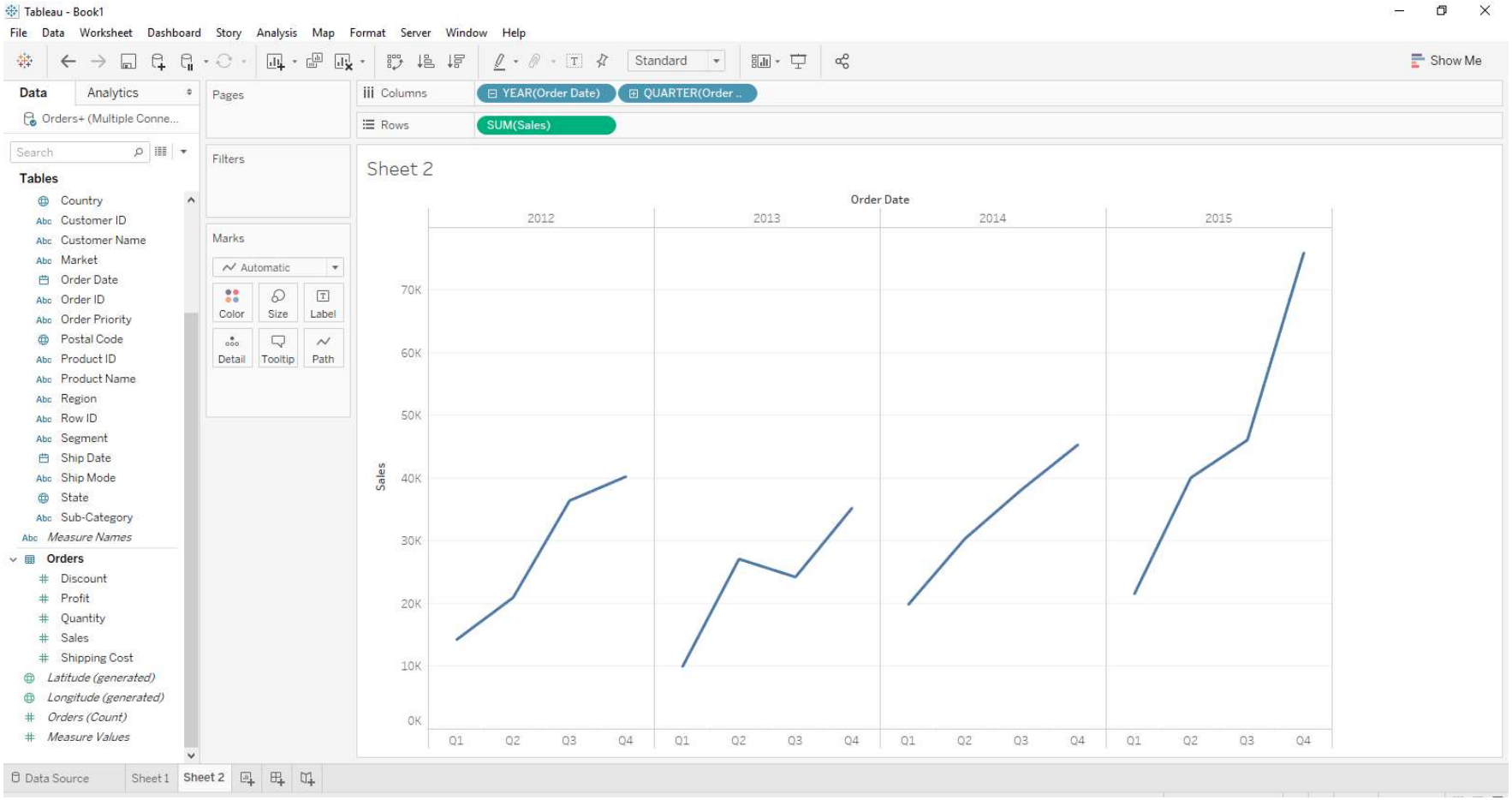
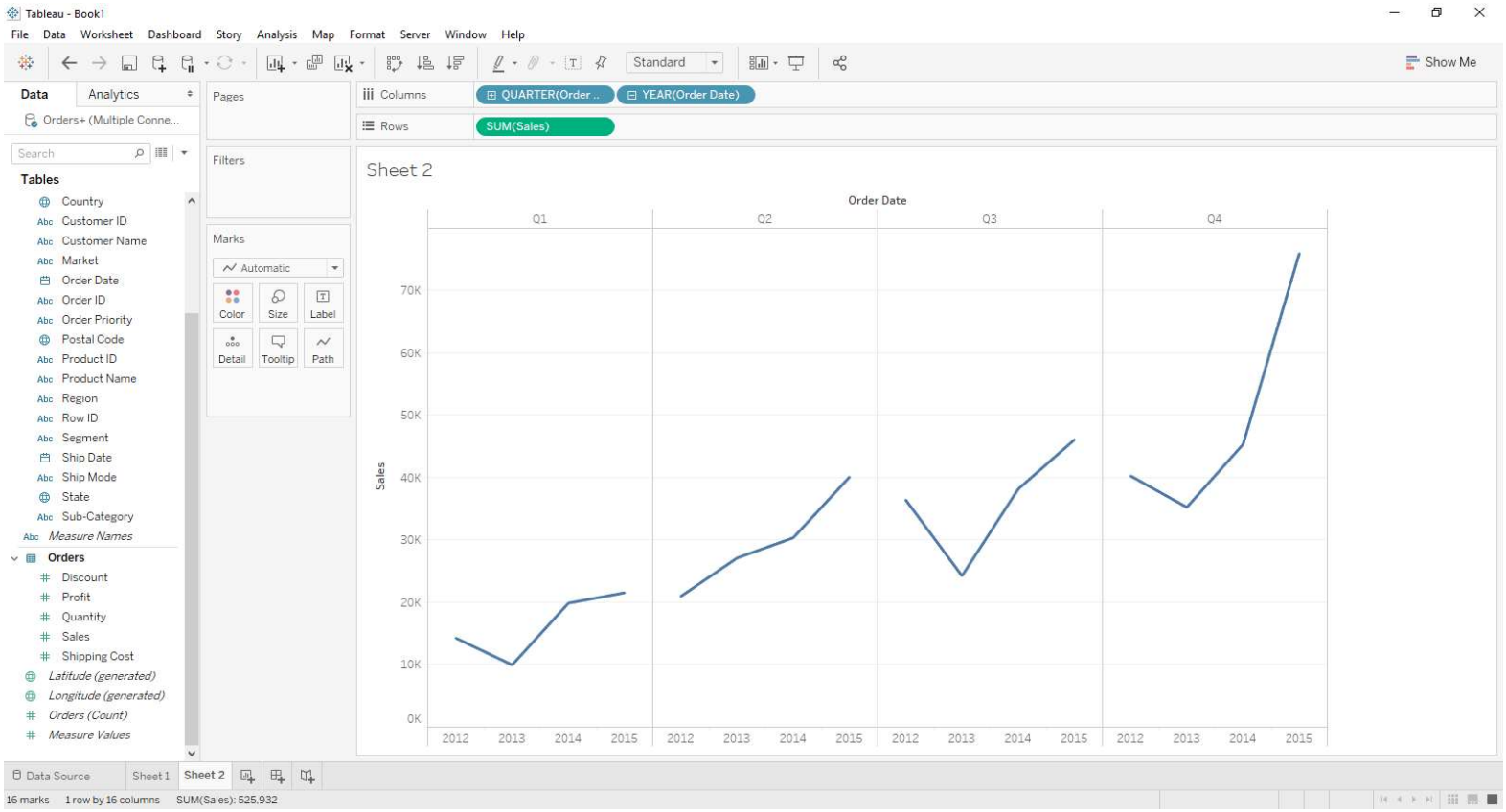
Detail
Tooltip
Path
Columns
YEAR(Order Date)
Rows
SUM(Sales)
Sheet 2
Order Date
Sales
180K
160K
140K
120K
100K
80K
60K
40K
20K
0K
2012
2013
2014
2015
Data Source
Sheet 1
Sheet 2
4 marks
1 row by 4 columns
SUM(Sales): 525.932

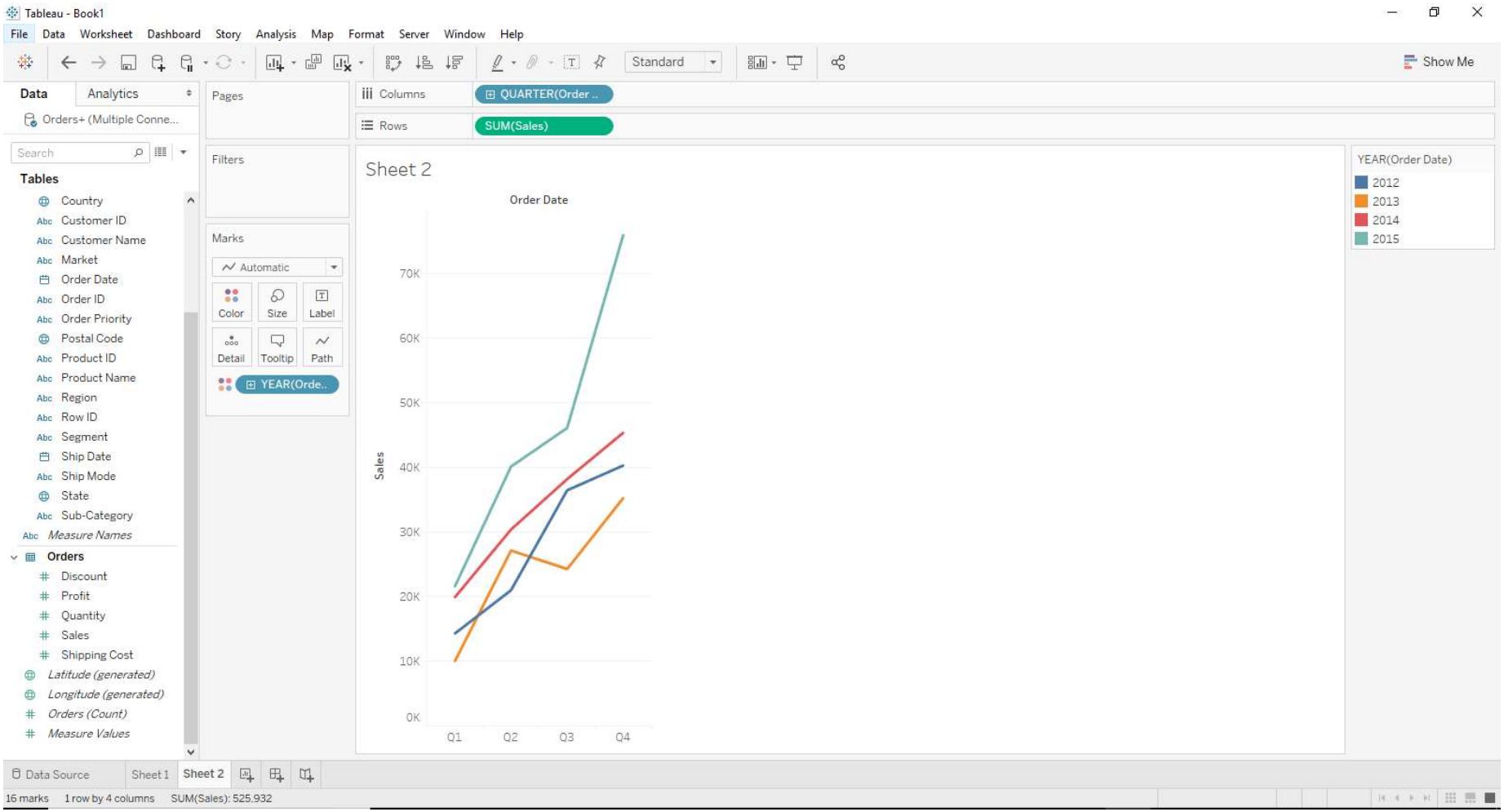
Year and Quarter



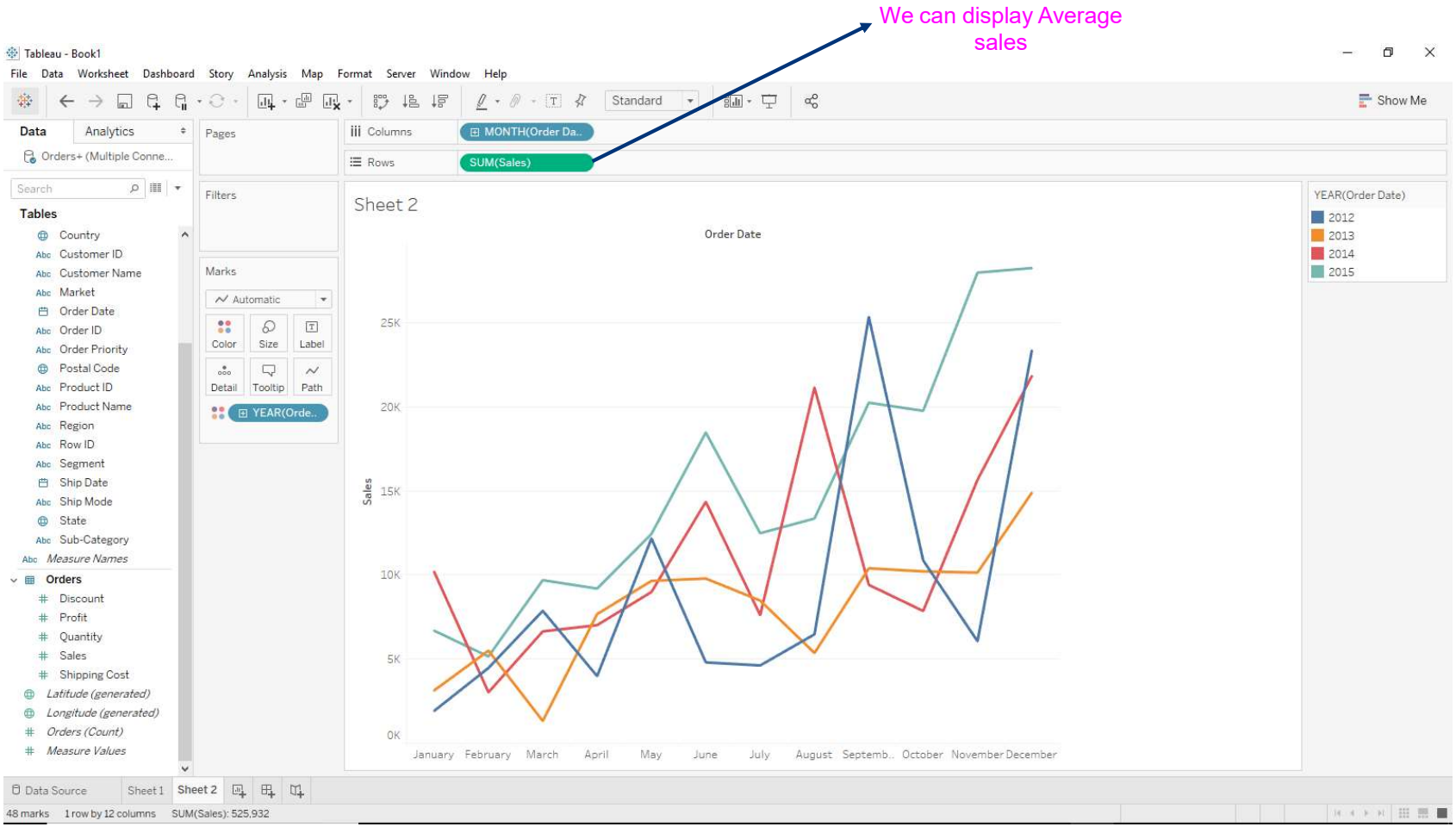
Year and Quarter



Colors on year



Monthly sales



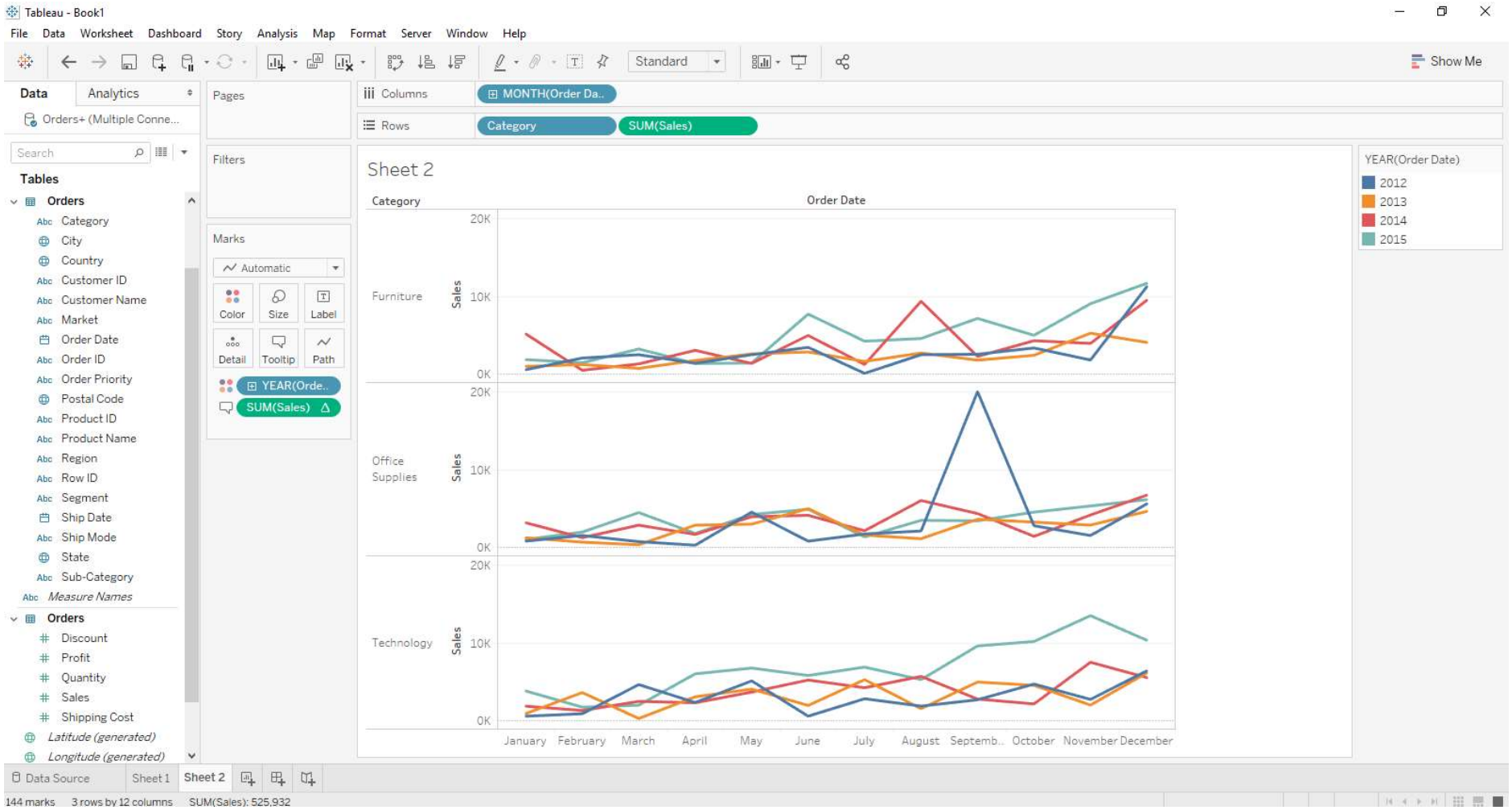


Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
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Analytics
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Search
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Abc Category
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SUM(Sales)
Sheet 2
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Office Supplies
Technology
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January February March April May June July August Septemb.. October November December
YEAR(Order Date)
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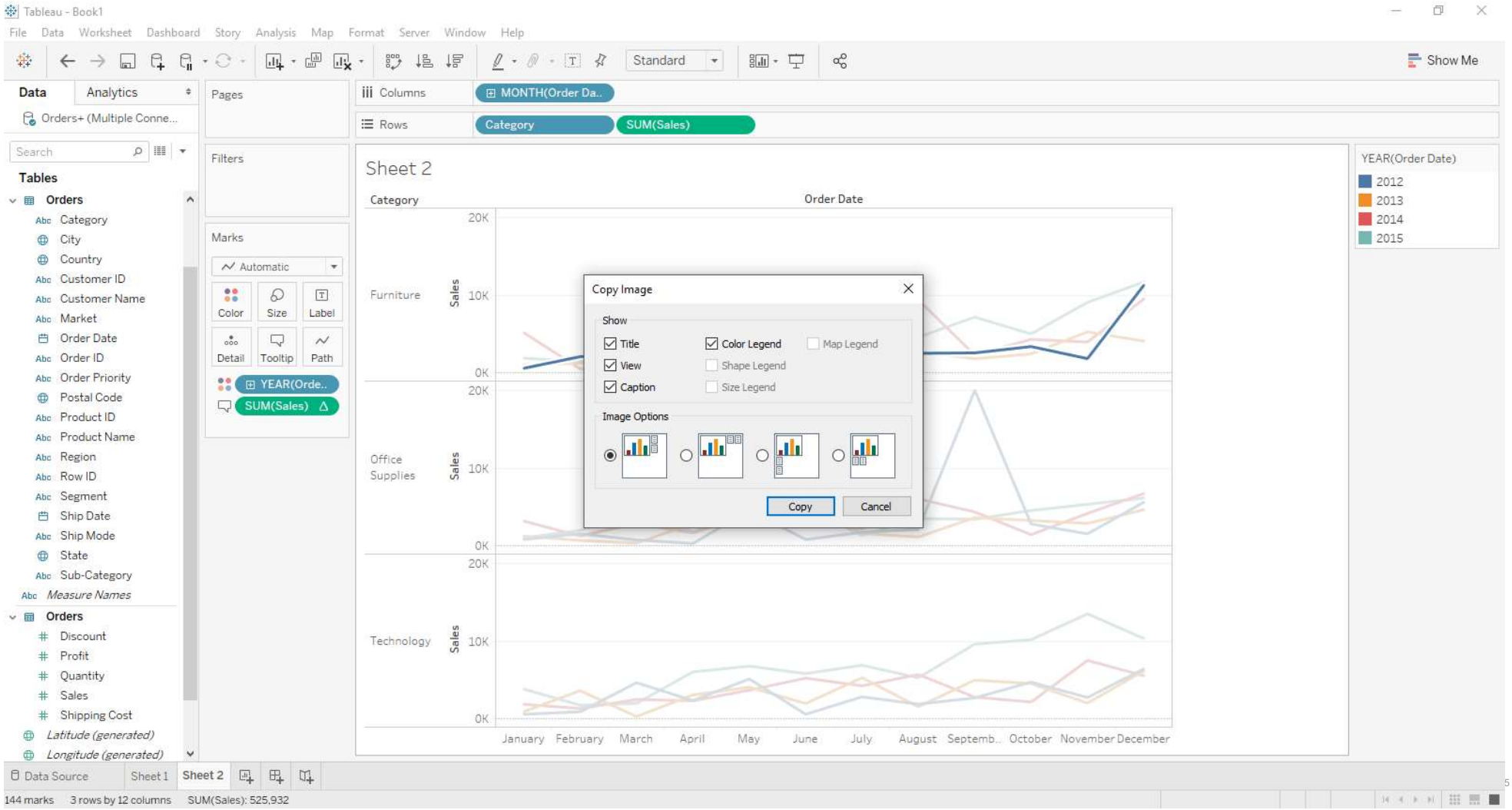
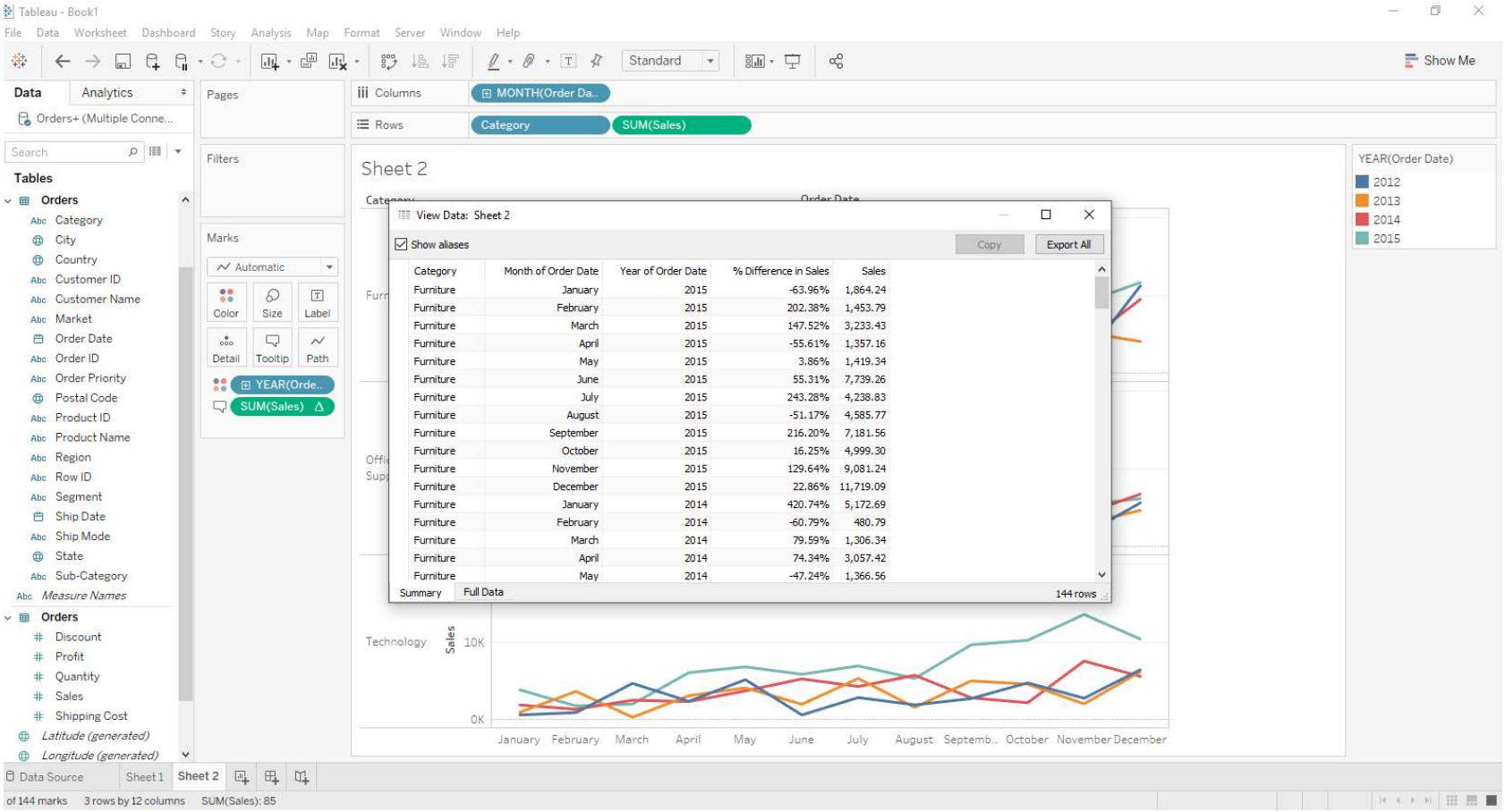
Data Source
Sheet 1
Sheet 2
144 marks
3 rows by 12 columns
SUM(Sales): 525,932

Copy Image and Share



View and copy data



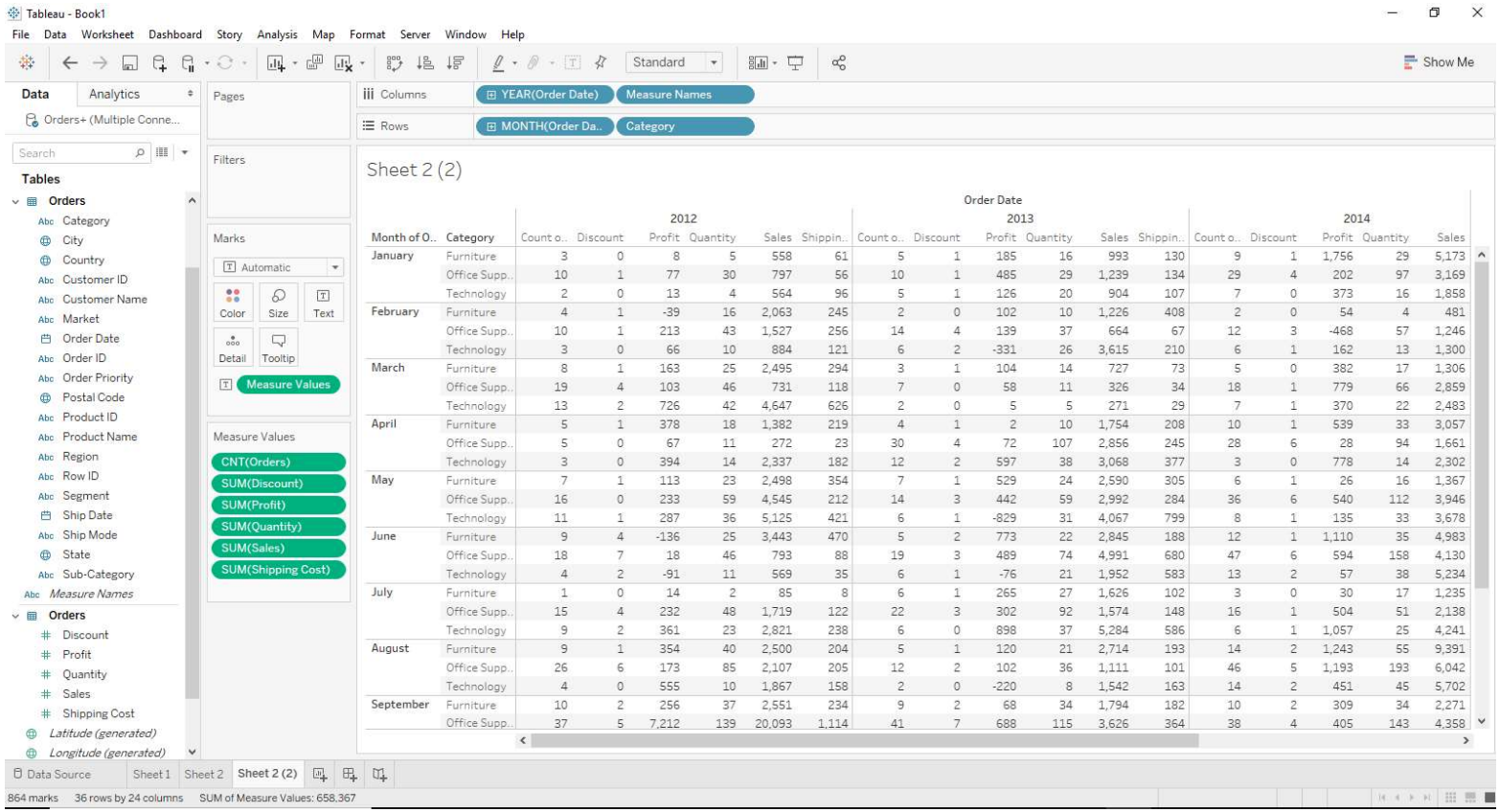


Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
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Furniture
Office Supp..
Technology
Data Source
Sheet 1
Sheet 2
Sheet 2 (2)
864 marks
36 rows by 24 columns
SUM of Measure Values: 658,367

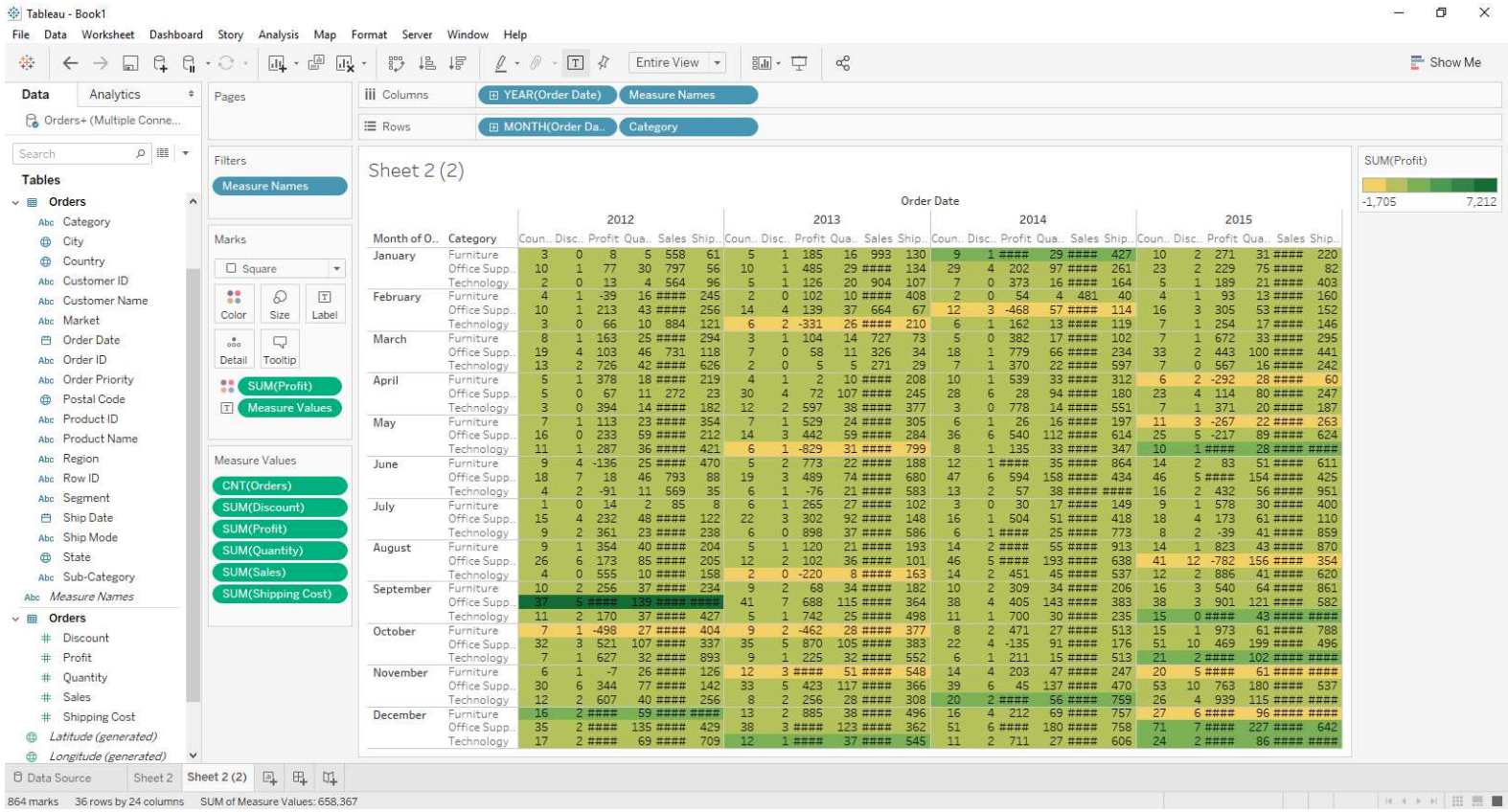
Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
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Technology
SUM(Profit)
-1,705
7,212
Data Source
Sheet 2
Sheet 2 (2)
864 marks
36 rows by 24 columns
SUM of Measure Values: 658,367

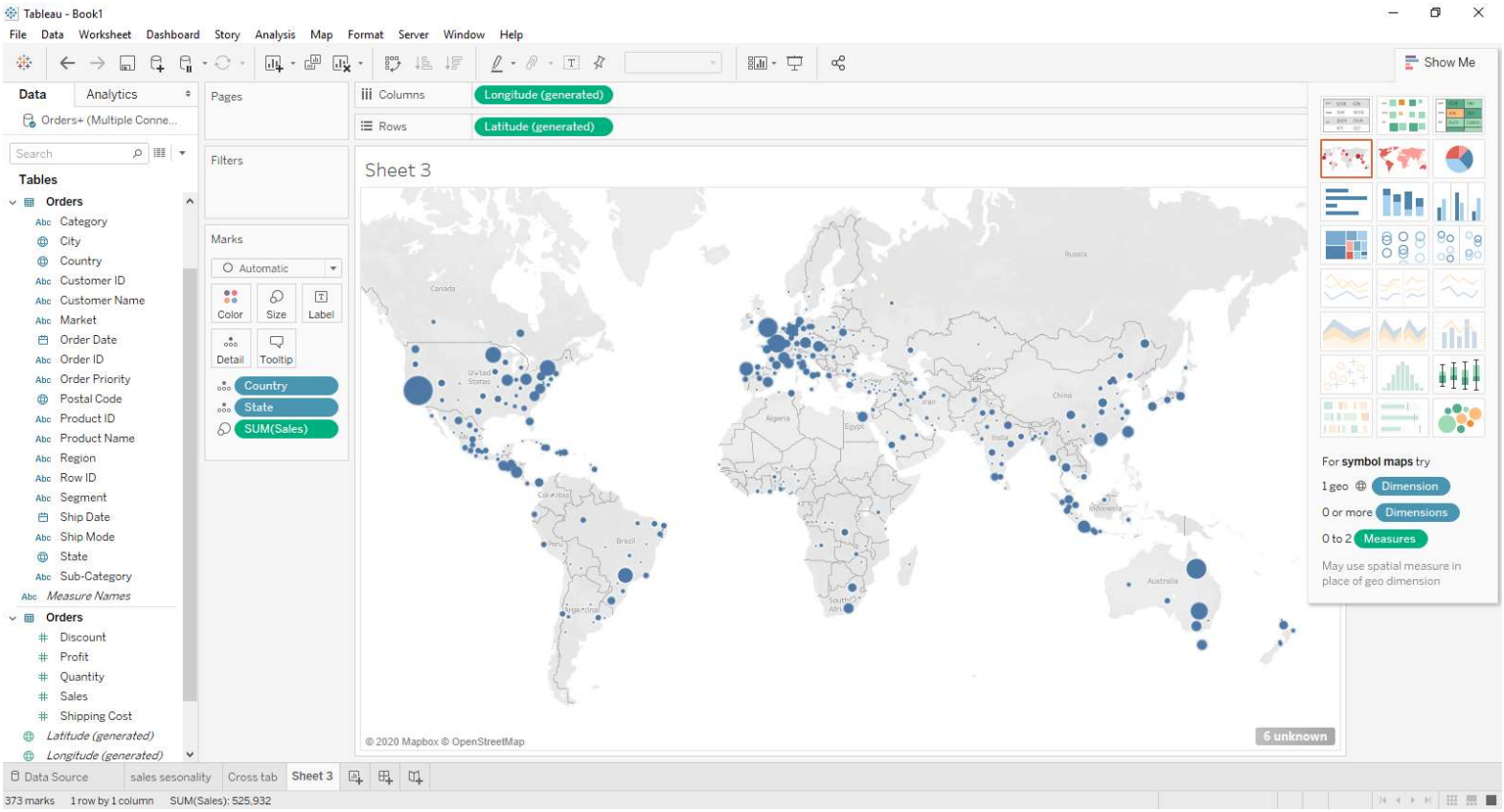
Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Show Me
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Country
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SUM(Sales)
Columns
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Rows
Latitude (generated)
Sheet 3
© 2020 Mapbox © OpenStreetMap
6 unknown
For symbol maps try
1 geo Dimension
0 or more Dimensions
0 to 2 Measures
May use spatial measure in place of geo dimension
Data Source
sales sesonality
Cross tab
Sheet 3
373 marks
1 row by 1 column
SUM(Sales): 525,932

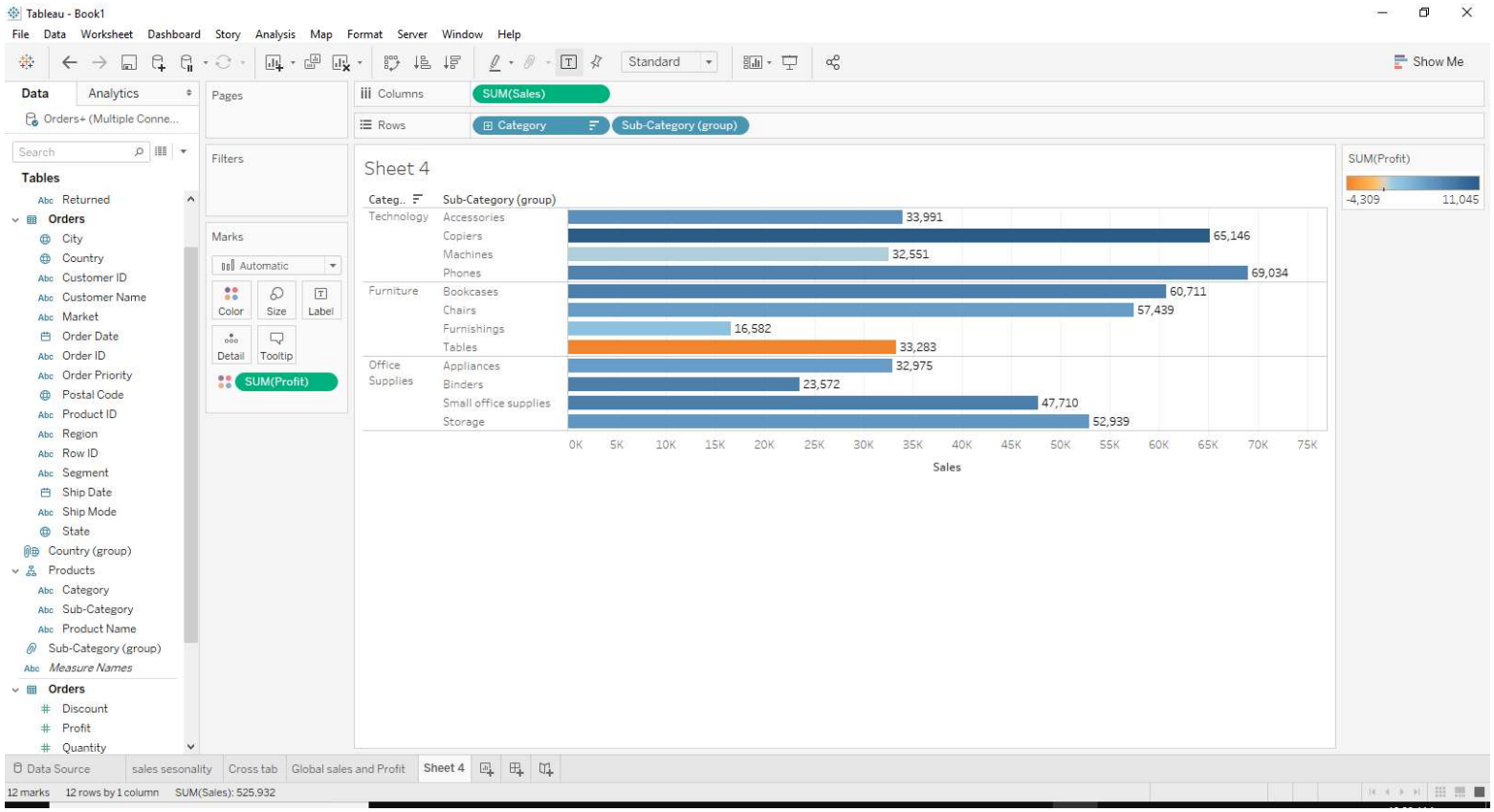
Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
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Order ID
Order Priority
Postal Code
Product ID
Region
Row ID
Segment
Ship Date
Ship Mode
State
Country (group)
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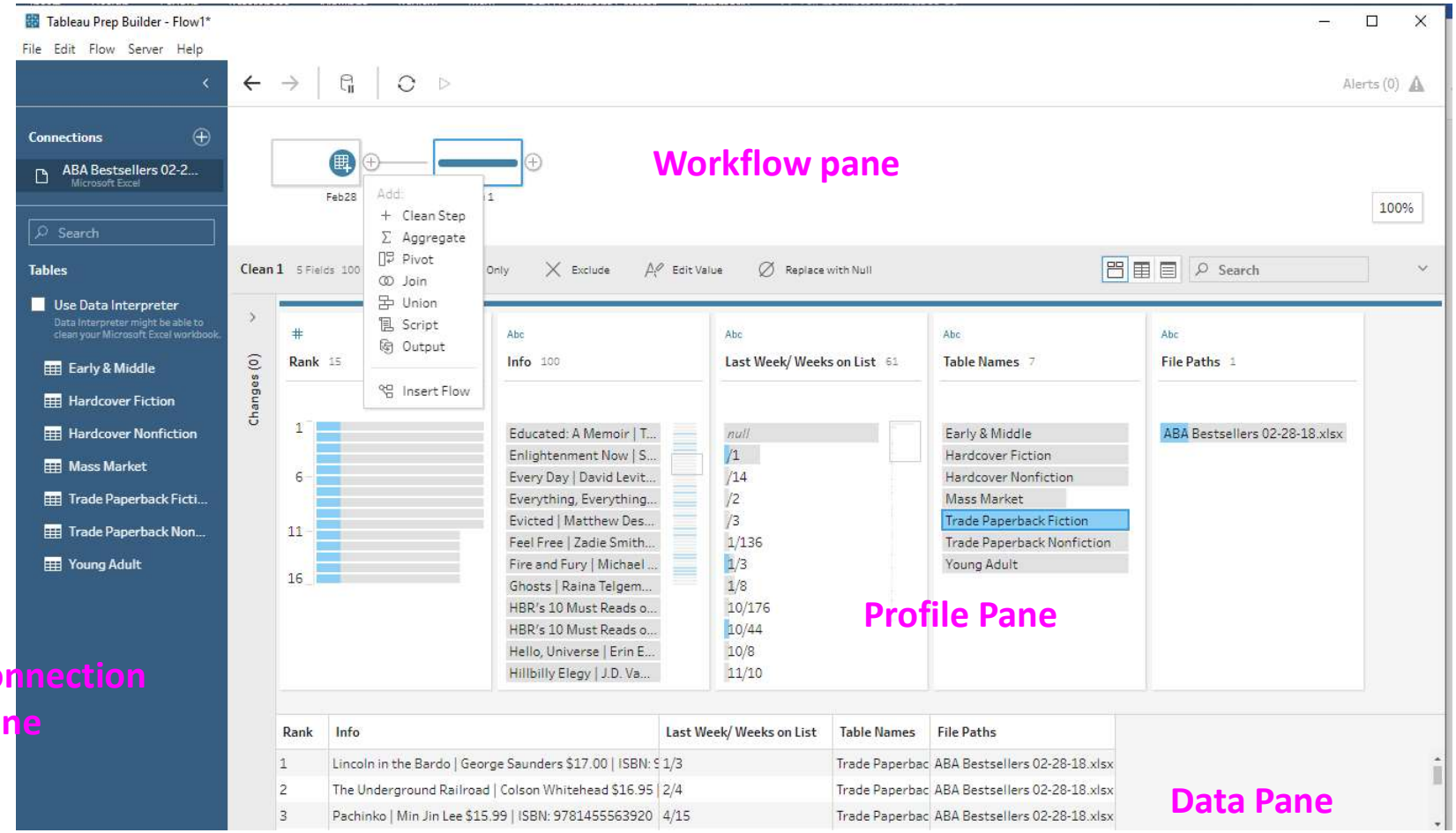
Category
Sub-Category
Product Name
Sub-Category (group)
Measure Names
Orders
Discount
Profit
Quantity
Pages
Filters
Marks
Automatic
Color
Size
Label
Detail
Tooltip
SUM(Profit)
Columns
SUM(Sales)
Rows
Category
Sub-Category (group)
Sheet 4
Categ..
Sub-Category (group)
Technology
Accessories 33,991
Copiers 65,146
Machines 32,551
Phones 69,034
Furniture
Bookcases 60,711
Chairs 57,439
Furnishings 16,582
Tables 33,283
Office Supplies
Appliances 32,975
Binders 23,572
Small office supplies 47,710
Storage 52,939
0K 5K 10K 15K 20K 25K 30K 35K 40K 45K 50K 55K 60K 65K 70K 75K
Sales
SUM(Profit)
-4,309
11,045
Data Source
sales sesonality
Cross tab
Global sales and Profit
Sheet 4
12 marks
12 rows by 1 column
SUM(Sales): 525,932

Tableau Prep



thank you
danke
謝謝
ngiyabonga
teşekkür ederim
gracias
спасибо
bedankt
dziękuję
obrigado
sukriya
kop khun krap
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grazie
terima kasih
감사합니다
merci
мерси
tapadh leat
dank je
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ありがとう