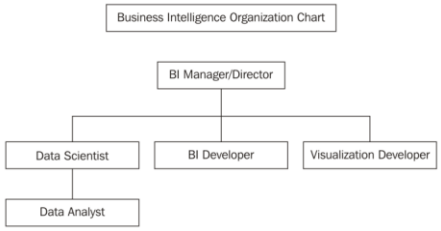
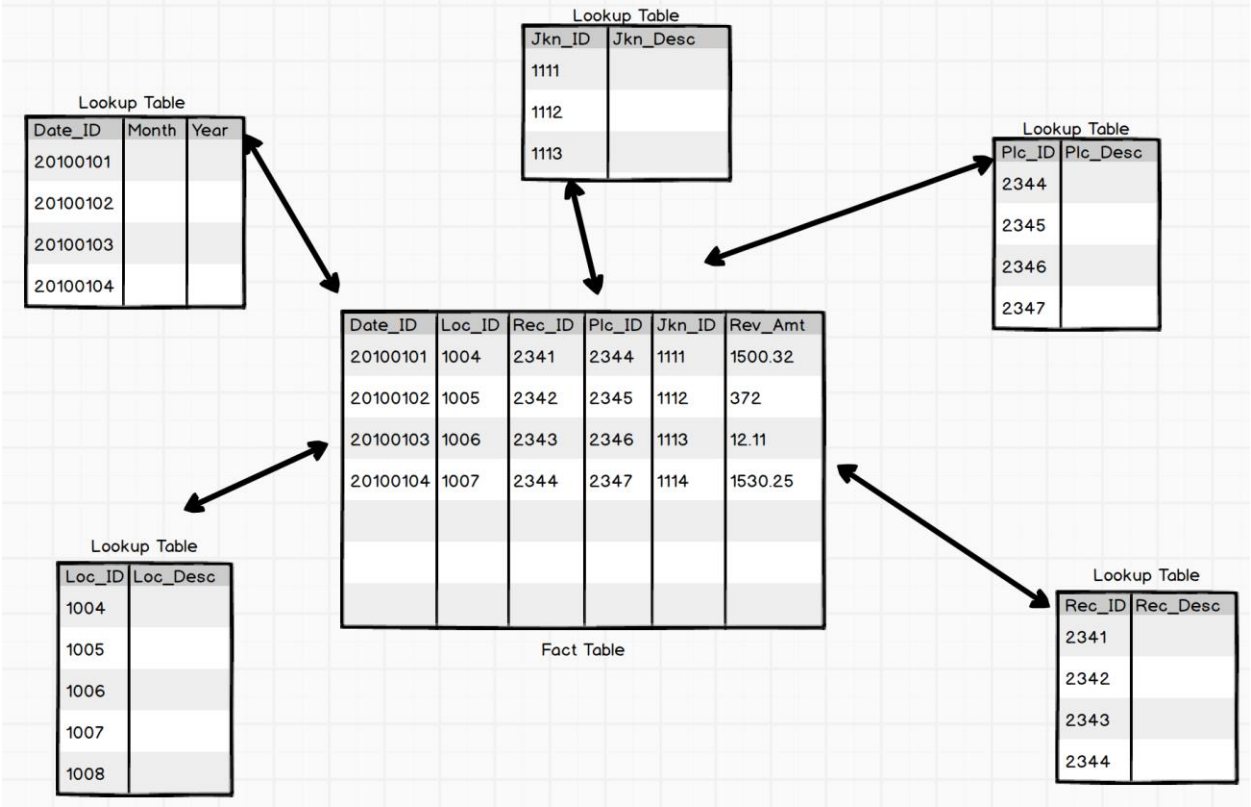
Chapter 1: Introduction to Practical Business Intelligence





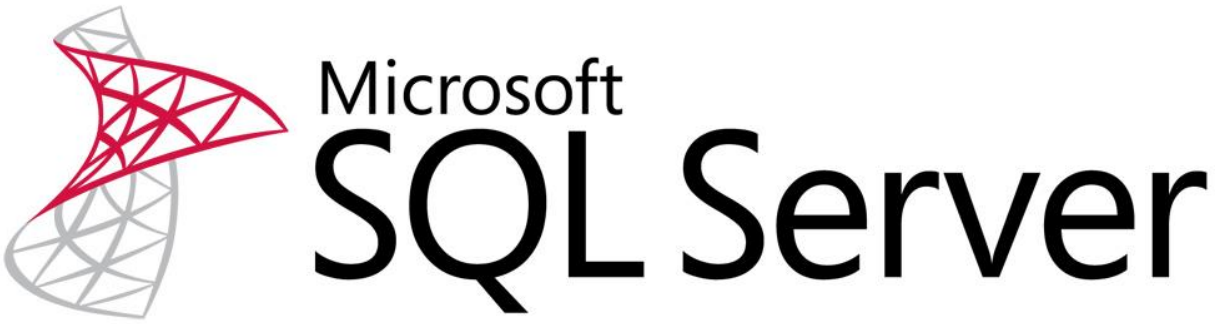

Power BI

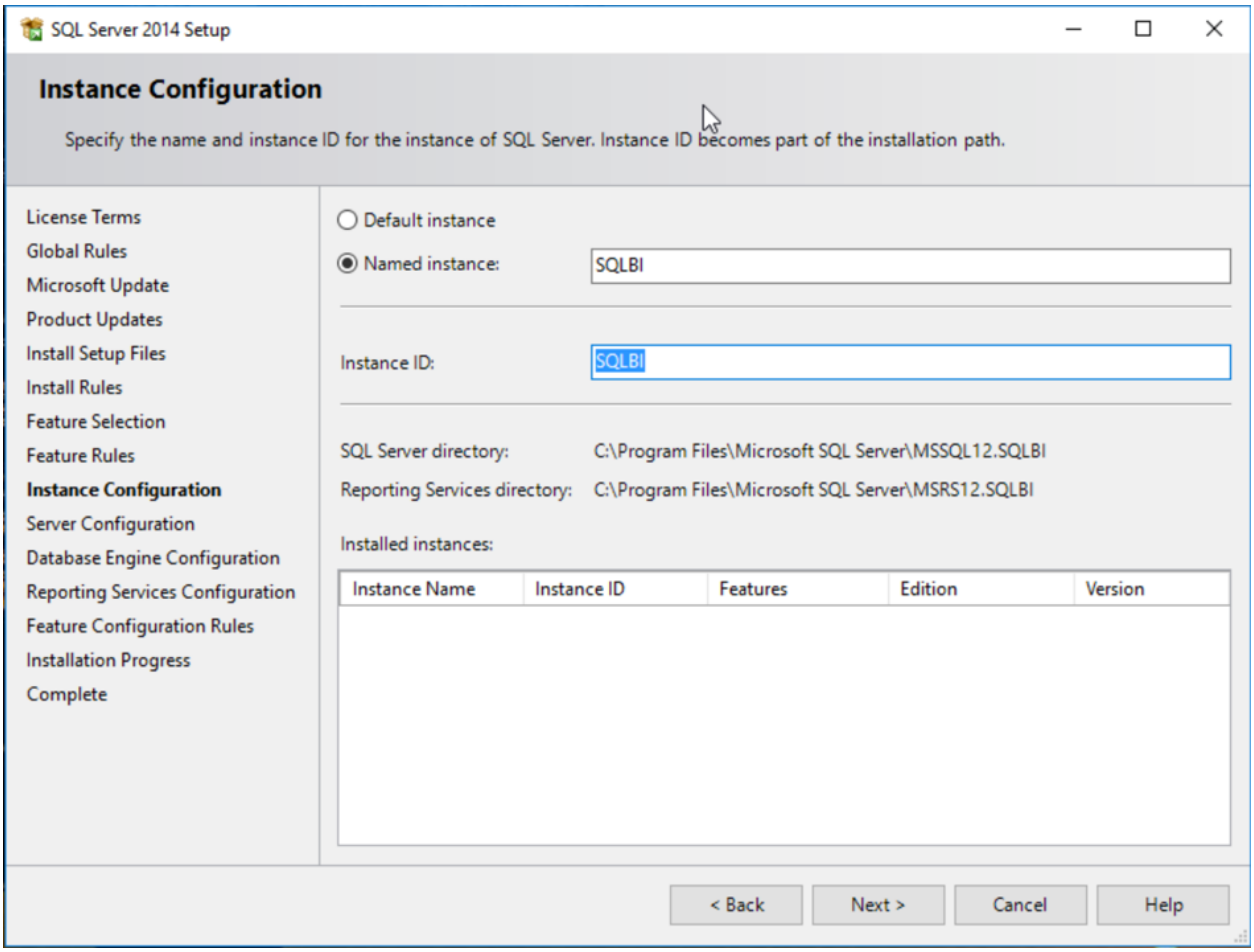

Data-Driven Documents

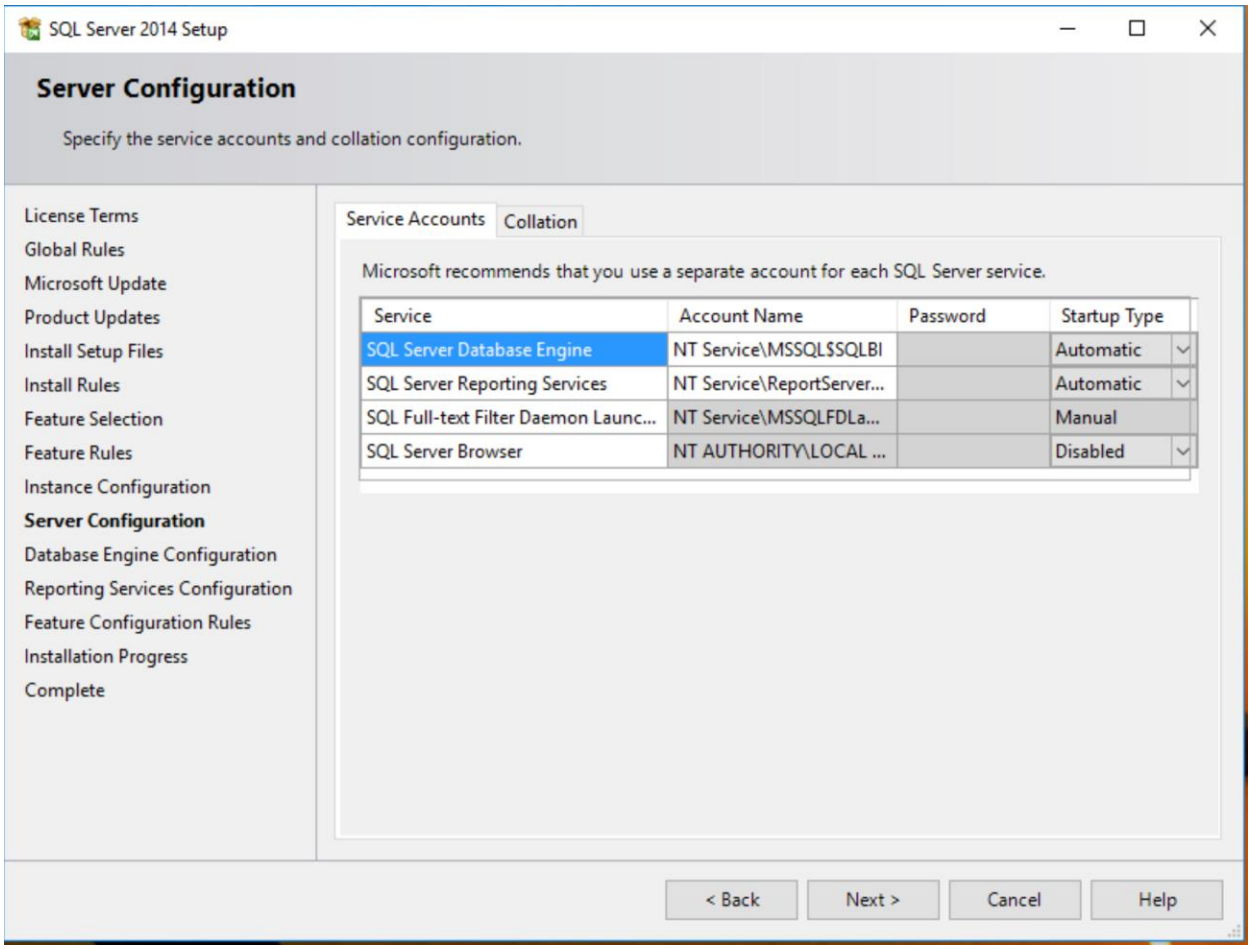

RStudio

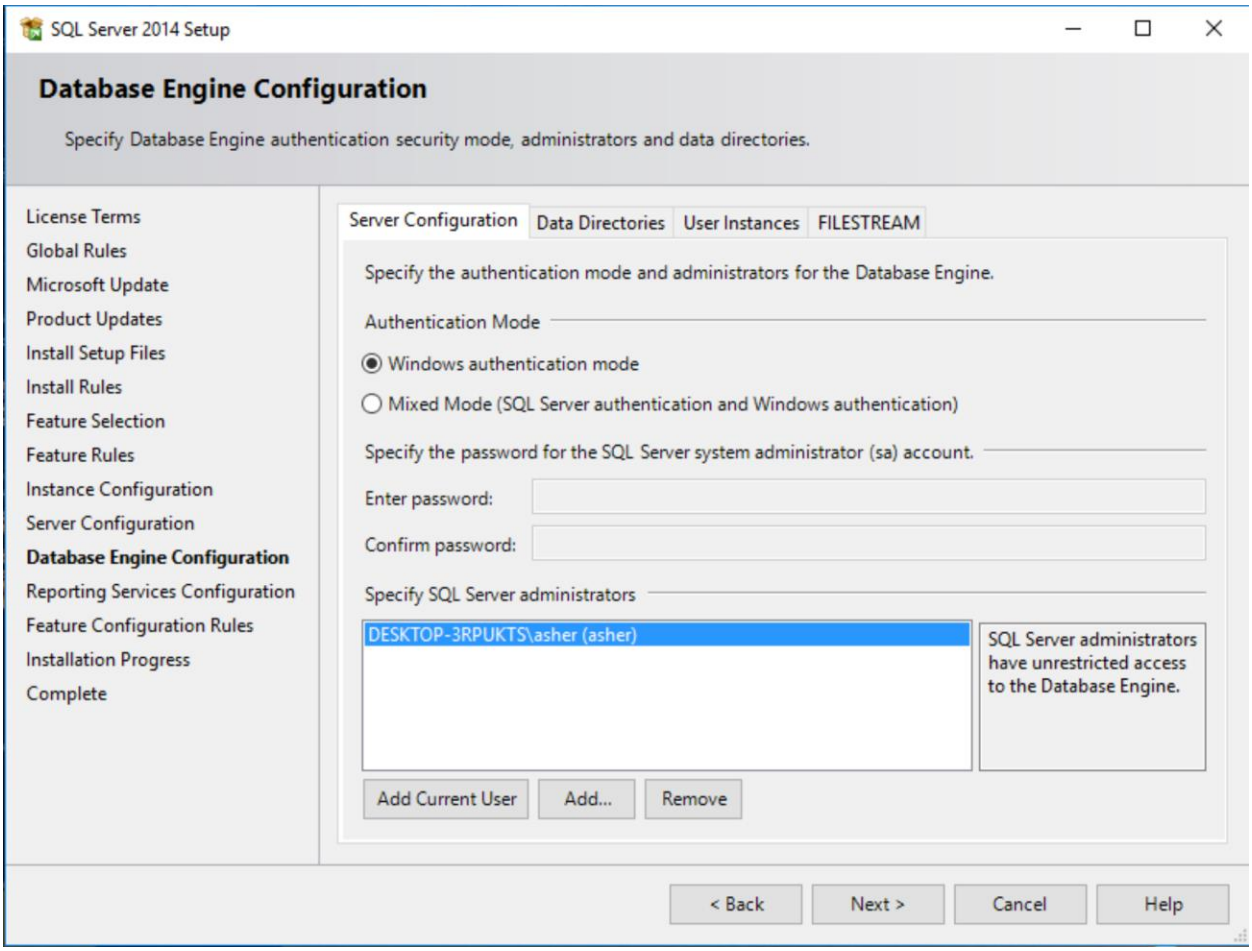

python

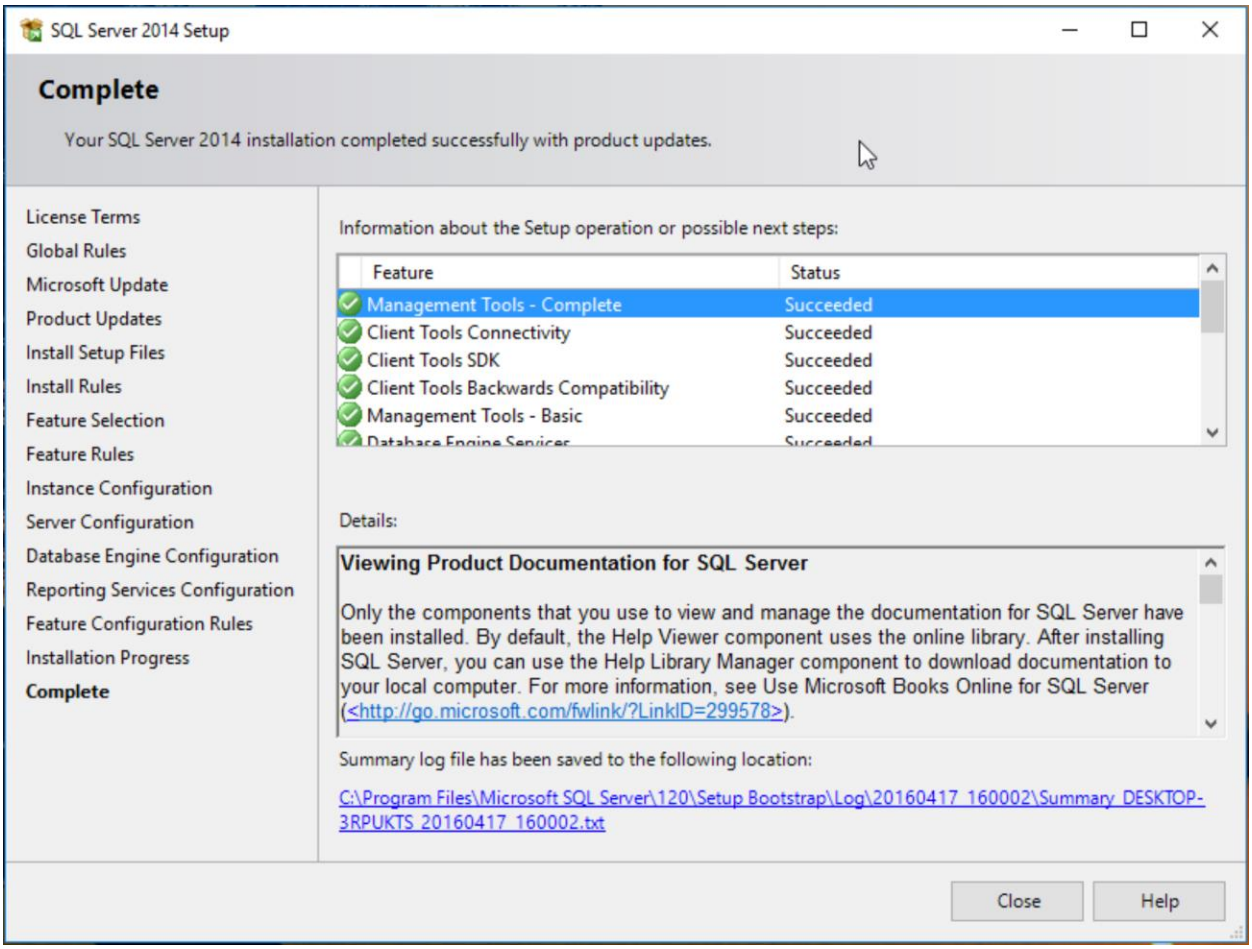

+ableau

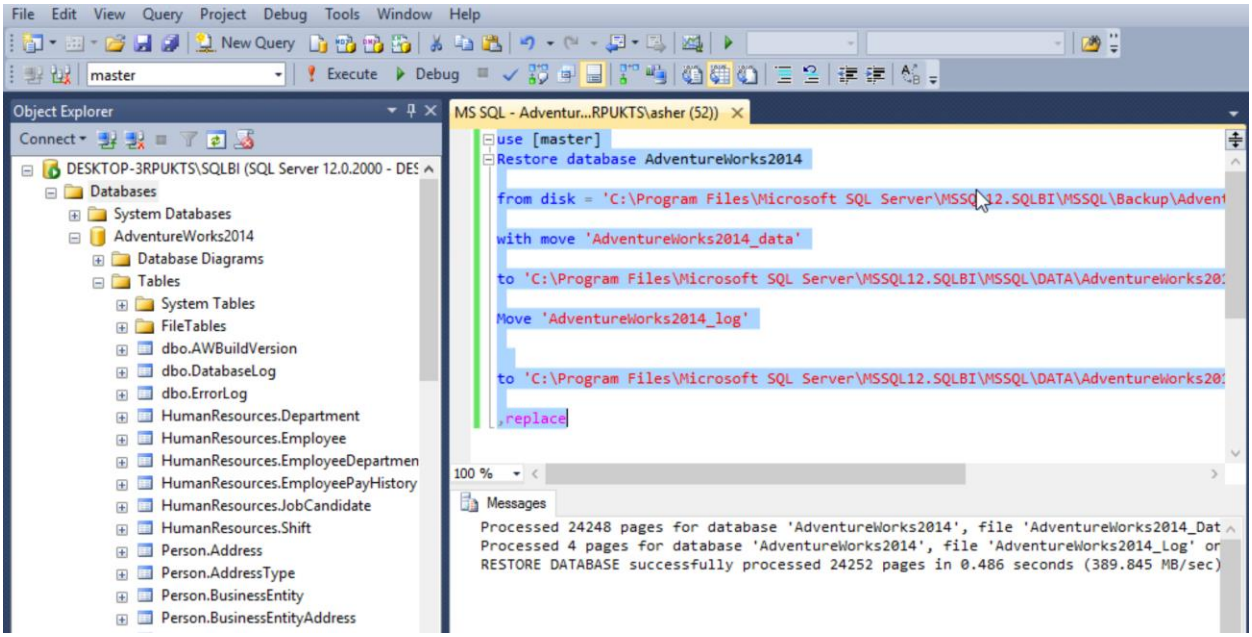

Microsoft
SQL Server

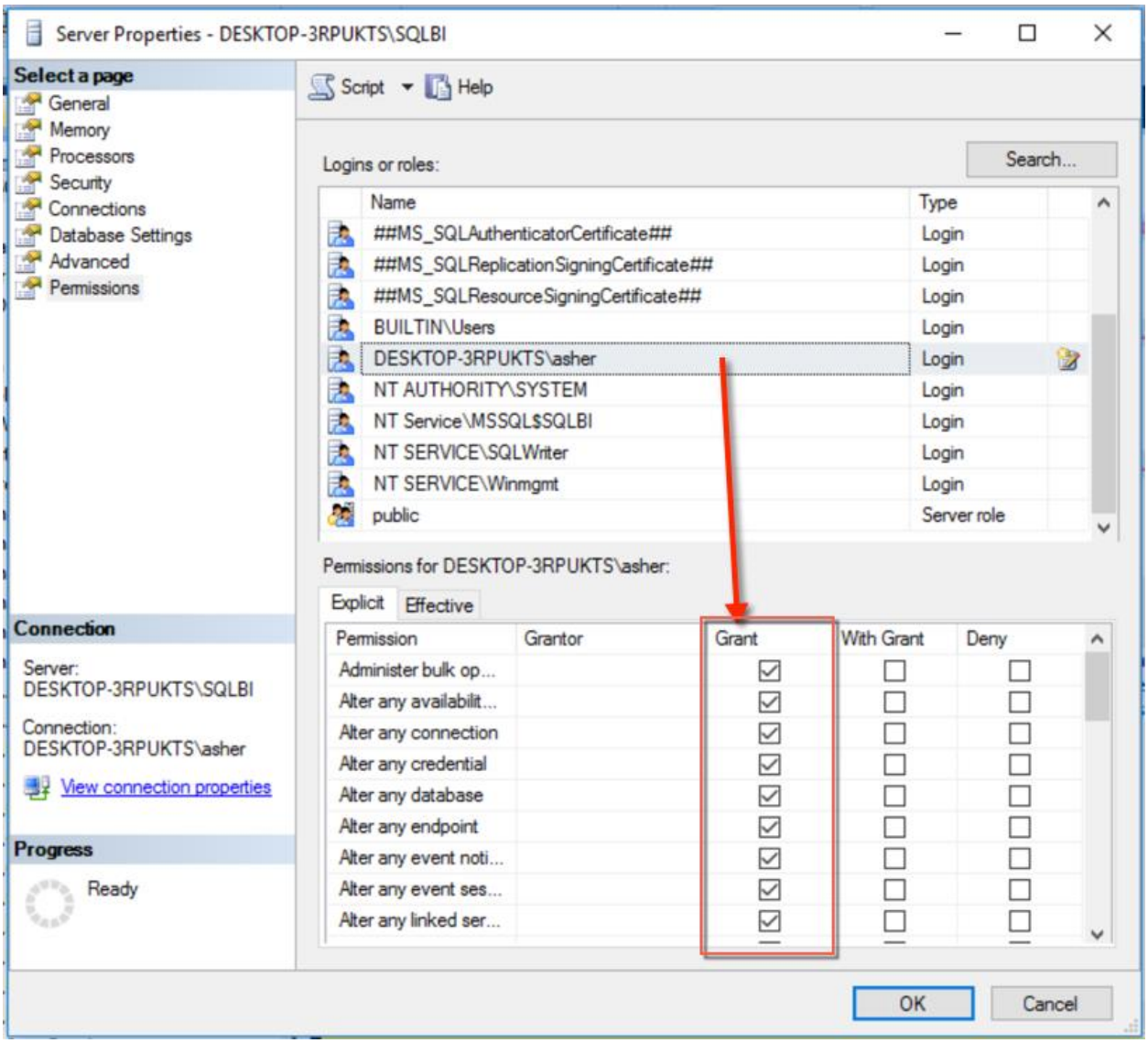

SQL Server 2014 Setup
Instance Configuration
Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Reporting Services Configuration
Feature Configuration Rules
Installation Progress
Complete
Default instance
Named instance:
SQLBI
Instance ID:
SQLBI
SQL Server directory:
C:\Program Files\Microsoft SQL Server\MSSQL12.SQLBI
Reporting Services directory:
C:\Program Files\Microsoft SQL Server\MSRS12.SQLBI
Installed instances:
Instance Name
Instance ID
Features
Edition
Version
< Back
Next >
Cancel
Help

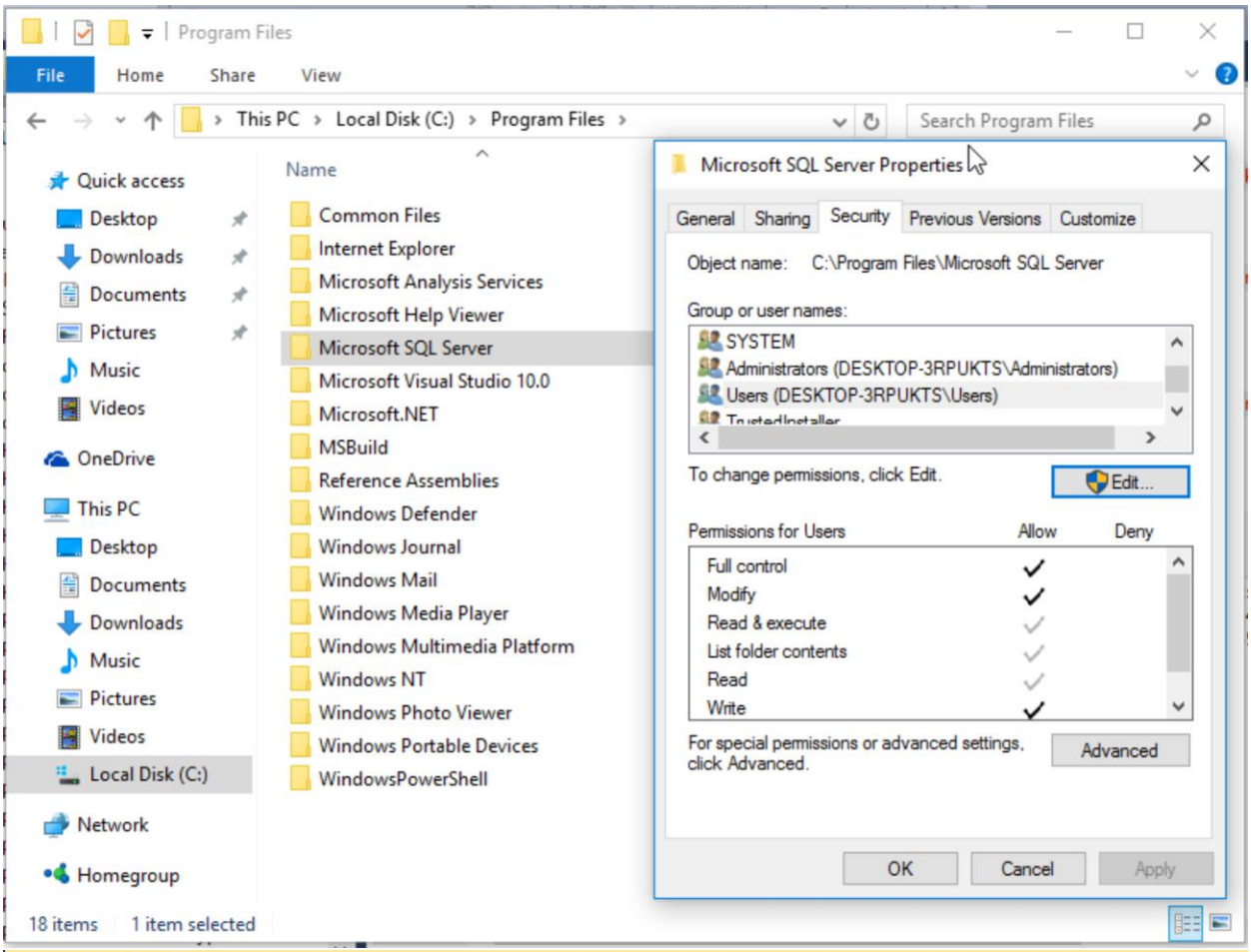

SQL Server 2014 Setup
Server Configuration
Specify the service accounts and collation configuration.
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Reporting Services Configuration
Feature Configuration Rules
Installation Progress
Complete
Service Accounts
Collation
Microsoft recommends that you use a separate account for each SQL Server service.
Service
Account Name
Password
Startup Type
SQL Server Database Engine
NT Service\MSSQL$SQLBI
Automatic
SQL Server Reporting Services
NT Service\ReportServer...
Automatic
SQL Full-text Filter Daemon Launc...
NT Service\MSSQLFDLa...
Manual
SQL Server Browser
NT AUTHORITY\LOCAL ...
Disabled
< Back
Next >
Cancel
Help


SQL Server 2014 Setup
Database Engine Configuration
Specify Database Engine authentication security mode, administrators and data directories.
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Reporting Services Configuration
Feature Configuration Rules
Installation Progress
Complete
Server Configuration
Data Directories
User Instances
FILESTREAM
Specify the authentication mode and administrators for the Database Engine.
Authentication Mode
Windows authentication mode
Mixed Mode (SQL Server authentication and Windows authentication)
Specify the password for the SQL Server system administrator (sa) account.
Enter password:
Confirm password:
Specify SQL Server administrators
DESKTOP-3RPUKTS\asher (asher)
SQL Server administrators have unrestricted access to the Database Engine.
Add Current User
Add...
Remove
< Back
Next >
Cancel
Help


SQL Server 2014 Setup
Complete
Your SQL Server 2014 installation completed successfully with product updates.
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Reporting Services Configuration
Feature Configuration Rules
Installation Progress
Complete
Information about the Setup operation or possible next steps:
Feature
Status
Management Tools - Complete
Succeeded
Client Tools Connectivity
Succeeded
Client Tools SDK
Succeeded
Client Tools Backwards Compatibility
Succeeded
Management Tools - Basic
Succeeded
Details:
Viewing Product Documentation for SQL Server
Only the components that you use to view and manage the documentation for SQL Server have been installed. By default, the Help Viewer component uses the online library. After installing SQL Server, you can use the Help Library Manager component to download documentation to your local computer. For more information, see Use Microsoft Books Online for SQL Server (<http://go.microsoft.com/fwlink/?LinkID=299578>).
Summary log file has been saved to the following location:
C:\Program Files\Microsoft SQL Server\120\Setup Bootstrap\Log\20160417_160002\Summary_DESKTOP-3RPUKTS_20160417_160002.txt
Close
Help


File Edit View Query Project Debug Tools Window Help
New Query
master
Execute
Debug
Object Explorer
Connect
DESKTOP-3RPUKTS\SQLBI (SQL Server 12.0.2000 - DES
Databases
System Databases
AdventureWorks2014
Database Diagrams
Tables
System Tables
FileTables
dbo.AWBuildVersion
dbo.DatabaseLog
dbo.ErrorLog
HumanResources.Department
HumanResources.Employee
HumanResources.EmployeeDepartmen
HumanResources.EmployeePayHistory
HumanResources.JobCandidate
HumanResources.Shift
Person.Address
Person.AddressType
Person.BusinessEntity
Person.BusinessEntityAddress
MS SQL - Adventur...RPUKTS\asher (52))
use [master]
Restore database AdventureWorks2014
from disk = 'C:\Program Files\Microsoft SQL Server\MSSQL12.SQLBI\MSSQL\Backup\Advent
with move 'AdventureWorks2014_data'
to 'C:\Program Files\Microsoft SQL Server\MSSQL12.SQLBI\MSSQL\DATA\AdventureWorks20
Move 'AdventureWorks2014_log'
to 'C:\Program Files\Microsoft SQL Server\MSSQL12.SQLBI\MSSQL\DATA\AdventureWorks20
,replace
100 %
Messages
Processed 24248 pages for database 'AdventureWorks2014', file 'AdventureWorks2014_Dat
Processed 4 pages for database 'AdventureWorks2014', file 'AdventureWorks2014_Log' or
RESTORE DATABASE successfully processed 24252 pages in 0.486 seconds (389.845 MB/sec)


Server Properties - DESKTOP-3RPUKTS\SQLBI
Select a page
General
Memory
Processors
Security
Connections
Database Settings
Advanced
Permissions
Script
Help
Logins or roles:
Search...
Name
Type
##MS_SQLAuthenticatorCertificate##
Login
##MS_SQLReplicationSigningCertificate##
Login
##MS_SQLResourceSigningCertificate##
Login
BUILTIN\Users
Login
DESKTOP-3RPUKTS\asher
Login
NT AUTHORITY\SYSTEM
Login
NT Service\MSSQL$SQLBI
Login
NT SERVICE\SQLWriter
Login
NT SERVICE\Winmgmt
Login
public
Server role
Permissions for DESKTOP-3RPUKTS\asher:
Explicit
Effective
Permission
Grantor
Grant
With Grant
Deny
Administer bulk op...
Alter any availabilit...
Alter any connection
Alter any credential
Alter any database
Alter any endpoint
Alter any event noti...
Alter any event ses...
Alter any linked ser...
Connection
Server:
DESKTOP-3RPUKTS\SQLBI
Connection:
DESKTOP-3RPUKTS\asher
View connection properties
Progress
Ready
OK
Cancel




```sql
Select
region.Name as Region
,round(sum(sales.SalesYTD),2) as SalesYTD
,round(sum(sales.SalesLastYear),2) as SalesPY
FROM [AdventureWorks2014].[Sales].[SalesTerritory] region
left outer join [AdventureWorks2014].[Sales].[SalesPerson] sales on
sales.TerritoryID = region.TerritoryID
where region.CountryRegionCode = 'US'
Group by region.Name
order by region.Name asc
```

100 %

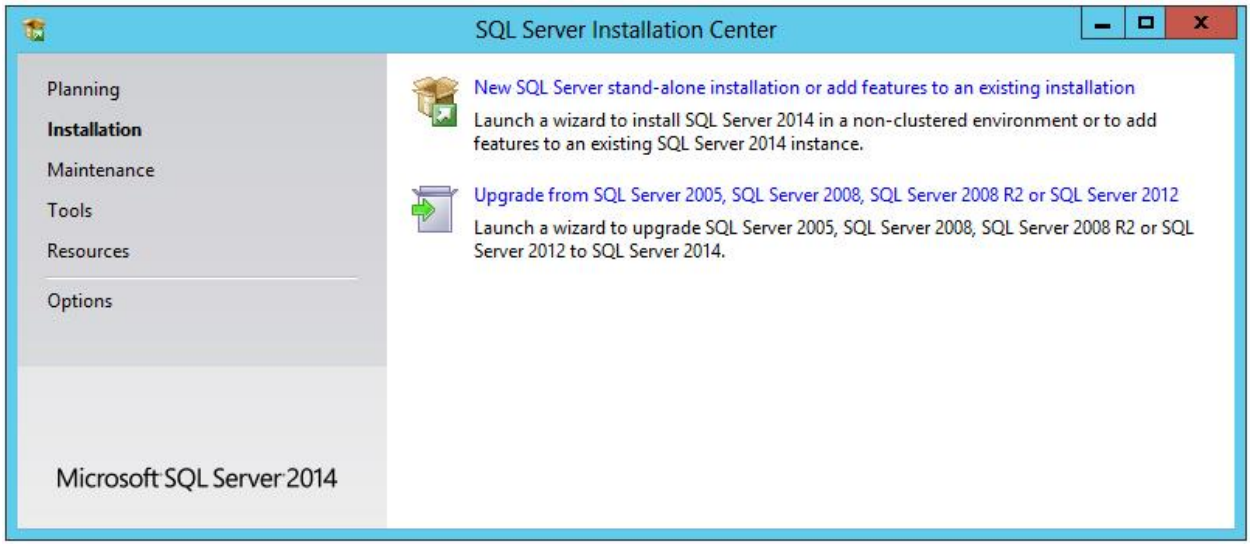
Results | Messages

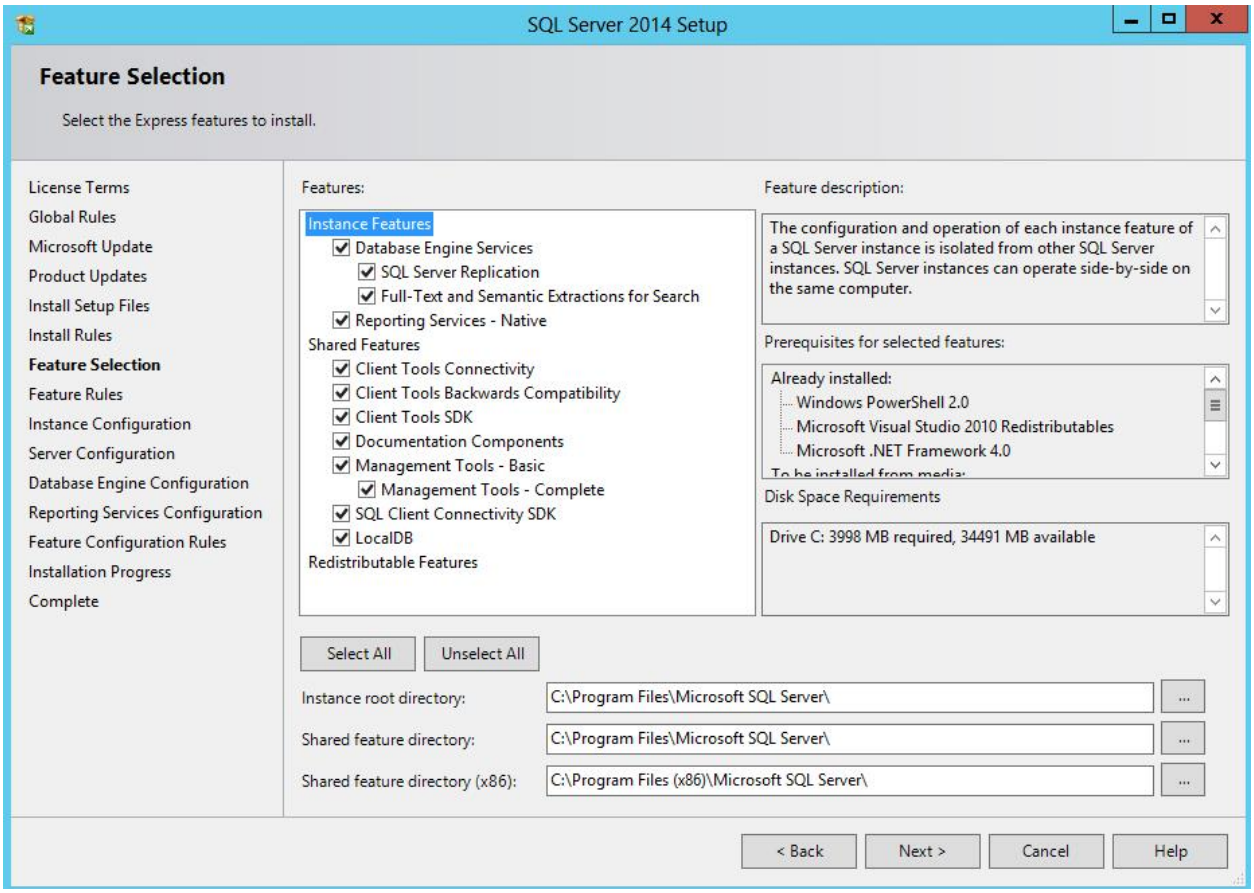
	Region	SalesYTD	SalesPY
1	Central	3189418.37	1997186.20
2	Northeast	3763178.18	1750406.48
3	Northwest	4502152.27	3298694.49
4	Southeast	2315185.61	1849640.94
5	Southwest	6709904.17	3512662.03

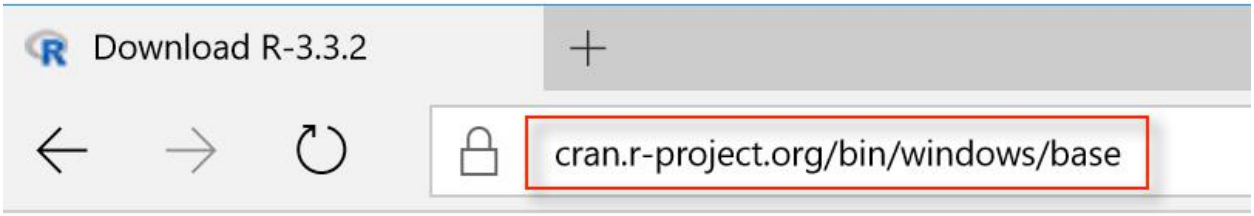
Qlik

Choose the download you want

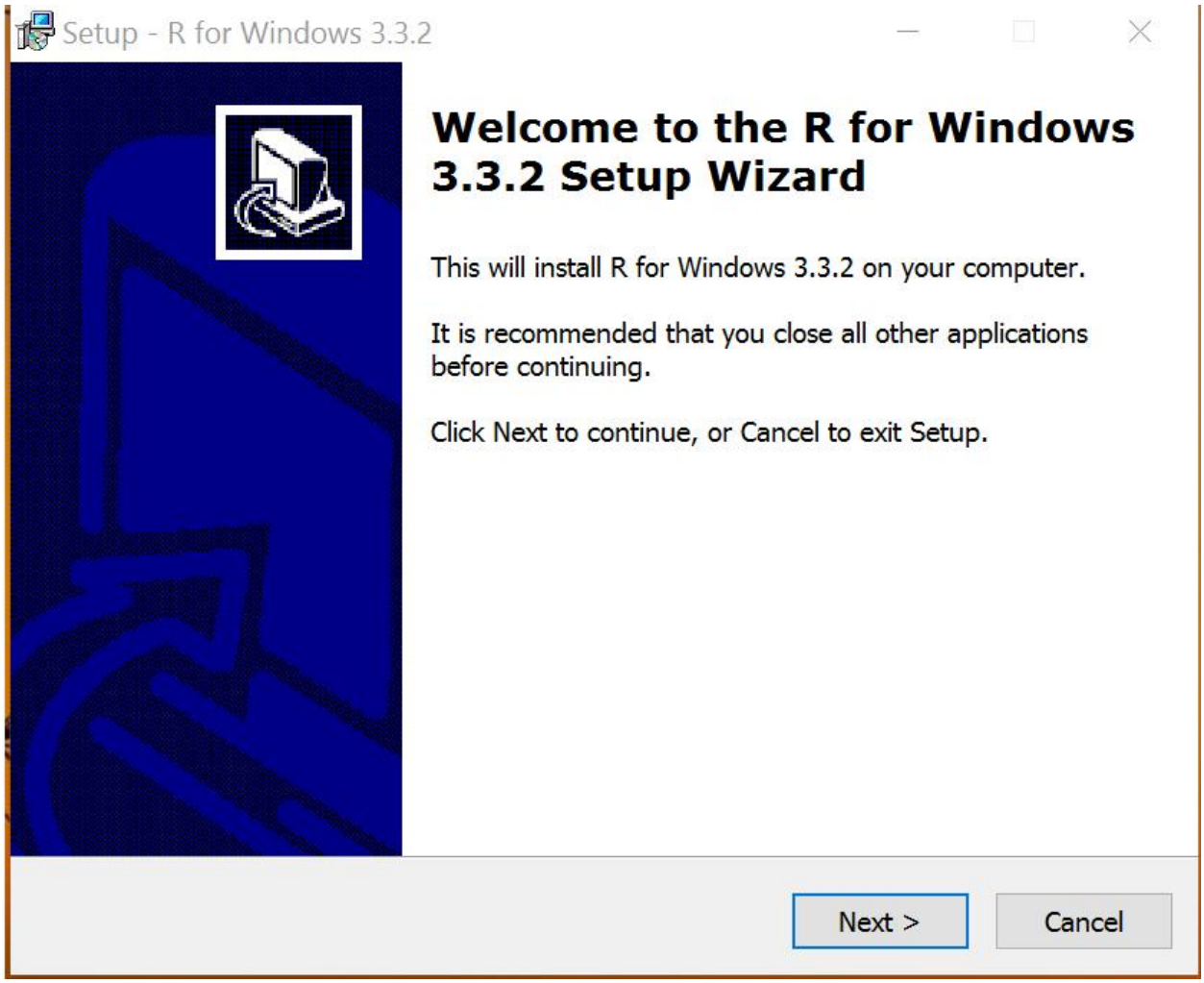
File Name	Size
Express 32BIT WoW64\SQLEXPR32_x86_ENU.exe	149.9 MB
Express 32BIT\SQLEXPR_x86_ENU.exe	168.4 MB
Express 64BIT\SQLEXPR_x64_ENU.exe	196.7 MB
ExpressAdv 32BIT\SQLEXPRADV_x86_ENU.exe	1.1 GB
ExpressAdv 64BIT\SQLEXPRADV_x64_ENU.exe	1.1 GB
ExpressAndTools 32BIT\SQLEXPRWT_x86_ENU.exe	840.8 MB

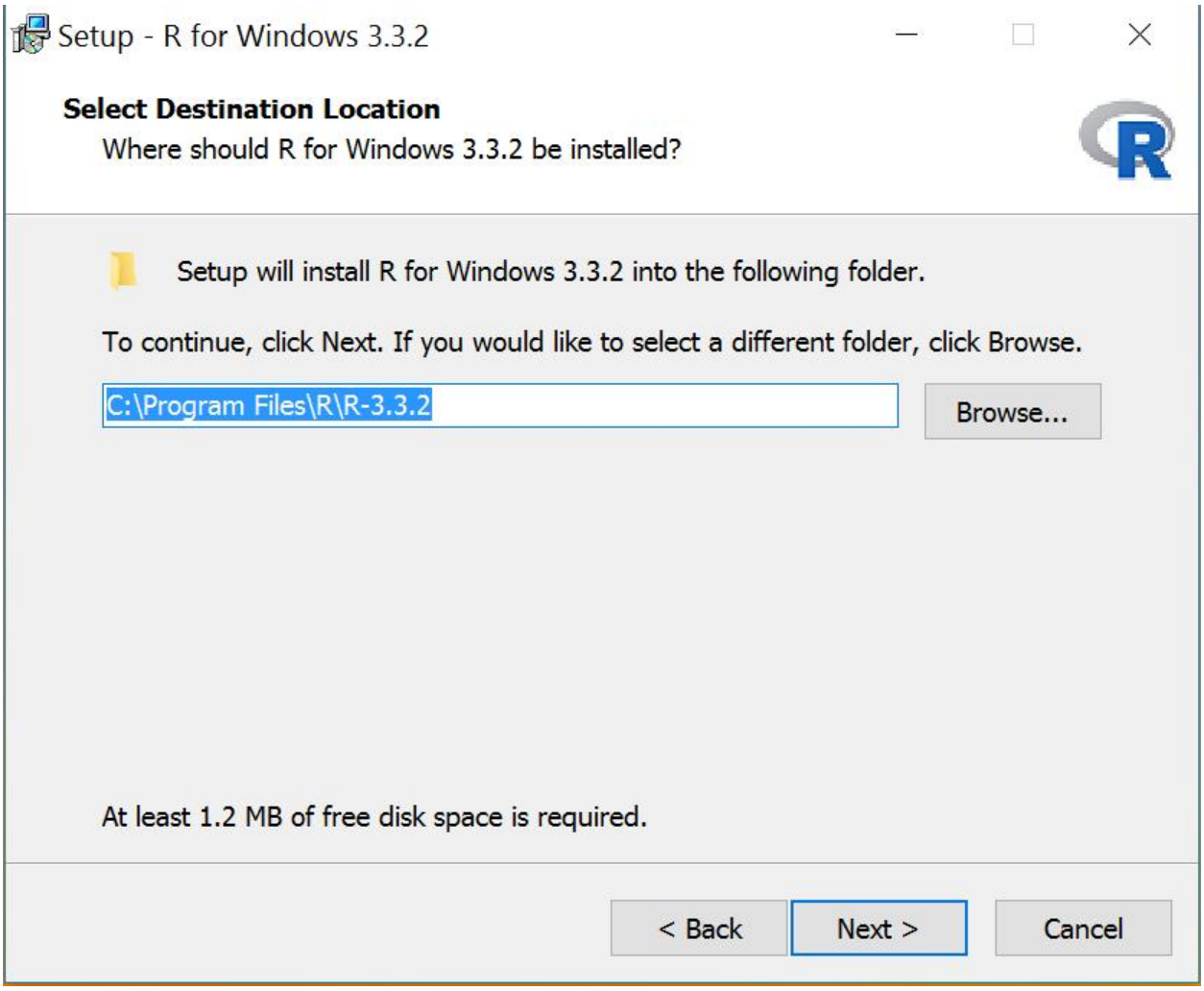


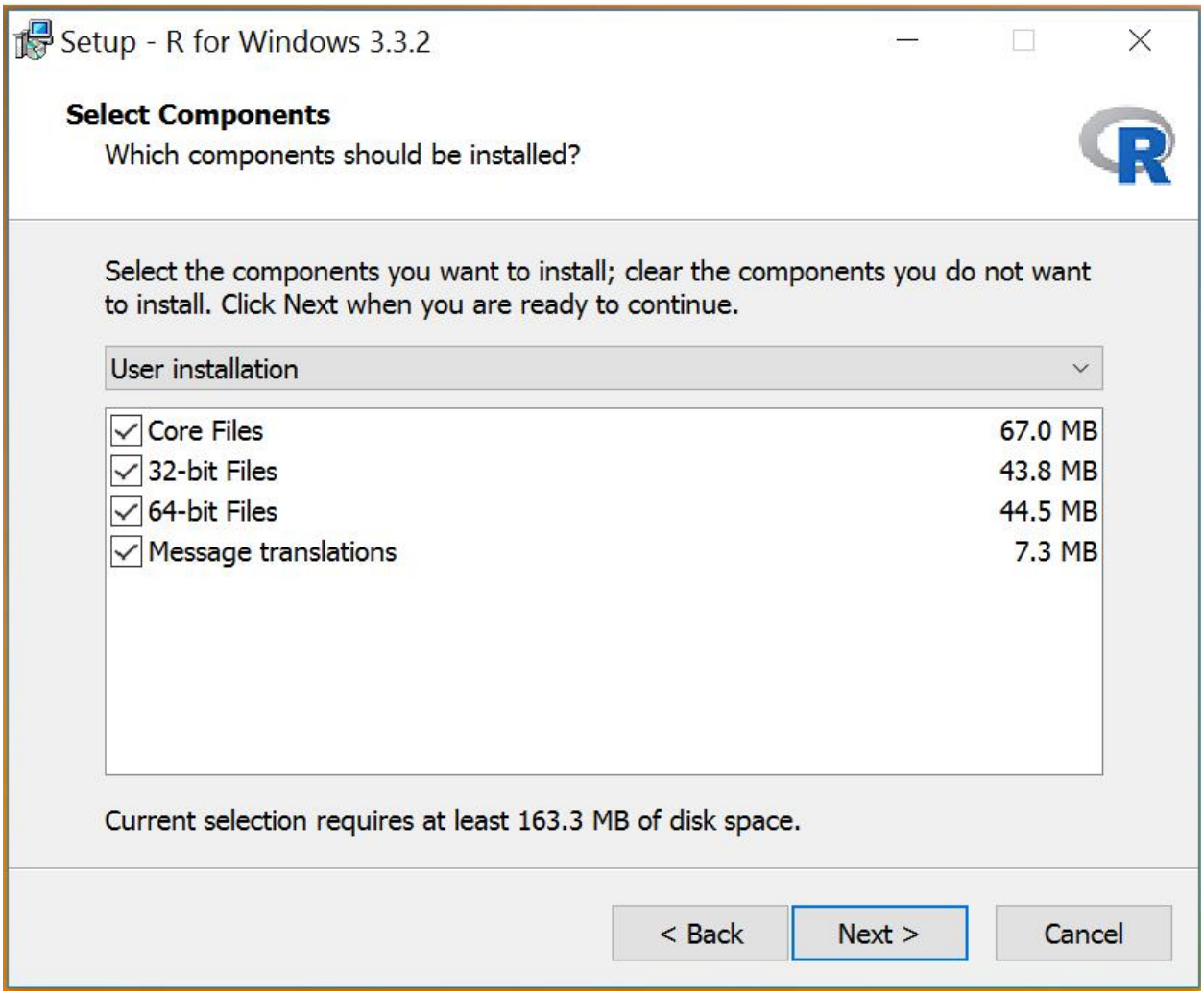

SQL Server 2014 Setup
Feature Selection
Select the Express features to install.
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Reporting Services Configuration
Feature Configuration Rules
Installation Progress
Complete
Features:
Instance Features
Database Engine Services
SQL Server Replication
Full-Text and Semantic Extractions for Search
Reporting Services - Native
Shared Features
Client Tools Connectivity
Client Tools Backwards Compatibility
Client Tools SDK
Documentation Components
Management Tools - Basic
Management Tools - Complete
SQL Client Connectivity SDK
LocalDB
Redistributable Features
Feature description:
The configuration and operation of each instance feature of a SQL Server instance is isolated from other SQL Server instances. SQL Server instances can operate side-by-side on the same computer.
Prerequisites for selected features:
Already installed:
Windows PowerShell 2.0
Microsoft Visual Studio 2010 Redistributables
Microsoft .NET Framework 4.0
Disk Space Requirements
Drive C: 3998 MB required, 34491 MB available
Select All
Unselect All
Instance root directory:
C:\Program Files\Microsoft SQL Server\
Shared feature directory:
C:\Program Files\Microsoft SQL Server\
Shared feature directory (x86):
C:\Program Files (x86)\Microsoft SQL Server\
< Back
Next >
Cancel
Help

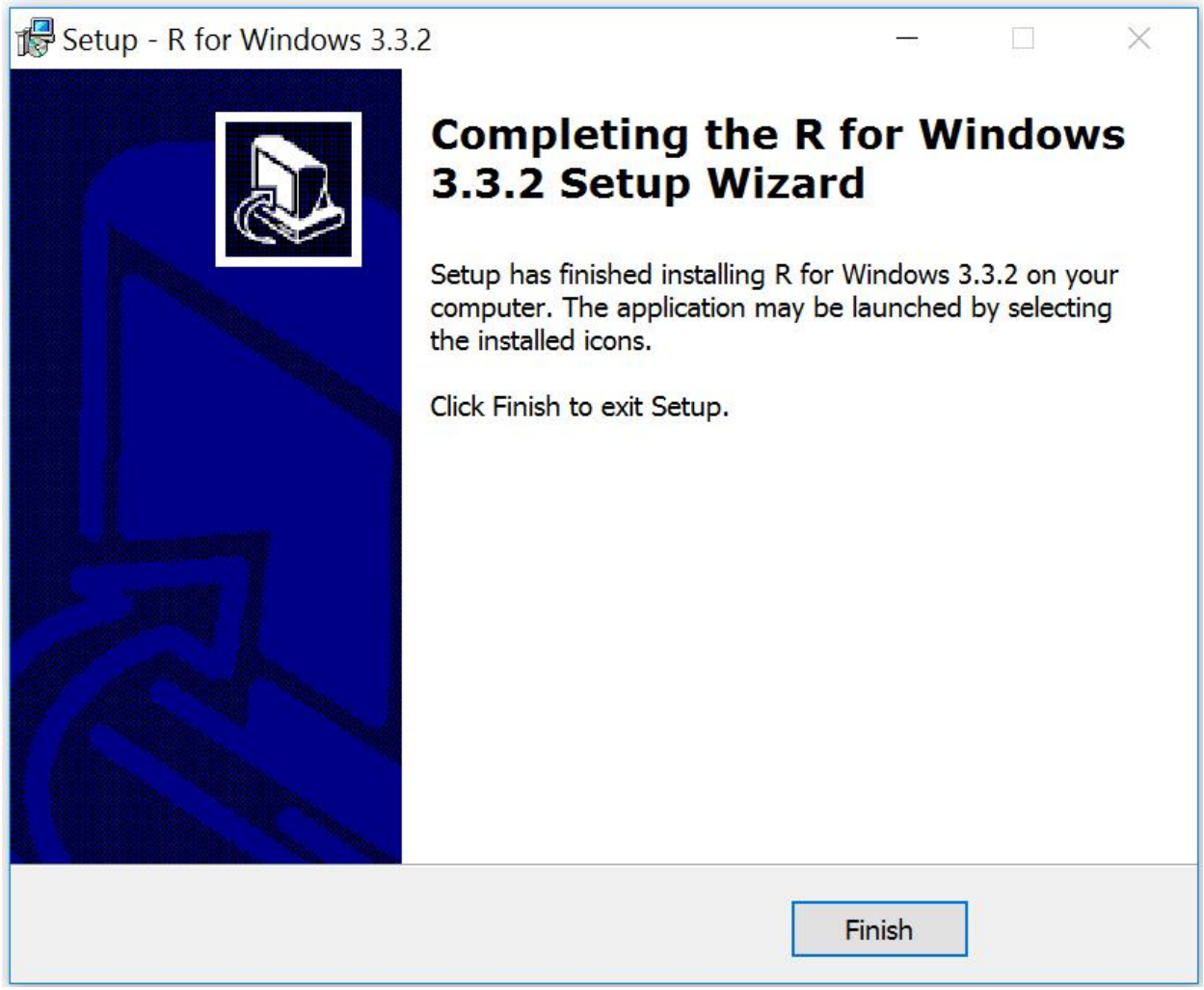

Download R-3.3.2
cran.r-project.org/bin/windows/base


Download R 3.3.2 for Windows (62 megabytes, 32/64 bit)
Installation and other instructions
New features in this version


Setup - R for Windows 3.3.2
Welcome to the R for Windows 3.3.2 Setup Wizard
This will install R for Windows 3.3.2 on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

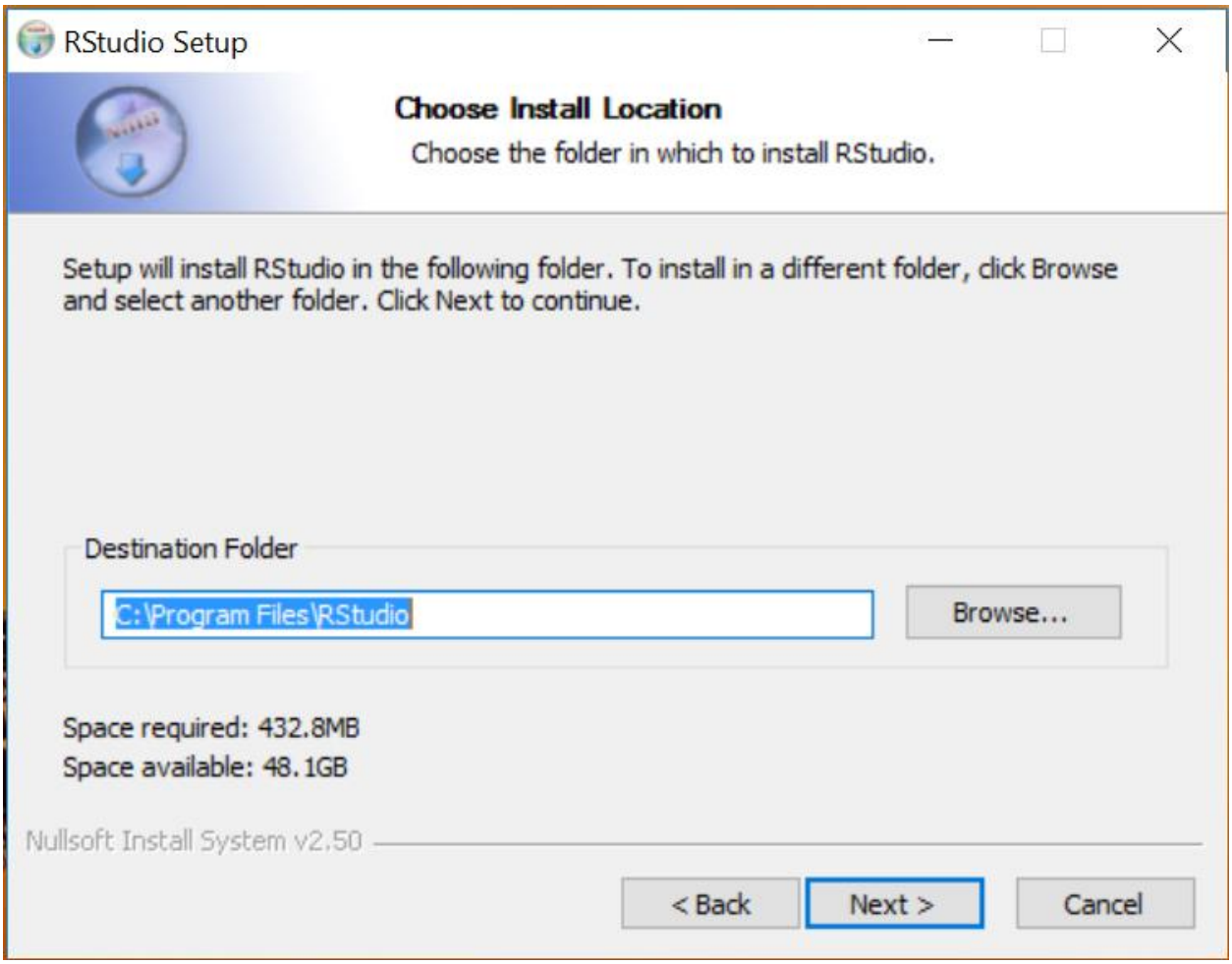

Setup - R for Windows 3.3.2
Select Destination Location
Where should R for Windows 3.3.2 be installed?
Setup will install R for Windows 3.3.2 into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\Program Files\R\R-3.3.2
Browse...
At least 1.2 MB of free disk space is required.
< Back
Next >
Cancel

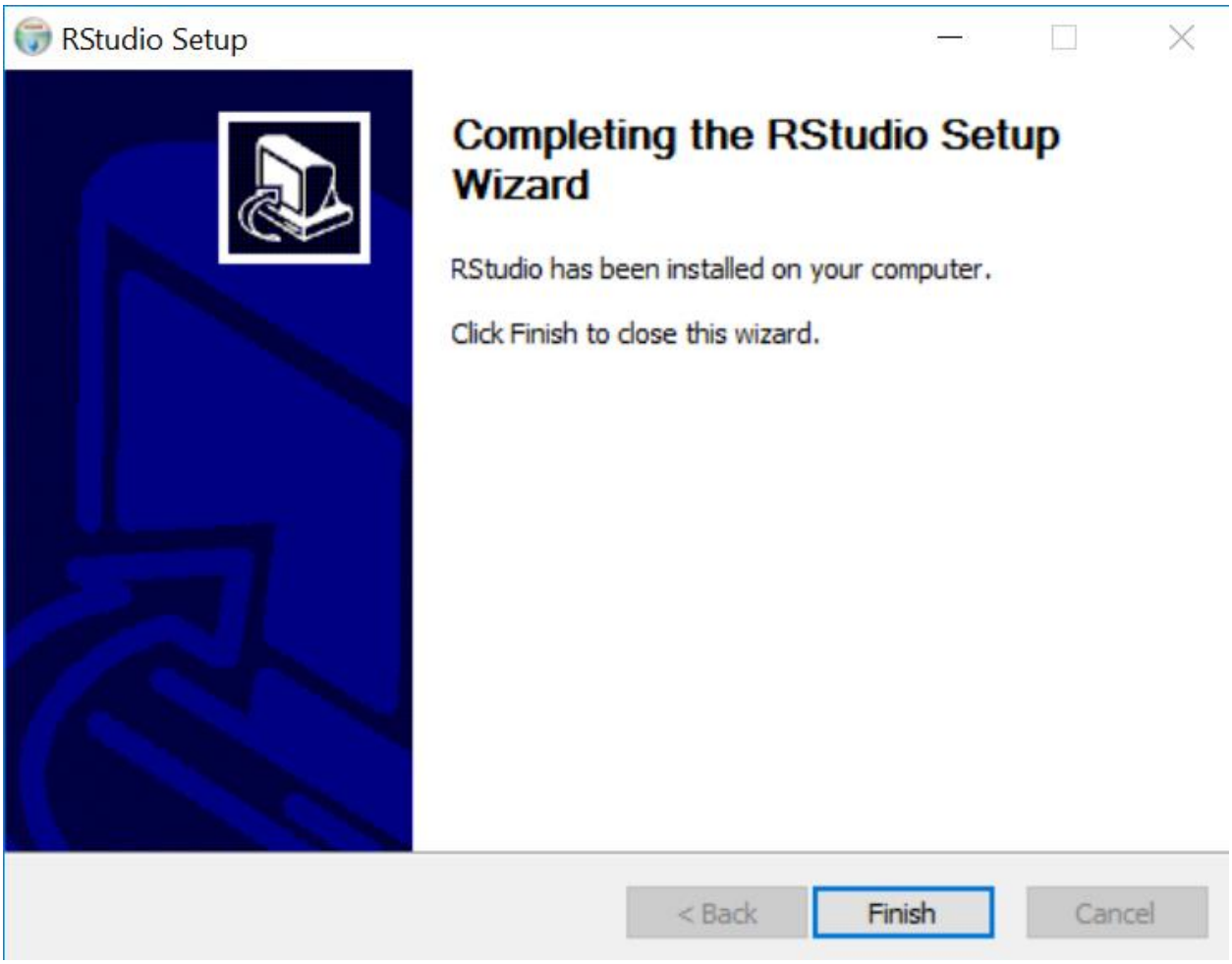

Setup - R for Windows 3.3.2
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
User installation
Core Files 67.0 MB
32-bit Files 43.8 MB
64-bit Files 44.5 MB
Message translations 7.3 MB
Current selection requires at least 163.3 MB of disk space.
< Back
Next >
Cancel

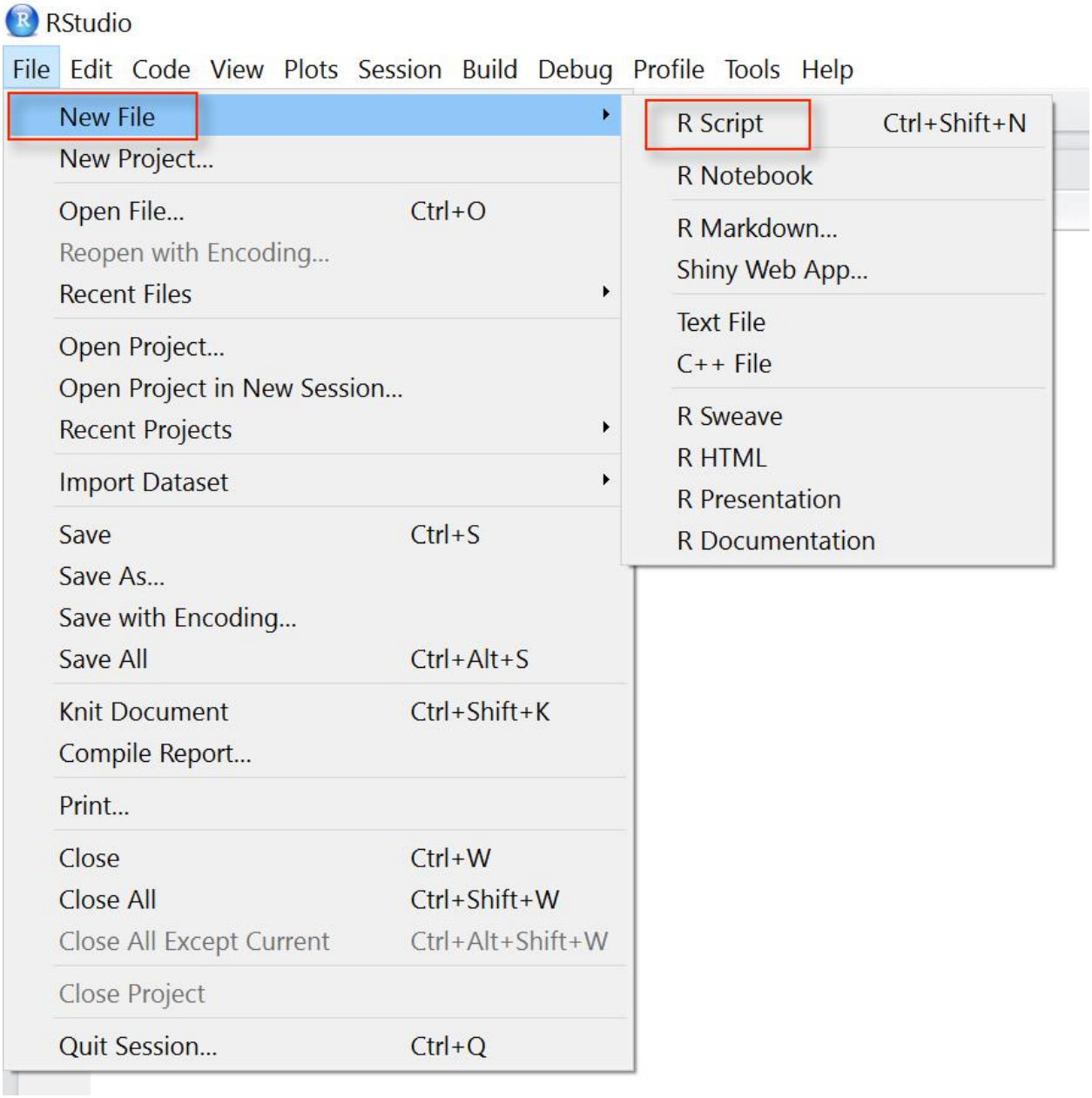


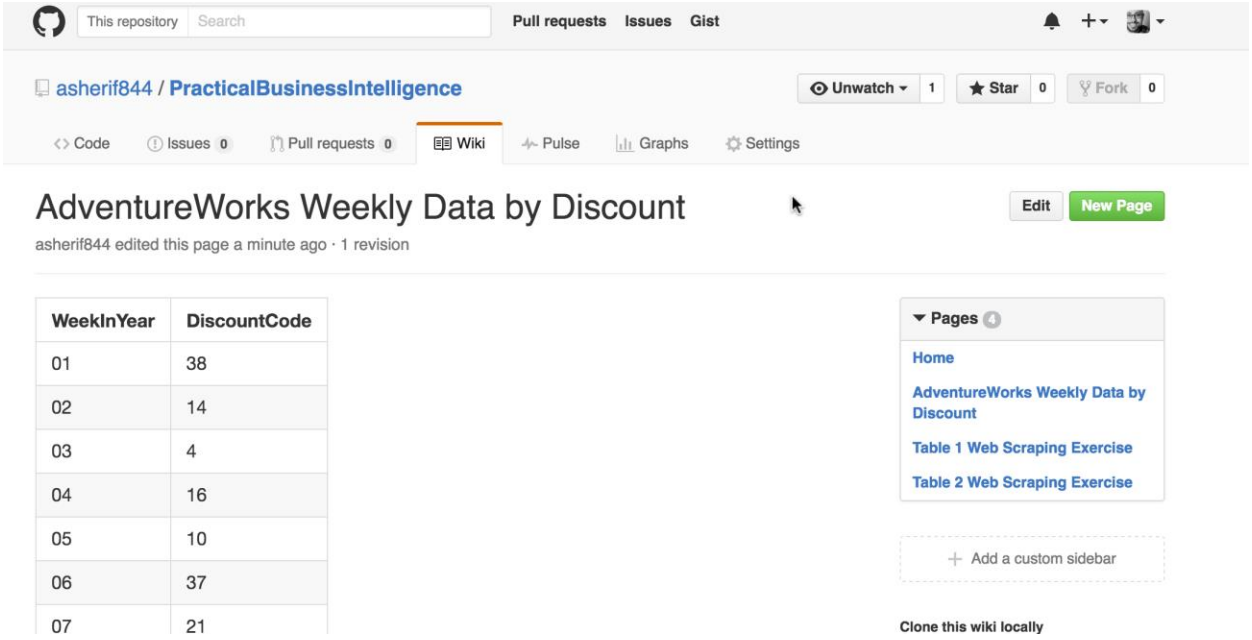
Installers for Supported Platforms

Installers	Size
RStudio 1.0.44 - Windows Vista/7/8/10	81.9 MB
RStudio 1.0.44 - Mac OS X 10.6+ (64-bit)	71.1 MB
RStudio 1.0.44 - Ubuntu 12.04+/Debian 8+ (32-bit)	85.4 MB
RStudio 1.0.44 - Ubuntu 12.04+/Debian 8+ (64-bit)	92 MB
RStudio 1.0.44 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	84.6 MB
RStudio 1.0.44 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	85.6 MB

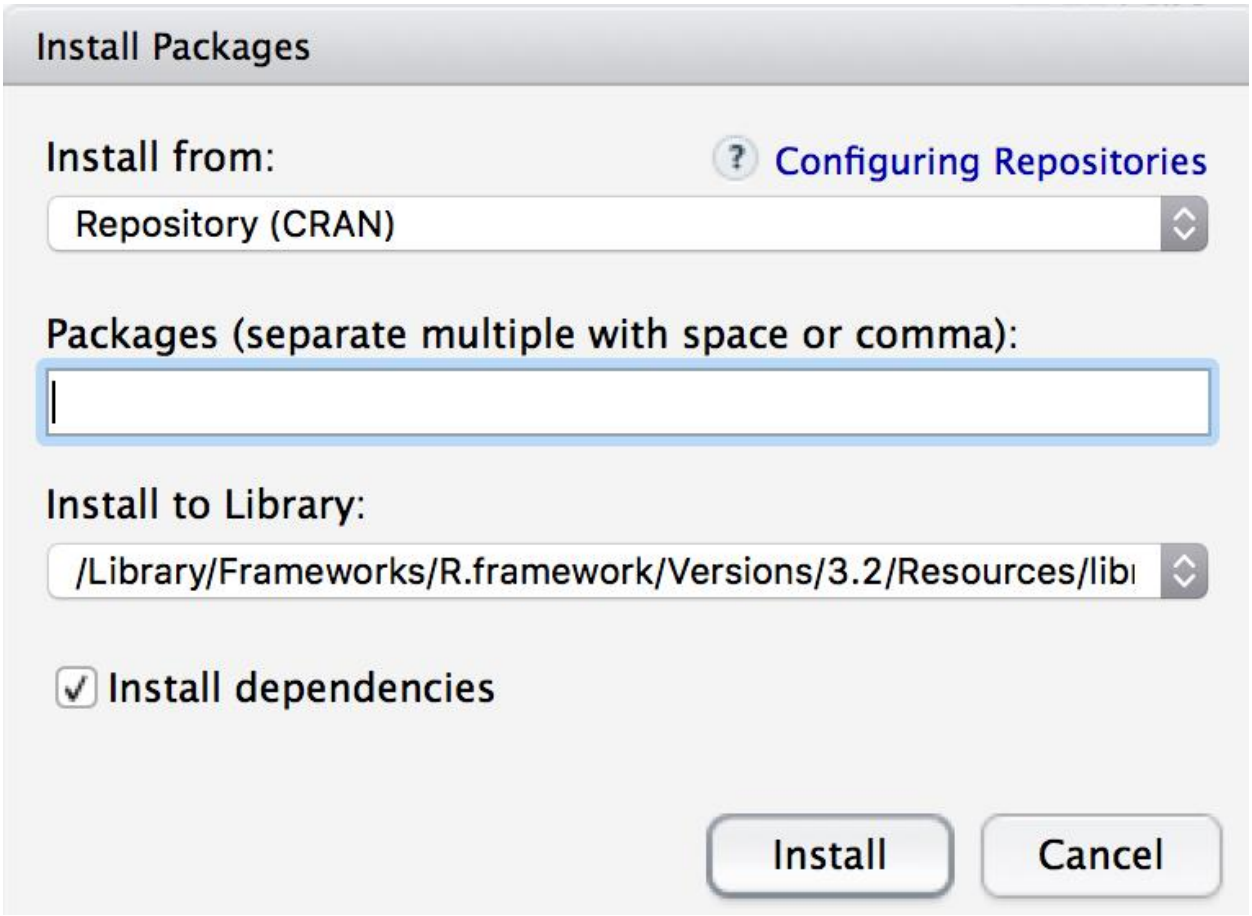

RStudio Setup
Choose Install Location
Choose the folder in which to install RStudio.
Setup will install RStudio in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.
Destination Folder
C:\Program Files\RStudio
Browse...
Space required: 432.8MB
Space available: 48.1GB
Nullsoft Install System v2.50
< Back
Next >
Cancel

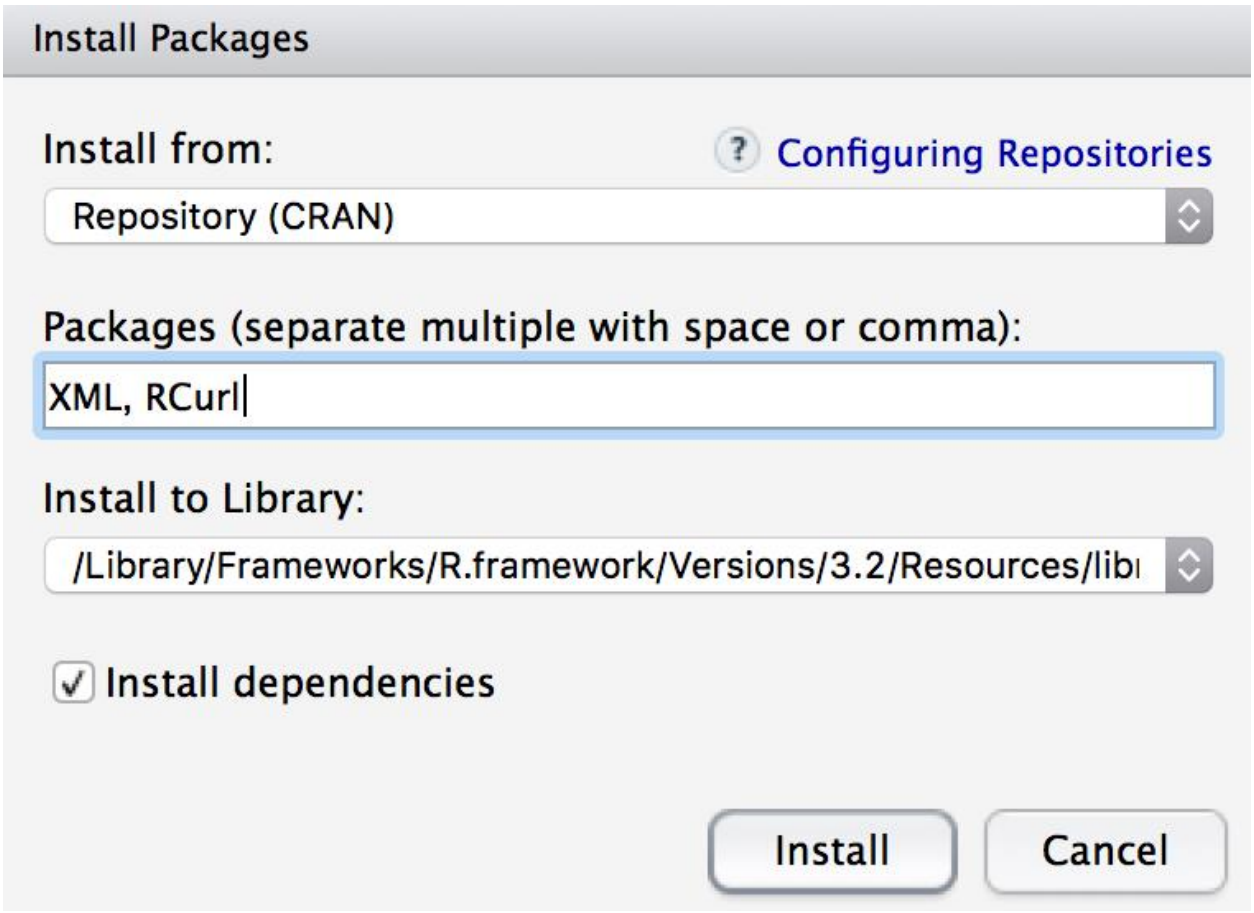

RStudio Setup
Completing the RStudio Setup Wizard
RStudio has been installed on your computer.
Click Finish to close this wizard.
< Back
Finish
Cancel


RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
New File
New Project...
Open File... Ctrl+O
Reopen with Encoding...
Recent Files
Open Project...
Open Project in New Session...
Recent Projects
Import Dataset
Save Ctrl+S
Save As...
Save with Encoding...
Save All Ctrl+Alt+S
Knit Document Ctrl+Shift+K
Compile Report...
Print...
Close Ctrl+W
Close All Ctrl+Shift+W
Close All Except Current Ctrl+Alt+Shift+W
Close Project
Quit Session... Ctrl+Q
R Script Ctrl+Shift+N
R Notebook
R Markdown...
Shiny Web App...
Text File
C++ File
R Sweave
R HTML
R Presentation
R Documentation

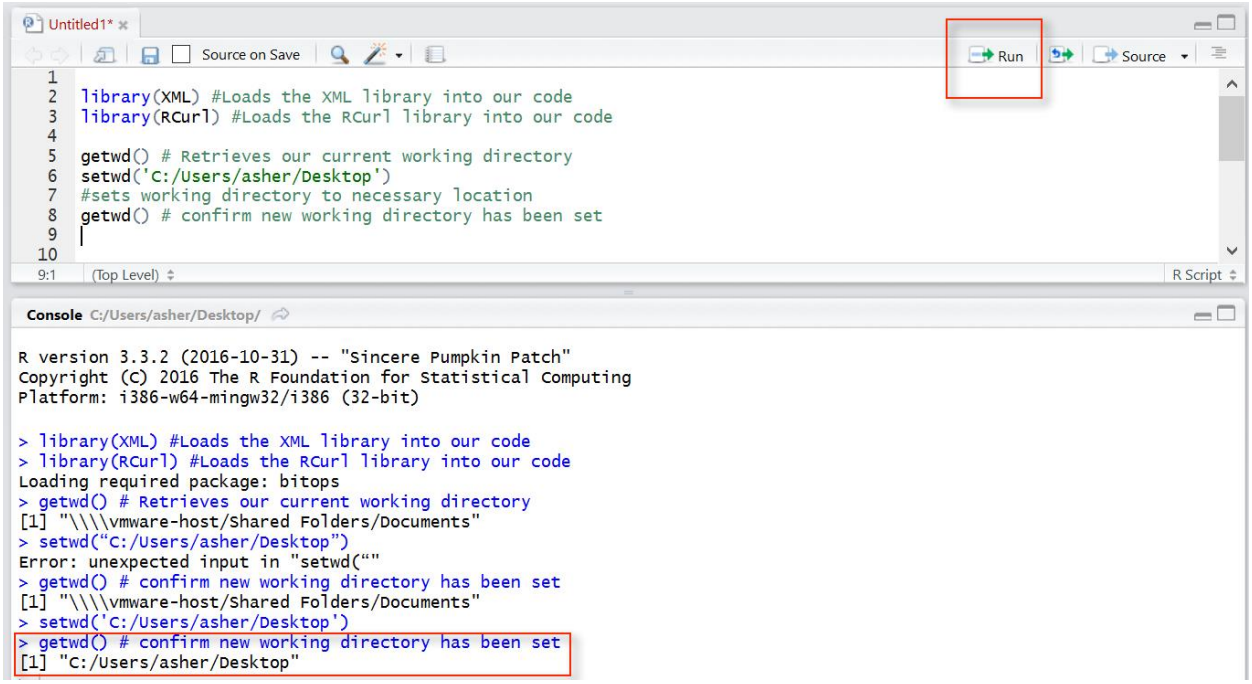


WeekInYear	DiscountCode
01	38
02	14
03	4
04	16
05	10
06	37
07	21






```
package 'XML' successfully unpacked and MD5 sums checked

The downloaded binary packages are in
        C:\Users\asher\AppData\Local\Temp\Rtmpc9isgv\downloaded_packages
> |
```



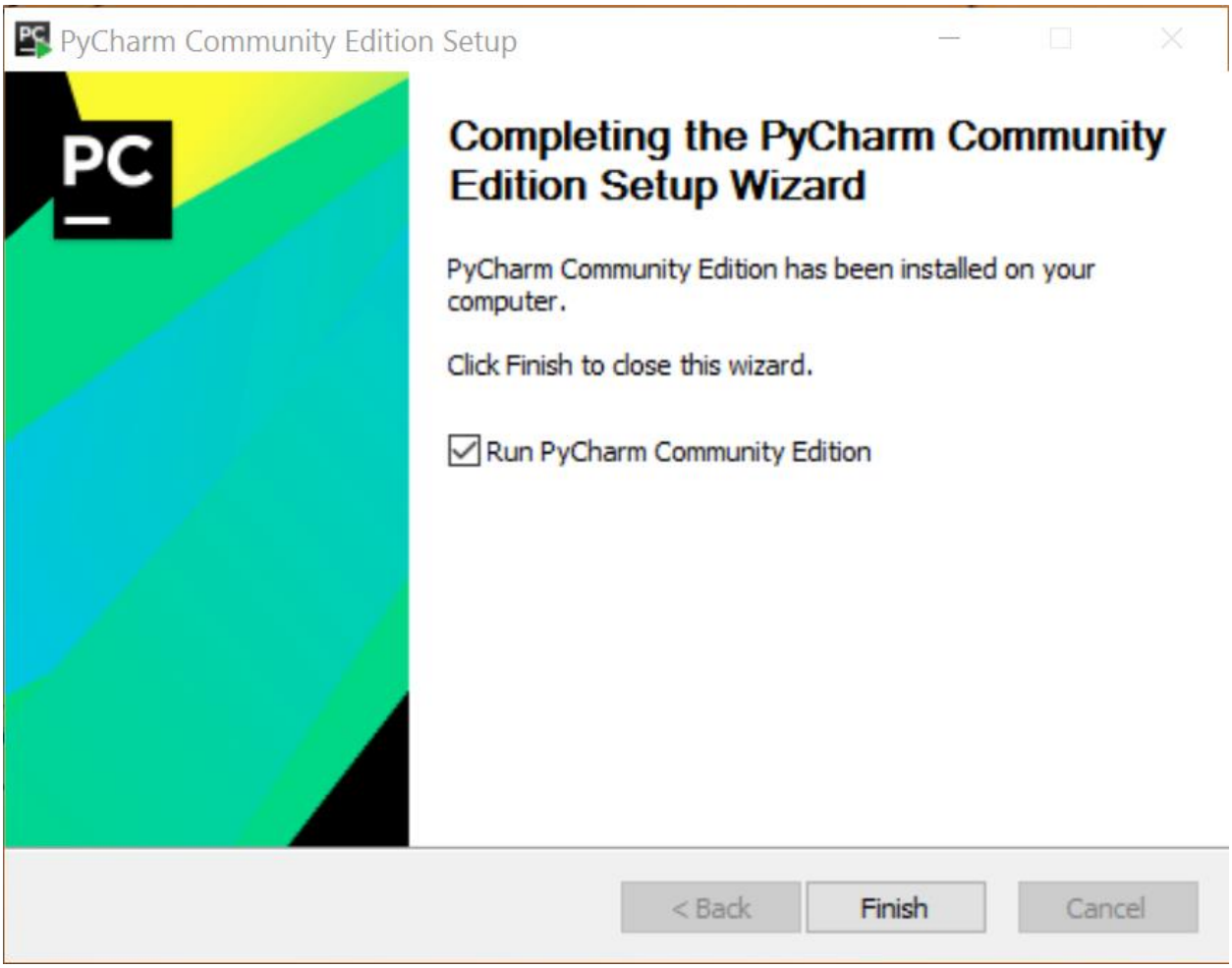

```
> head(retrieveTable) #returns the first five rows of the table
  WeekInYear DiscountCode
1         01           38
2         02           14
3         03            4
4         04           16
5         05           10
6         06           37
>
```

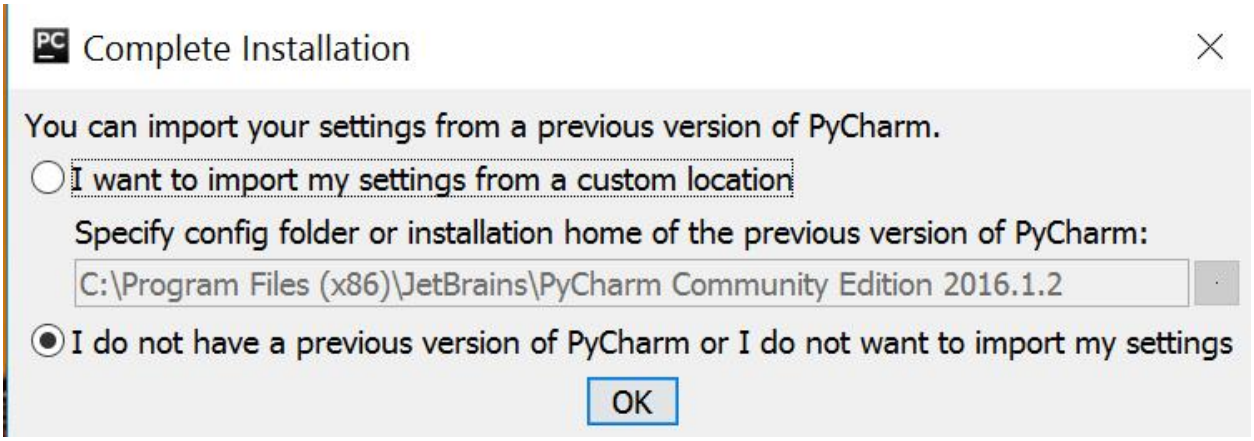
```
> str(retrieveTable)
'data.frame':   52 obs. of  2 variables:
 $ WeekInYear  : Factor w/ 52 levels "01","02","03",..: 1 2 3 4 5 6 7 8 9 10 ...
 $ DiscountCode: Factor w/ 32 levels "10","12","13",..: 22 4 24 5 1 21 11 1 12 18 ...
```

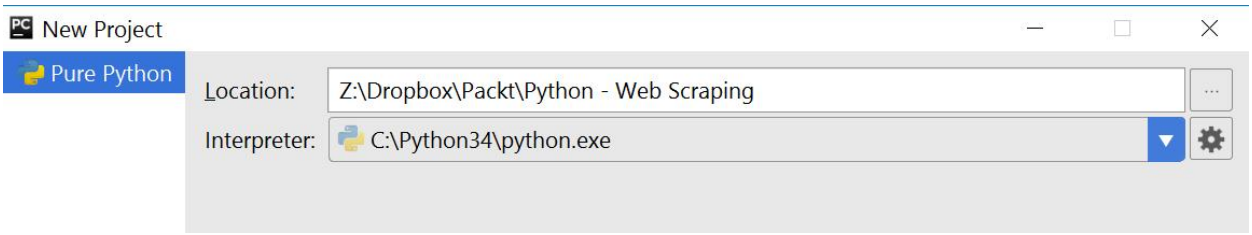
```
> str(retrieveTable)
'data.frame':   52 obs. of  2 variables:
 $ WeekInYear  : Factor w/ 52 levels "01","02","03",..: 1 2 3 4 5 6 7 8 9 10 ...
 $ DiscountCode: num  22 4 24 5 1 21 11 1 12 18 ...
```

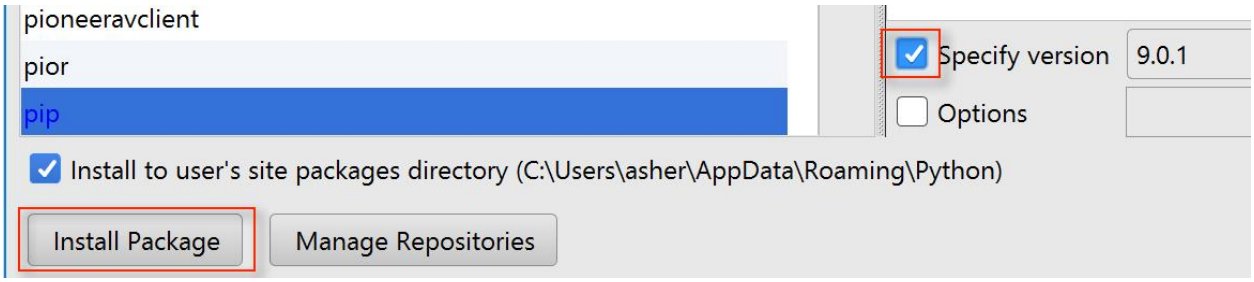

Python 3.4.4 (64-bit) Setup
Customize Python 3.4.4 (64-bit)
Select the way you want features to be installed.
Click on the icons in the tree below to change the way features will be installed.
Register Extensions
Tcl/Tk
Documentation
Utility Scripts
pip
Test suite
Add python.exe to Path
Prepend C:\Python34\ to the system Path variable. This allows you to type 'python' into a command prompt without needing the full path.
This feature requires 0KB on your hard drive.
python for windows
Disk Usage
Advanced
< Back
Next >
Cancel

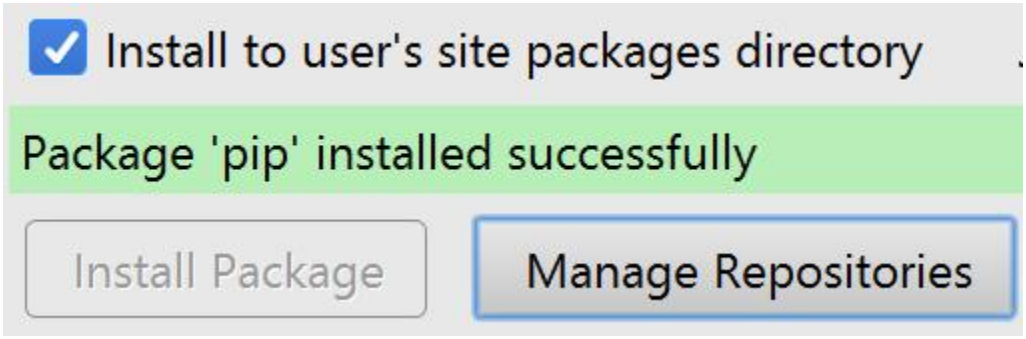

Python 3.4.4 (64-bit) Setup
Complete the Python 3.4.4 (64-bit) Installer
Special Windows thanks to:
Mark Hammond, without whose years of freely shared Windows expertise, Python for Windows would still be Python for DOS.
python
for
windows
Click the Finish button to exit the Installer.
< Back
Finish
Cancel

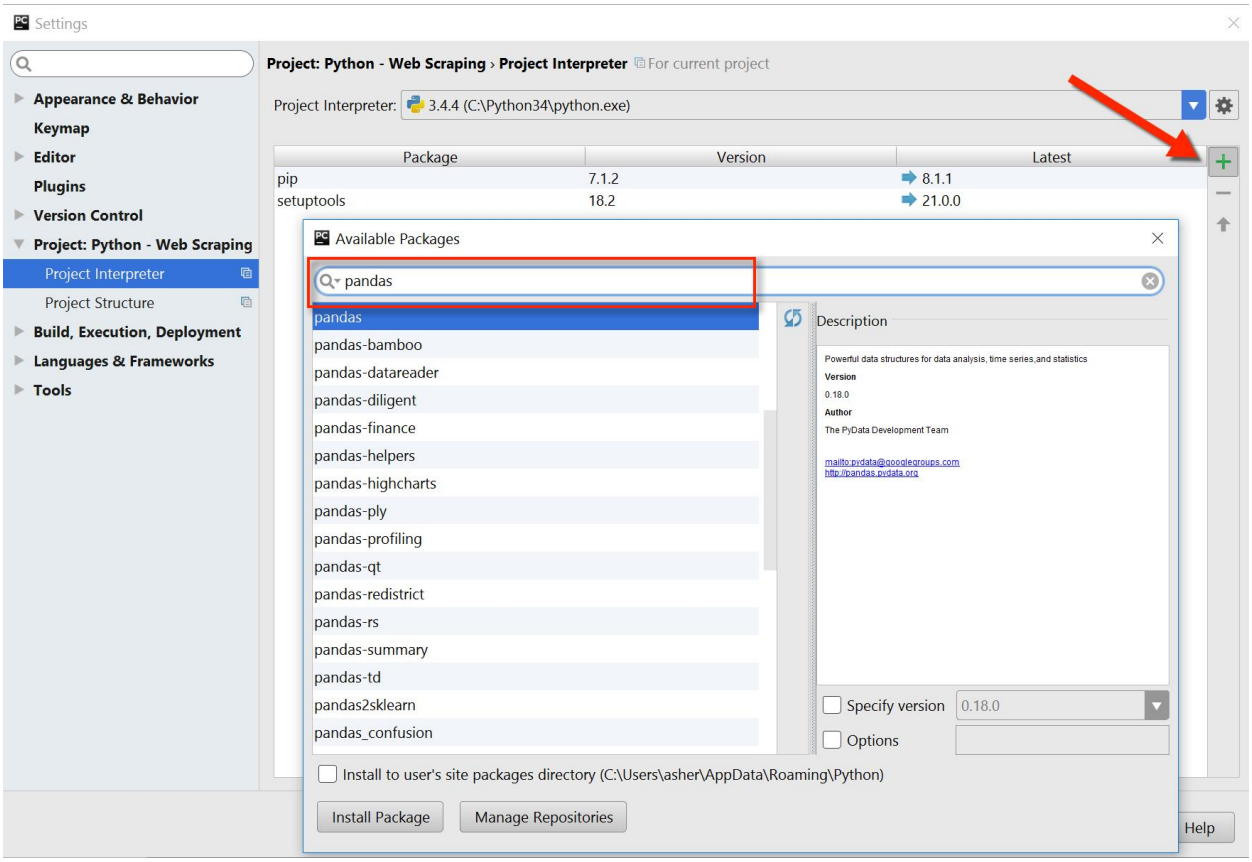

PyCharm Community Edition Setup
Completing the PyCharm Community Edition Setup Wizard
PyCharm Community Edition has been installed on your computer.
Click Finish to close this wizard.
Run PyCharm Community Edition
< Back
Finish
Cancel

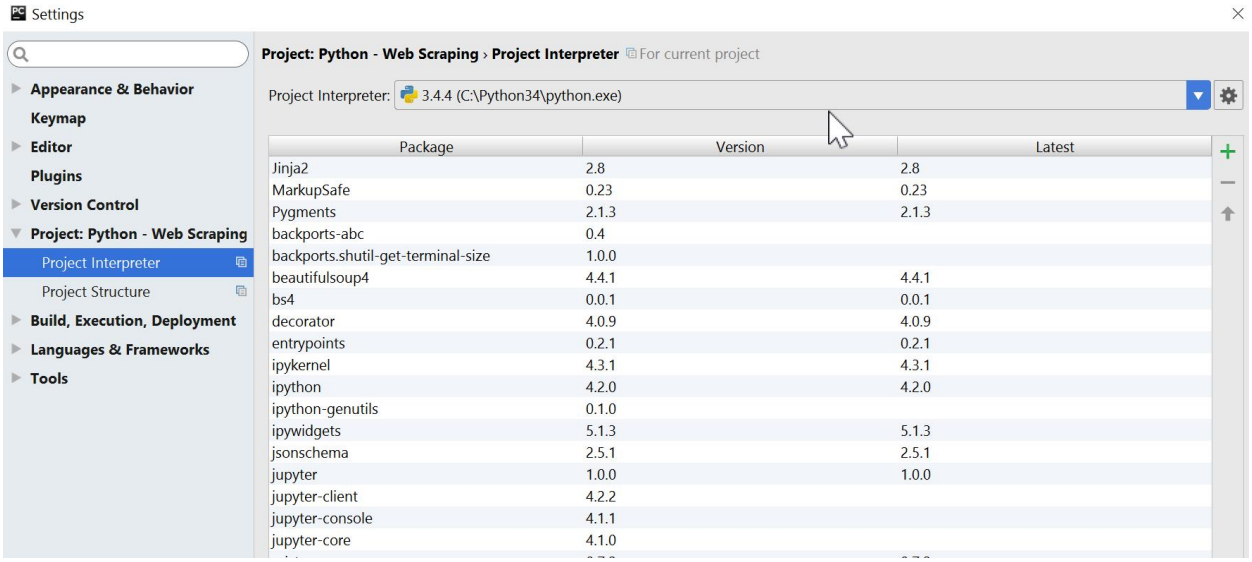

Complete Installation
You can import your settings from a previous version of PyCharm.
I want to import my settings from a custom location
Specify config folder or installation home of the previous version of PyCharm:
C:\Program Files (x86)\JetBrains\PyCharm Community Edition 2016.1.2
I do not have a previous version of PyCharm or I do not want to import my settings
OK


New Project
Pure Python
Location:
Z:\Dropbox\Packt\Python - Web Scraping
Interpreter:
C:\Python34\python.exe


pioneeravclient
pior
pip
Specify version
9.0.1
Options
Install to user's site packages directory (C:\Users\asher\AppData\Roaming\Python)
Install Package
Manage Repositories


Install to user's site packages directory
Package 'pip' installed successfully
Install Package
Manage Repositories


Settings
Project: Python - Web Scraping › Project Interpreter For current project
Project Interpreter: 3.4.4 (C:\Python34\python.exe)
Appearance & Behavior
Keymap
Editor
Plugins
Version Control
Project: Python - Web Scraping
Project Interpreter
Project Structure
Build, Execution, Deployment
Languages & Frameworks
Tools
Package
Version
Latest
pip
7.1.2
8.1.1
setuptools
18.2
21.0.0
Available Packages
pandas
pandas
pandas-bamboo
pandas-datareader
pandas-diligent
pandas-finance
pandas-helpers
pandas-highcharts
pandas-ply
pandas-profiling
pandas-qt
pandas-redistrict
pandas-rs
pandas-summary
pandas-td
pandas2sklearn
pandas_confusion
Description
Powerful data structures for data analysis, time series,and statistics
Version
0.18.0
Author
The PyData Development Team
mailto:pydata@googlegroups.com
http://pandas.pydata.org
Specify version
0.18.0
Options
Install to user's site packages directory (C:\Users\asher\AppData\Roaming\Python)
Install Package
Manage Repositories
Help


Settings
Project: Python - Web Scraping › Project Interpreter For current project
Project Interpreter: 3.4.4 (C:\Python34\python.exe)
Appearance & Behavior
Keymap
Editor
Plugins
Version Control
Project: Python - Web Scraping
Project Interpreter
Project Structure
Build, Execution, Deployment
Languages & Frameworks
Tools
Package
Version
Latest
Jinja2
2.8
2.8
MarkupSafe
0.23
0.23
Pygments
2.1.3
2.1.3
backports-abc
0.4
backports.shutil-get-terminal-size
1.0.0
beautifulsoup4
4.4.1
4.4.1
bs4
0.0.1
0.0.1
decorator
4.0.9
4.0.9
entrypoints
0.2.1
0.2.1
ipykernel
4.3.1
4.3.1
ipython
4.2.0
4.2.0
ipython-genutils
0.1.0
ipywidgets
5.1.3
5.1.3
jsonschema
2.5.1
2.5.1
jupyter
1.0.0
1.0.0
jupyter-client
4.2.2
jupyter-console
4.1.1
jupyter-core
4.1.0

asherif844 / **PracticalBusinessIntelligence**

Watch 1 | Star 0 | Fork 0

Code | Issues 0 | Pull requests 0 | Wiki | Pulse | Graphs

AdventureWorks Detail by CountryCode

asherif844 edited this page a day ago · 1 revision

CountryRegionCode	PercentBikeRides
AS	32
AU	34
CA	27
DE	23
FM	18
FR	38
GB	35
MH	25

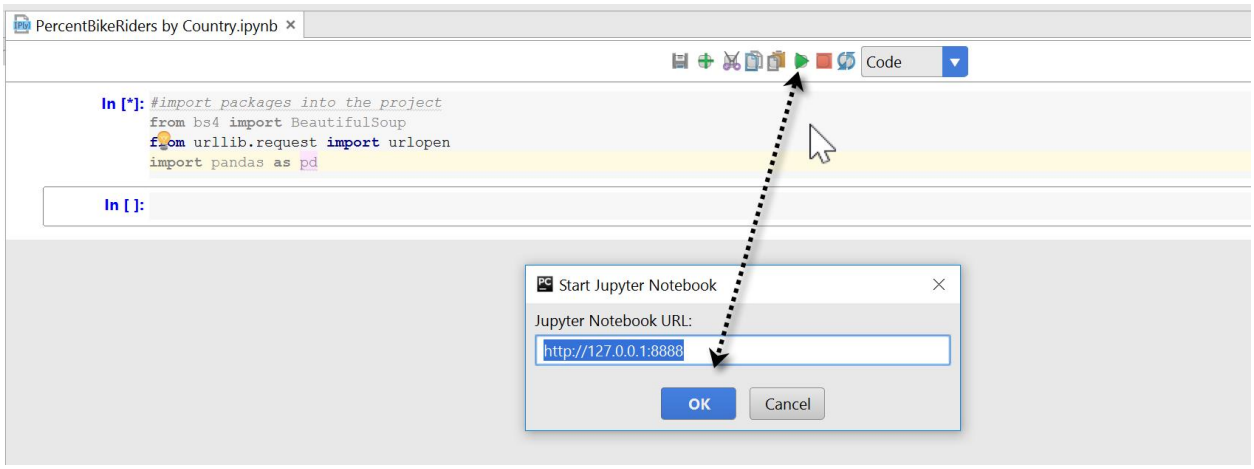
Pages 4

- Home
- AdventureWorks Detail by CountryCode
- AdventureWorks Weekly Data by Discount
- Table 2 Web Scraping Exercise

Clone this wiki locally

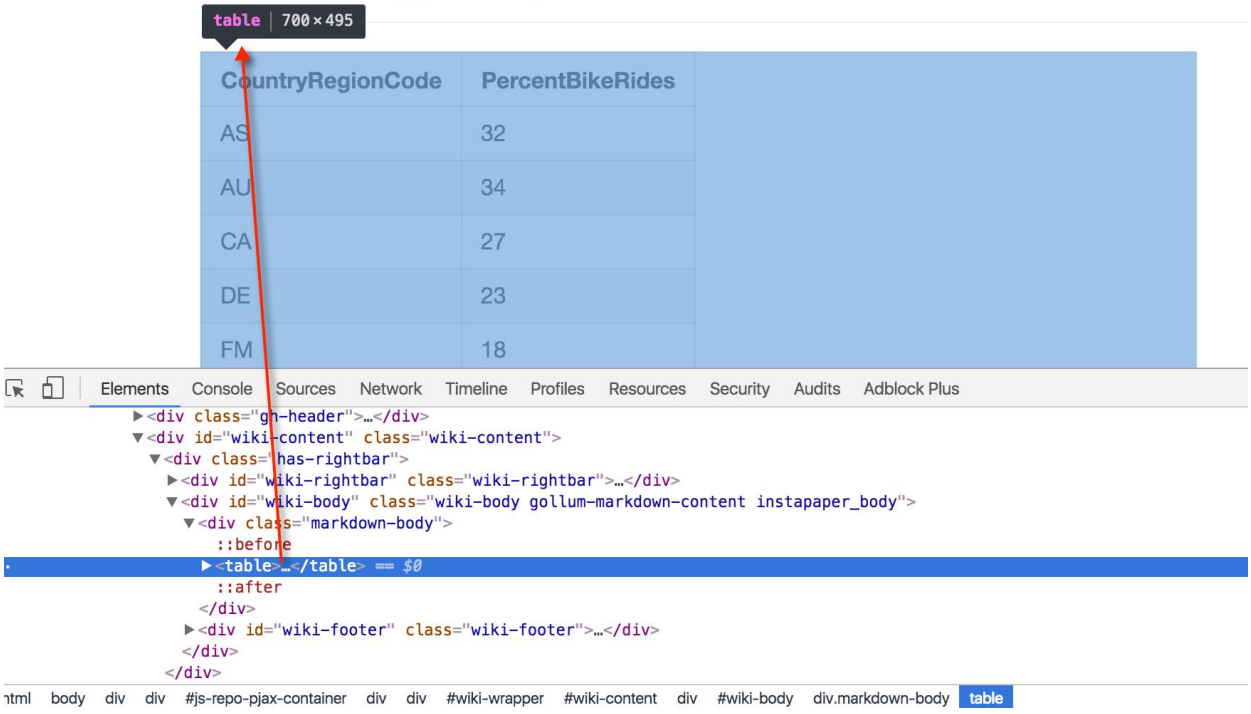
https://github.com/asherif8

Clone in Desktop



AdventureWorks Detail by CountryCode

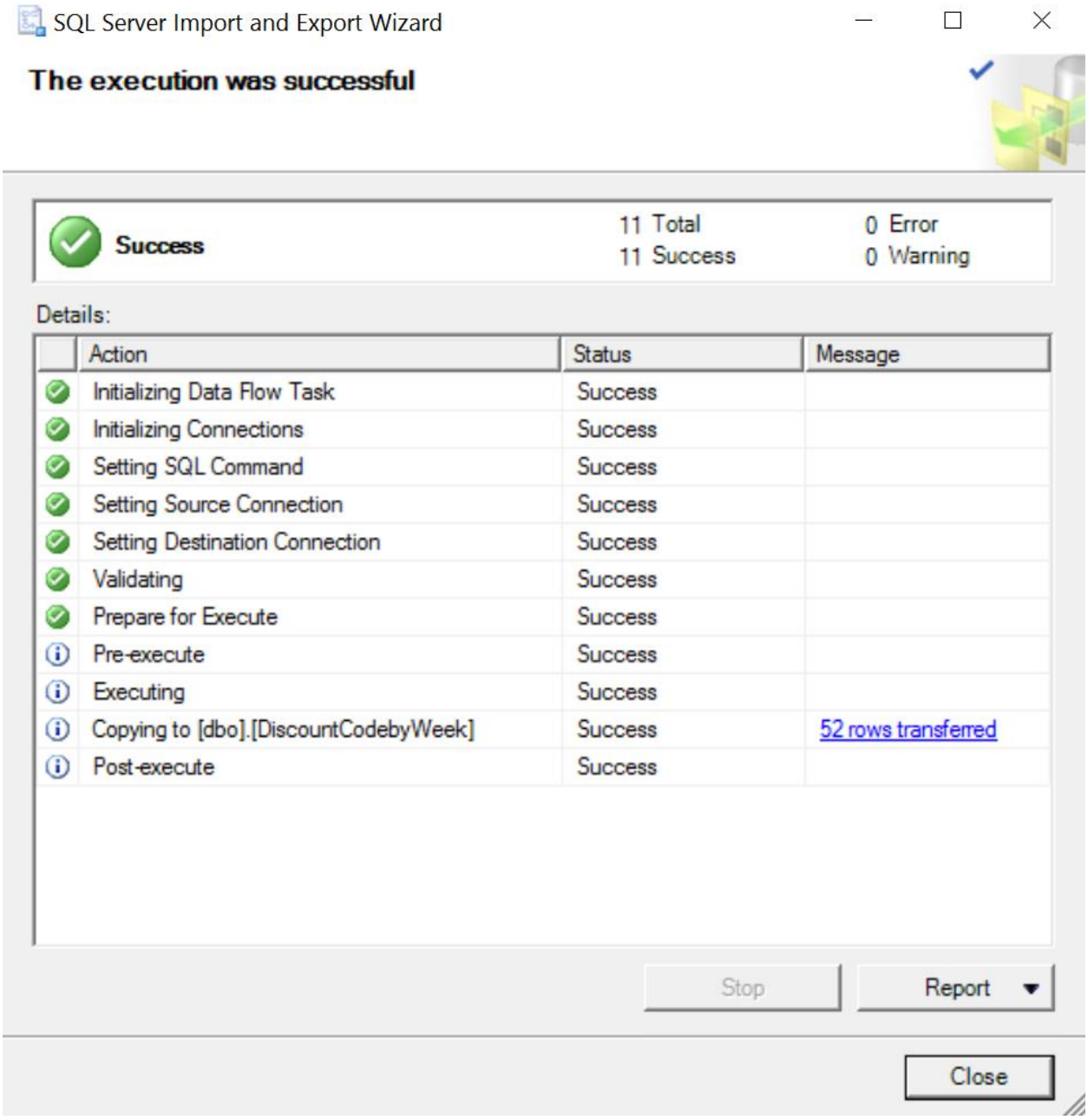
asherif844 edited this page 2 hours ago · 1 revision

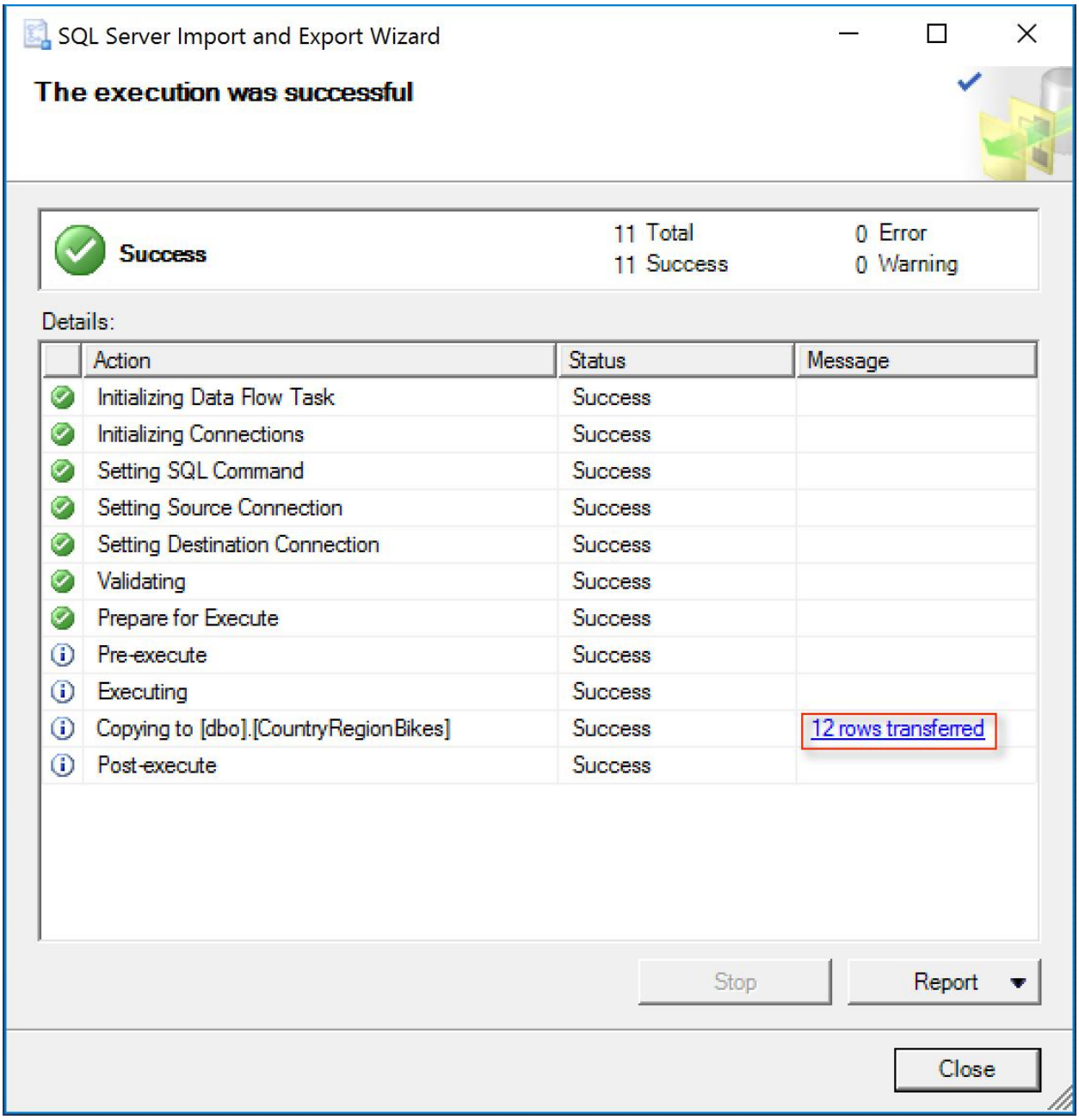


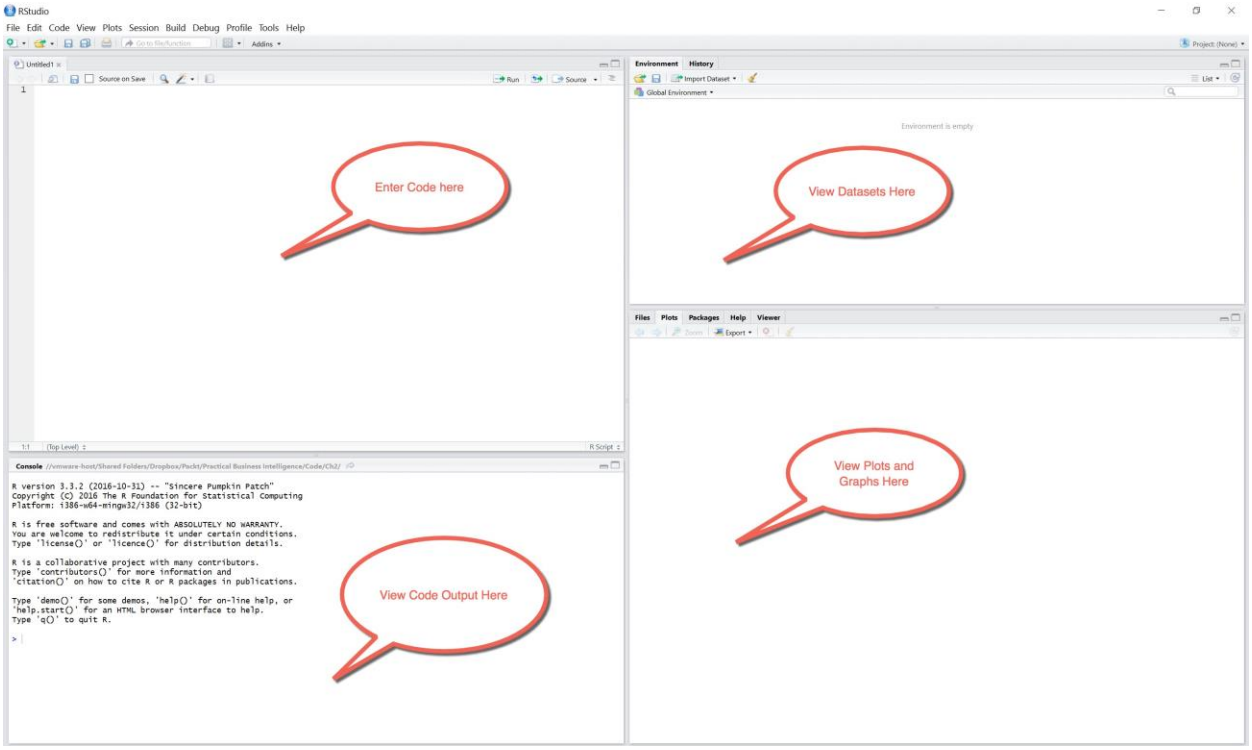
In [15]:
```
dataframe.head()
```

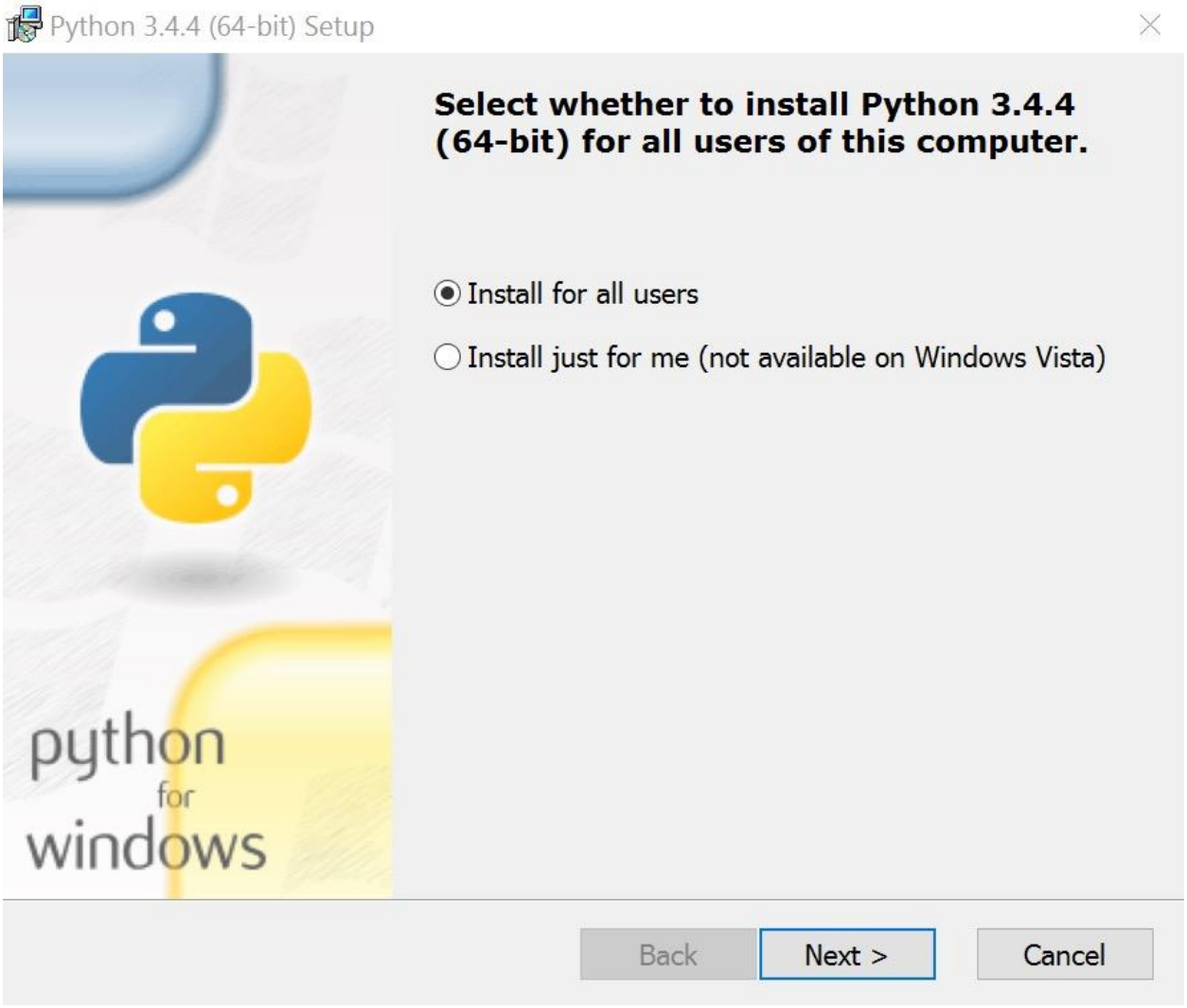
Out[15]:

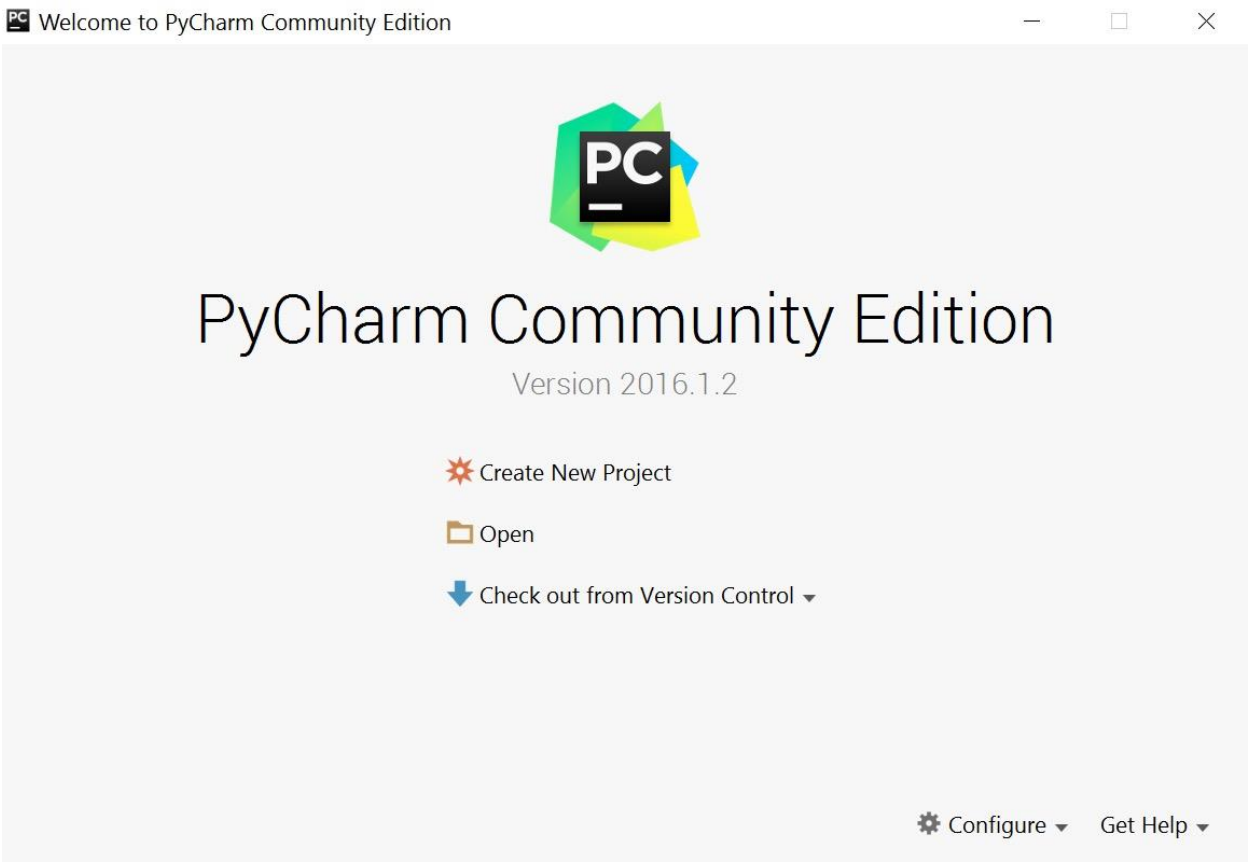
	CountryRegionCode	PercentBikeRides
0	AS	32
1	AU	34
2	CA	27
3	DE	23
4	FM	18

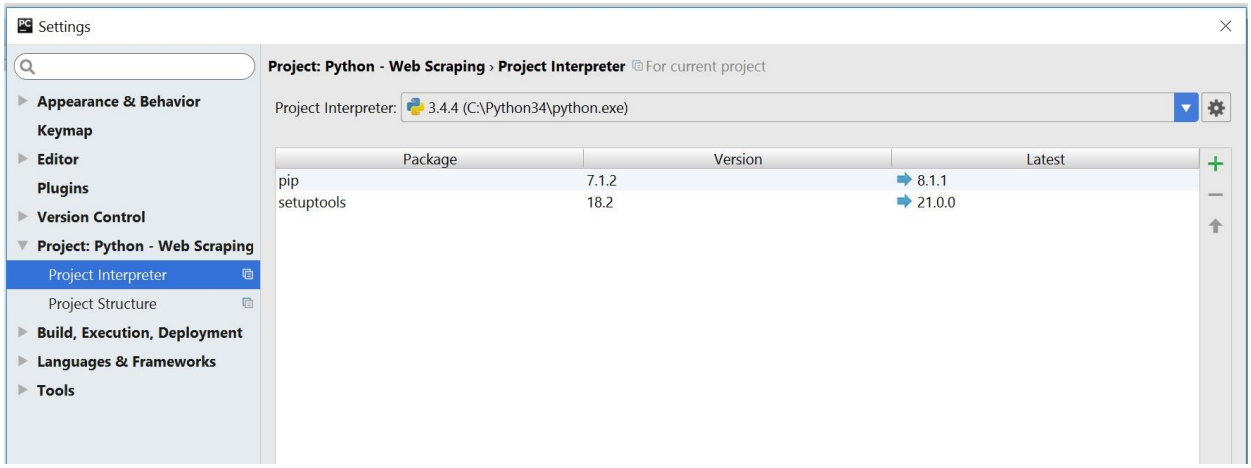

SQL Server Import and Export Wizard
The execution was successful
Success
11 Total
11 Success
0 Error
0 Warning
Details:
Action
Status
Message
Initializing Data Flow Task
Success
Initializing Connections
Success
Setting SQL Command
Success
Setting Source Connection
Success
Setting Destination Connection
Success
Validating
Success
Prepare for Execute
Success
Pre-execute
Success
Executing
Success
Copying to [dbo].[DiscountCodebyWeek]
Success
52 rows transferred
Post-execute
Success
Stop
Report
Close

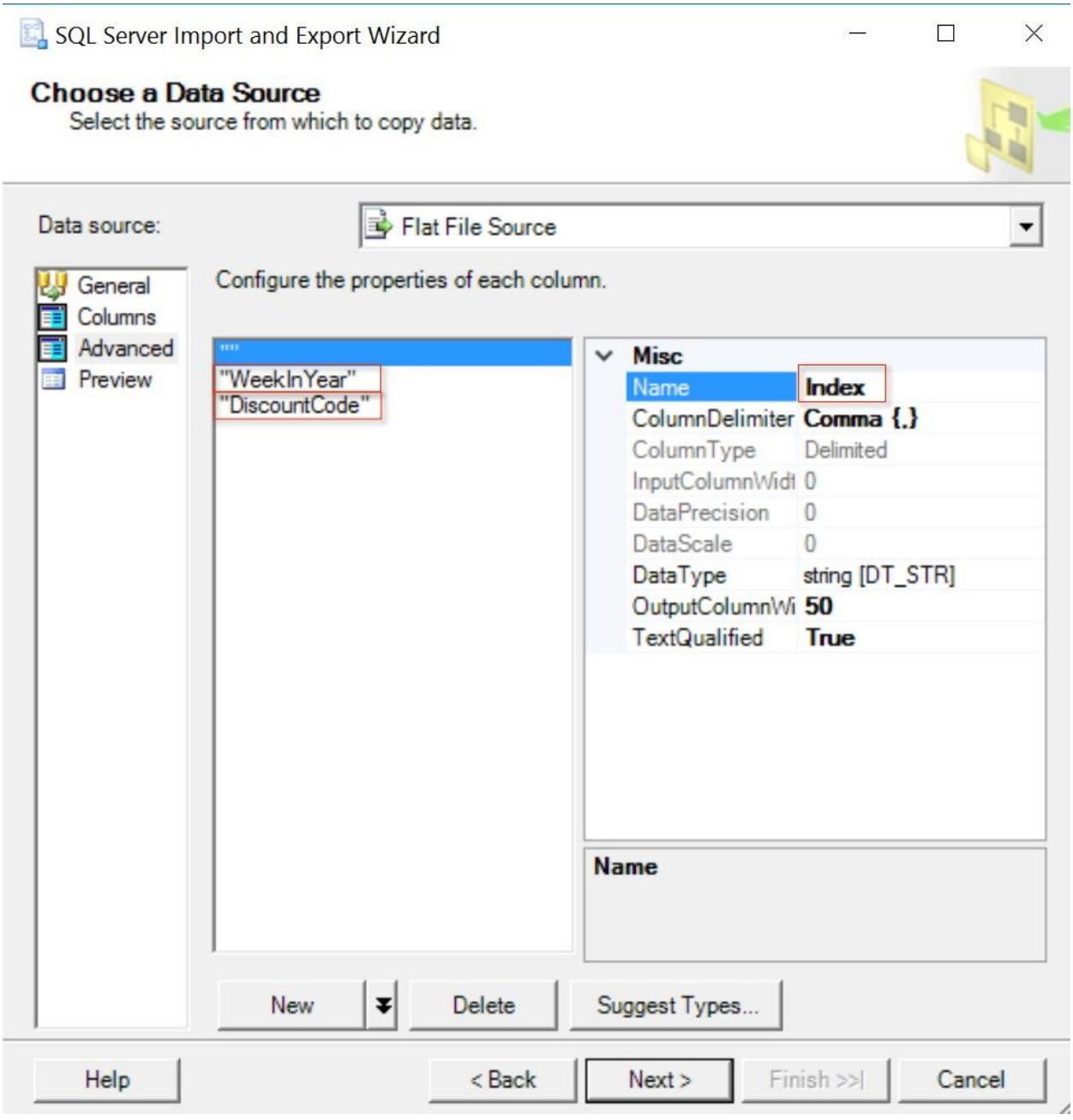

SQL Server Import and Export Wizard
The execution was successful
Success
11 Total
11 Success
0 Error
0 Warning
Details:
Action
Status
Message
Initializing Data Flow Task
Success
Initializing Connections
Success
Setting SQL Command
Success
Setting Source Connection
Success
Setting Destination Connection
Success
Validating
Success
Prepare for Execute
Success
Pre-execute
Success
Executing
Success
Copying to [dbo].[CountryRegionBikes]
Success
12 rows transferred
Post-execute
Success
Stop
Report
Close

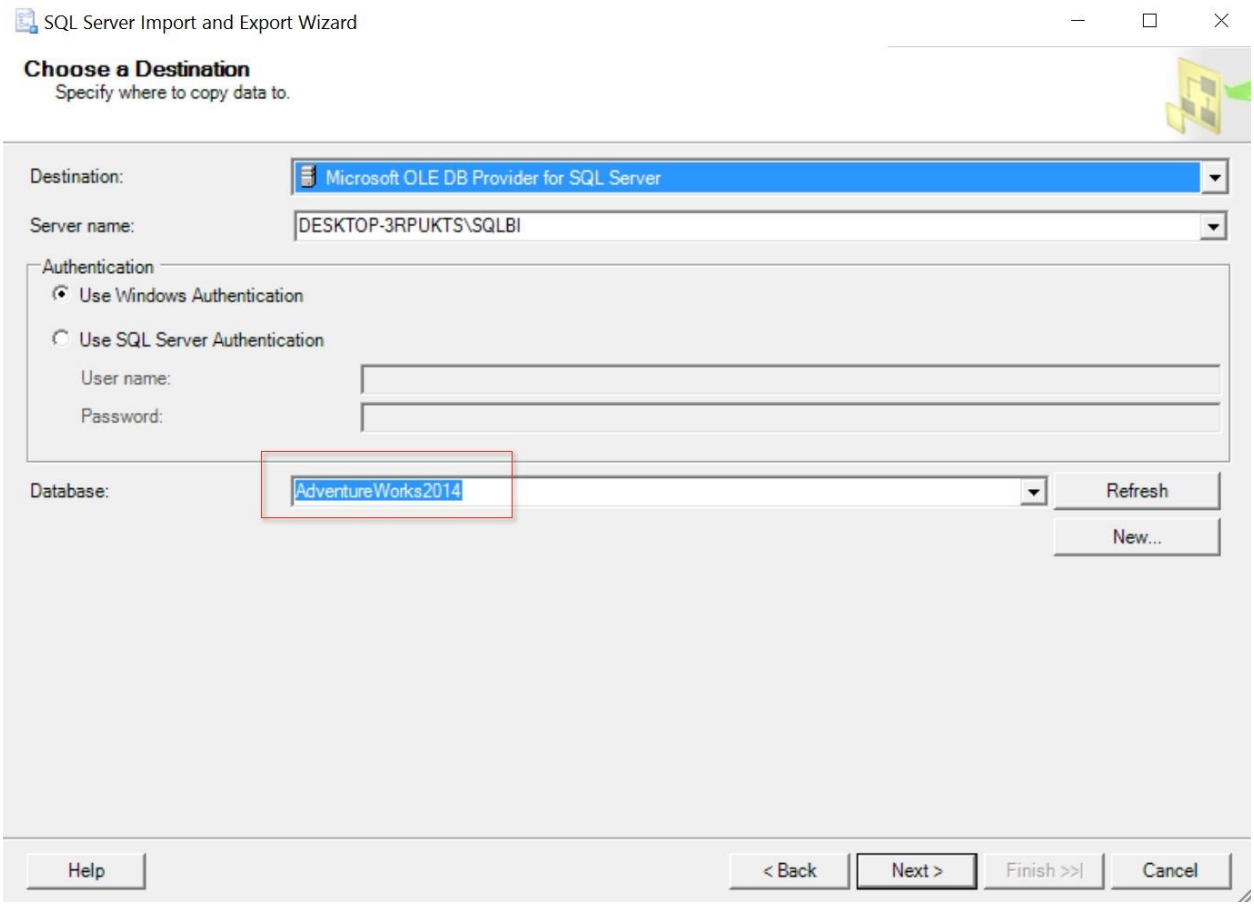

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Enter Code here
View Datasets Here
View Plots and Graphs Here
View Code Output Here


Python 3.4.4 (64-bit) Setup
Select whether to install Python 3.4.4 (64-bit) for all users of this computer.
Install for all users
Install just for me (not available on Windows Vista)
python
for
windows
Back
Next >
Cancel

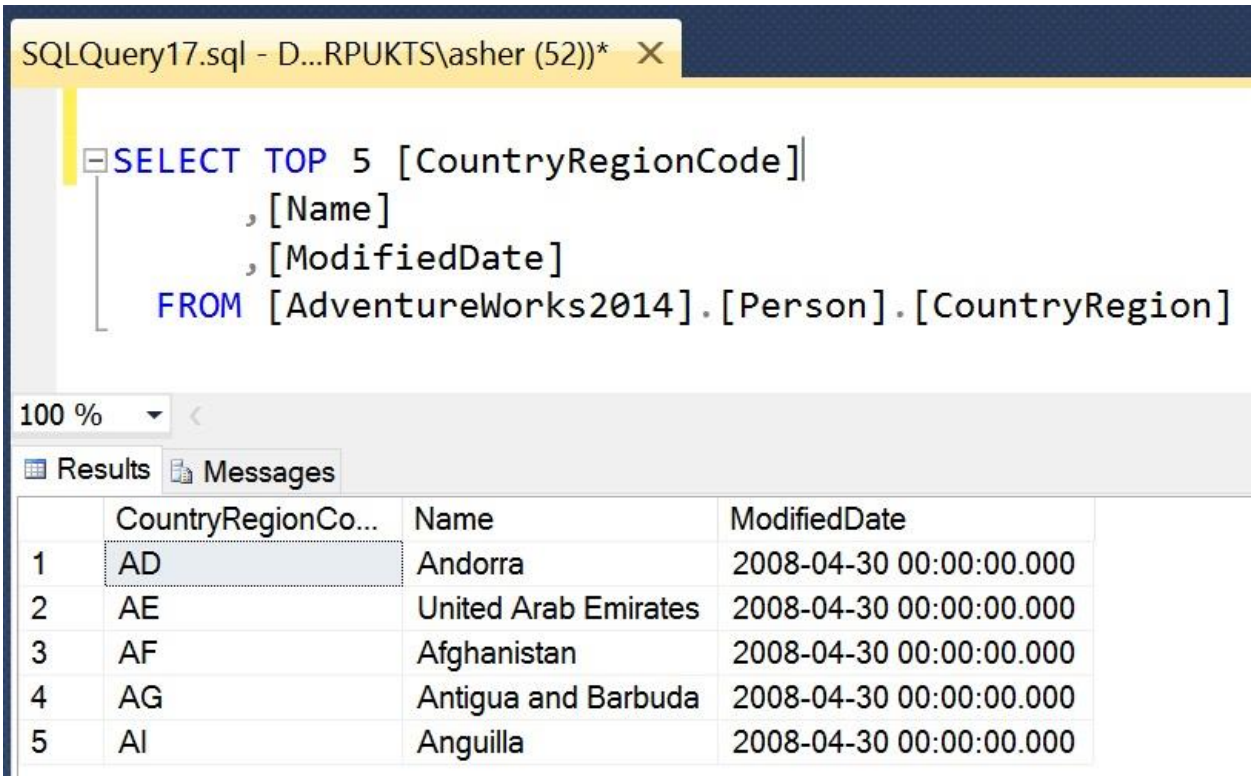

Welcome to PyCharm Community Edition
PyCharm Community Edition
Version 2016.1.2
Create New Project
Open
Check out from Version Control
Configure
Get Help


Settings
Project: Python - Web Scraping › Project Interpreter
For current project
Appearance & Behavior
Keymap
Editor
Plugins
Version Control
Project: Python - Web Scraping
Project Interpreter
Project Structure
Build, Execution, Deployment
Languages & Frameworks
Tools
Project Interpreter:
3.4.4 (C:\Python34\python.exe)
Package
Version
Latest
pip
7.1.2
8.1.1
setuptools
18.2
21.0.0

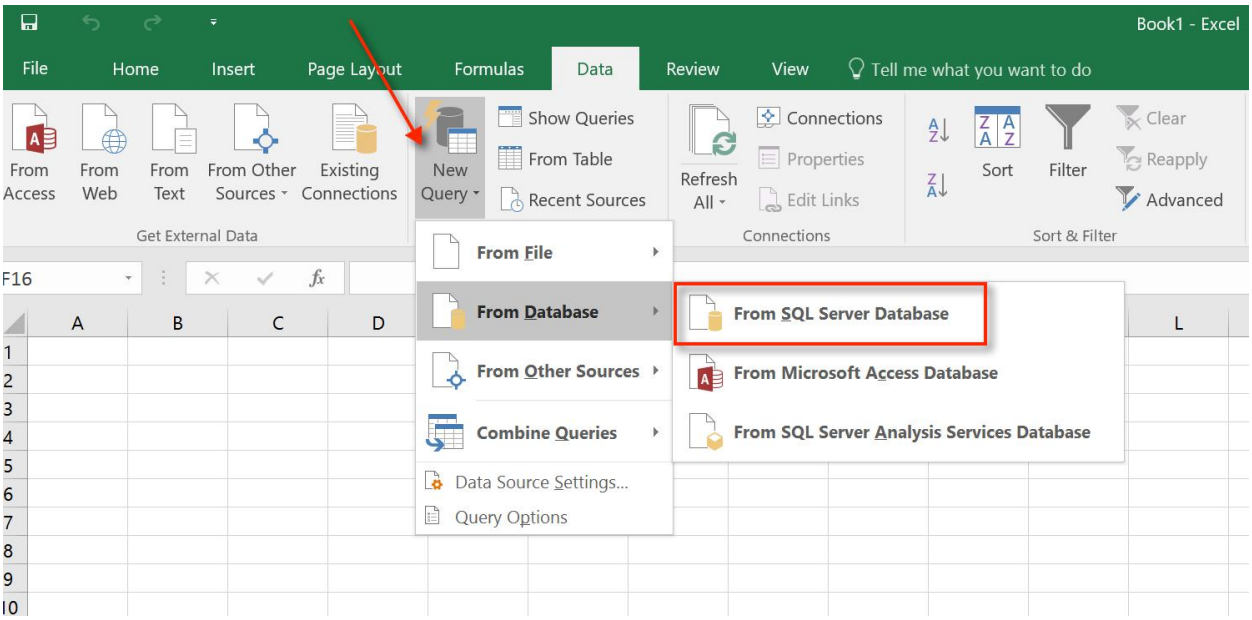

SQL Server Import and Export Wizard
Choose a Data Source
Select the source from which to copy data.
Data source:
Flat File Source
General
Columns
Advanced
Preview
Configure the properties of each column.
"WeekInYear"
"DiscountCode"
Misc
Name
Index
ColumnDelimiter
Comma {,}
ColumnType
Delimited
InputColumnWidt
0
DataPrecision
0
DataScale
0
DataType
string [DT_STR]
OutputColumnWi
50
TextQualified
True
Name
New
Delete
Suggest Types...
Help
< Back
Next >
Finish >>|
Cancel

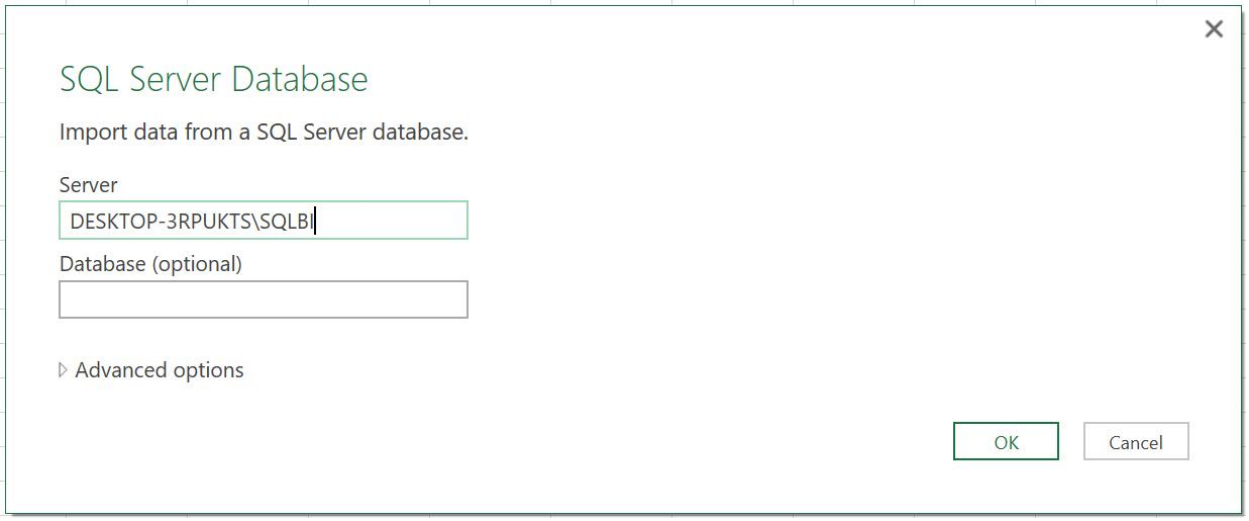

SQL Server Import and Export Wizard
Choose a Destination
Specify where to copy data to.
Destination:
Microsoft OLE DB Provider for SQL Server
Server name:
DESKTOP-3RPUKTS\SQLBI
Authentication
Use Windows Authentication
Use SQL Server Authentication
User name:
Password:
Database:
AdventureWorks2014
Refresh
New...
Help
< Back
Next >
Finish >>|
Cancel

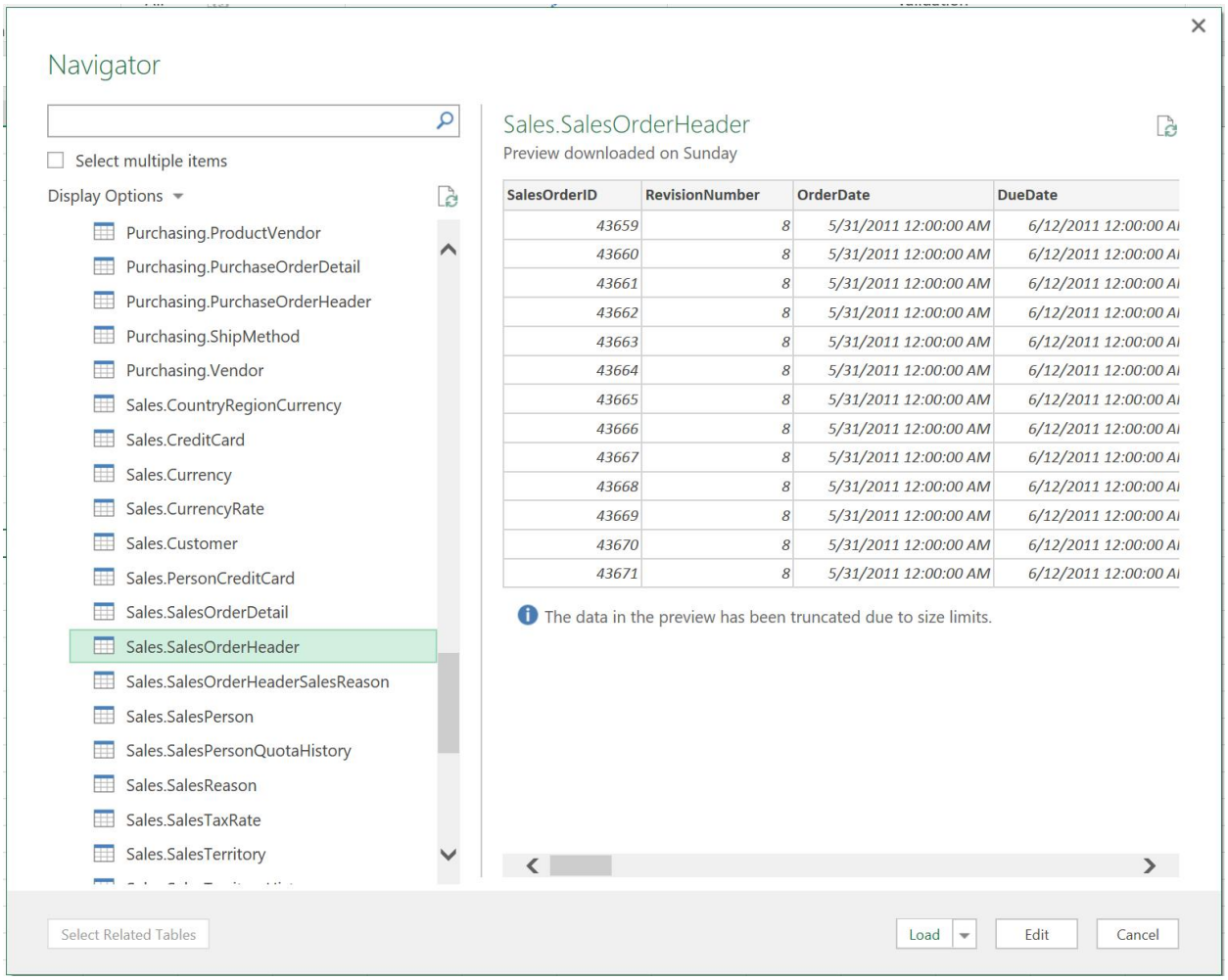
Chapter 3: Analysis with Excel and Creating Interactive Maps and Charts with Power BI

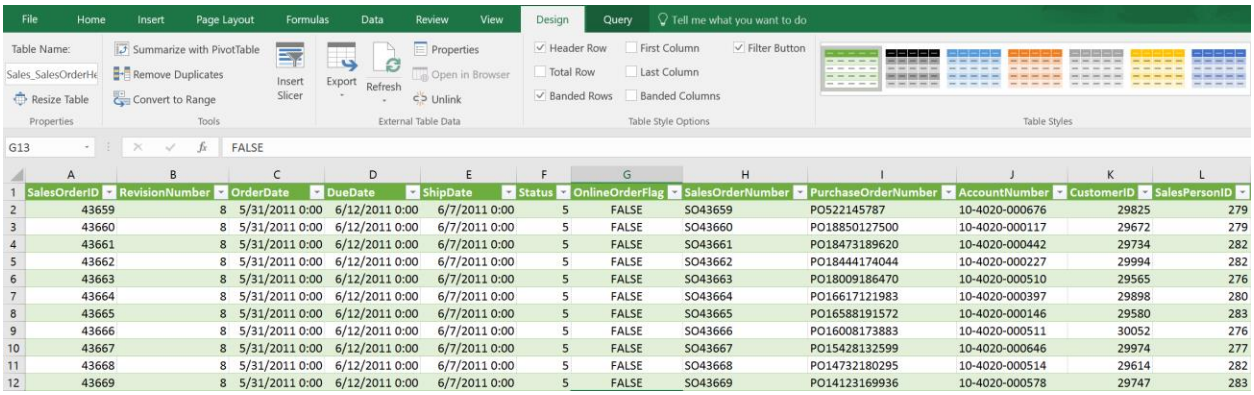


	CountryRegionCo...	Name	ModifiedDate
1	AD	Andorra	2008-04-30 00:00:00.000
2	AE	United Arab Emirates	2008-04-30 00:00:00.000
3	AF	Afghanistan	2008-04-30 00:00:00.000
4	AG	Antigua and Barbuda	2008-04-30 00:00:00.000
5	AI	Anguilla	2008-04-30 00:00:00.000




SQL Server Database
Import data from a SQL Server database.
Server
DESKTOP-3RPUKTS\SQLBI
Database (optional)
Advanced options
OK
Cancel


Navigator
Select multiple items
Display Options
Purchasing.ProductVendor
Purchasing.PurchaseOrderDetail
Purchasing.PurchaseOrderHeader
Purchasing.ShipMethod
Purchasing.Vendor
Sales.CountryRegionCurrency
Sales.CreditCard
Sales.Currency
Sales.CurrencyRate
Sales.Customer
Sales.PersonCreditCard
Sales.SalesOrderDetail
Sales.SalesOrderHeader
Sales.SalesOrderHeaderSalesReason
Sales.SalesPerson
Sales.SalesPersonQuotaHistory
Sales.SalesReason
Sales.SalesTaxRate
Sales.SalesTerritory
Sales.SalesOrderHeader
Preview downloaded on Sunday
SalesOrderID RevisionNumber OrderDate DueDate
43659 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43660 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43661 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43662 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43663 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43664 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43665 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43666 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43667 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43668 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43669 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43670 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
43671 8 5/31/2011 12:00:00 AM 6/12/2011 12:00:00 AM
The data in the preview has been truncated due to size limits.
Select Related Tables
Load
Edit
Cancel



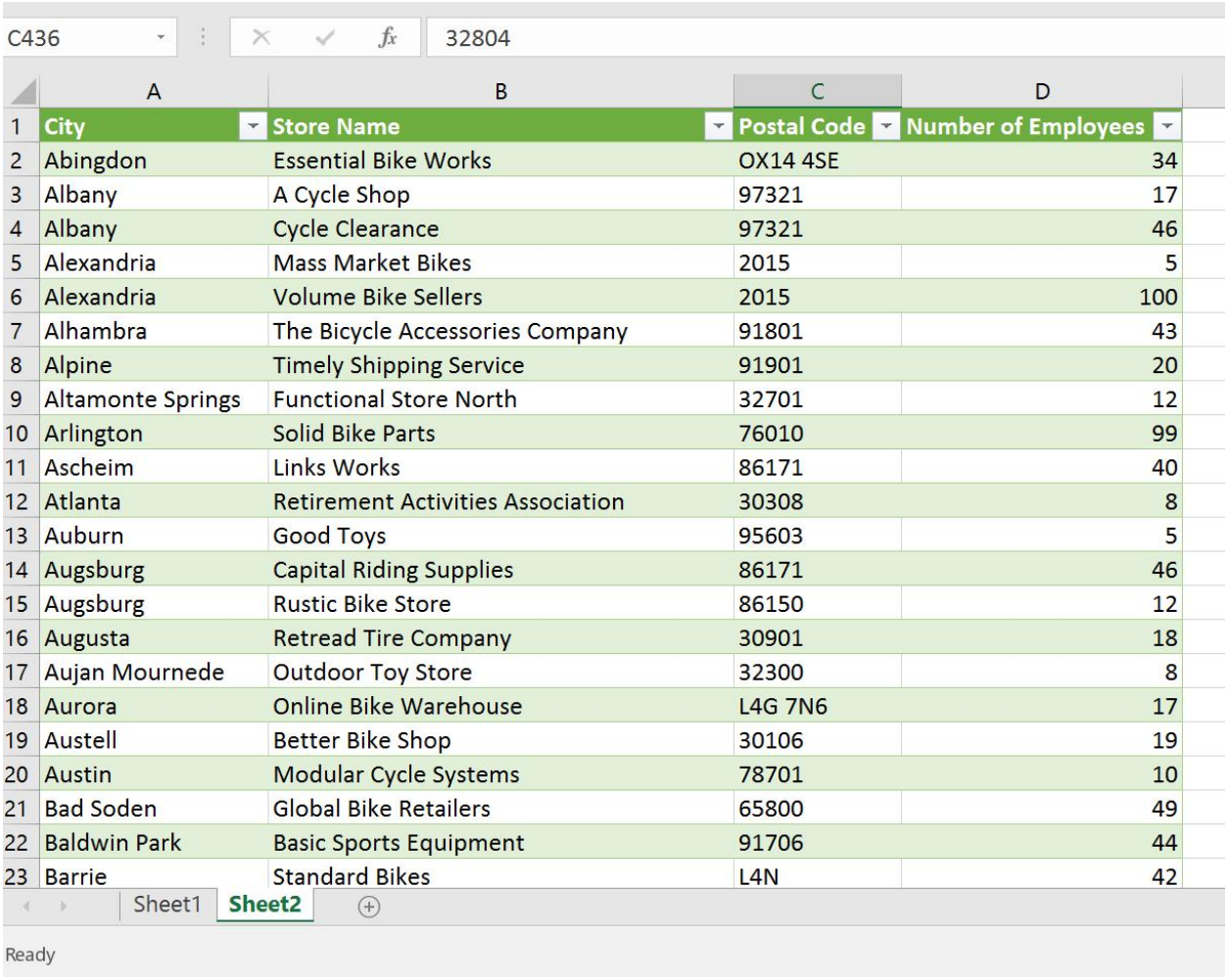
	A	B	C	D	E	F	G	H	I	J	K	L
1	SalesOrderID	RevisionNumber	OrderDate	DueDate	ShipDate	Status	OnlineOrderFlag	SalesOrderNumber	PurchaseOrderNumber	AccountNumber	CustomerID	SalesPersonID
2	43659	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43659	PO522145787	10-4020-000676	29825	279
3	43660	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43660	PO18850127500	10-4020-000117	29672	279
4	43661	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43661	PO18473189620	10-4020-000442	29734	282
5	43662	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43662	PO18444174044	10-4020-000227	29994	282
6	43663	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43663	PO18009186470	10-4020-000510	29565	276
7	43664	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43664	PO16617121983	10-4020-000397	29898	280
8	43665	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43665	PO16588191572	10-4020-000146	29580	283
9	43666	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43666	PO16008173883	10-4020-000511	30052	276
10	43667	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43667	PO15428132599	10-4020-000646	29974	277
11	43668	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43668	PO14732180295	10-4020-000514	29614	282
12	43669	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43669	PO14123169936	10-4020-000578	29747	283

100 %

Results | Messages

	Territory ID	Sub Total	Tax Amount	Freight	Total Due
1	1	16084942.5482	1506070.6437	470647.1791	18061660.371
2	2	6939374.4813	671112.4924	209722.6548	7820209.6285
3	3	7909009.0062	765173.5159	239116.7252	8913299.2473
4	4	24184609.6011	2259797.9767	706187.0115	27150594.5893
5	5	7879655.0731	765290.8895	239153.4043	8884099.3669
6	6	16355770.4553	1556692.2994	486466.4333	18398929.188
7	7	7251555.6473	661480.8668	206712.8319	8119749.346
8	8	4915407.596	430028.1254	134383.8541	5479819.5755
9	9	10655335.9598	883078.052	275962.0834	11814376.0952
10	10	7670721.0356	688249.5984	215078.0742	8574048.7082

3	Row Labels	Sum of SubTotal	Sum of TaxAmt	Sum of Freight	Sum of TotalDue
4	1	16084942.55	1506070.644	470647.1791	18061660.37
5	2	6939374.481	671112.4924	209722.6548	7820209.629
6	3	7909009.006	765173.5159	239116.7252	8913299.247
7	4	24184609.6	2259797.977	706187.0115	27150594.59
8	5	7879655.073	765290.8895	239153.4043	8884099.367
9	6	16355770.46	1556692.299	486466.4333	18398929.19
10	7	7251555.647	661480.8668	206712.8319	8119749.346
11	8	4915407.596	430028.1254	134383.8541	5479819.576
12	9	10655335.96	883078.052	275962.0834	11814376.1
13	10	7670721.036	688249.5984	215078.0742	8574048.708
14	**Grand Total**	**109846381.4**	**10186974.46**	**3183430.252**	**123216786.1**

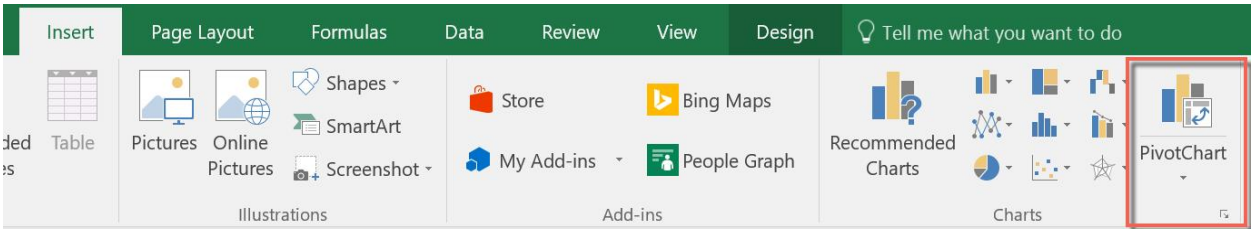


C436 | 32804

	A	B	C	D
1	City	Store Name	Postal Code	Number of Employees
2	Abingdon	Essential Bike Works	OX14 4SE	34
3	Albany	A Cycle Shop	97321	17
4	Albany	Cycle Clearance	97321	46
5	Alexandria	Mass Market Bikes	2015	5
6	Alexandria	Volume Bike Sellers	2015	100
7	Alhambra	The Bicycle Accessories Company	91801	43
8	Alpine	Timely Shipping Service	91901	20
9	Altamonte Springs	Functional Store North	32701	12
10	Arlington	Solid Bike Parts	76010	99
11	Ascheim	Links Works	86171	40
12	Atlanta	Retirement Activities Association	30308	8
13	Auburn	Good Toys	95603	5
14	Augsburg	Capital Riding Supplies	86171	46
15	Augsburg	Rustic Bike Store	86150	12
16	Augusta	Retread Tire Company	30901	18
17	Aujan Mournede	Outdoor Toy Store	32300	8
18	Aurora	Online Bike Warehouse	L4G 7N6	17
19	Austell	Better Bike Shop	30106	19
20	Austin	Modular Cycle Systems	78701	10
21	Bad Soden	Global Bike Retailers	65800	49
22	Baldwin Park	Basic Sports Equipment	91706	44
23	Barrie	Standard Bikes	L4N	42

Sheet1 | Sheet2

Ready



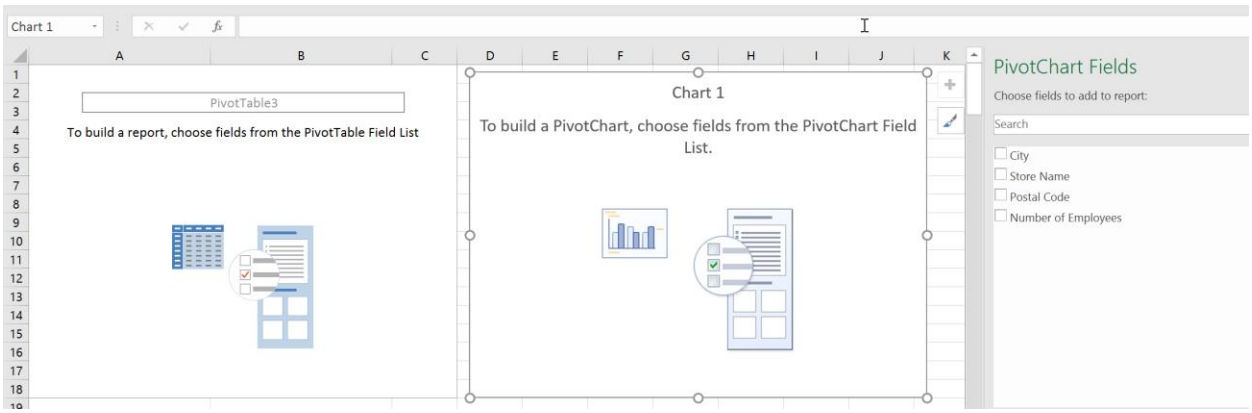
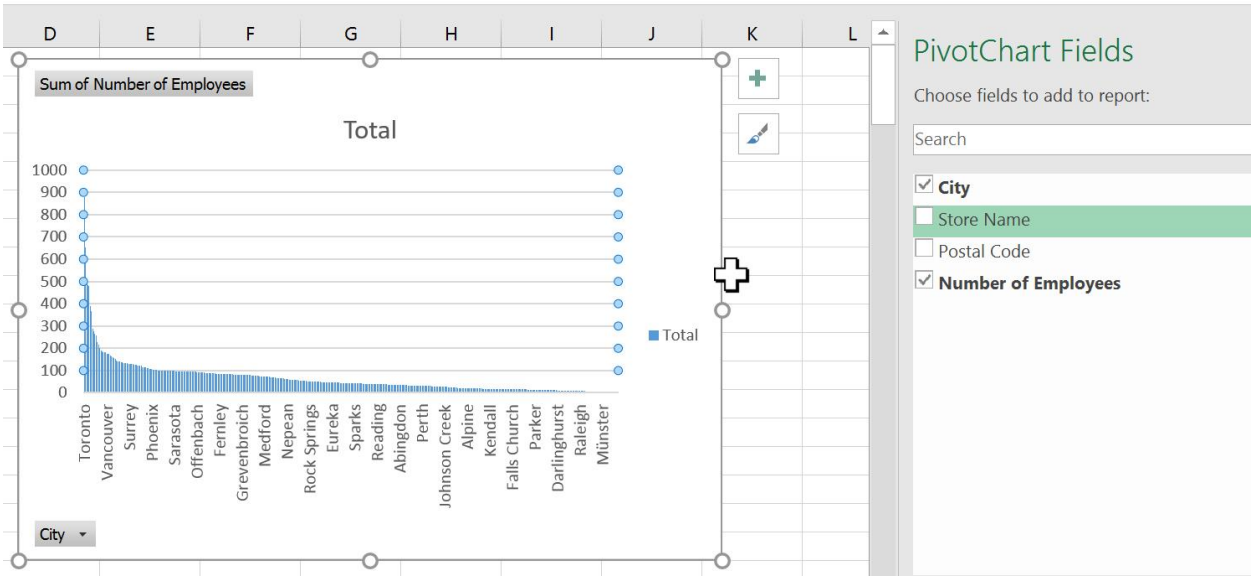
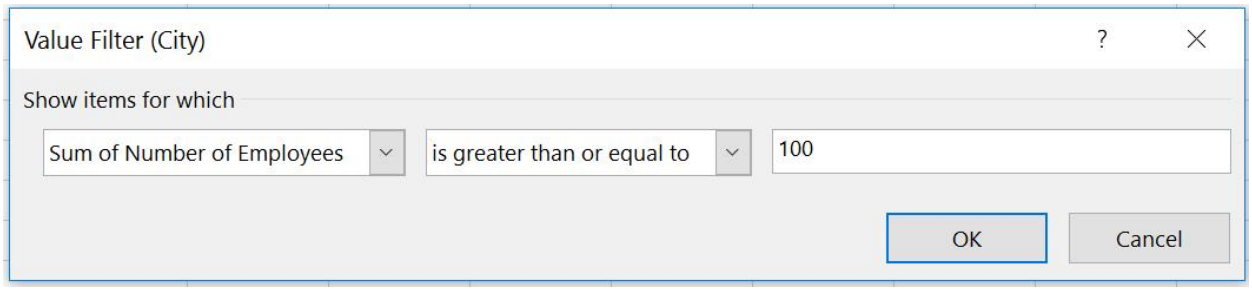
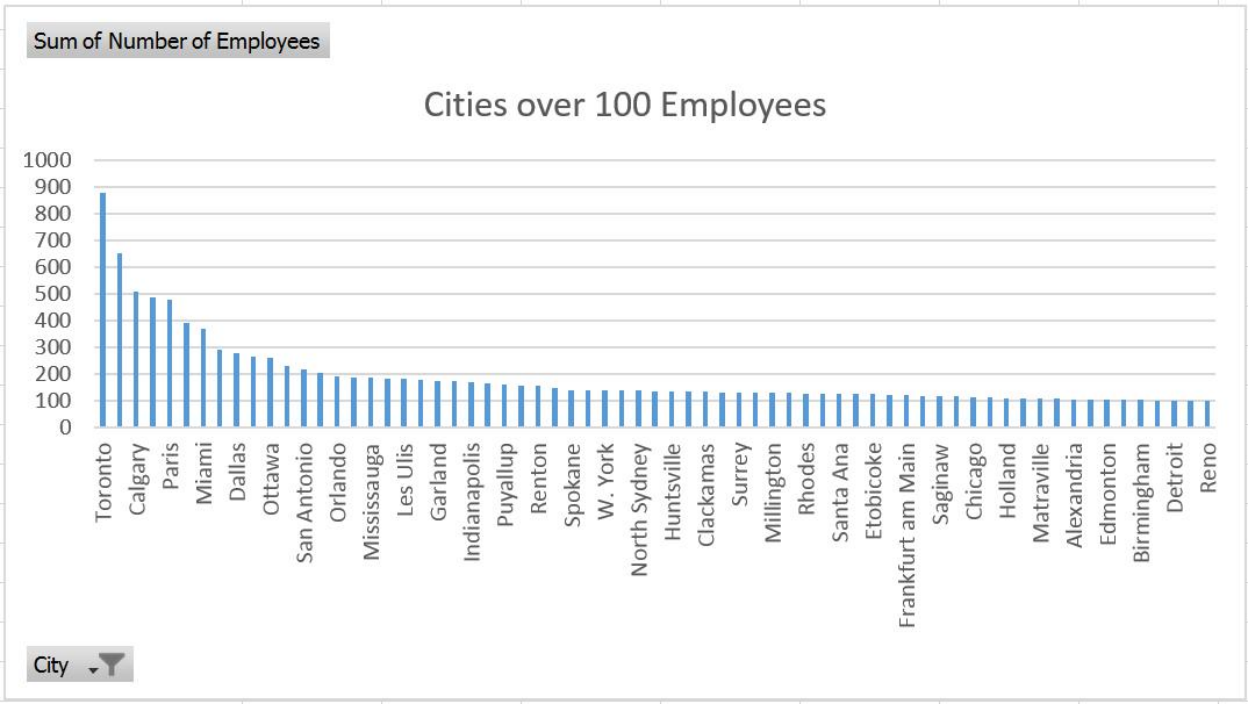
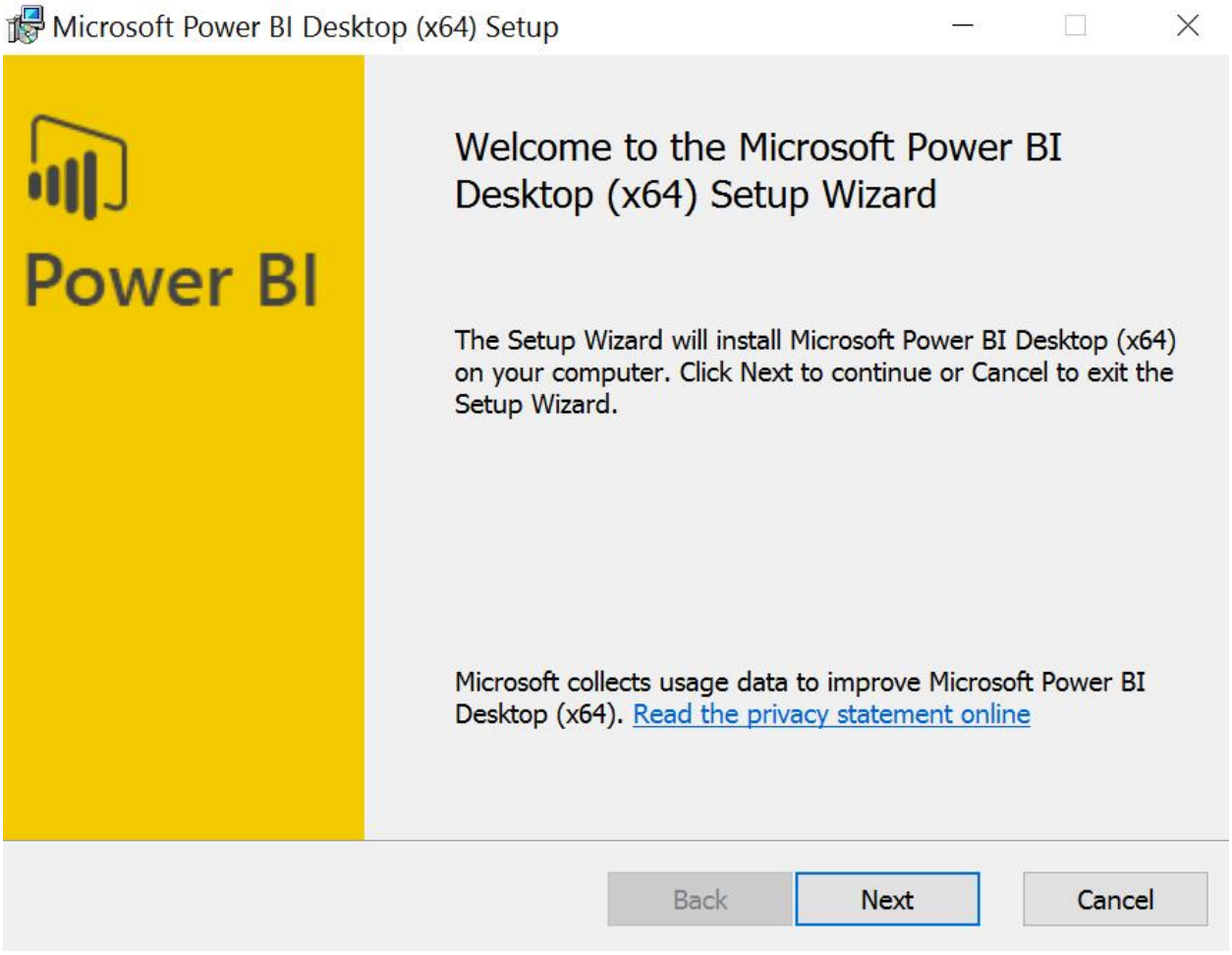


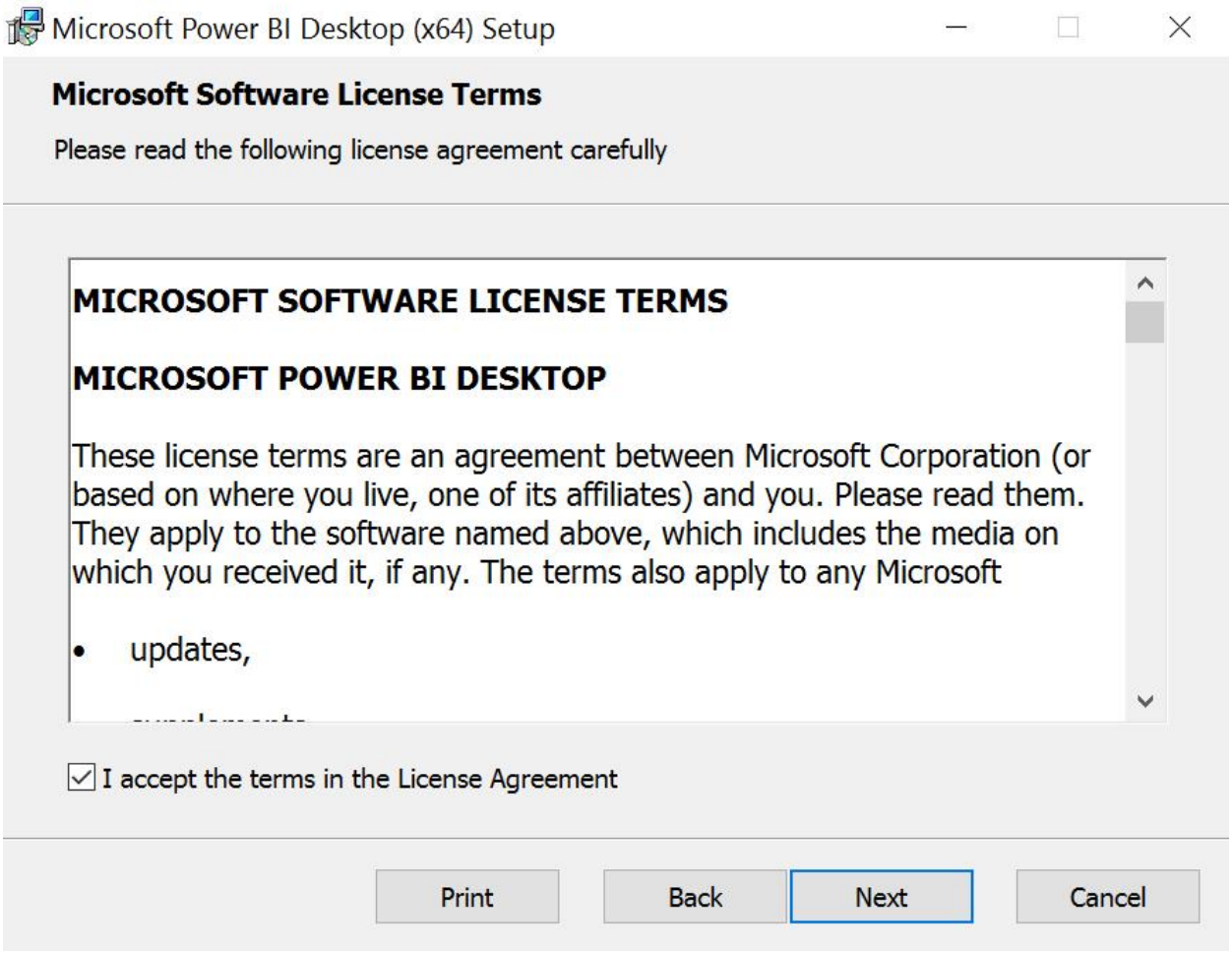
Chart 1
PivotTable3
To build a report, choose fields from the PivotTable Field List
Chart 1
To build a PivotChart, choose fields from the PivotChart Field List.
PivotChart Fields
Choose fields to add to report:
Search
City
Store Name
Postal Code
Number of Employees

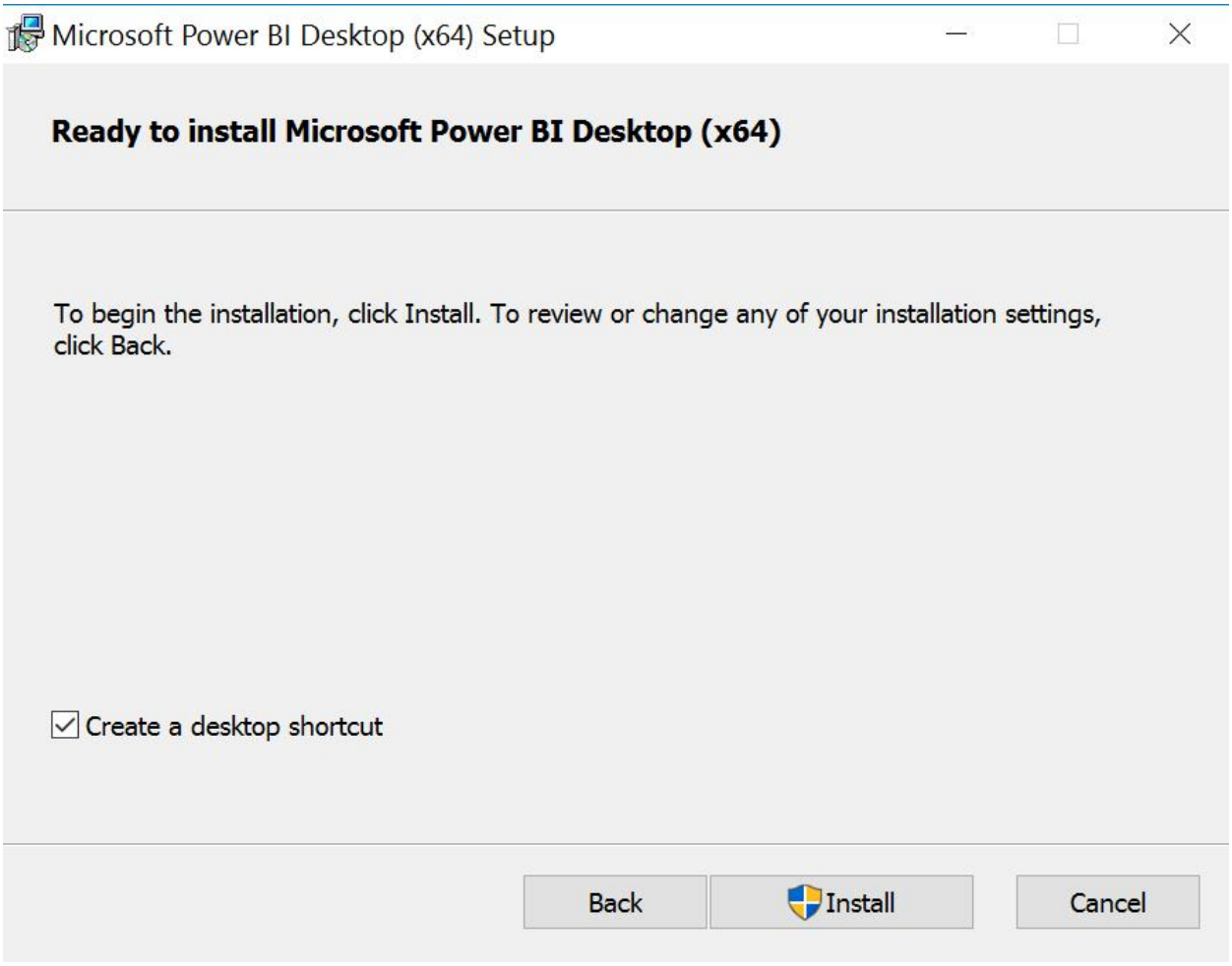

Sum of Number of Employees
Total
1000
900
800
700
600
500
400
300
200
100
0
Toronto
Vancouver
Surrey
Phoenix
Sarasota
Offenbach
Fernley
Grevenbroich
Medford
Nepean
Rock Springs
Eureka
Sparks
Reading
Abingdon
Perth
Johnson Creek
Alpine
Kendall
Falls Church
Parker
Darlinghurst
Raleigh
Münster
Total
City
PivotChart Fields
Choose fields to add to report:
Search
City
Store Name
Postal Code
Number of Employees

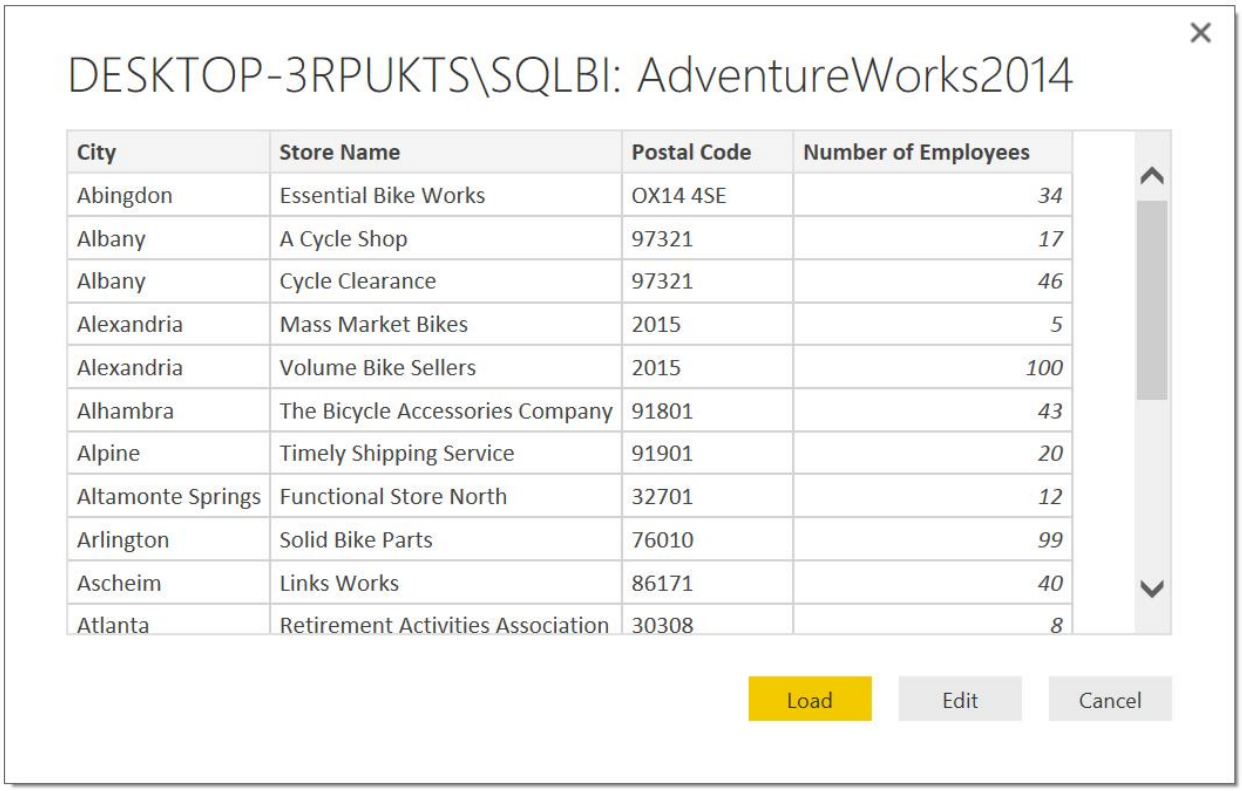

Value Filter (City)
Show items for which
Sum of Number of Employees
is greater than or equal to
100
OK
Cancel

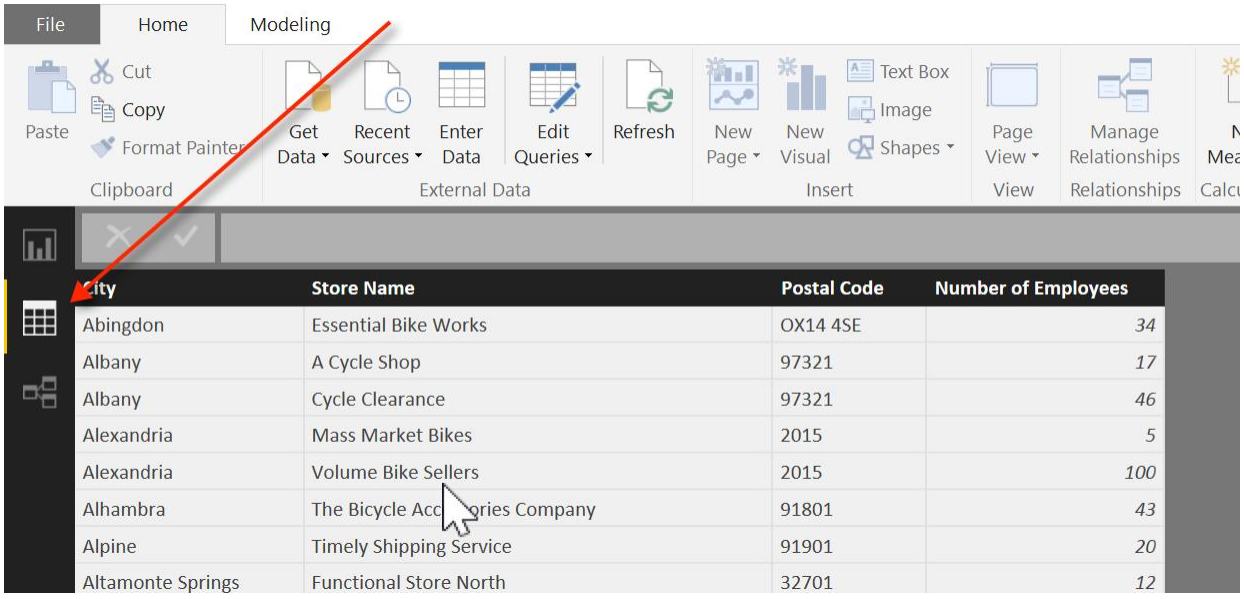

Sum of Number of Employees
Cities over 100 Employees
1000
900
800
700
600
500
400
300
200
100
0
Toronto
Calgary
Paris
Miami
Dallas
Ottawa
San Antonio
Orlando
Mississauga
Les Ulis
Garland
Indianapolis
Puyallup
Renton
Spokane
W. York
North Sydney
Huntsville
Clackamas
Surrey
Millington
Rhodes
Santa Ana
Etobicoke
Frankfurt am Main
Saginaw
Chicago
Holland
Matraville
Alexandria
Edmonton
Birmingham
Detroit
Reno
City

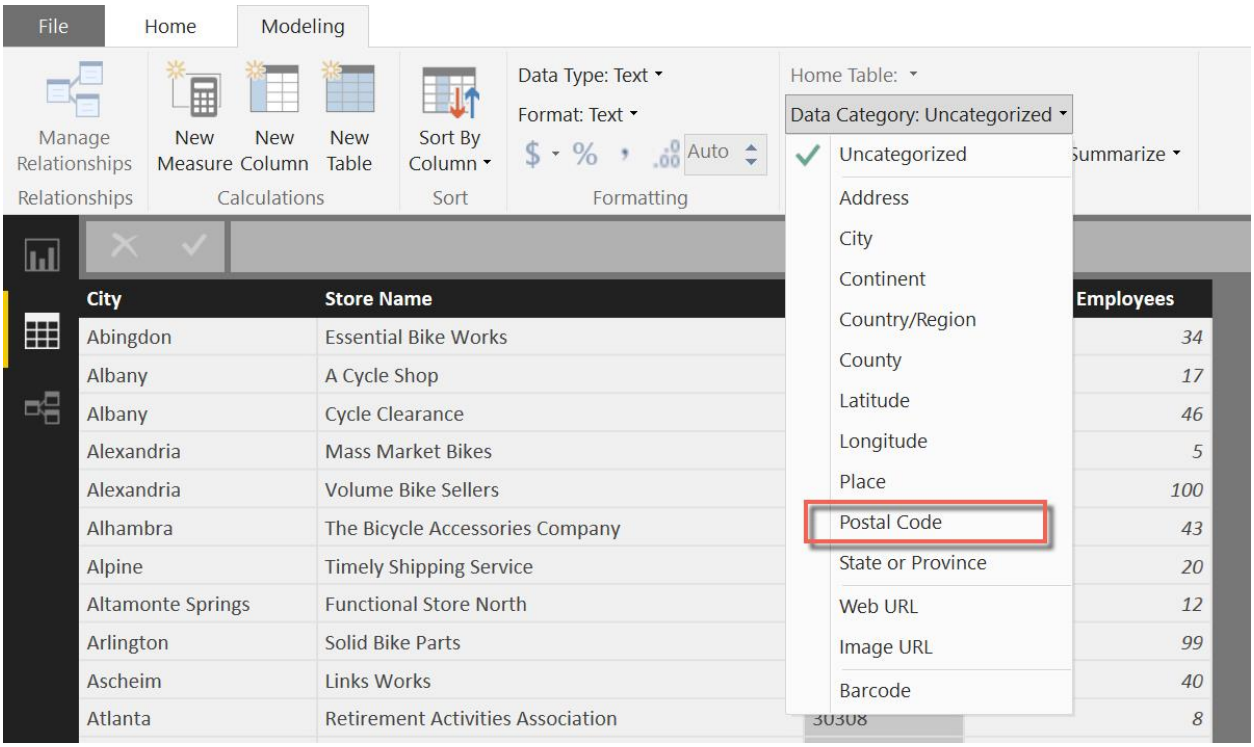

Microsoft Power BI Desktop (x64) Setup
Power BI
Welcome to the Microsoft Power BI Desktop (x64) Setup Wizard
The Setup Wizard will install Microsoft Power BI Desktop (x64) on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
Microsoft collects usage data to improve Microsoft Power BI Desktop (x64). Read the privacy statement online
Back
Next
Cancel

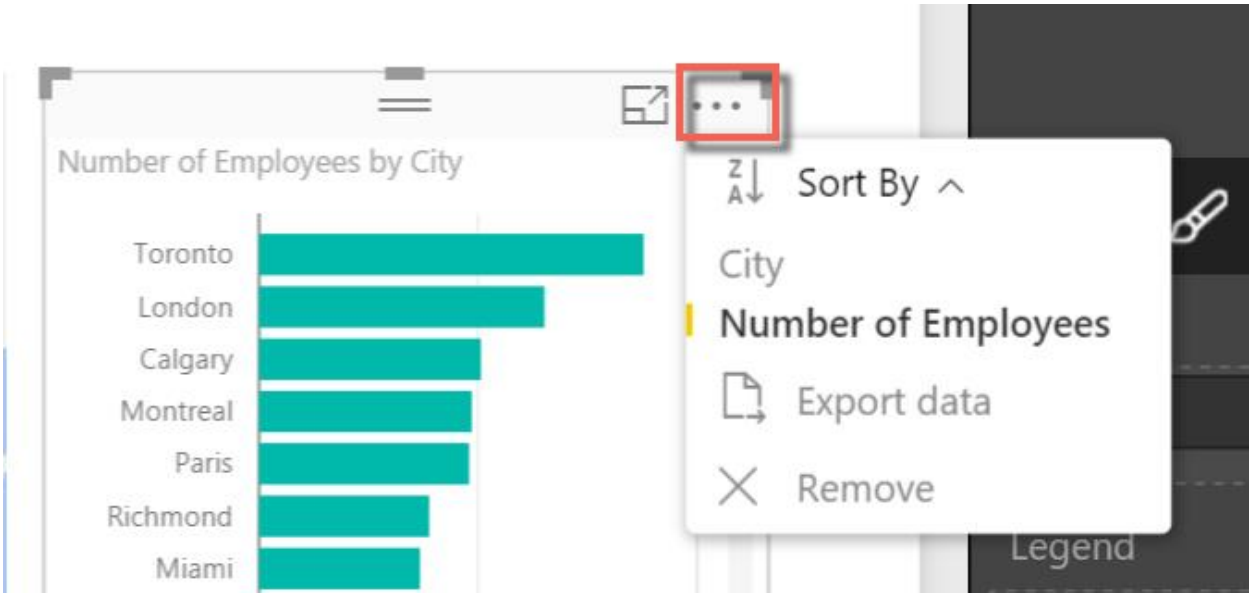

Microsoft Power BI Desktop (x64) Setup
Microsoft Software License Terms
Please read the following license agreement carefully
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT POWER BI DESKTOP
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
• updates,
I accept the terms in the License Agreement
Print
Back
Next
Cancel

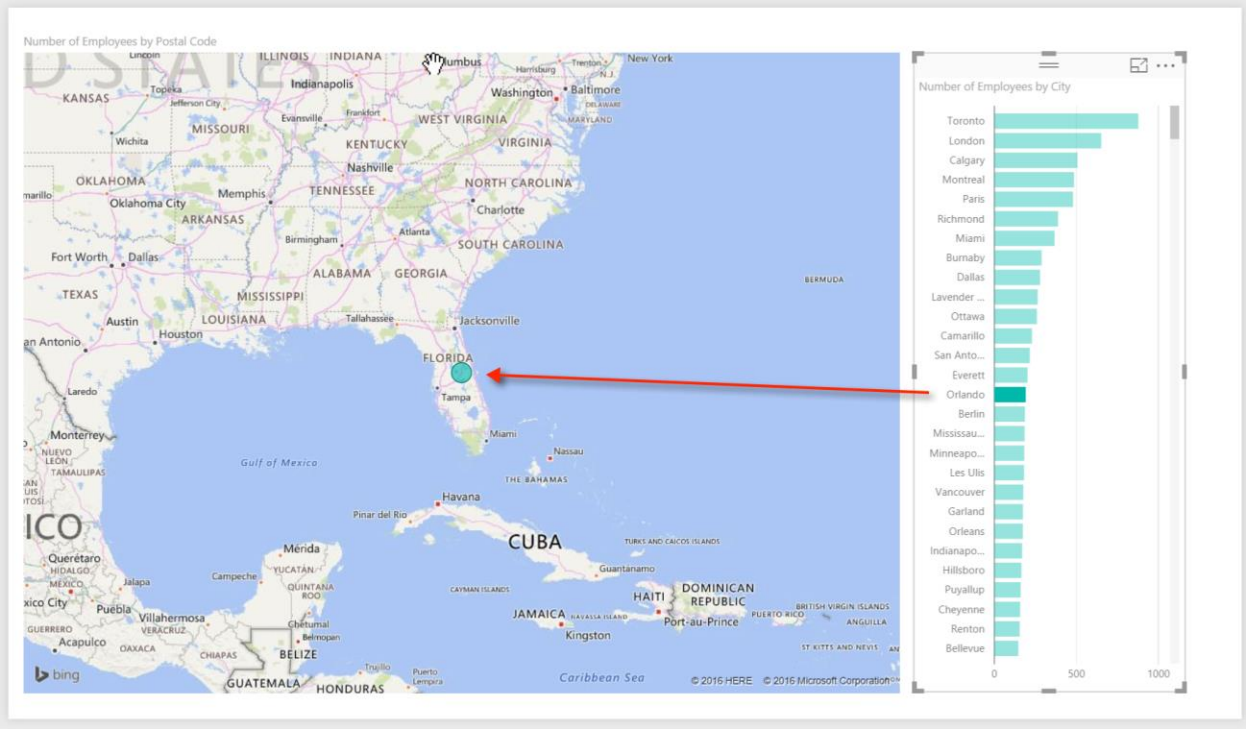

Microsoft Power BI Desktop (x64) Setup
Ready to install Microsoft Power BI Desktop (x64)
To begin the installation, click Install. To review or change any of your installation settings, click Back.
Create a desktop shortcut
Back
Install
Cancel

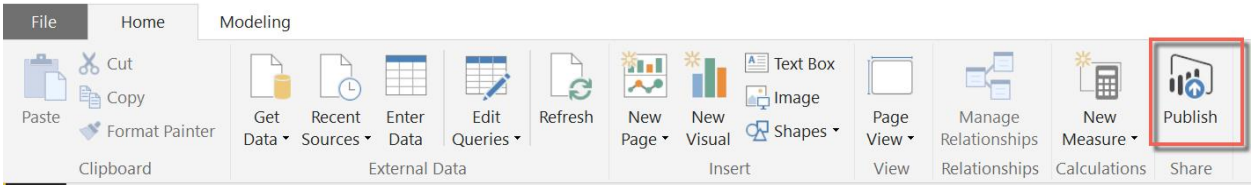

DESKTOP-3RPUKTS\SQLBI: AdventureWorks2014
City
Store Name
Postal Code
Number of Employees
Abingdon
Essential Bike Works
OX14 4SE
34
Albany
A Cycle Shop
97321
17
Albany
Cycle Clearance
97321
46
Alexandria
Mass Market Bikes
2015
5
Alexandria
Volume Bike Sellers
2015
100
Alhambra
The Bicycle Accessories Company
91801
43
Alpine
Timely Shipping Service
91901
20
Altamonte Springs
Functional Store North
32701
12
Arlington
Solid Bike Parts
76010
99
Ascheim
Links Works
86171
40
Atlanta
Retirement Activities Association
30308
8
Load
Edit
Cancel

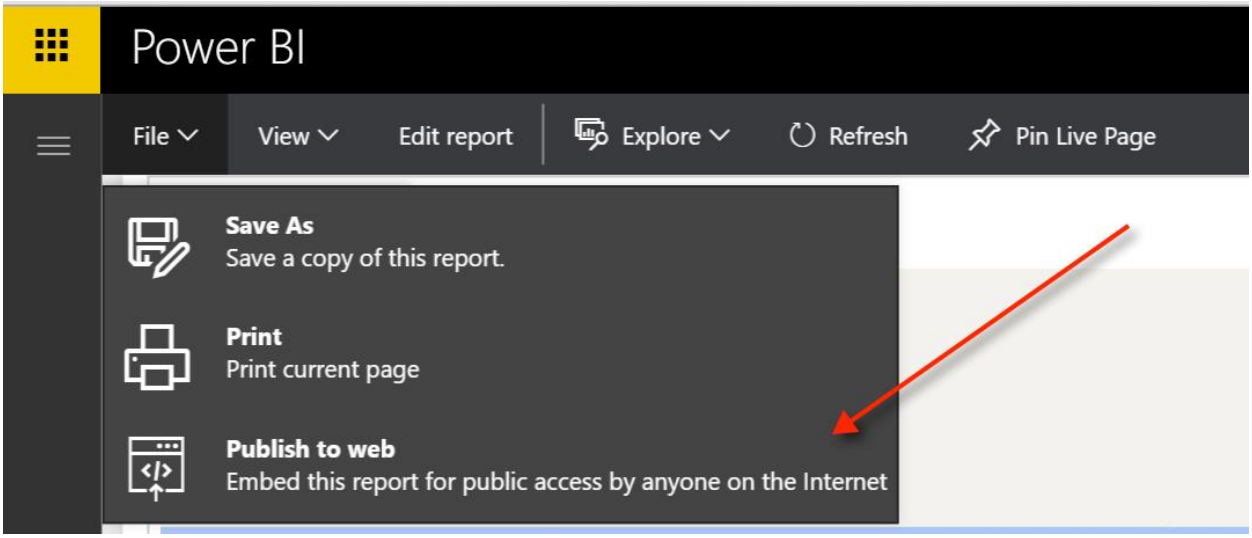

File
Home
Modeling
Paste
Cut
Copy
Format Painter
Clipboard
Get Data
Recent Sources
Enter Data
Edit Queries
Refresh
External Data
New Page
New Visual
Text Box
Image
Shapes
Insert
Page View
View
Manage Relationships
Relationships
City
Store Name
Postal Code
Number of Employees
Abingdon
Essential Bike Works
OX14 4SE
34
Albany
A Cycle Shop
97321
17
Albany
Cycle Clearance
97321
46
Alexandria
Mass Market Bikes
2015
5
Alexandria
Volume Bike Sellers
2015
100
Alhambra
The Bicycle Acc ories Company
91801
43
Alpine
Timely Shipping Service
91901
20
Altamonte Springs
Functional Store North
32701
12

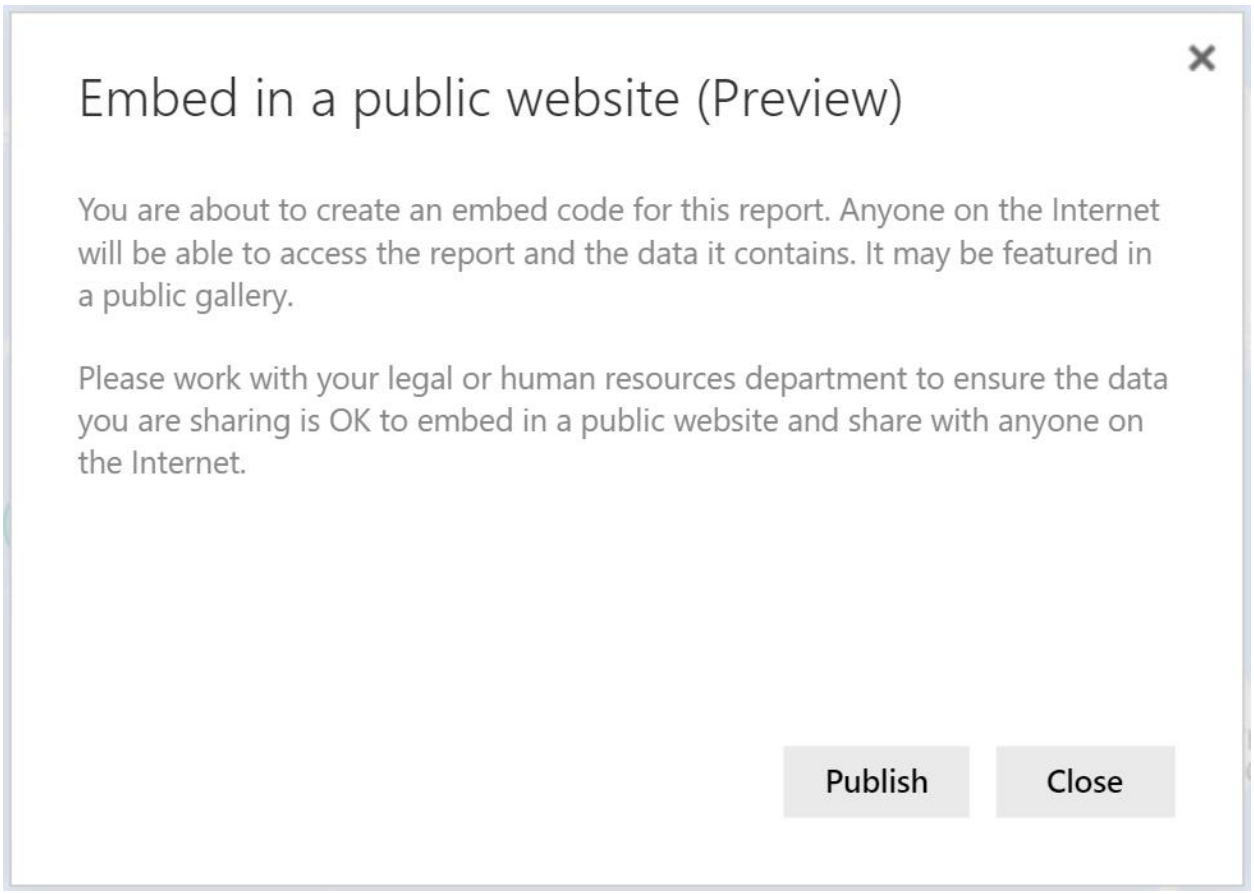

File
Home
Modeling
Manage Relationships
Relationships
New Measure
New Column
New Table
Calculations
Sort By Column
Sort
Data Type: Text
Format: Text
Auto
Formatting
Home Table:
Data Category: Uncategorized
Summarize
Uncategorized
Address
City
Continent
Country/Region
County
Latitude
Longitude
Place
Postal Code
State or Province
Web URL
Image URL
Barcode
City
Store Name
Employees
Abingdon
Essential Bike Works
34
Albany
A Cycle Shop
17
Albany
Cycle Clearance
46
Alexandria
Mass Market Bikes
5
Alexandria
Volume Bike Sellers
100
Alhambra
The Bicycle Accessories Company
43
Alpine
Timely Shipping Service
20
Altamonte Springs
Functional Store North
12
Arlington
Solid Bike Parts
99
Ascheim
Links Works
40
Atlanta
Retirement Activities Association
8

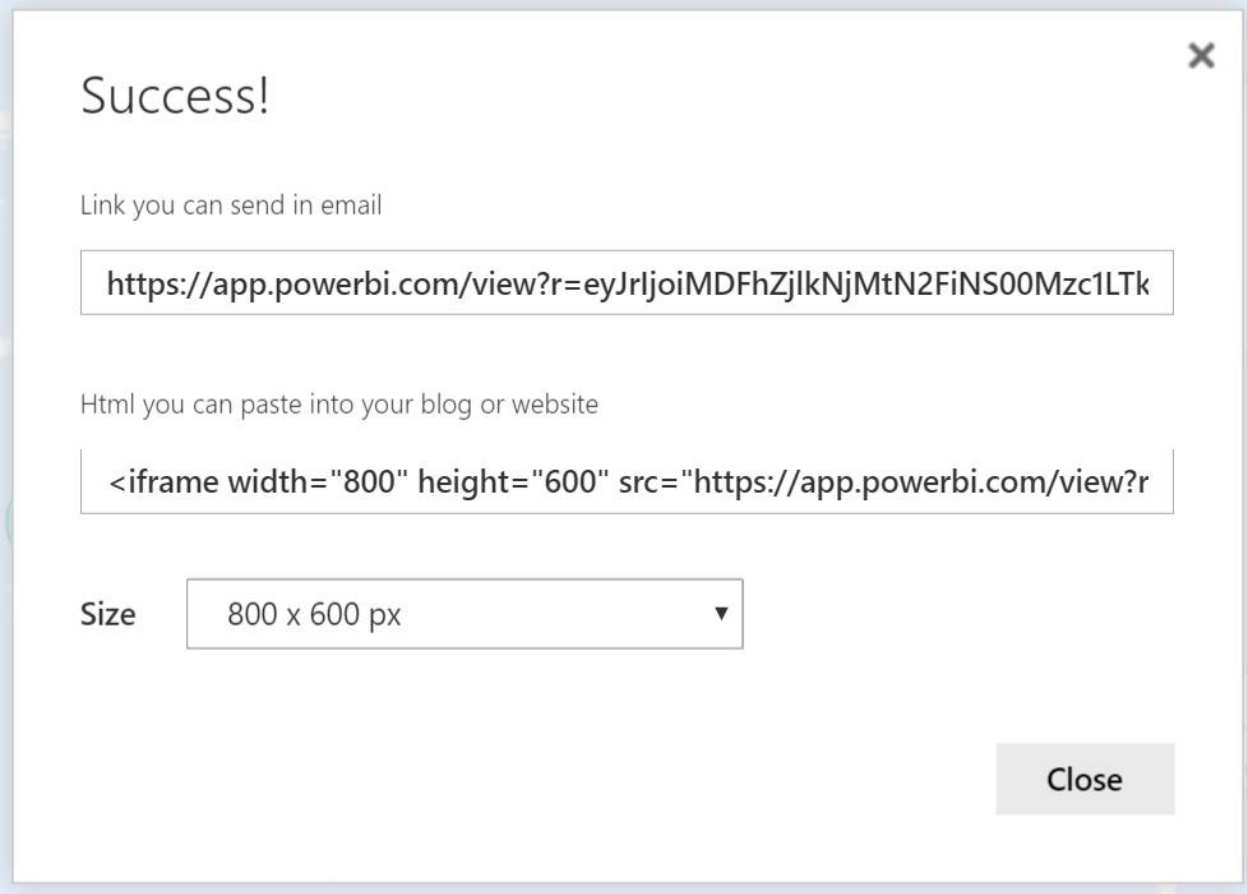

Number of Employees by City
Toronto
London
Calgary
Montreal
Paris
Richmond
Miami
Sort By
City
Number of Employees
Export data
Remove
Legend

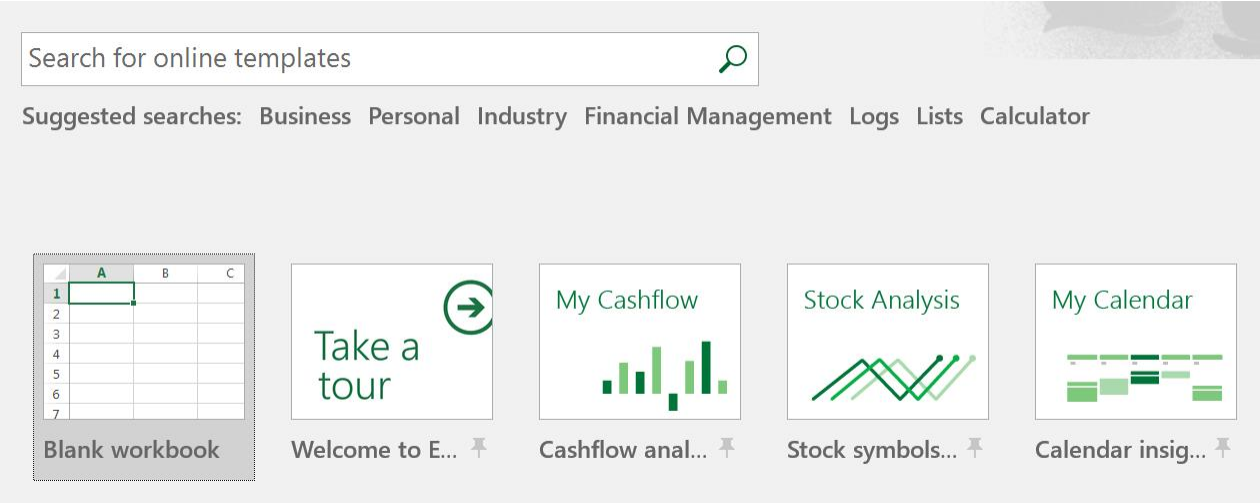

Number of Employees by Postal Code
Number of Employees by City
Toronto
London
Calgary
Montreal
Paris
Richmond
Miami
Burnaby
Dallas
Orlando
Ottawa
Everett
Berlin
Vancouver
Garland
Orleans
Hillsboro
Puyallup
Cheyenne
Renton
Bellevue
0
500
1000
Gulf of Mexico
Caribbean Sea
CUBA
FLORIDA
bing

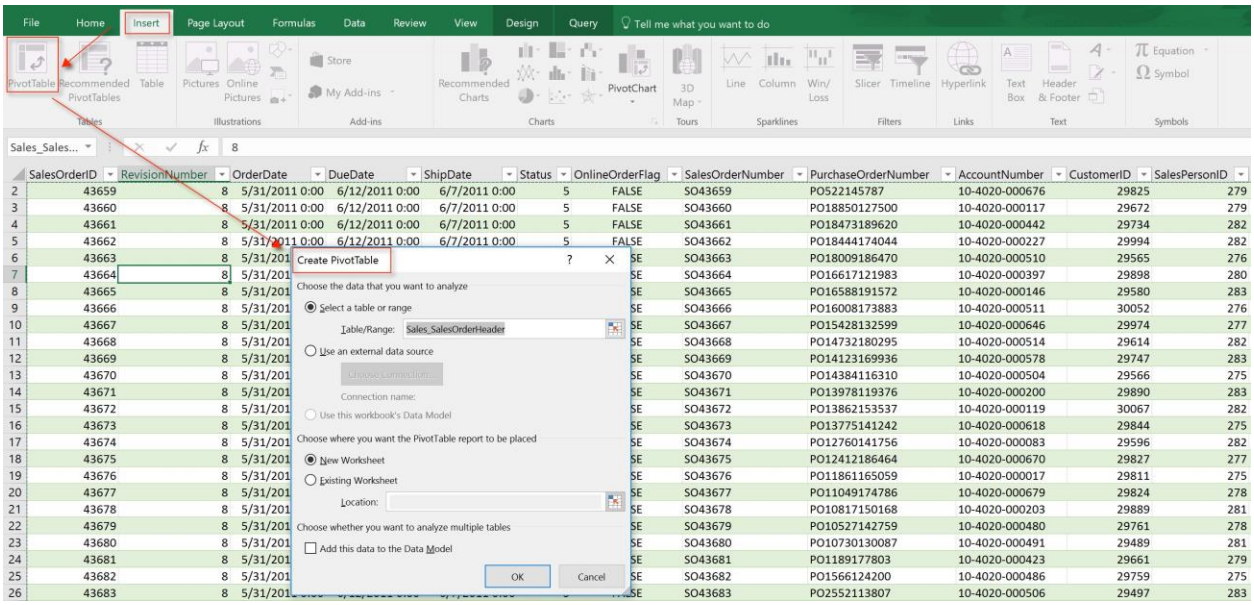

File
Home
Modeling
Paste
Cut
Copy
Format Painter
Clipboard
Get Data
Recent Sources
Enter Data
Edit Queries
Refresh
External Data
New Page
New Visual
Text Box
Image
Shapes
Insert
Page View
View
Manage Relationships
Relationships
New Measure
Calculations
Publish
Share


Power BI
File
View
Edit report
Explore
Refresh
Pin Live Page
Save As
Save a copy of this report.
Print
Print current page
Publish to web
Embed this report for public access by anyone on the Internet


Embed in a public website (Preview)
You are about to create an embed code for this report. Anyone on the Internet will be able to access the report and the data it contains. It may be featured in a public gallery.
Please work with your legal or human resources department to ensure the data you are sharing is OK to embed in a public website and share with anyone on the Internet.
Publish
Close


Success!
Link you can send in email
https://app.powerbi.com/view?r=eyJrIjoiMDFhZjlkNjMtN2FiNS00Mzc1LTk
Html you can paste into your blog or website
<iframe width="800" height="600" src="https://app.powerbi.com/view?r
Size
800 x 600 px
Close

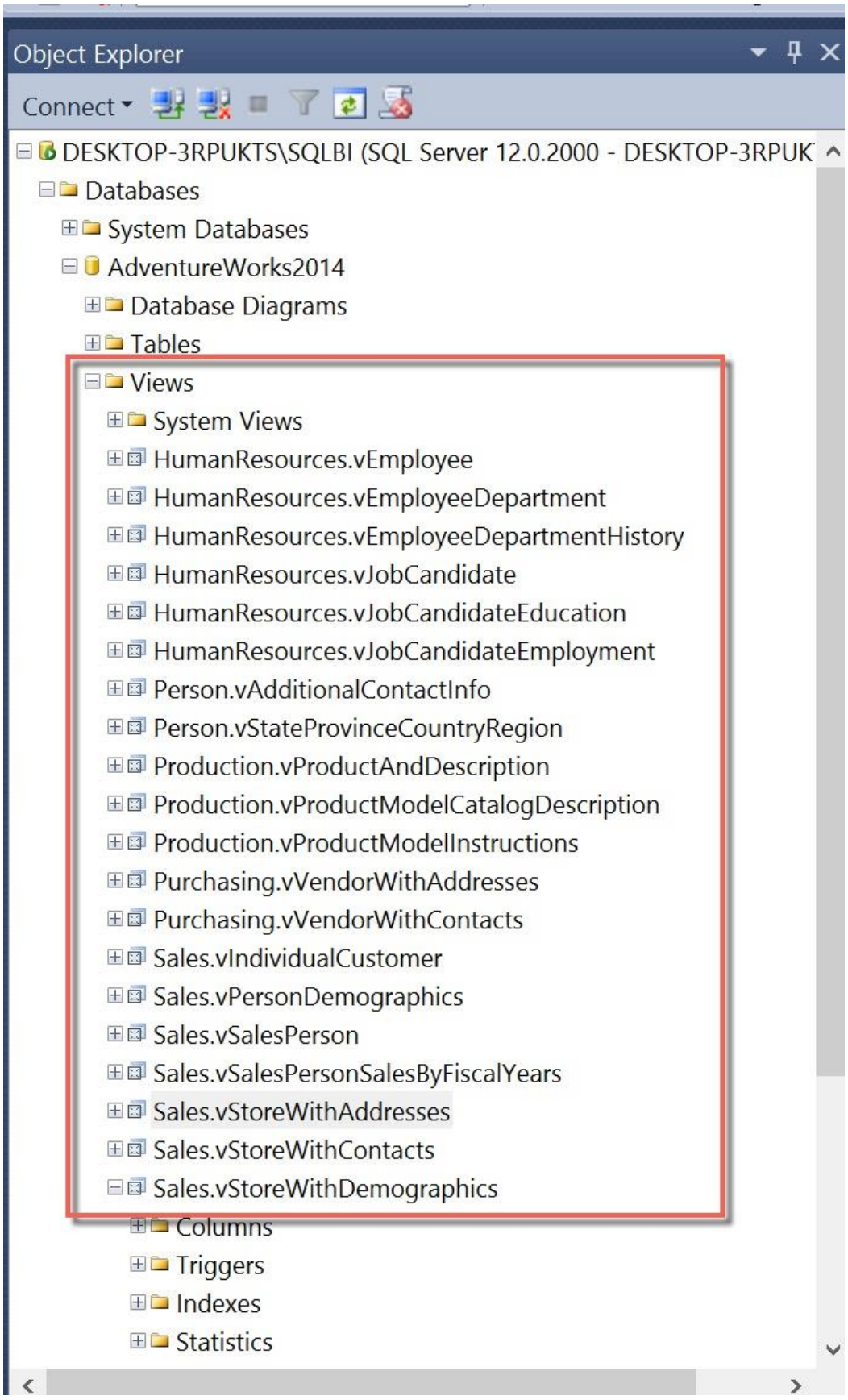

Search for online templates
Suggested searches: Business Personal Industry Financial Management Logs Lists Calculator
Blank workbook
Take a tour
Welcome to E...
My Cashflow
Cashflow anal...
Stock Analysis
Stock symbols...
My Calendar
Calendar insig...

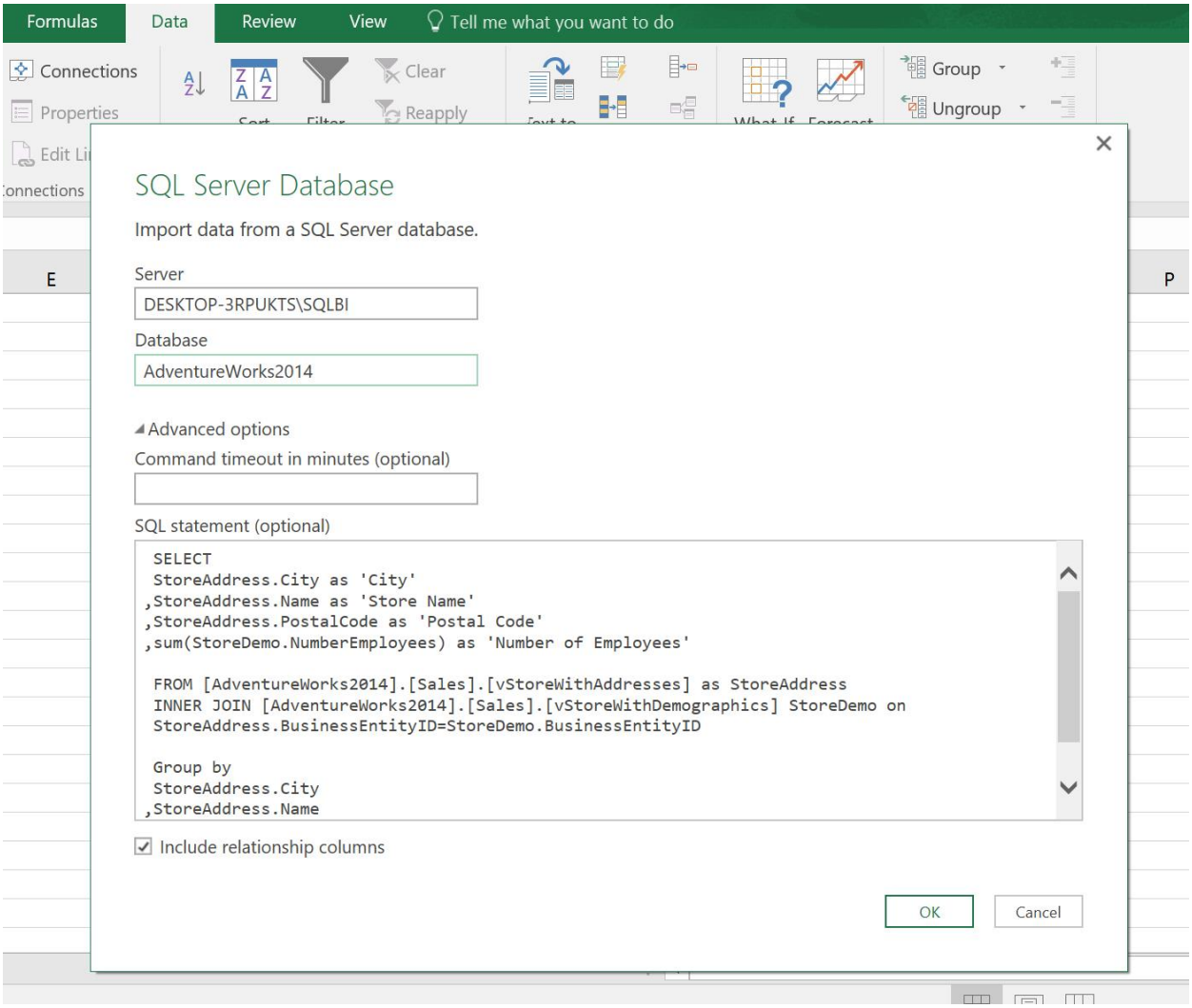


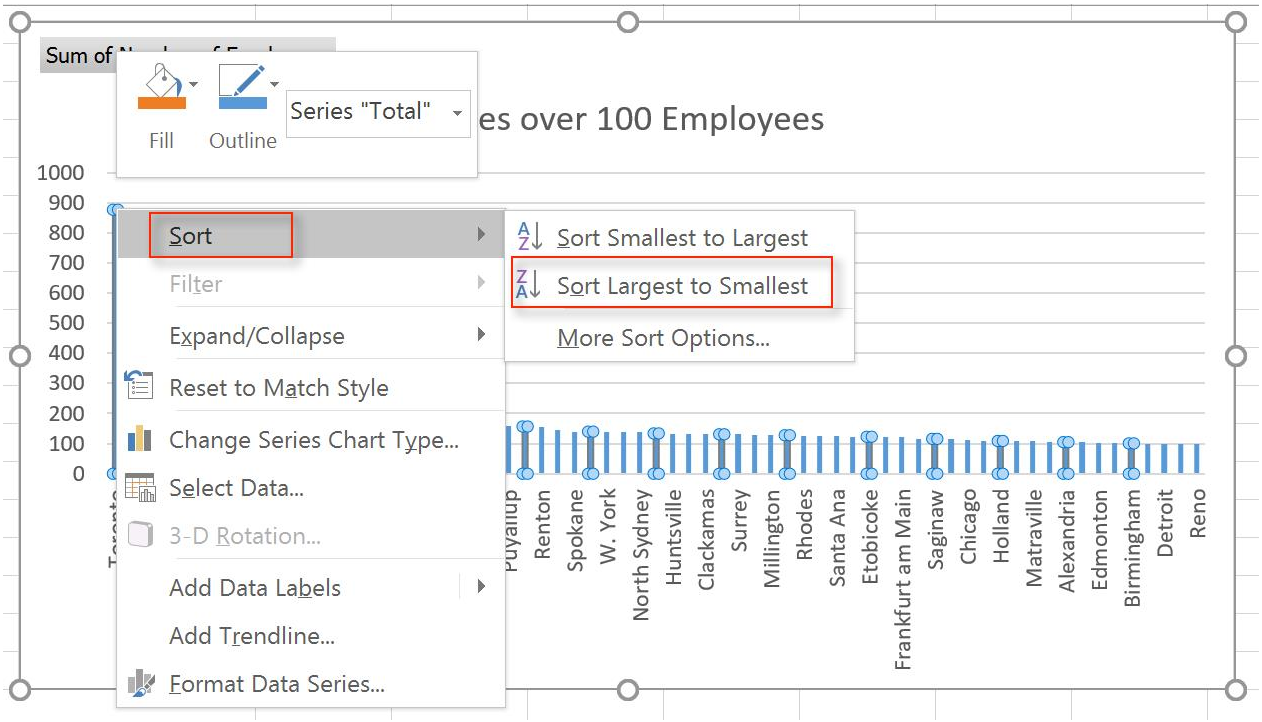
	SalesOrderID	RevisionNumber	OrderDate	DueDate	ShipDate	Status	OnlineOrderFlag	SalesOrderNumber	PurchaseOrderNumber	AccountNumber	CustomerID	SalesPersonID
2	43659	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43659	PO522145787	10-4020-000676	29825	279
3	43660	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43660	PO18850127500	10-4020-000117	29672	279
4	43661	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43661	PO18473189620	10-4020-000442	29734	282
5	43662	8	5/31/2011 0:00	6/12/2011 0:00	6/7/2011 0:00	5	FALSE	SO43662	PO18444174044	10-4020-000227	29994	282
6	43663	8	5/31/201				SE	SO43663	PO18009186470	10-4020-000510	29565	276
7	43664	8	5/31/201				SE	SO43664	PO16617121983	10-4020-000397	29898	280
8	43665	8	5/31/201				SE	SO43665	PO16588191572	10-4020-000146	29580	283
9	43666	8	5/31/201				SE	SO43666	PO16008173883	10-4020-000511	30052	276
10	43667	8	5/31/201				SE	SO43667	PO15428132599	10-4020-000646	29974	277
11	43668	8	5/31/201				SE	SO43668	PO14732180295	10-4020-000514	29614	282
12	43669	8	5/31/201				SE	SO43669	PO14123169936	10-4020-000578	29747	283
13	43670	8	5/31/201				SE	SO43670	PO14384116310	10-4020-000504	29566	275
14	43671	8	5/31/201				SE	SO43671	PO13978119376	10-4020-000200	29890	283
15	43672	8	5/31/201				SE	SO43672	PO13862153537	10-4020-000119	30067	282
16	43673	8	5/31/201				SE	SO43673	PO13775141242	10-4020-000618	29844	275
17	43674	8	5/31/201				SE	SO43674	PO12760141756	10-4020-000083	29596	282
18	43675	8	5/31/201				SE	SO43675	PO12412186464	10-4020-000670	29827	277
19	43676	8	5/31/201				SE	SO43676	PO11861165059	10-4020-000017	29811	275
20	43677	8	5/31/201				SE	SO43677	PO11049174786	10-4020-000679	29824	278
21	43678	8	5/31/201				SE	SO43678	PO10817150168	10-4020-000203	29889	281
22	43679	8	5/31/201				SE	SO43679	PO10527142759	10-4020-000480	29761	278
23	43680	8	5/31/201				SE	SO43680	PO10730130087	10-4020-000491	29489	281
24	43681	8	5/31/201				SE	SO43681	PO1189177803	10-4020-000423	29661	279
25	43682	8	5/31/201				SE	SO43682	PO1566124200	10-4020-000486	29759	275
26	43683	8	5/31/201				SE	SO43683	PO2552113807	10-4020-000506	29497	283

D3

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3		Column Labels										
4		1	2	3	4	5	6	7	8	9	10	Grand Total
5	Sum of TaxAmt	$ 1,506,071	$671,112	$765,174	$2,259,798	$765,291	$1,556,692	$661,481	$430,028	$883,078	$688,250	$10,186,974


Object Explorer
Connect
DESKTOP-3RPUKTS\SQLBI (SQL Server 12.0.2000 - DESKTOP-3RPUK
Databases
System Databases
AdventureWorks2014
Database Diagrams
Tables
Views
System Views
HumanResources.vEmployee
HumanResources.vEmployeeDepartment
HumanResources.vEmployeeDepartmentHistory
HumanResources.vJobCandidate
HumanResources.vJobCandidateEducation
HumanResources.vJobCandidateEmployment
Person.vAdditionalContactInfo
Person.vStateProvinceCountryRegion
Production.vProductAndDescription
Production.vProductModelCatalogDescription
Production.vProductModelInstructions
Purchasing.vVendorWithAddresses
Purchasing.vVendorWithContacts
Sales.vIndividualCustomer
Sales.vPersonDemographics
Sales.vSalesPerson
Sales.vSalesPersonSalesByFiscalYears
Sales.vStoreWithAddresses
Sales.vStoreWithContacts
Sales.vStoreWithDemographics
Columns
Triggers
Indexes
Statistics


Formulas
Data
Review
View
Tell me what you want to do
Connections
Properties
Clear
Reapply
Group
Ungroup
SQL Server Database
Import data from a SQL Server database.
Server
DESKTOP-3RPUKTS\SQLBI
Database
AdventureWorks2014
Advanced options
Command timeout in minutes (optional)
SQL statement (optional)
SELECT
StoreAddress.City as 'City'
,StoreAddress.Name as 'Store Name'
,StoreAddress.PostalCode as 'Postal Code'
,sum(StoreDemo.NumberEmployees) as 'Number of Employees'
FROM [AdventureWorks2014].[Sales].[vStoreWithAddresses] as StoreAddress
INNER JOIN [AdventureWorks2014].[Sales].[vStoreWithDemographics] StoreDemo on
StoreAddress.BusinessEntityID=StoreDemo.BusinessEntityID
Group by
StoreAddress.City
,StoreAddress.Name
Include relationship columns
OK
Cancel


Fill
Outline
Series "Total"
es over 100 Employees
1000
900
800
700
600
500
400
300
200
100
0
Sort
Filter
Expand/Collapse
Reset to Match Style
Change Series Chart Type...
Select Data...
3-D Rotation...
Add Data Labels
Add Trendline...
Format Data Series...
Sort Smallest to Largest
Sort Largest to Smallest
More Sort Options...
Puyallup
Renton
Spokane
W. York
North Sydney
Huntsville
Clackamas
Surrey
Millington
Rhodes
Santa Ana
Etobicoke
Frankfurt am Main
Saginaw
Chicago
Holland
Matraville
Alexandria
Edmonton
Birmingham
Detroit
Reno

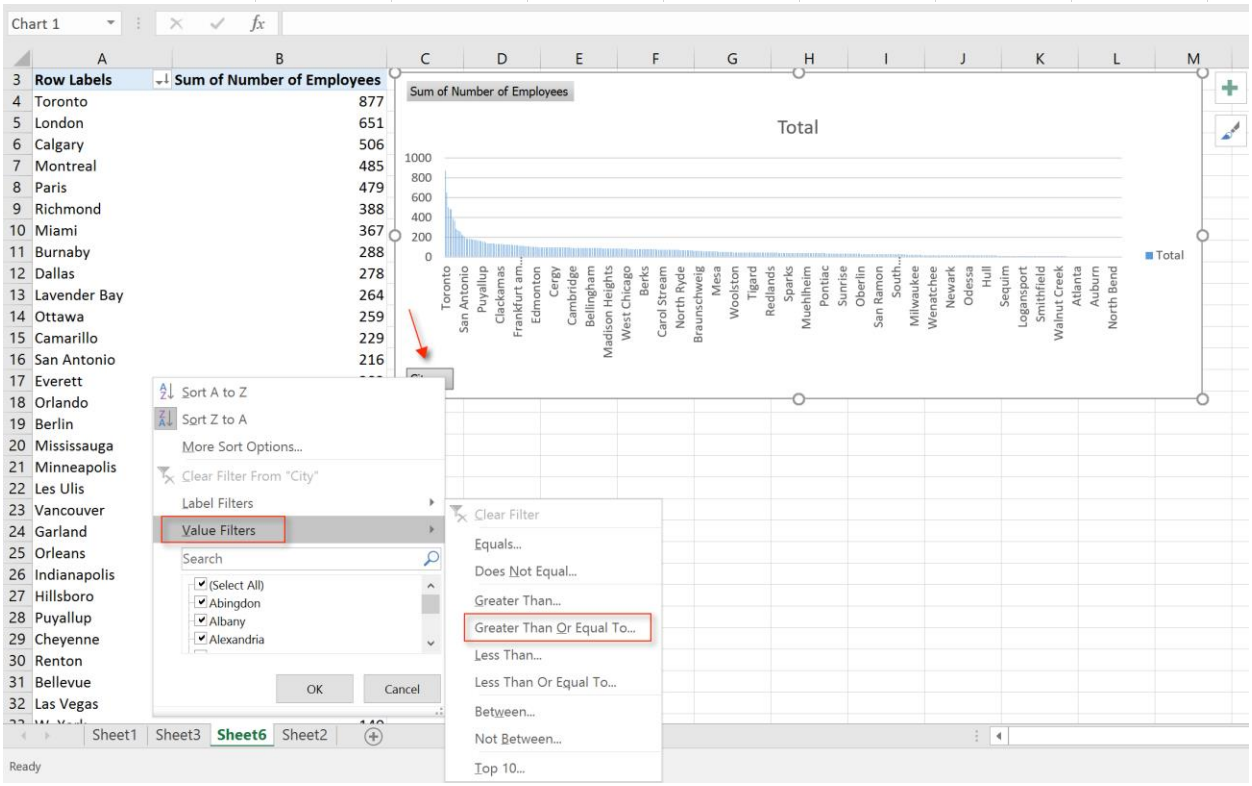
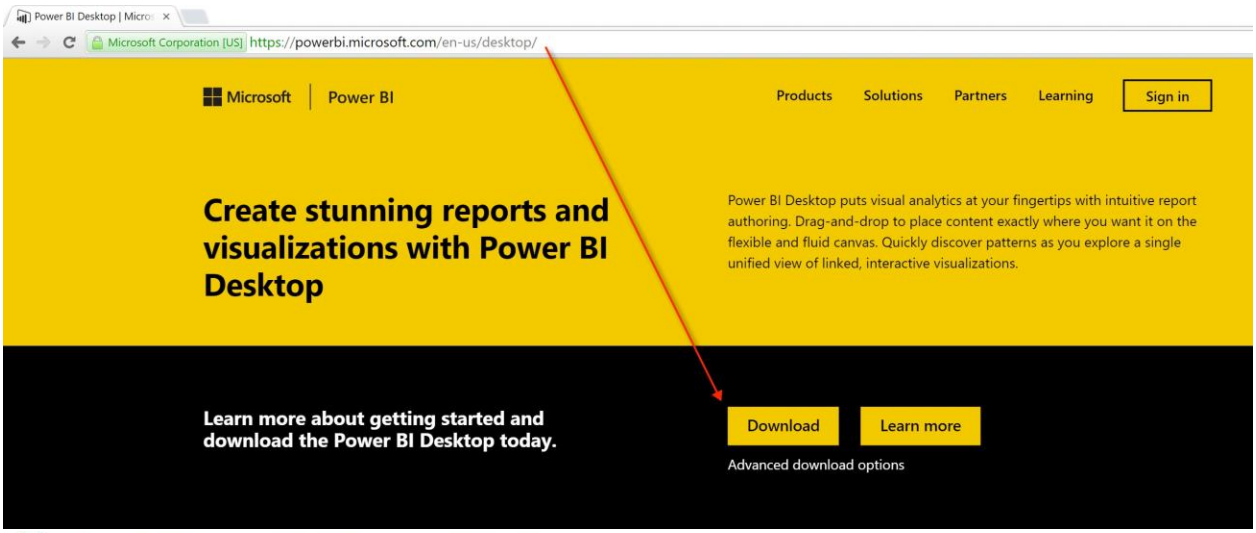


Chart 1
Row Labels
Sum of Number of Employees
Toronto 877
London 651
Calgary 506
Montreal 485
Paris 479
Richmond 388
Miami 367
Burnaby 288
Dallas 278
Lavender Bay 264
Ottawa 259
Camarillo 229
San Antonio 216
Everett
Orlando
Berlin
Mississauga
Minneapolis
Les Ulis
Vancouver
Garland
Orleans
Indianapolis
Hillsboro
Puyallup
Cheyenne
Renton
Bellevue
Las Vegas
Sum of Number of Employees
Total
Total
Sort A to Z
Sort Z to A
More Sort Options...
Clear Filter From "City"
Label Filters
Value Filters
Search
(Select All)
Abingdon
Albany
Alexandria
OK
Cancel
Clear Filter
Equals...
Does Not Equal...
Greater Than...
Greater Than Or Equal To...
Less Than...
Less Than Or Equal To...
Between...
Not Between...
Top 10...
Sheet1
Sheet3
Sheet6
Sheet2
Ready


Power BI Desktop | Micro
Microsoft Corporation [US]
https://powerbi.microsoft.com/en-us/desktop/
Microsoft
Power BI
Products
Solutions
Partners
Learning
Sign in
Create stunning reports and visualizations with Power BI Desktop
Power BI Desktop puts visual analytics at your fingertips with intuitive report authoring. Drag-and-drop to place content exactly where you want it on the flexible and fluid canvas. Quickly discover patterns as you explore a single unified view of linked, interactive visualizations.
Learn more about getting started and download the Power BI Desktop today.
Download
Learn more
Advanced download options

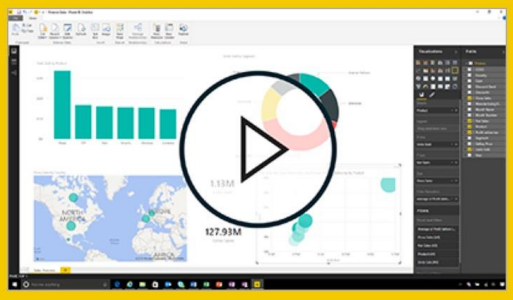

Microsoft Power BI Desktop (x64) Setup
Power BI
Completed the Microsoft Power BI Desktop (x64) Setup Wizard
You have successfully completed the Microsoft Power BI Desktop (x64) Setup Wizard. To close this wizard, click Finish.
Launch Microsoft Power BI Desktop
Back
Finish
Cancel

Power BI Desktop

Get Data

Recent Sources

Open Other Reports



Getting started with Power BI Desktop

Building reports

Query view concepts

Uploading your reports

View all videos

✓ Show this page on startup

FORUMS

POWER BI BLOG

TUTORIALS

Analyzing Sales Data
Facebook Analytics
Importing data from a Web page

SQL Server Database

Import data from a SQL Server database.

Server

DESKTOP-3RPUKTS\SQLBI

Database (optional)

AdventureWorks2014

- (•) Import
- ( ) DirectQuery

▲ Advanced options

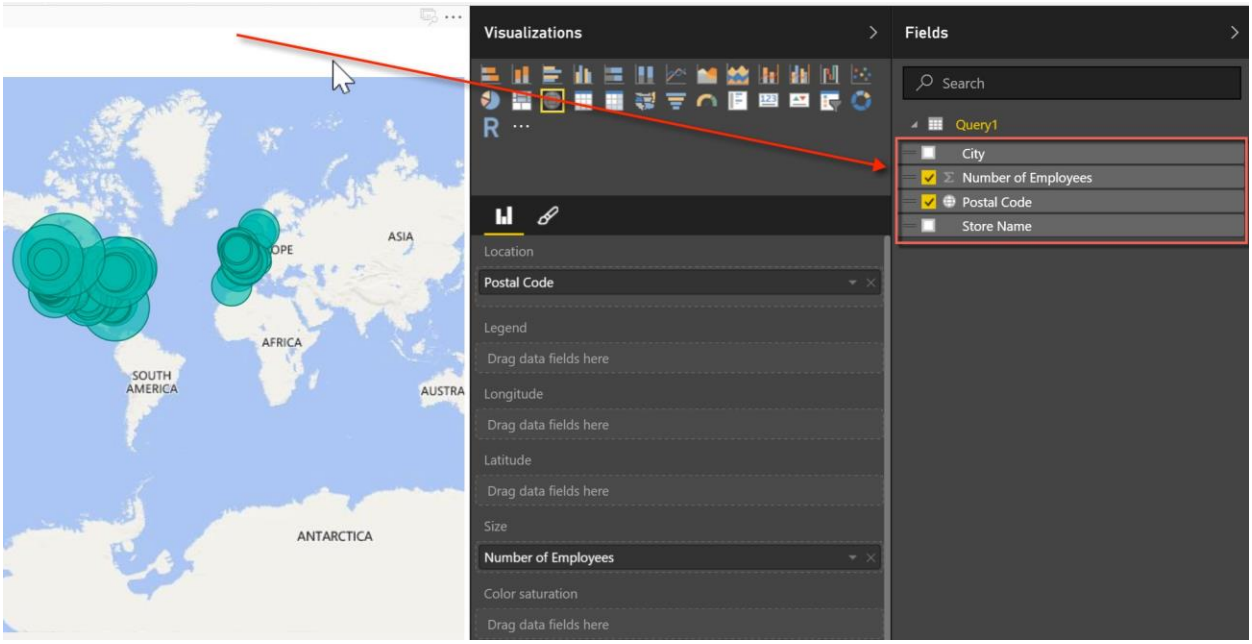
Command timeout in minutes (optional)

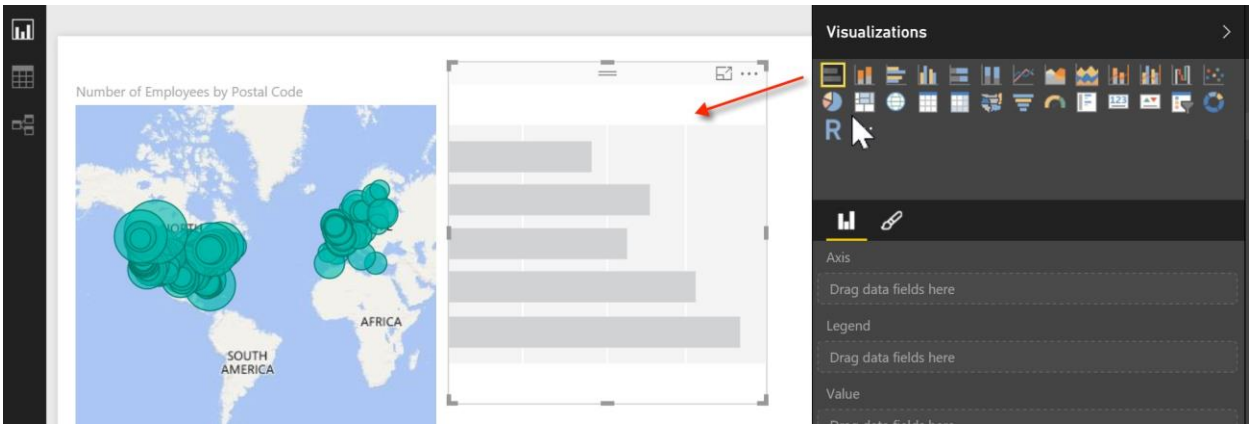
SQL statement (optional)

```
SELECT
 StoreAddress.City as 'City'
,StoreAddress.Name as 'Store Name'
,StoreAddress.PostalCode as 'Postal Code'
,sum(StoreDemo.NumberEmployees) as 'Number of Employees'

 FROM [AdventureWorks2014].[Sales].[vStoreWithAddresses] as StoreAddress
 INNER JOIN [AdventureWorks2014].[Sales].[vStoreWithDemographics] StoreDemo on
 StoreAddress.BusinessEntityID=StoreDemo.BusinessEntityID

 Group by
 StoreAddress.City
,StoreAddress.Name
```

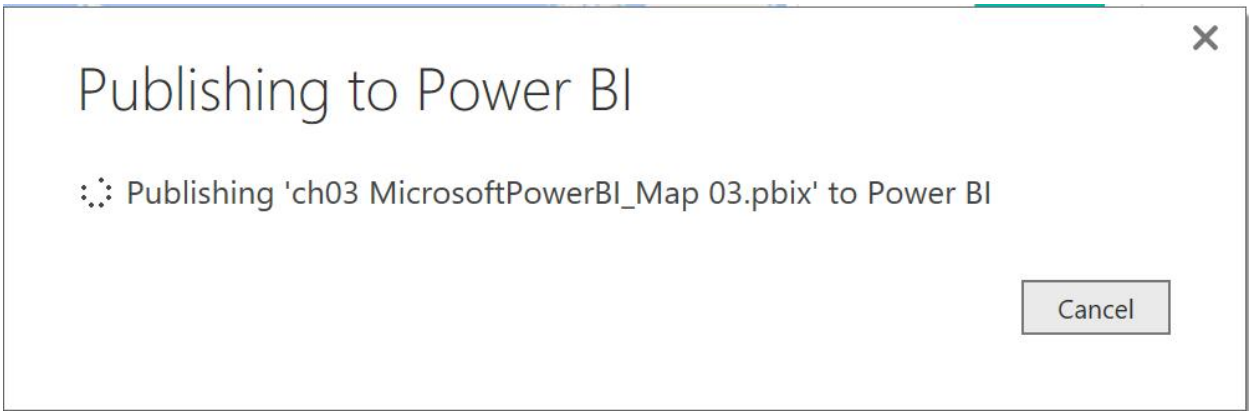
☑ Include relationship columns

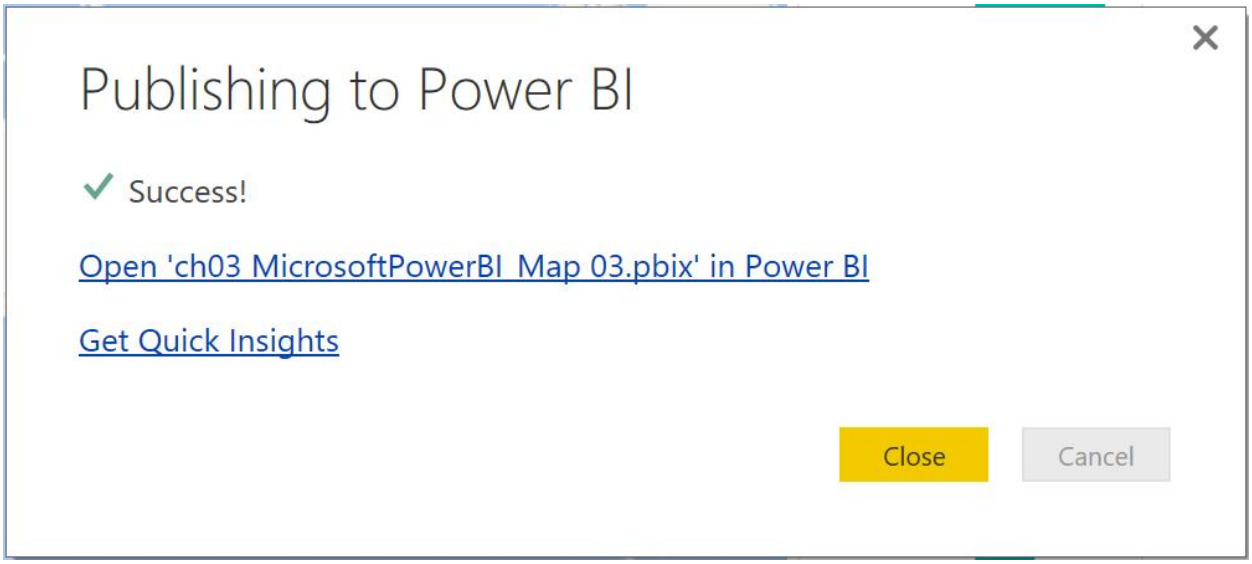
OK Cancel

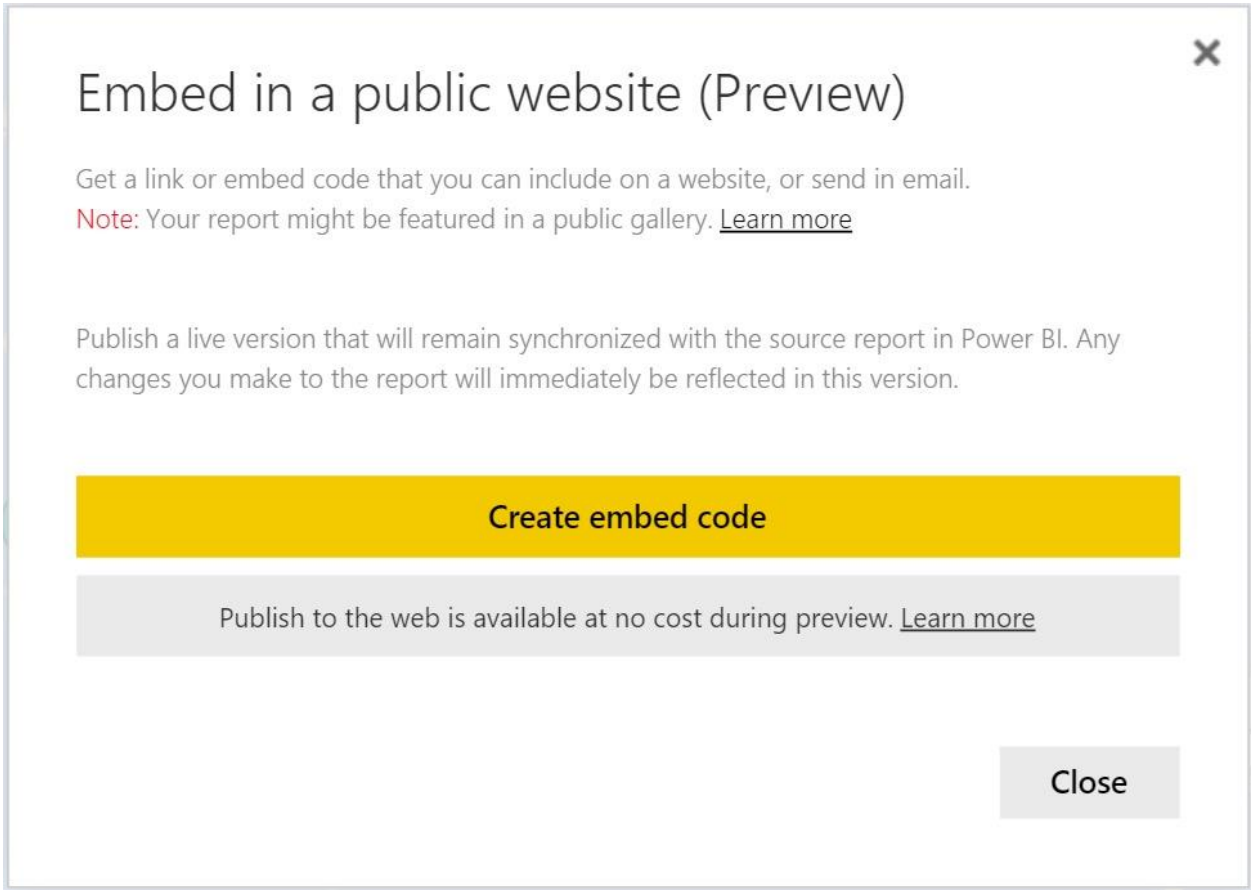

Visualizations
Fields
Search
Query1
City
Number of Employees
Postal Code
Store Name
Location
Postal Code
Legend
Drag data fields here
Longitude
Drag data fields here
Latitude
Drag data fields here
Size
Number of Employees
Color saturation
Drag data fields here
ASIA
AFRICA
SOUTH AMERICA
ANTARCTICA


Number of Employees by Postal Code
AFRICA
SOUTH AMERICA
Visualizations
Axis
Drag data fields here
Legend
Drag data fields here
Value

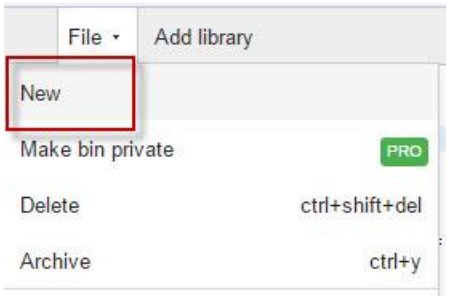

Number of Employees by Postal Code
ASIA
ASIA
NORTH AMERICA
AFRICA
AUSTRALIA
SOUTH AMERICA
SOUTH AMERICA
ANTARCTICA
bing
© 2016 HERE © 2016 Microsoft Corporation
Number of Employees by City
Toronto
London
Calgary
Montreal
Paris
Richmond
Miami
Burnaby
Dallas
Lavender ...
Ottawa
Camarillo
San Anto...
Everett
Orlando
Berlin
Mississau...
Minneapo...
Les Ulis
Vancouver
Garland
Orleans
Indianapo...
Hillsboro
Puyallup
Cheyenne
Renton
Bellevue
0
500
1000

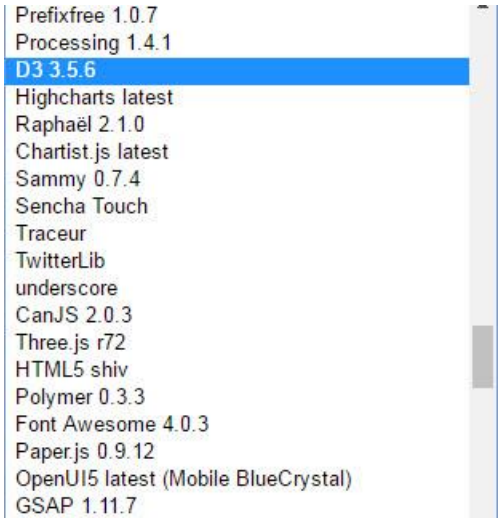

Publishing to Power BI
Publishing 'ch03 MicrosoftPowerBI_Map 03.pbix' to Power BI
Cancel


Publishing to Power BI
Success!
Open 'ch03 MicrosoftPowerBI_Map 03.pbix' in Power BI
Get Quick Insights
Close
Cancel


Embed in a public website (Preview)
Get a link or embed code that you can include on a website, or send in email.
Note: Your report might be featured in a public gallery. Learn more
Publish a live version that will remain synchronized with the source report in Power BI. Any changes you make to the report will immediately be reflected in this version.
Create embed code
Publish to the web is available at no cost during preview. Learn more
Close

Chapter 4: Creating Bar Charts with D3.js

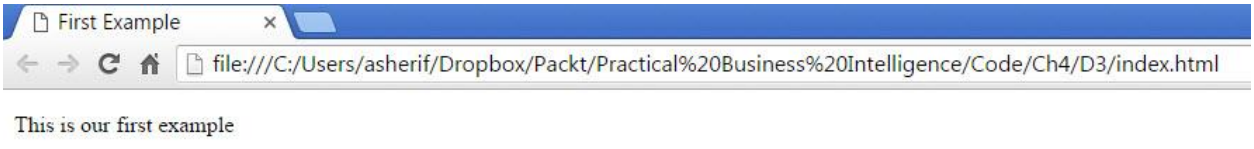


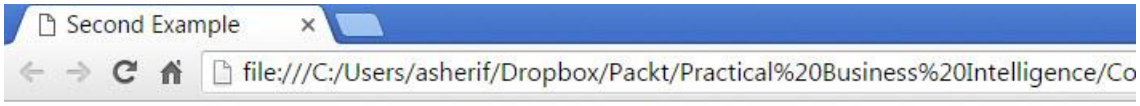


D3.js is a JavaScript library for manipulating documents based on data. **D3** helps you bring data to life using HTML, SVG, and CSS. D3's emphasis on web standards gives you the full capabilities of modern browsers without tying yourself to a proprietary framework, combining powerful visualization components and a data-driven approach to DOM manipulation.

Download the latest version

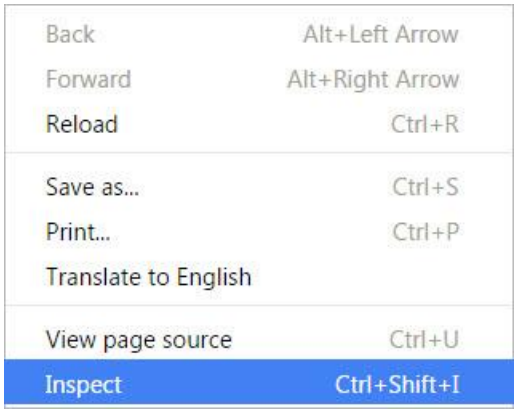
- d3.zip

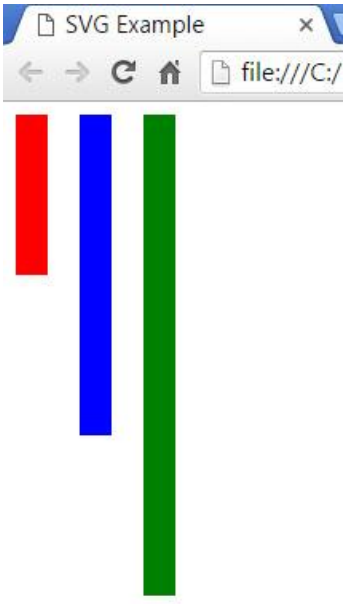


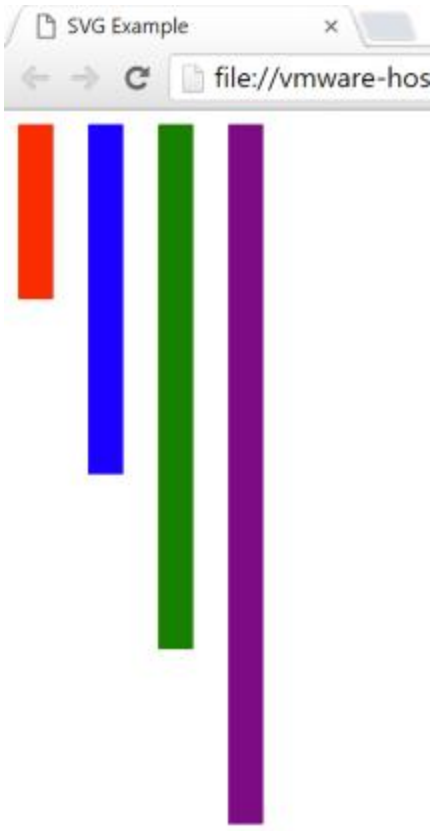


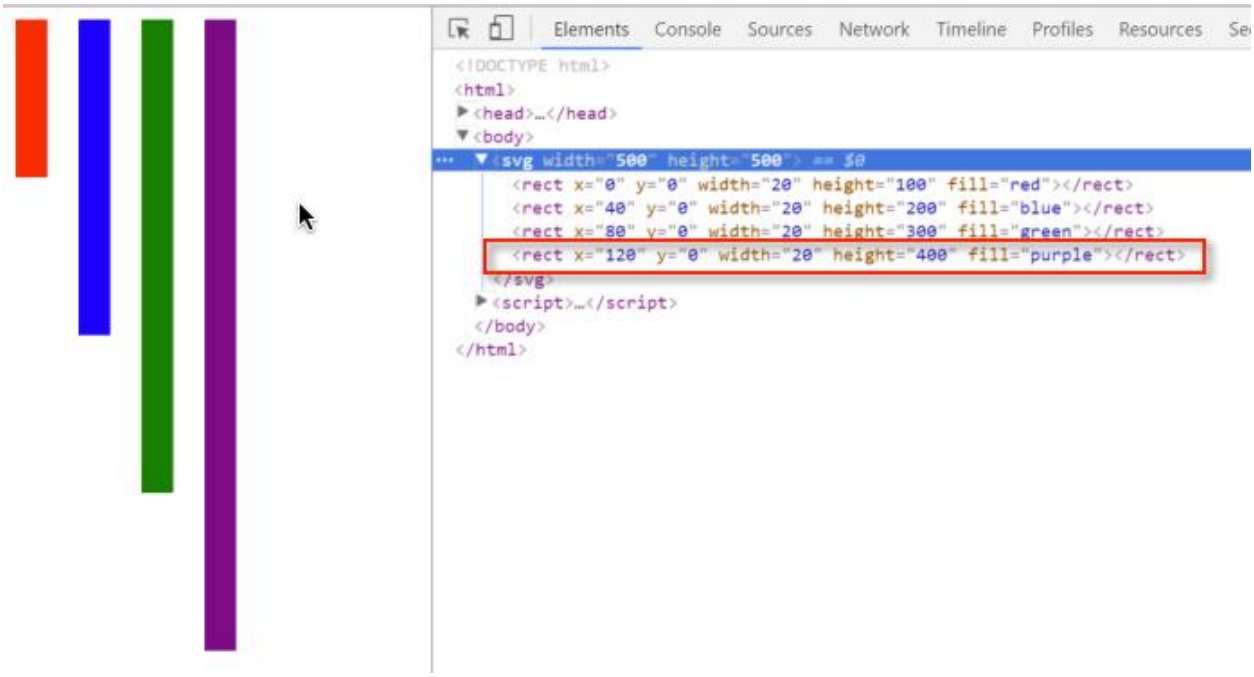
This is our first example

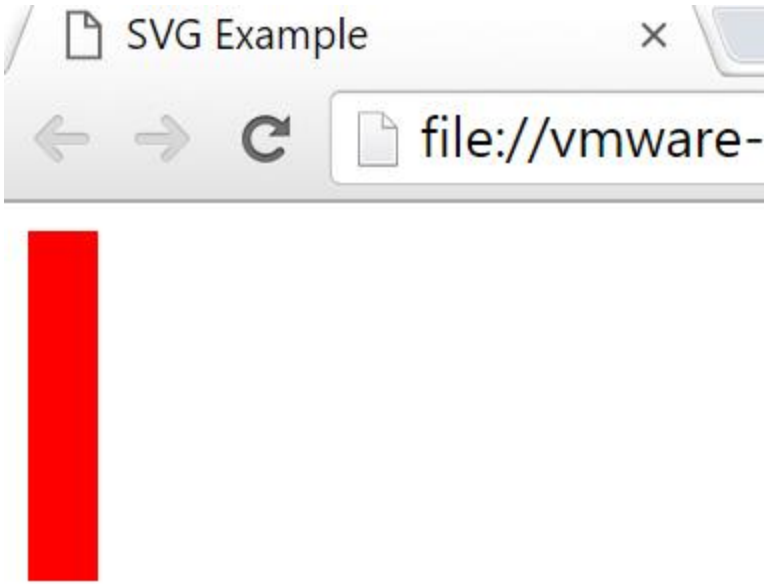
This is our second example



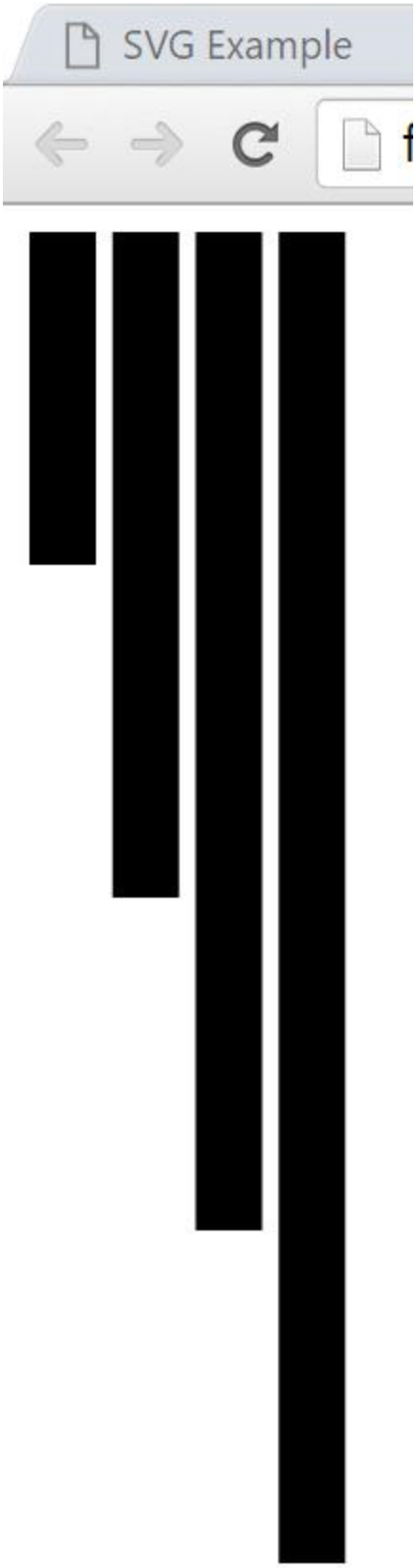



SVG Example
file://vmware-hos

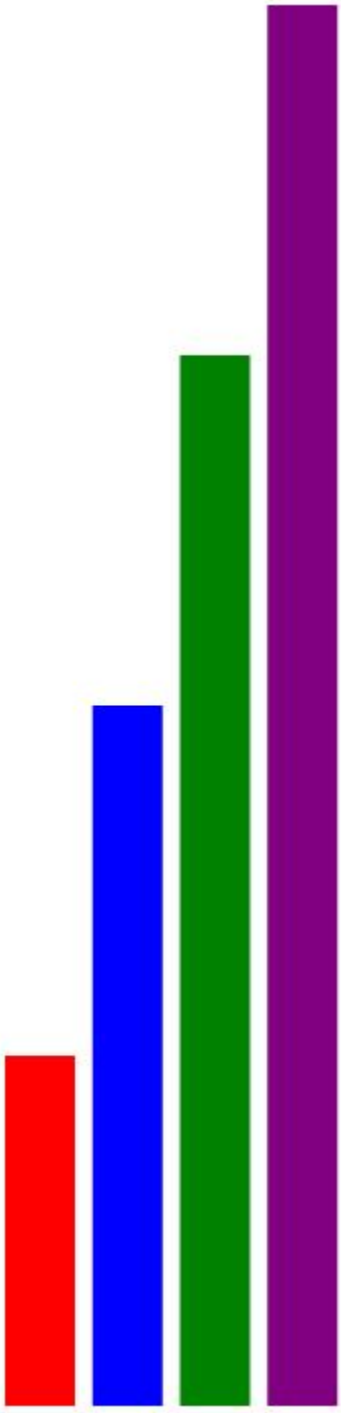

Elements
Console
Sources
Network
Timeline
Profiles
Resources
<!DOCTYPE html>
<html>
<head>…</head>
<body>
<svg width="500" height="500"> == $0
<rect x="0" y="0" width="20" height="100" fill="red"></rect>
<rect x="40" y="0" width="20" height="200" fill="blue"></rect>
<rect x="80" y="0" width="20" height="300" fill="green"></rect>
<rect x="120" y="0" width="20" height="400" fill="purple"></rect>
</svg>
<script>…</script>
</body>
</html>

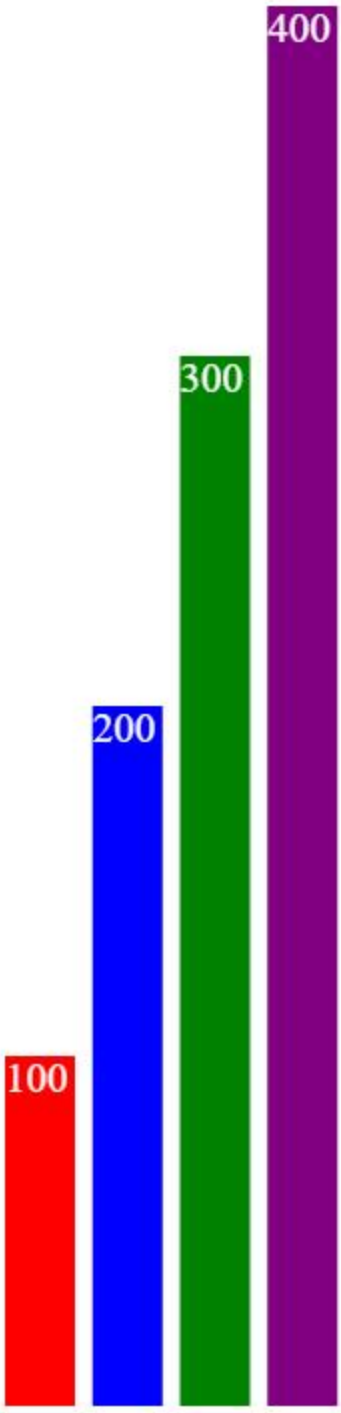

SVG Example
file://vmware-

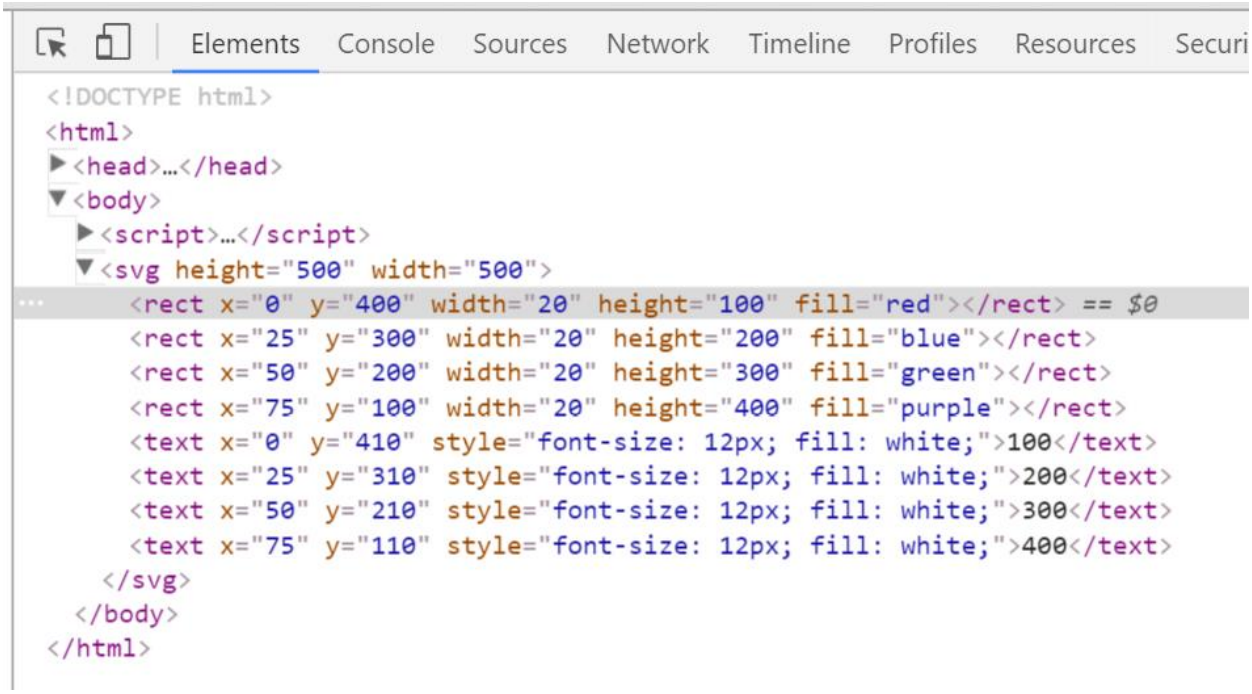

Elements
Console
Sources
Network
Timeline
Profiles
Resources
<!DOCTYPE html>
<html>
<head>…</head>
<body>
<script>…</script>
<svg height="500" width="500"> == $0
<rect x="0" y="0" width="20" height="100" fill="red"></rect>
<rect x="0" y="0" width="20" height="100" fill="red"></rect>
<rect x="0" y="0" width="20" height="100" fill="red"></rect>
<rect x="0" y="0" width="20" height="100" fill="red"></rect>
</svg>
</body>
</html>

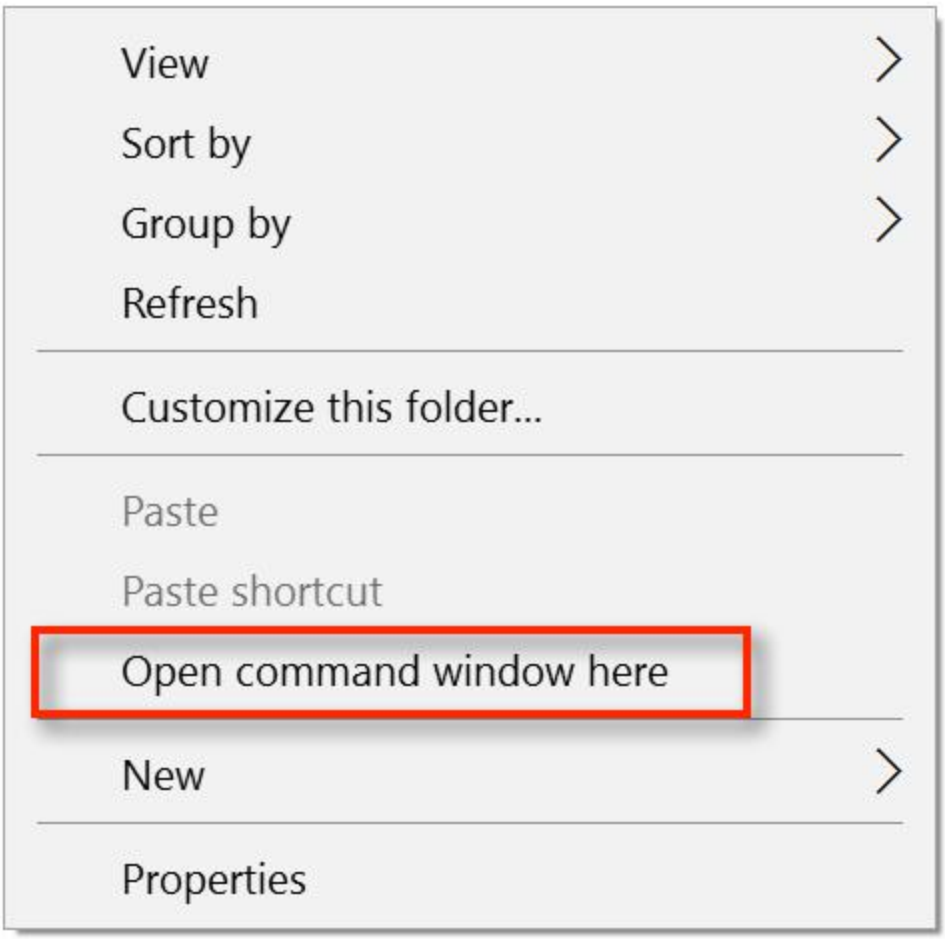

SVG Example

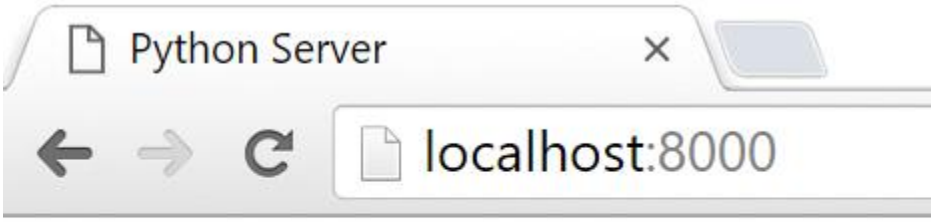

SVG Example



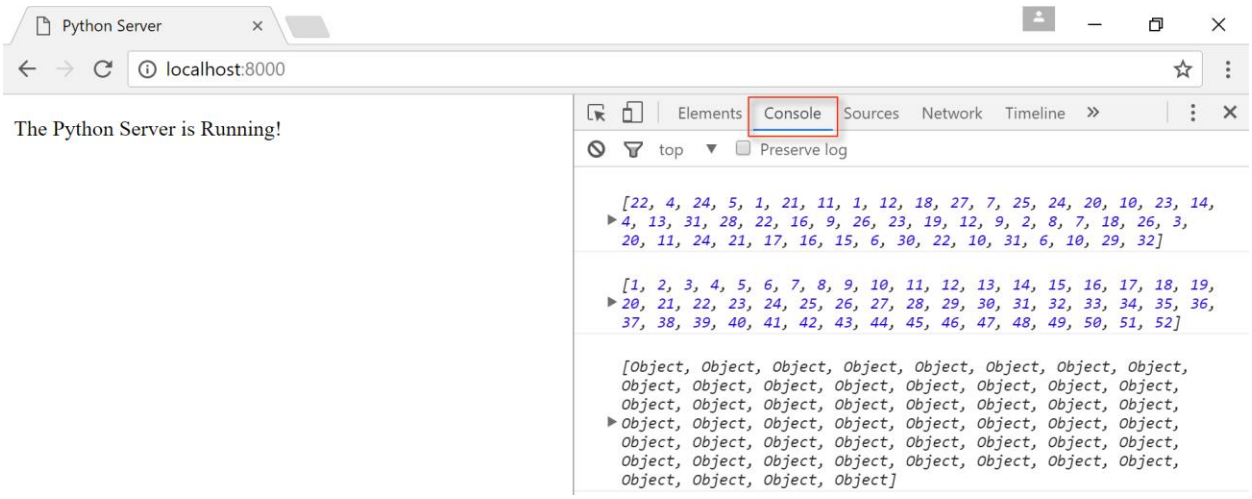

100
200
300
400

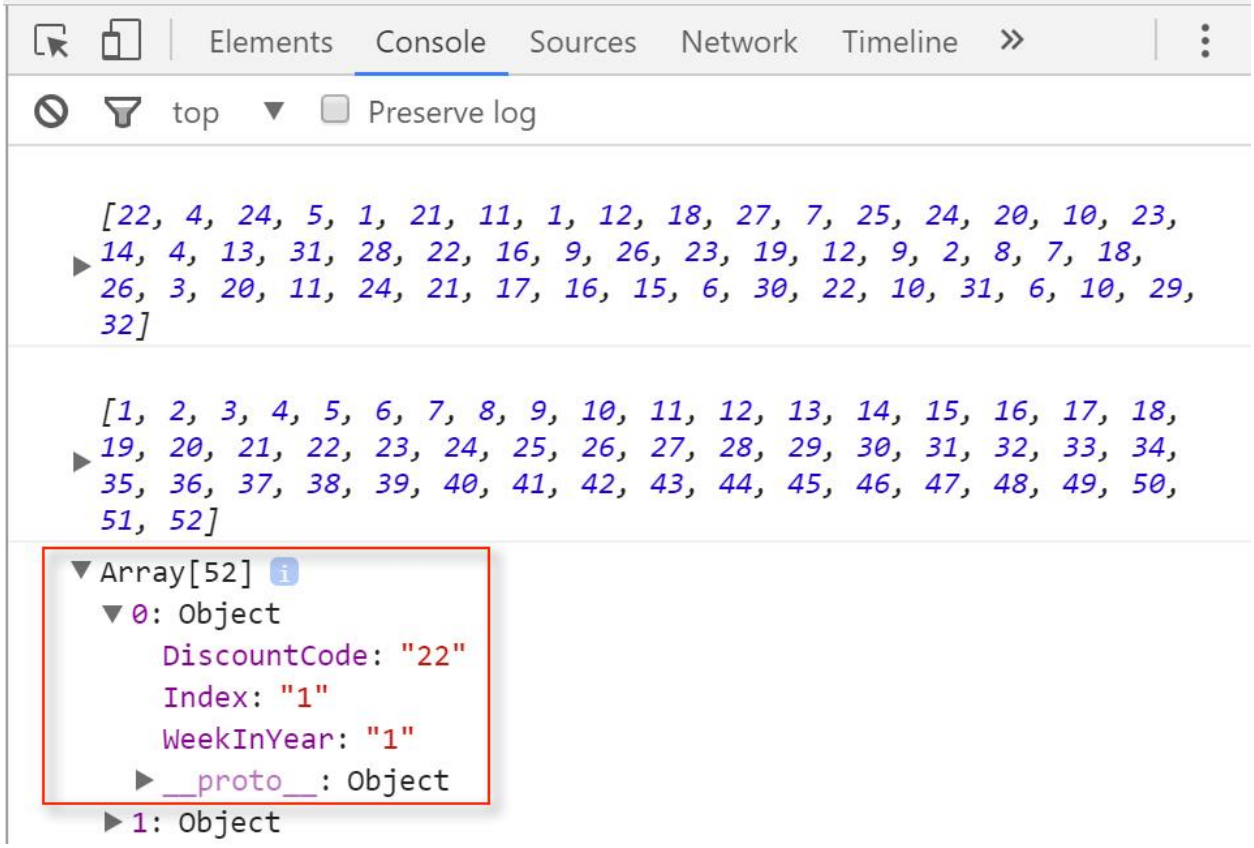

Elements
Console
Sources
Network
Timeline
Profiles
Resources
Securi
<!DOCTYPE html>
<html>
<head>…</head>
<body>
<script>…</script>
<svg height="500" width="500">
<rect x="0" y="400" width="20" height="100" fill="red"></rect> == $0
<rect x="25" y="300" width="20" height="200" fill="blue"></rect>
<rect x="50" y="200" width="20" height="300" fill="green"></rect>
<rect x="75" y="100" width="20" height="400" fill="purple"></rect>
<text x="0" y="410" style="font-size: 12px; fill: white;">100</text>
<text x="25" y="310" style="font-size: 12px; fill: white;">200</text>
<text x="50" y="210" style="font-size: 12px; fill: white;">300</text>
<text x="75" y="110" style="font-size: 12px; fill: white;">400</text>
</svg>
</body>
</html>

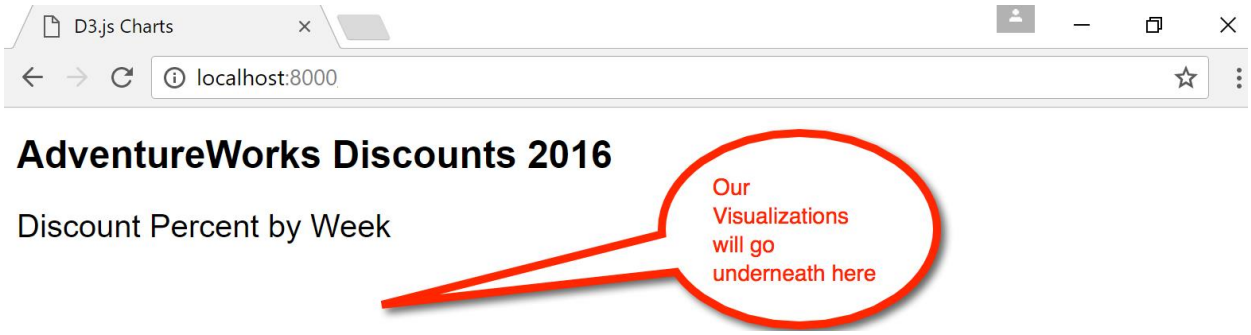


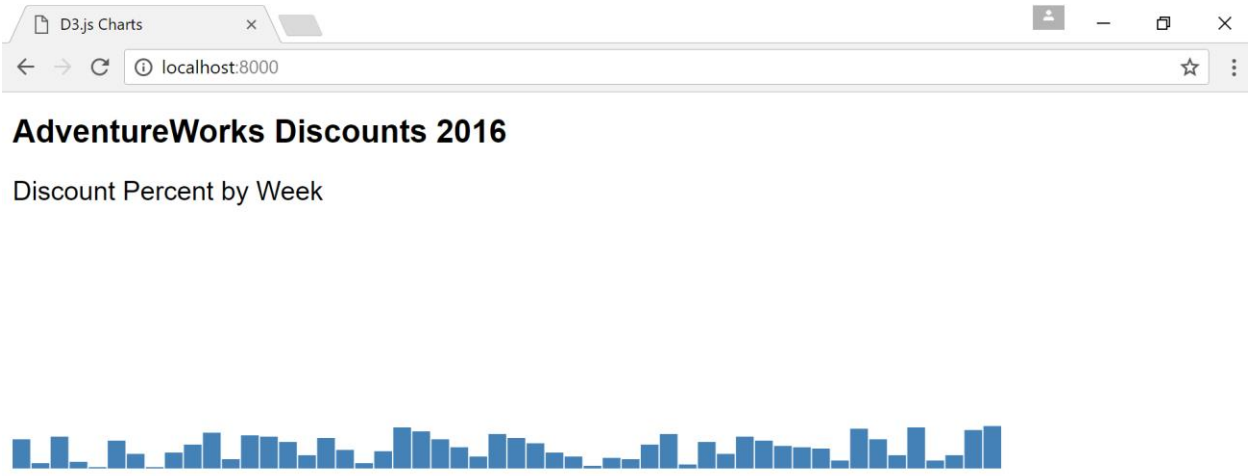


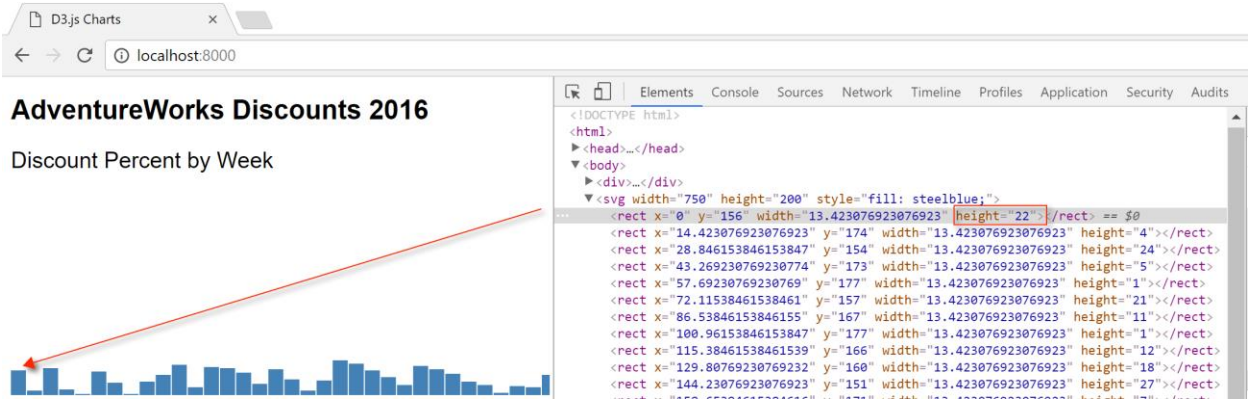
The Python Server is Running!

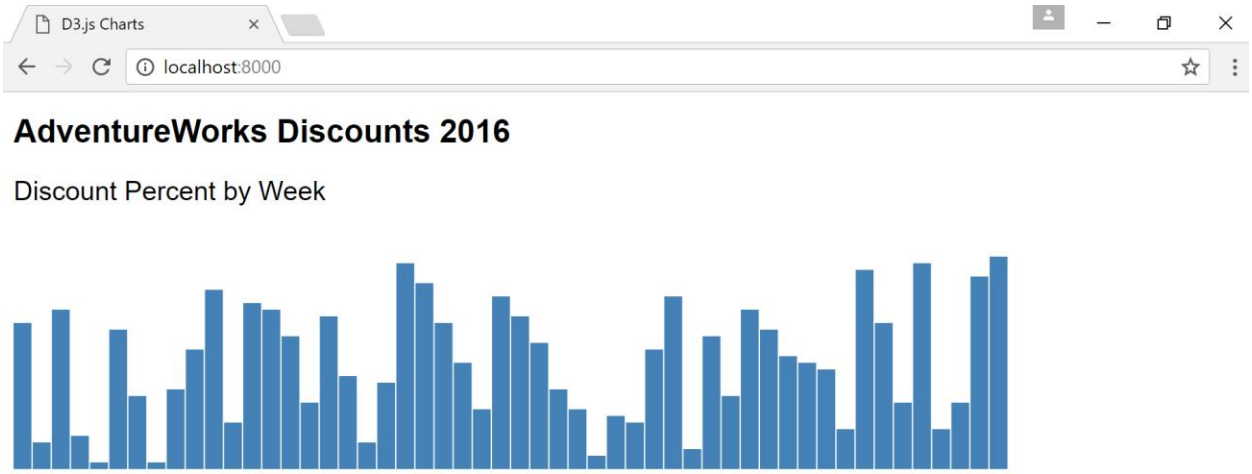

Python Server
localhost:8000
The Python Server is Running!
Elements
Console
Sources
Network
Timeline
top
Preserve log
[22, 4, 24, 5, 1, 21, 11, 1, 12, 18, 27, 7, 25, 24, 20, 10, 23, 14, 4, 13, 31, 28, 22, 16, 9, 26, 23, 19, 12, 9, 2, 8, 7, 18, 26, 3, 20, 11, 24, 21, 17, 16, 15, 6, 30, 22, 10, 31, 6, 10, 29, 32]
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52]
[Object, Object]

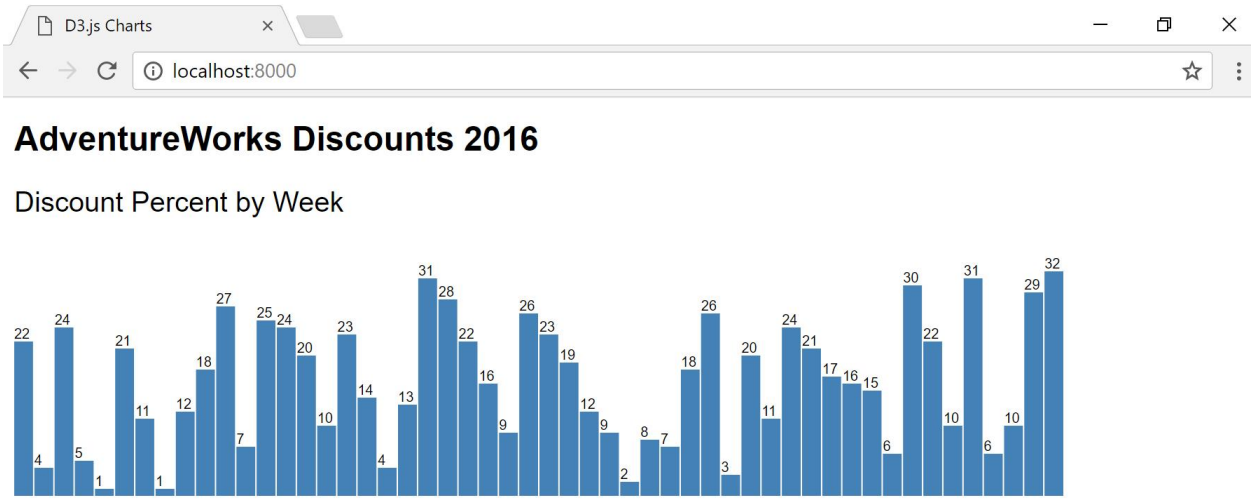

Elements
Console
Sources
Network
Timeline
top
Preserve log
[22, 4, 24, 5, 1, 21, 11, 1, 12, 18, 27, 7, 25, 24, 20, 10, 23, 14, 4, 13, 31, 28, 22, 16, 9, 26, 23, 19, 12, 9, 2, 8, 7, 18, 26, 3, 20, 11, 24, 21, 17, 16, 15, 6, 30, 22, 10, 31, 6, 10, 29, 32]
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52]
Array[52]
0: Object
DiscountCode: "22"
Index: "1"
WeekInYear: "1"
__proto__: Object
1: Object

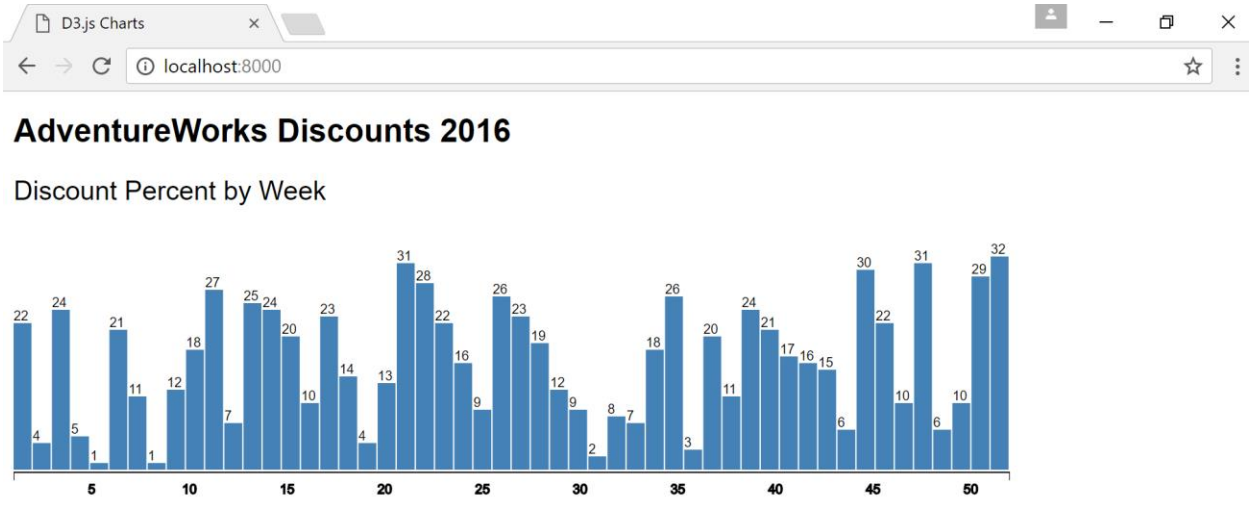

D3.js Charts
localhost:8000
AdventureWorks Discounts 2016
Discount Percent by Week
Our Visualizations will go underneath here

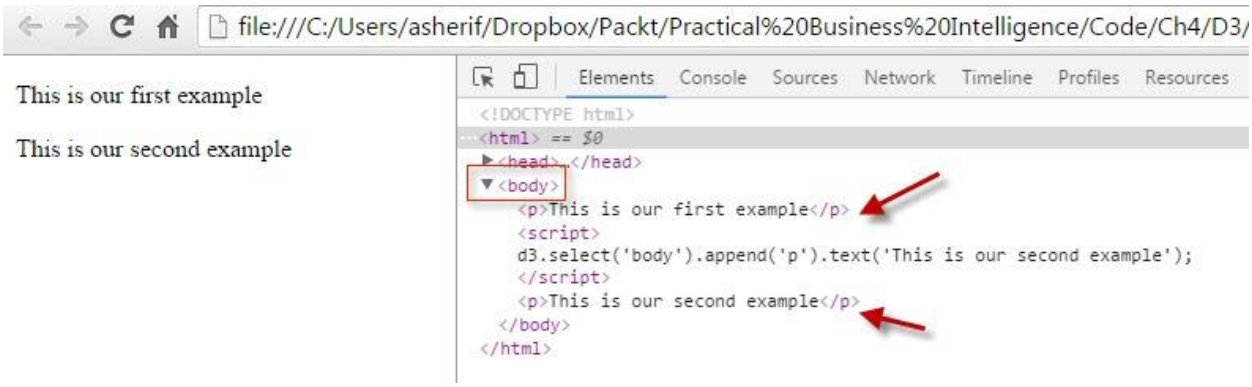

D3.js Charts
localhost:8000
AdventureWorks Discounts 2016
Discount Percent by Week

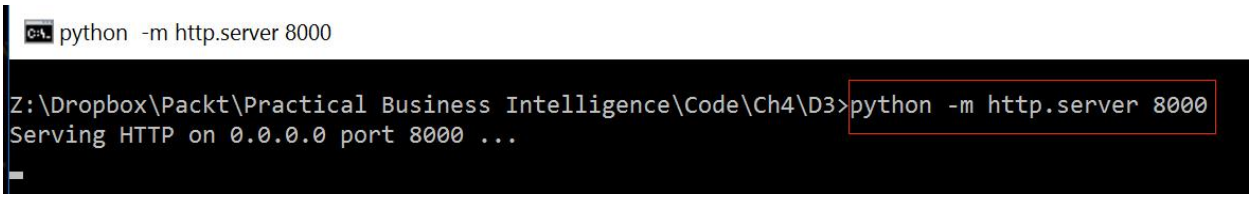

D3.js Charts
localhost:8000
AdventureWorks Discounts 2016
Discount Percent by Week
Elements
Console
Sources
Network
Timeline
Profiles
Application
Security
Audits
<!DOCTYPE html>
<html>
<head>…</head>
<body>
…
<svg width="750" height="200" style="fill: steelblue;">
<rect x="0" y="156" width="13.423076923076923" height="22"></rect> == $0
<rect x="14.423076923076923" y="174" width="13.423076923076923" height="4"></rect>
<rect x="28.846153846153847" y="154" width="13.423076923076923" height="24"></rect>
<rect x="43.269230769230774" y="173" width="13.423076923076923" height="5"></rect>
<rect x="57.69230769230769" y="177" width="13.423076923076923" height="1"></rect>
<rect x="72.11538461538461" y="157" width="13.423076923076923" height="21"></rect>
<rect x="86.53846153846155" y="167" width="13.423076923076923" height="11"></rect>
<rect x="100.96153846153847" y="177" width="13.423076923076923" height="1"></rect>
<rect x="115.38461538461539" y="166" width="13.423076923076923" height="12"></rect>
<rect x="129.80769230769232" y="160" width="13.423076923076923" height="18"></rect>
<rect x="144.23076923076923" y="151" width="13.423076923076923" height="27"></rect>
<rect x="158.65384615384616" y="174" width="13.423076923076923" height="4"></rect>
<rect x="173.07692307692307" y="154" width="13.423076923076923" height="24"></rect>
<rect x="187.5" y="173" width="13.423076923076923" height="5"></rect>
<rect x="201.92307692307693" y="177" width="13.423076923076923" height="1"></rect>
<rect x="216.34615384615384" y="157" width="13.423076923076923" height="21"></rect>
<rect x="230.76923076923077" y="167" width="13.423076923076923" height="11"></rect>
<rect x="245.19230769230768" y="177" width="13.423076923076923" height="1"></rect>
<rect x="259.6153846153846" y="166" width="13.423076923076923" height="12"></rect>
<rect x="274.0384615384615" y="160" width="13.423076923076923" height="18"></rect>
<rect x="288.4615384615385" y="151" width="13.423076923076923" height="27"></rect>
<rect x="302.8846153846154" y="174" width="13.423076923076923" height="4"></rect>
<rect x="317.3076923076923" y="154" width="13.423076923076923" height="24"></rect>
<rect x="331.7307692307692" y="173" width="13.423076923076923" height="5"></rect>
<rect x="346.1538461538462" y="177" width="13.423076923076923" height="1"></rect>
<rect x="360.5769230769231" y="157" width="13.423076923076923" height="21"></rect>
<rect x="375" y="167" width="13.423076923076923" height="11"></rect>
<rect x="389.4230769230769" y="177" width="13.423076923076923" height="1"></rect>
<rect x="403.8461538461538" y="166" width="13.423076923076923" height="12"></rect>
<rect x="418.2692307692308" y="160" width="13.423076923076923" height="18"></rect>
<rect x="432.6923076923077" y="151" width="13.423076923076923" height="27"></rect>
<rect x="447.1153846153846" y="174" width="13.423076923076923" height="4"></rect>
<rect x="461.5384615384615" y="154" width="13.423076923076923" height="24"></rect>
<rect x="475.9615384615385" y="173" width="13.423076923076923" height="5"></rect>
<rect x="490.3846153846154" y="177" width="13.423076923076923" height="1"></rect>
<rect x="504.8076923076923" y="157" width="13.423076923076923" height="21"></rect>
<rect x="519.2307692307693" y="167" width="13.423076923076923" height="11"></rect>
<rect x="533.6538461538462" y="177" width="13.423076923076923" height="1"></rect>
<rect x="548.0769230769231" y="166" width="13.423076923076923" height="12"></rect>
<rect x="562.5" y="160" width="13.423076923076923" height="18"></rect>
<rect x="576.9230769230769" y="151" width="13.423076923076923" height="27"></rect>
<rect x="591.3461538461538" y="174" width="13.423076923076923" height="4"></rect>
<rect x="605.7692307692307" y="154" width="13.423076923076923" height="24"></rect>
<rect x="620.1923076923077" y="173" width="13.423076923076923" height="5"></rect>
<rect x="634.6153846153846" y="177" width="13.423076923076923" height="1"></rect>
<rect x="649.0384615384615" y="157" width="13.423076923076923" height="21"></rect>
<rect x="663.4615384615385" y="167" width="13.423076923076923" height="11"></rect>
<rect x="677.8846153846154" y="177" width="13.423076923076923" height="1"></rect>
<rect x="692.3076923076923" y="166" width="13.423076923076923" height="12"></rect>
<rect x="706.7307692307693" y="160" width="13.423076923076923" height="18"></rect>
<rect x="721.1538461538462" y="151" width="13.423076923076923" height="27"></rect>
<rect x="735.5769230769231" y="174" width="13.423076923076923" height="4"></rect>
</svg>
</body>
</html>
html
body
svg
rect

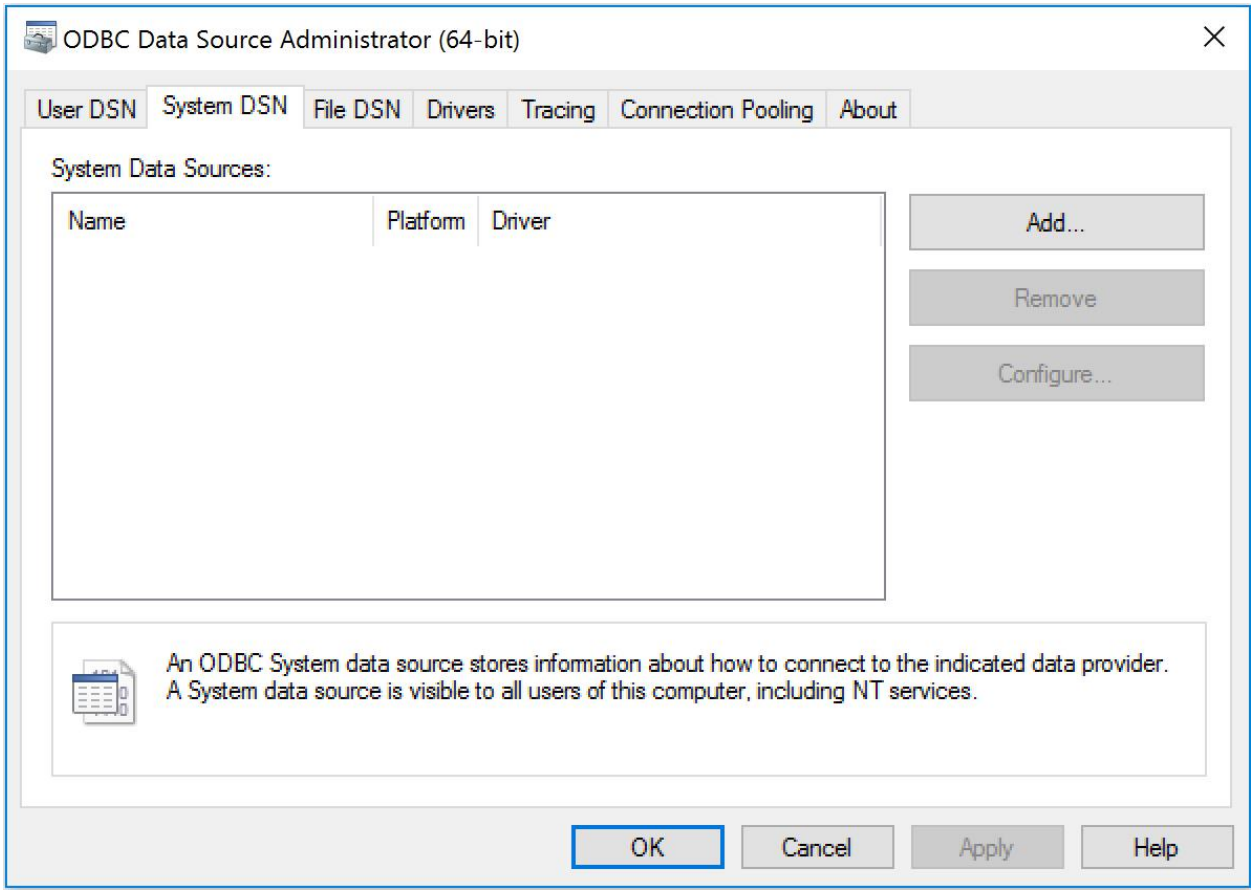

D3.js Charts
localhost:8000
AdventureWorks Discounts 2016
Discount Percent by Week

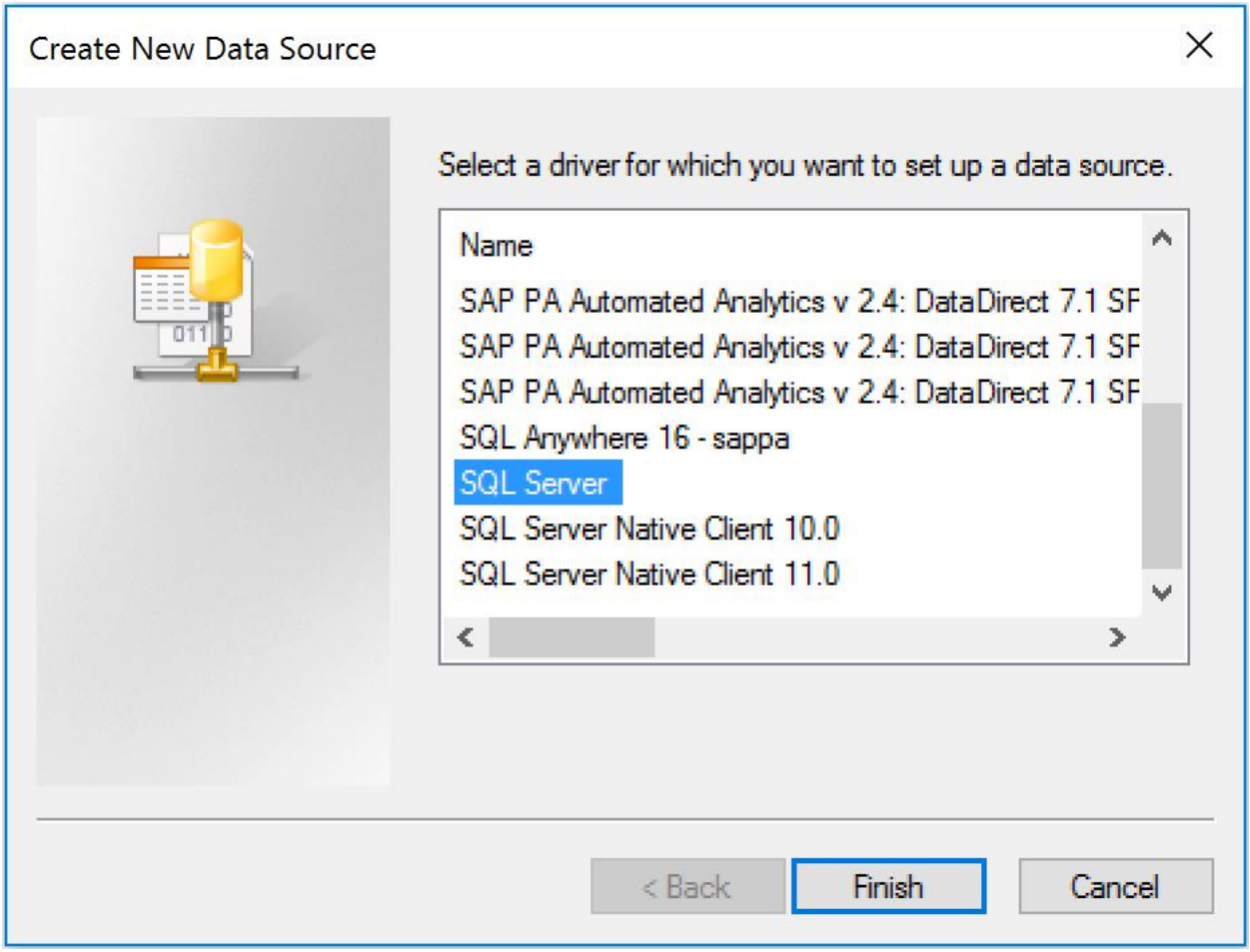

D3.js Charts
localhost:8000
AdventureWorks Discounts 2016
Discount Percent by Week
22 4 24 5 1 21 11 1 12 18 27 7 25 24 20 10 23 14 4 13 31 28 22 16 9 26 23 19 12 9 2 8 7 18 26 3 20 11 24 21 17 16 15 6 30 22 10 31 6 10 29 32


D3.js Charts
localhost:8000
AdventureWorks Discounts 2016
Discount Percent by Week
22 4 24 5 1 21 11 1 12 18 27 7 25 24 20 10 23 14 4 13 31 28 22 16 9 26 23 19 12 9 2 8 7 18 26 3 20 11 24 21 17 16 15 6 30 22 10 31 6 10 29 32
5 10 15 20 25 30 35 40 45 50


file:///C:/Users/asherif/Dropbox/Packt/Practical%20Business%20Intelligence/Code/Ch4/D3/
This is our first example
This is our second example
Elements
Console
Sources
Network
Timeline
Profiles
Resources
<!DOCTYPE html>
<html> == $0
<head></head>
<body>
This is our first example
<script>
d3.select('body').append('p').text('This is our second example');
</script>
This is our second example
</body>
</html>


python -m http.server 8000
Z:\Dropbox\Packt\Practical Business Intelligence\Code\Ch4\D3>python -m http.server 8000
Serving HTTP on 0.0.0.0 port 8000 ...


ODBC Data Source Administrator (64-bit)
User DSN
System DSN
File DSN
Drivers
Tracing
Connection Pooling
About
System Data Sources:
Name
Platform
Driver
Add...
Remove
Configure...
An ODBC System data source stores information about how to connect to the indicated data provider.
A System data source is visible to all users of this computer, including NT services.
OK
Cancel
Apply
Help


Create New Data Source
Select a driver for which you want to set up a data source.
Name
SAP PA Automated Analytics v 2.4: DataDirect 7.1 SF
SAP PA Automated Analytics v 2.4: DataDirect 7.1 SF
SAP PA Automated Analytics v 2.4: DataDirect 7.1 SF
SQL Anywhere 16 - sappa
SQL Server
SQL Server Native Client 10.0
SQL Server Native Client 11.0
< Back
Finish
Cancel

Create a New Data Source to SQL Server

This wizard will help you create an ODBC data source that you can use to connect to SQL Server.

What name do you want to use to refer to the data source?

Name: SQLBI

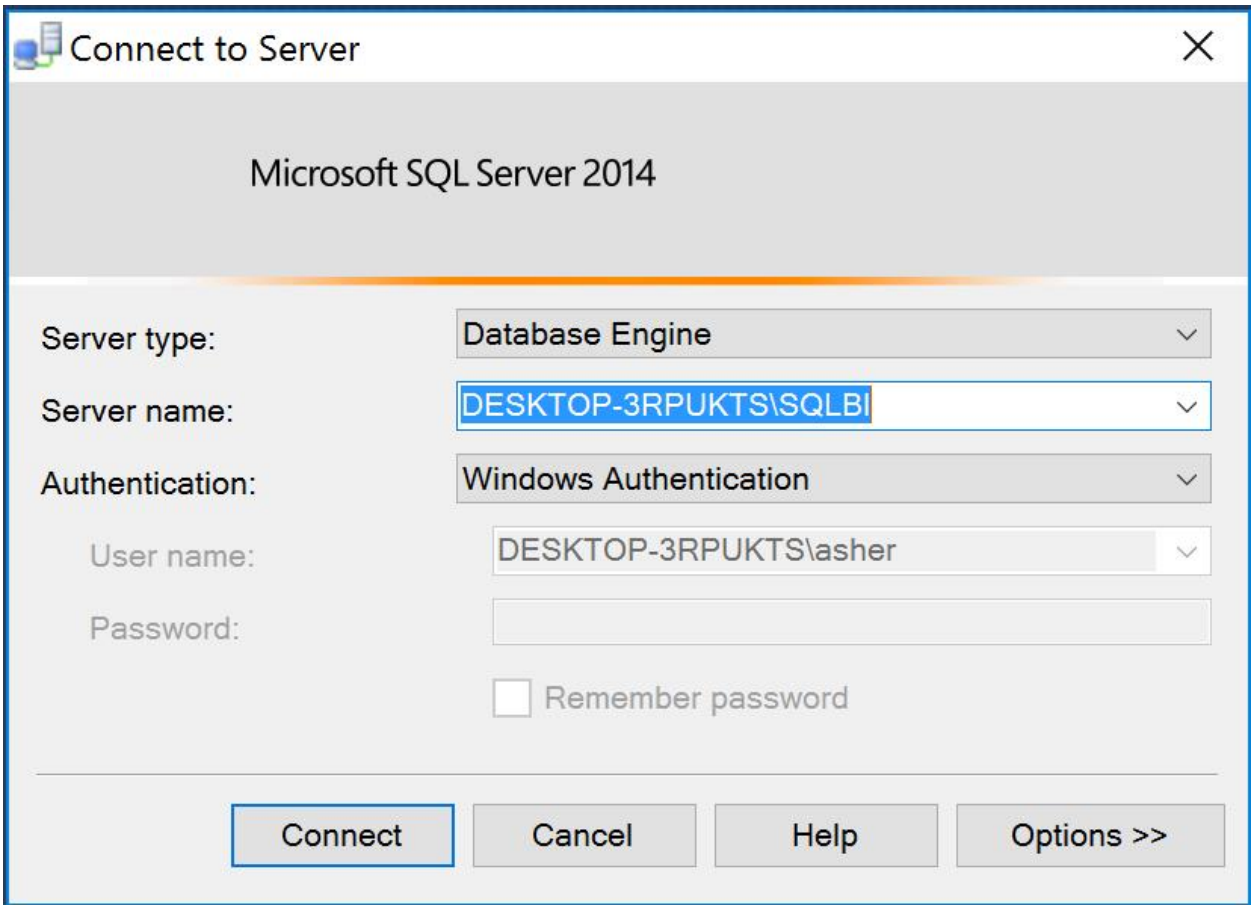
How do you want to describe the data source?

Description: SQLBI

Which SQL Server do you want to connect to?

Server: DESKTOP-3RPUKTS\SQLBI

Finish | Next > | Cancel | Help


Connect to Server
Microsoft SQL Server 2014
Server type:
Database Engine
Server name:
DESKTOP-3RPUKTS\SQLBI
Authentication:
Windows Authentication
User name:
DESKTOP-3RPUKTS\asher
Password:
Remember password
Connect
Cancel
Help
Options >>

Create a New Data Source to SQL Server

How should SQL Server verify the authenticity of the login ID?

- (•) With Windows NT authentication using the network login ID.
- ( ) With SQL Server authentication using a login ID and password entered by the user.

To change the network library used to communicate with SQL Server, click Client Configuration.

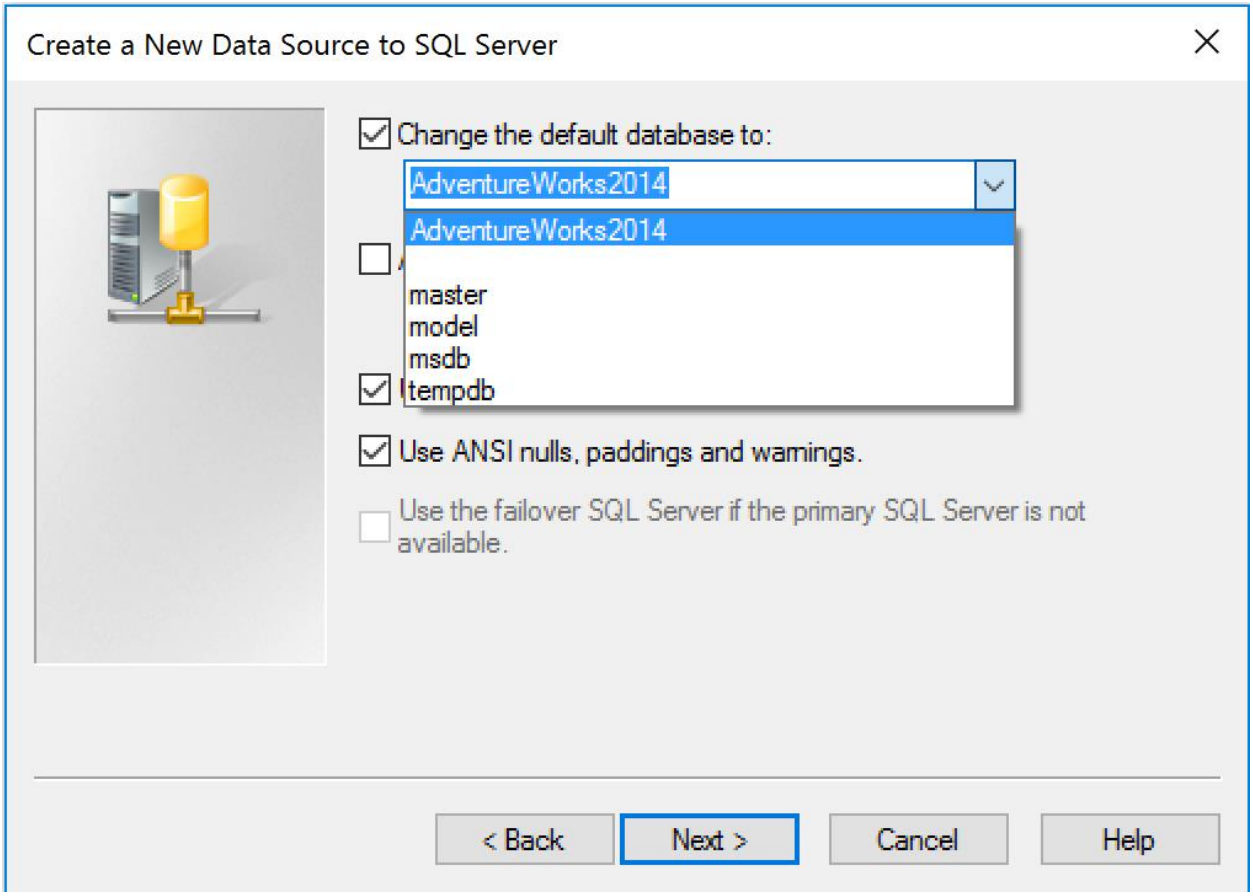
Client Configuration...

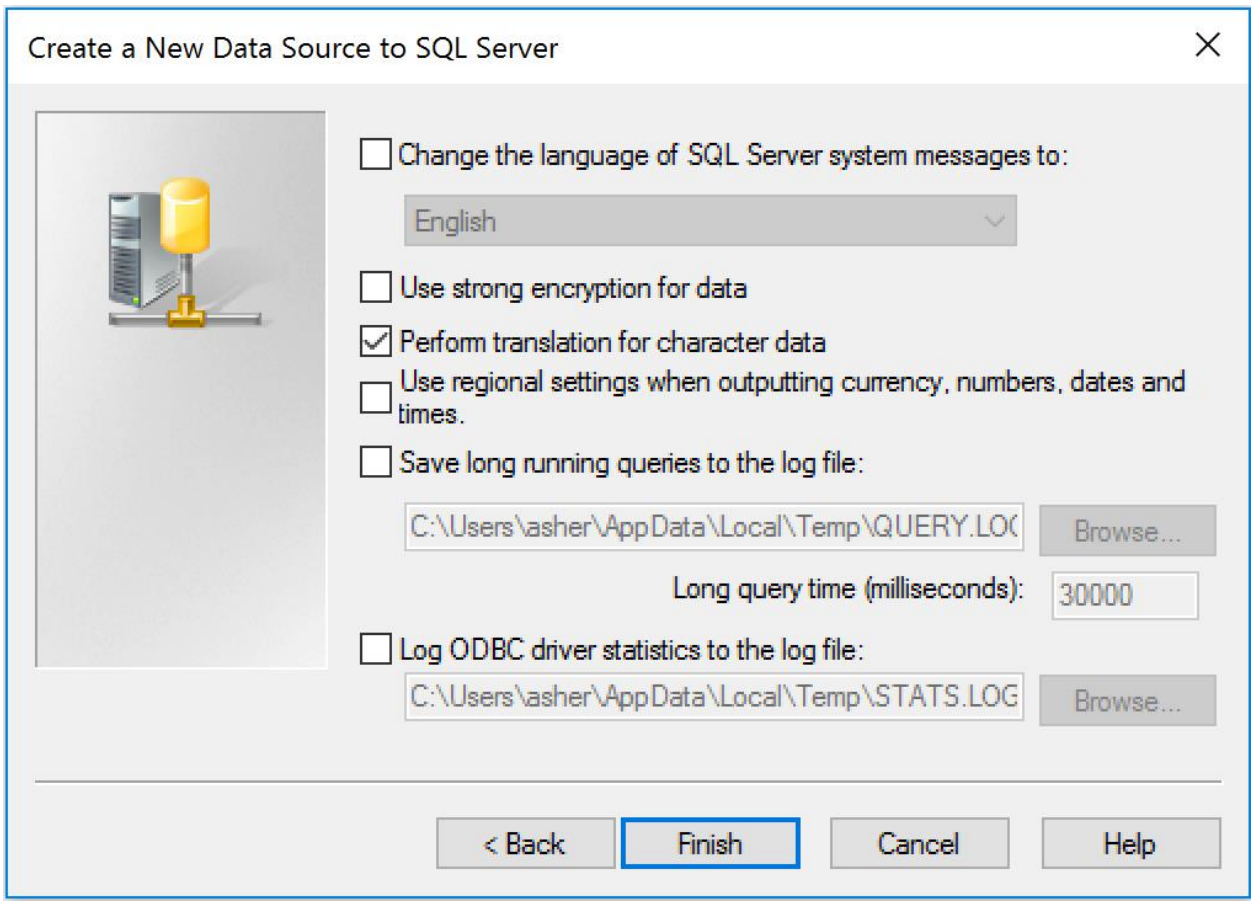
[x] Connect to SQL Server to obtain default settings for the additional configuration options.

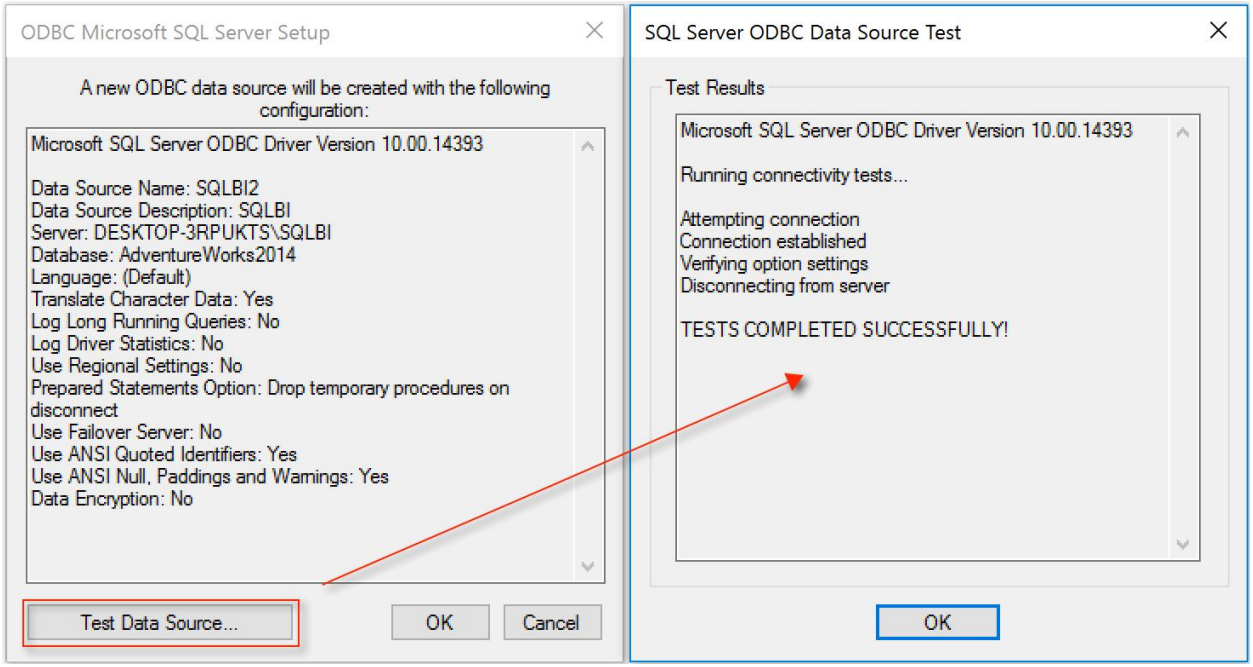
Login ID: asher

Password:

< Back | Next > | Cancel | Help

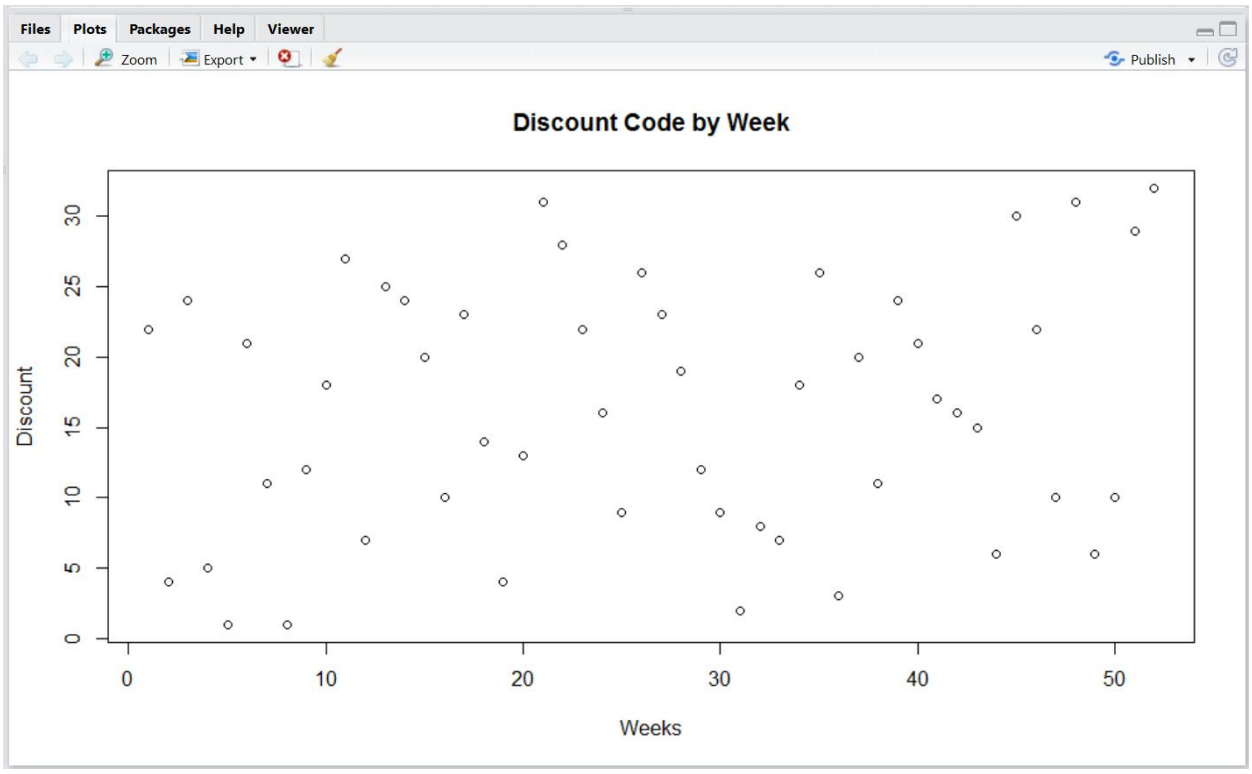

Create a New Data Source to SQL Server
Change the default database to:
AdventureWorks2014
AdventureWorks2014
master
model
msdb
tempdb
Use ANSI nulls, paddings and warnings.
Use the failover SQL Server if the primary SQL Server is not available.
< Back
Next >
Cancel
Help

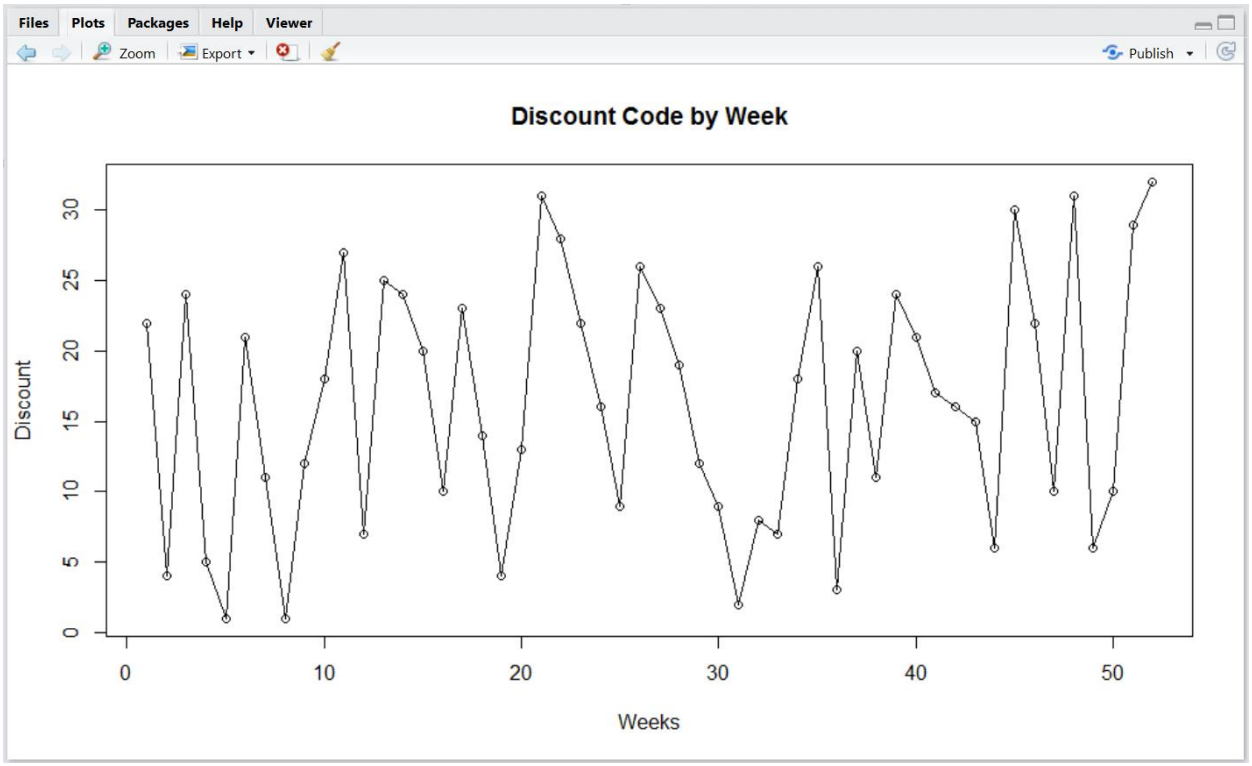

Create a New Data Source to SQL Server
Change the language of SQL Server system messages to:
English
Use strong encryption for data
Perform translation for character data
Use regional settings when outputting currency, numbers, dates and times.
Save long running queries to the log file:
C:\Users\asher\AppData\Local\Temp\QUERY.LOG
Browse...
Long query time (milliseconds):
30000
Log ODBC driver statistics to the log file:
C:\Users\asher\AppData\Local\Temp\STATS.LOG
Browse...
< Back
Finish
Cancel
Help


ODBC Microsoft SQL Server Setup
A new ODBC data source will be created with the following configuration:
Microsoft SQL Server ODBC Driver Version 10.00.14393
Data Source Name: SQLBI2
Data Source Description: SQLBI
Server: DESKTOP-3RPUKTS\SQLBI
Database: AdventureWorks2014
Language: (Default)
Translate Character Data: Yes
Log Long Running Queries: No
Log Driver Statistics: No
Use Regional Settings: No
Prepared Statements Option: Drop temporary procedures on disconnect
Use Failover Server: No
Use ANSI Quoted Identifiers: Yes
Use ANSI Null, Paddings and Warnings: Yes
Data Encryption: No
Test Data Source...
OK
Cancel
SQL Server ODBC Data Source Test
Test Results
Microsoft SQL Server ODBC Driver Version 10.00.14393
Running connectivity tests...
Attempting connection
Connection established
Verifying option settings
Disconnecting from server
TESTS COMPLETED SUCCESSFULLY!
OK

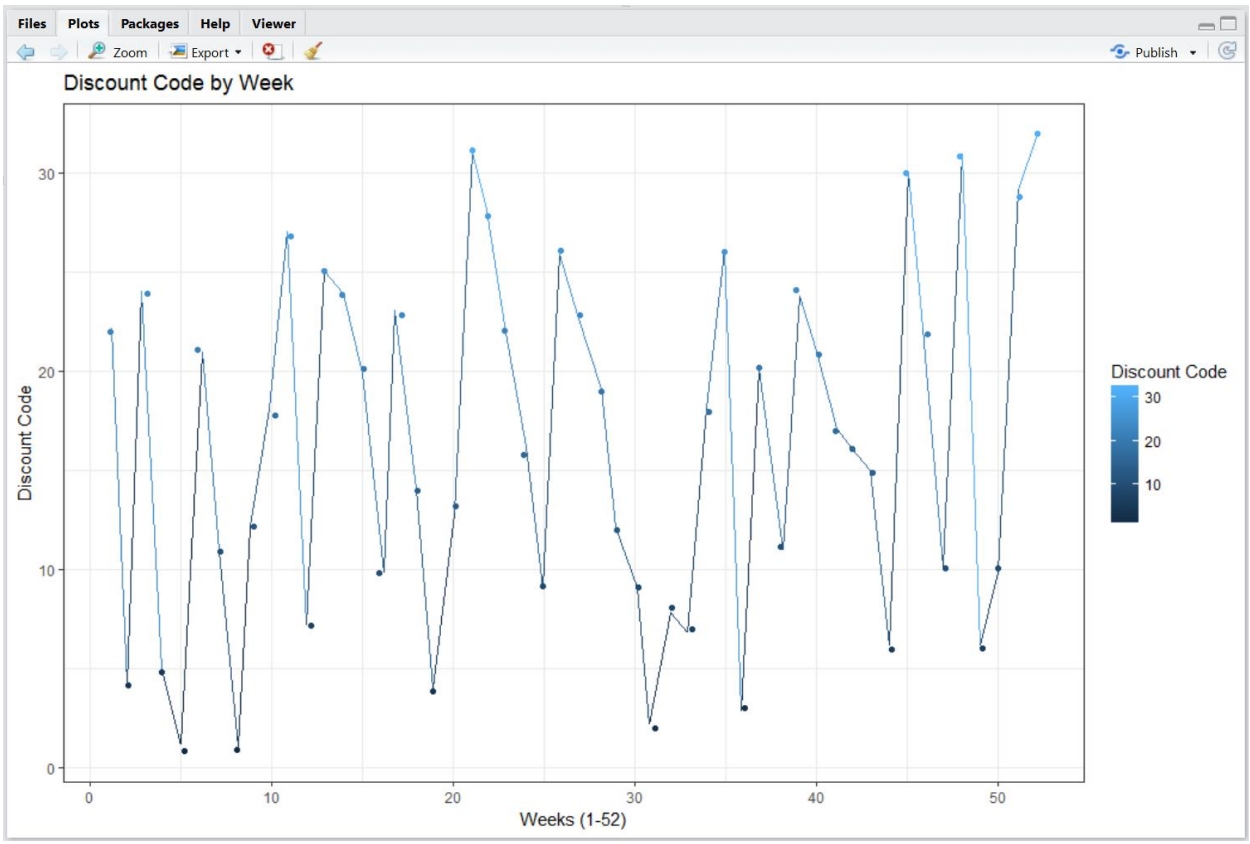
```
> connection_SQLBI
RODBC Connection
Details:
  case=nochange
  DSN=SQLBI
  Description=SQLBI
  UID=
  Trusted_Connection=Yes
  APP=RStudio
  WSID=DESKTOP-3RPUKTS
  DATABASE=AdventureWorks2014
```

```
> head(SQL_Query_1)
  Week Discount Weeks
1 "01"       22     1
2 "02"        4     2
3 "03"       24     3
4 "04"        5     4
5 "05"        1     5
6 "06"       21     6
```


Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Discount Code by Week
Discount
Weeks
0
5
10
15
20
25
30
0
10
20
30
40
50

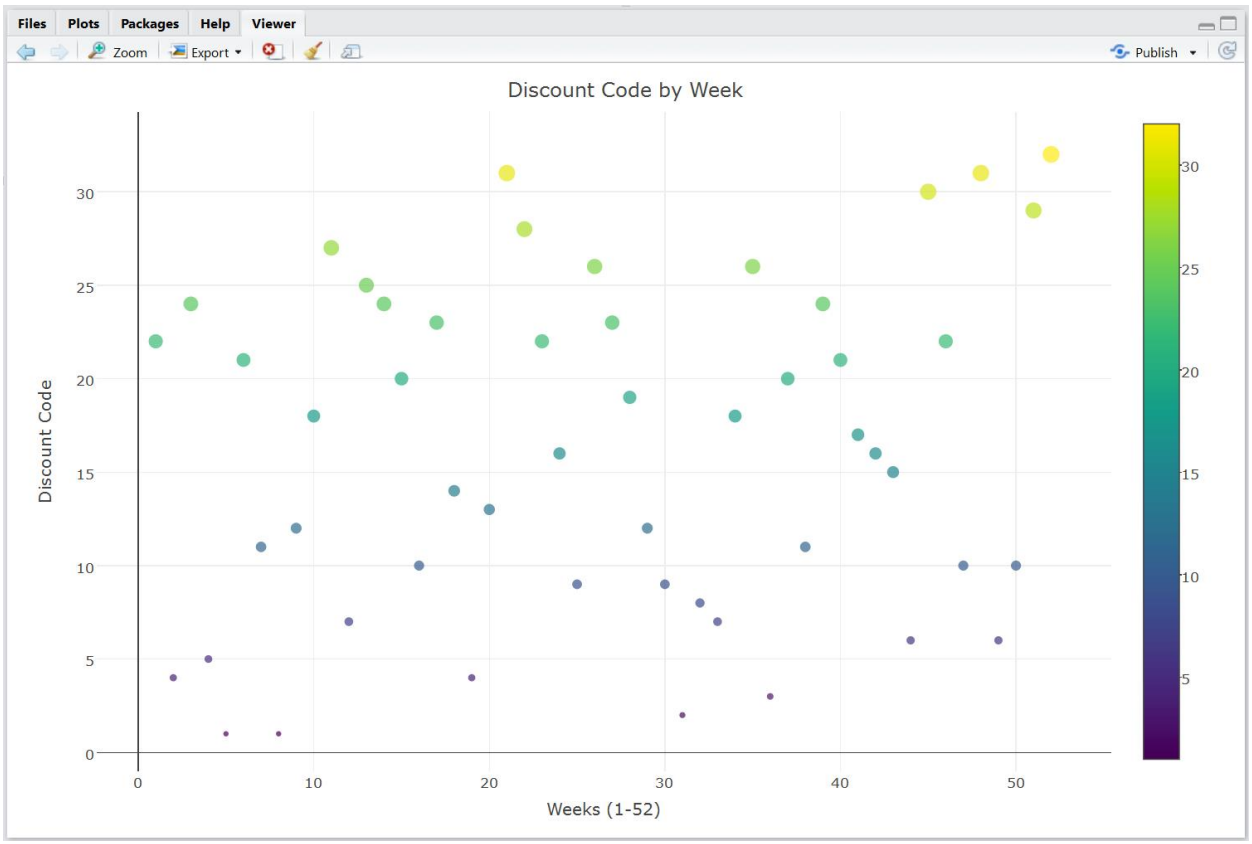

Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Discount Code by Week
Discount
Weeks
0
5
10
15
20
25
30
0
10
20
30
40
50

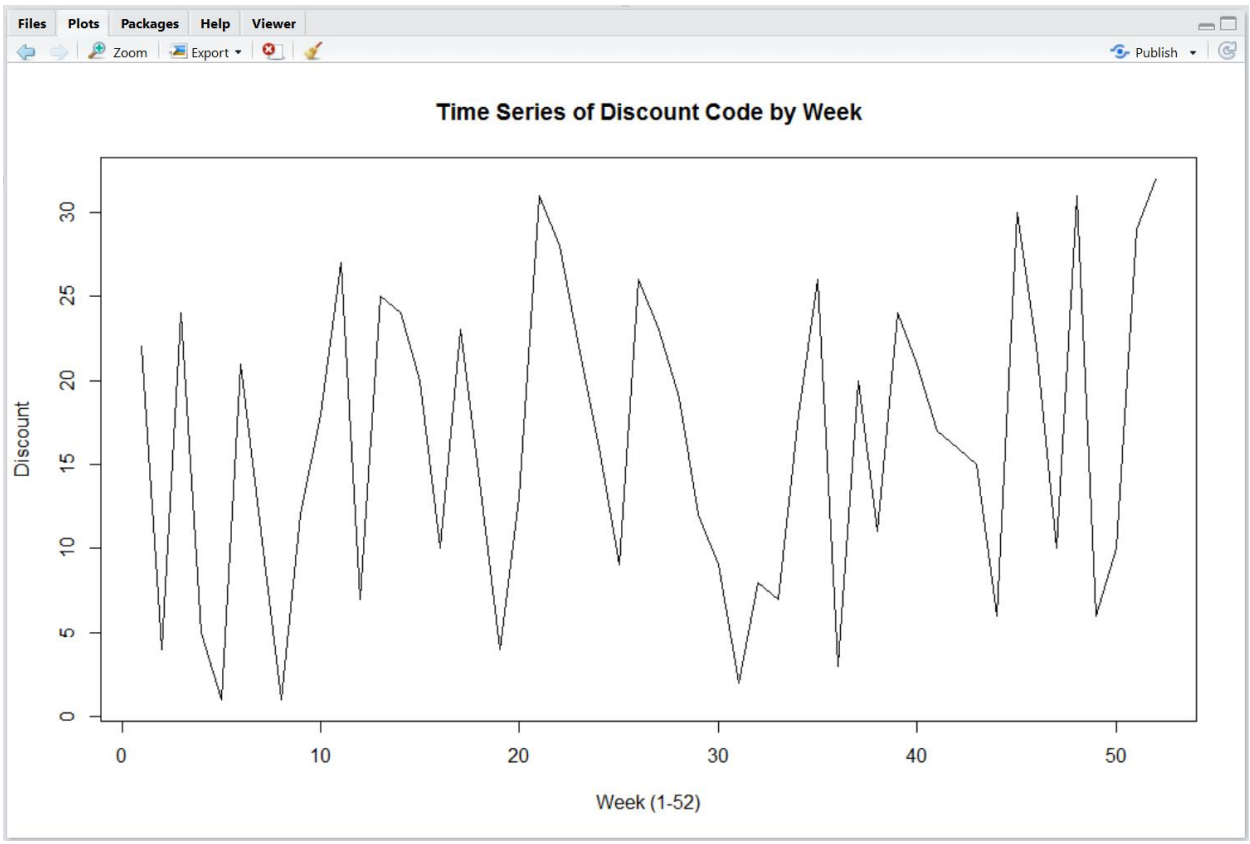

Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Discount Code by Week
Discount
0
5
15
25
0
10
20
30
40
50
Weeks
Discount Code by Week
Discount
0
5
15
25
0
10
20
30
40
50
Weeks

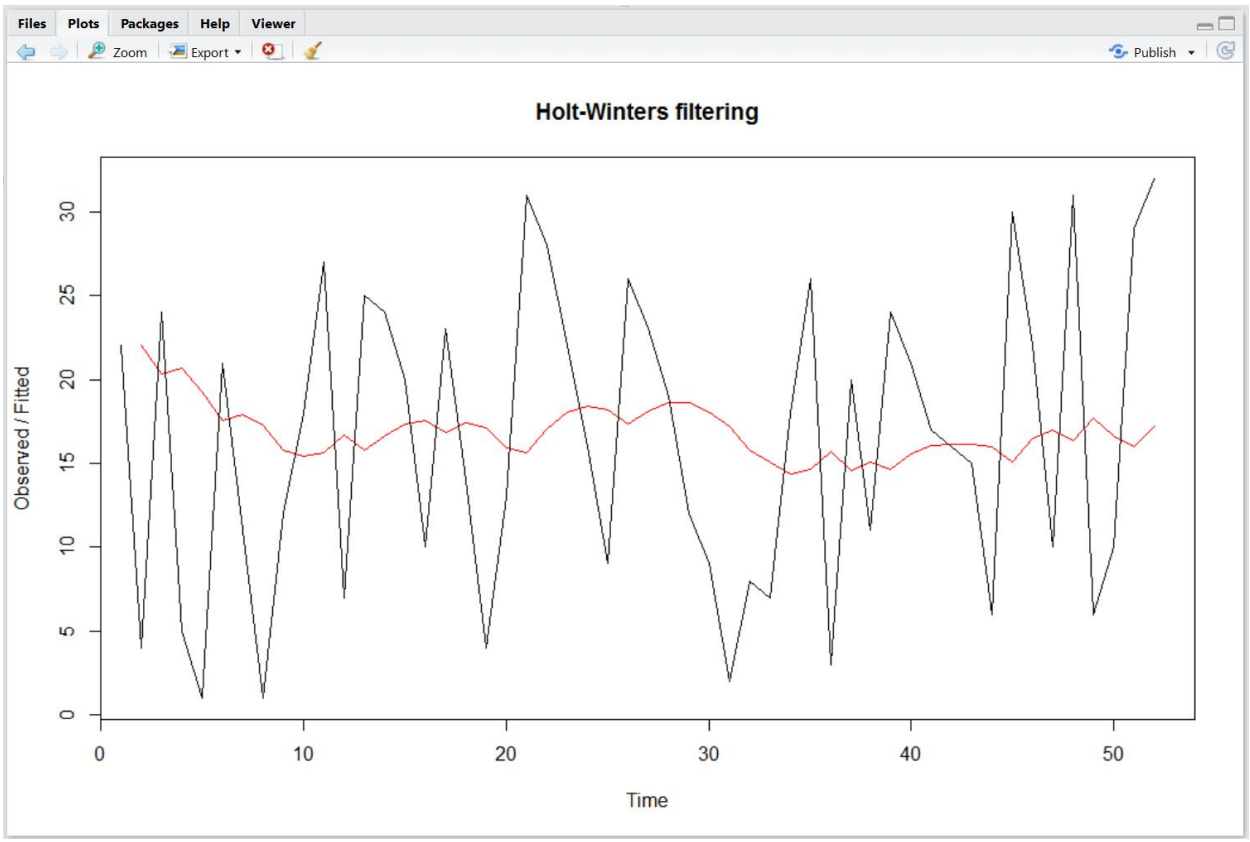

Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Discount Code by Week
Discount Code
Weeks (1-52)
0
10
20
30
40
50
Discount Code
30
20
10

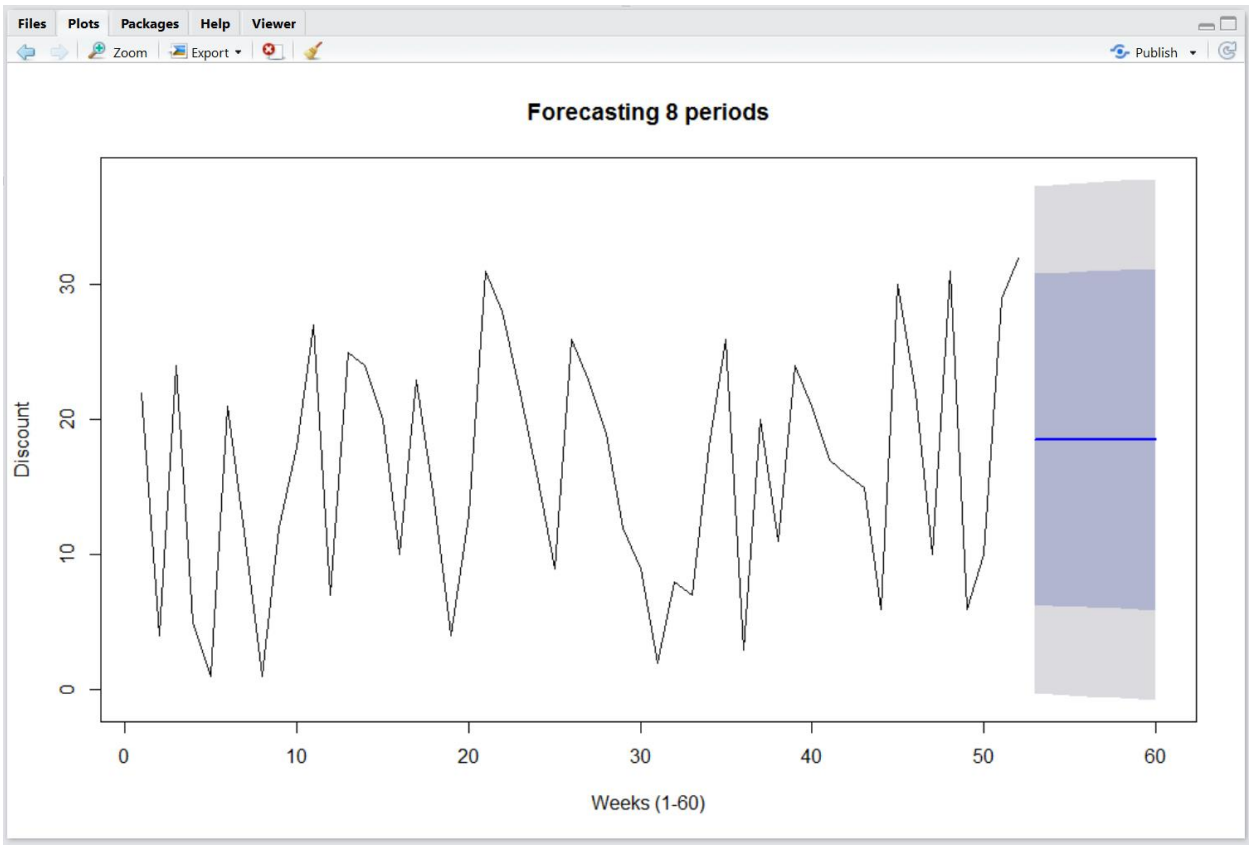

Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Discount Code by Week
Discount Code
Weeks (1-52)
0
5
10
15
20
25
30
10
20
30
40
50

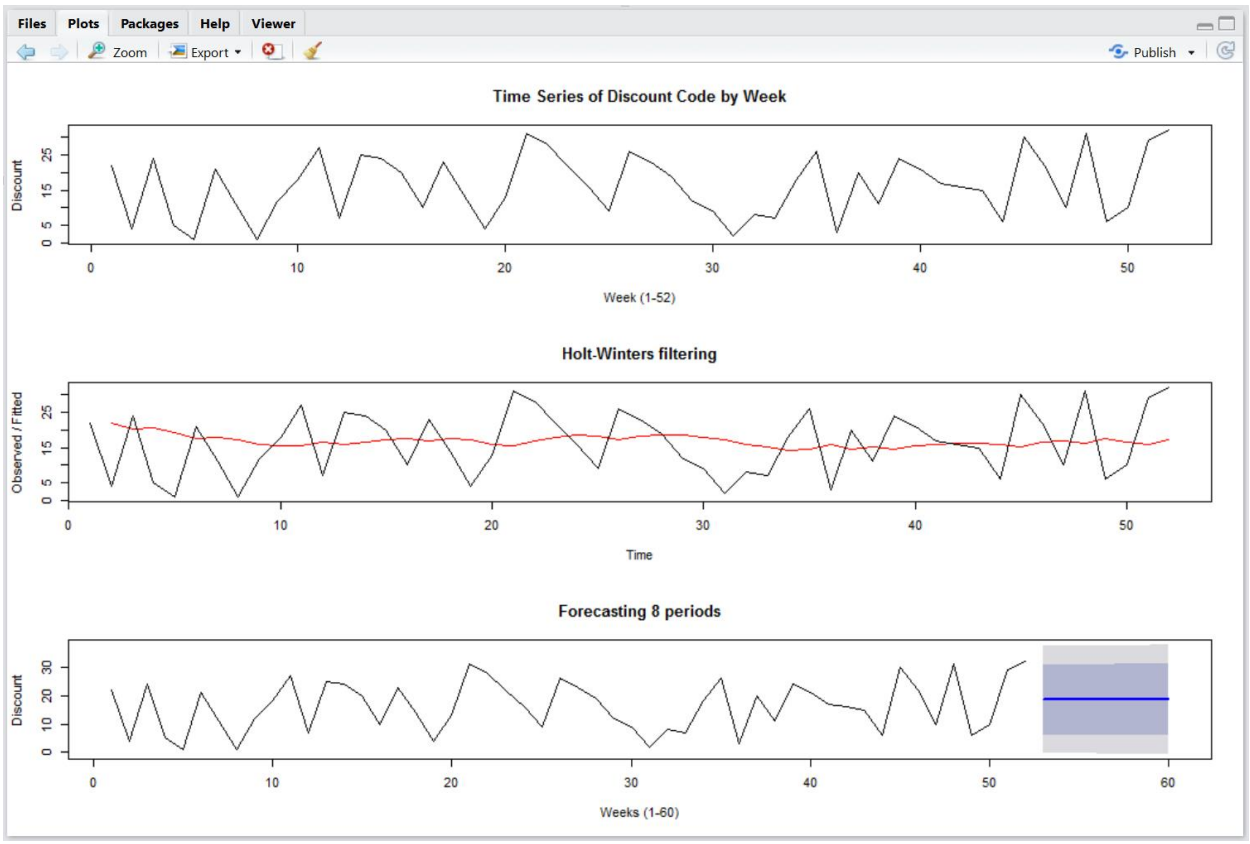

Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Discount Code by Week + 52-Week Average
Discount
Average
Discount Code
Weeks (1-52)
0
5
10
15
20
25
30
10
20
30
40
50

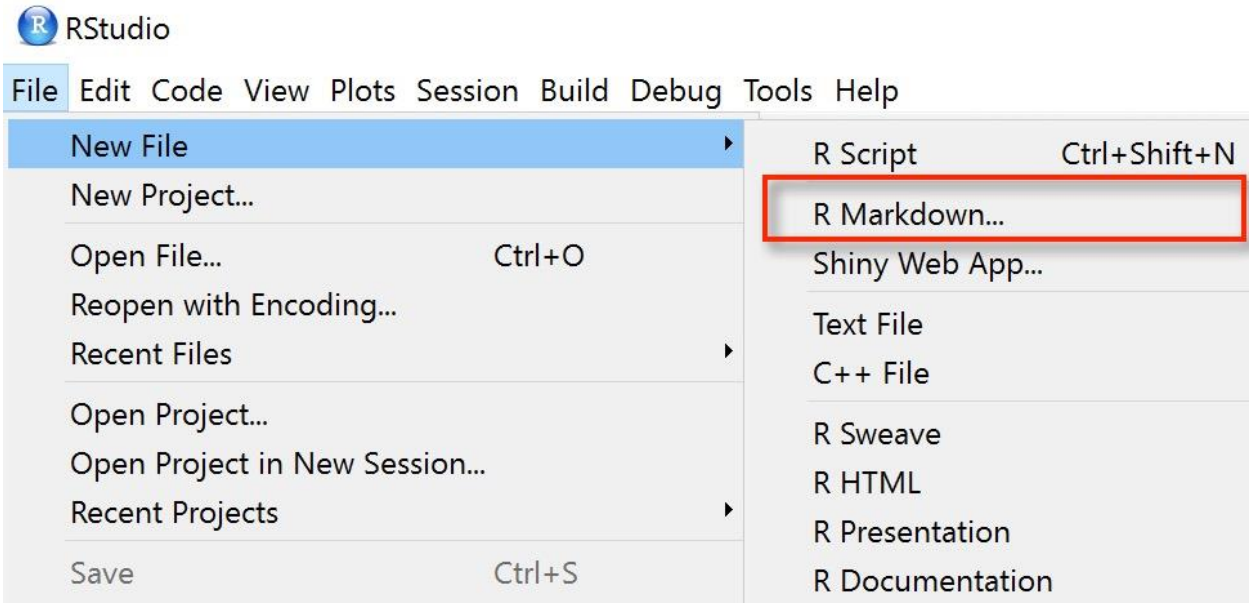

Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Discount Code by Week
Discount Code
Weeks (1-52)
0
5
10
15
20
25
30
0
10
20
30
40
50

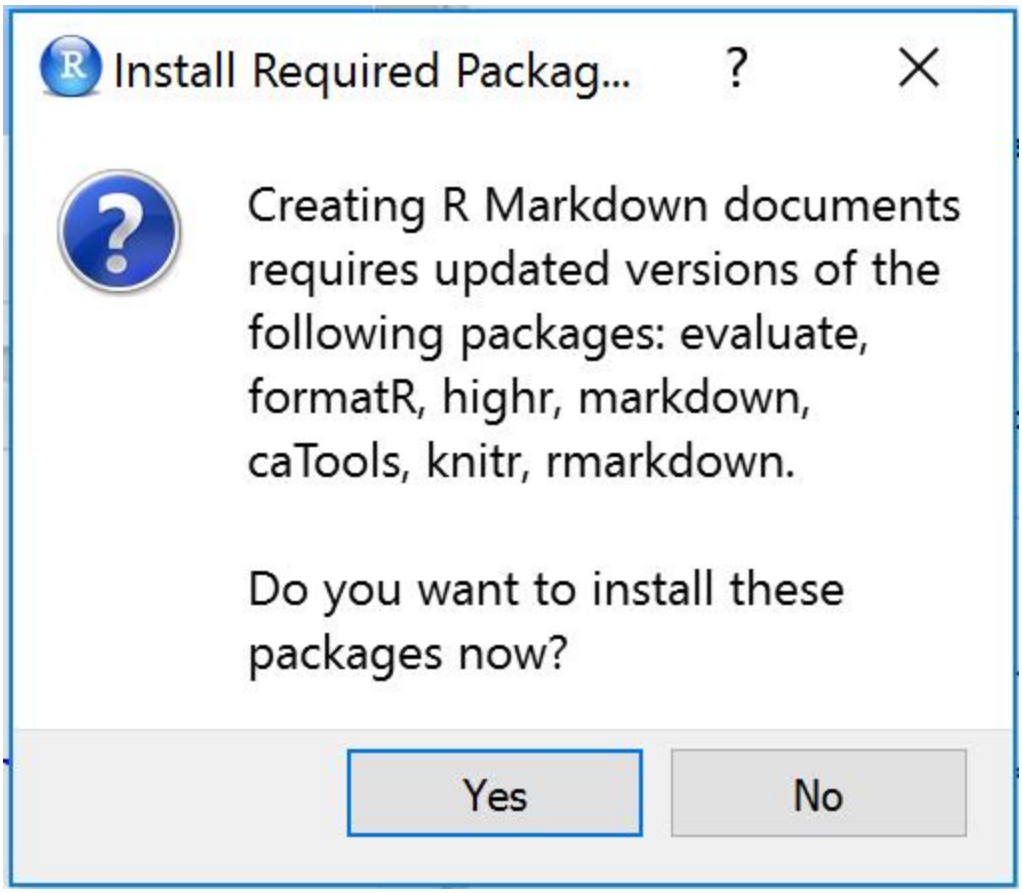

Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Time Series of Discount Code by Week
Discount
0
5
10
15
20
25
30
0
10
20
30
40
50
Week (1-52)

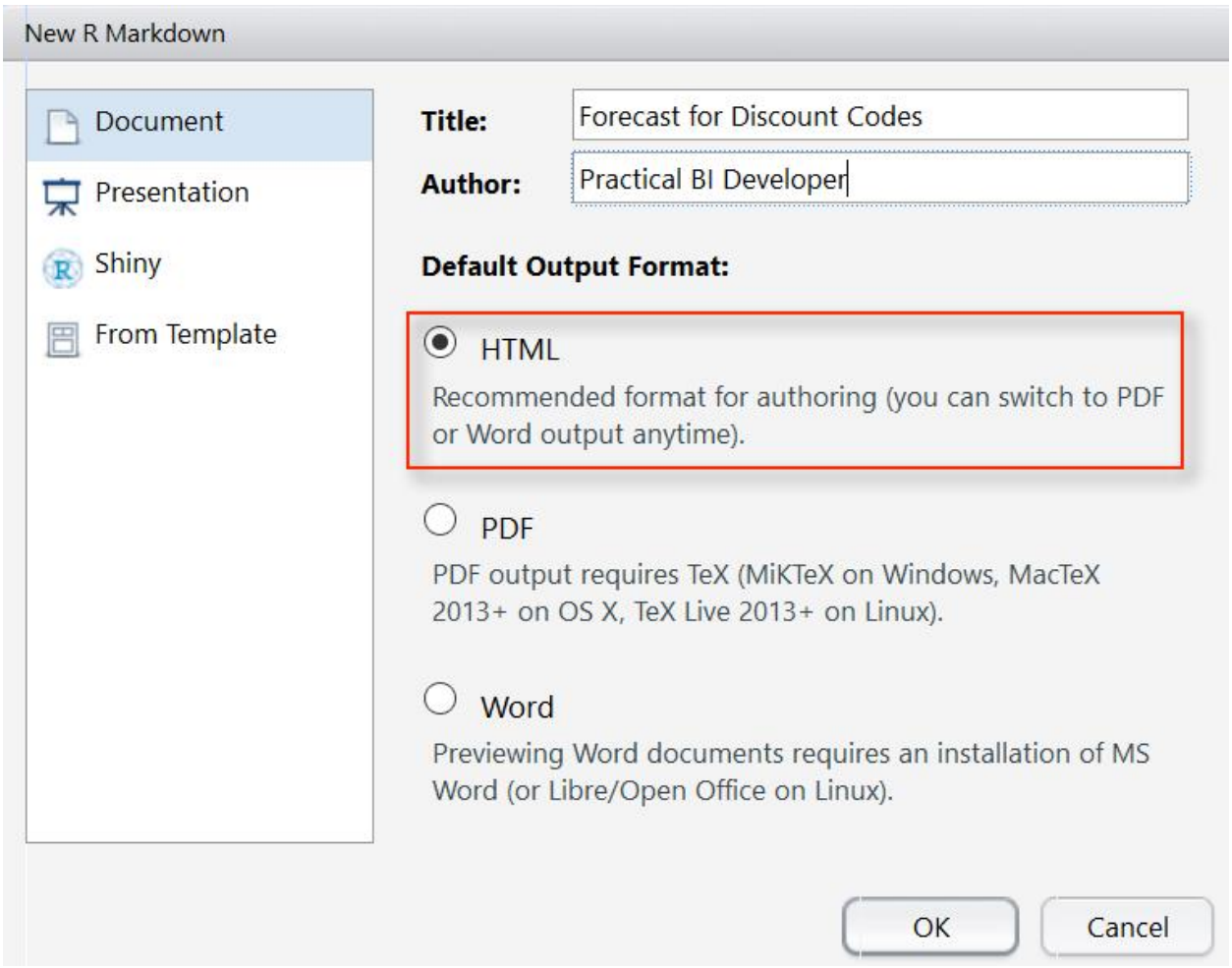

Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Holt-Winters filtering
Observed / Fitted
Time
0
5
10
15
20
25
30
0
10
20
30
40
50

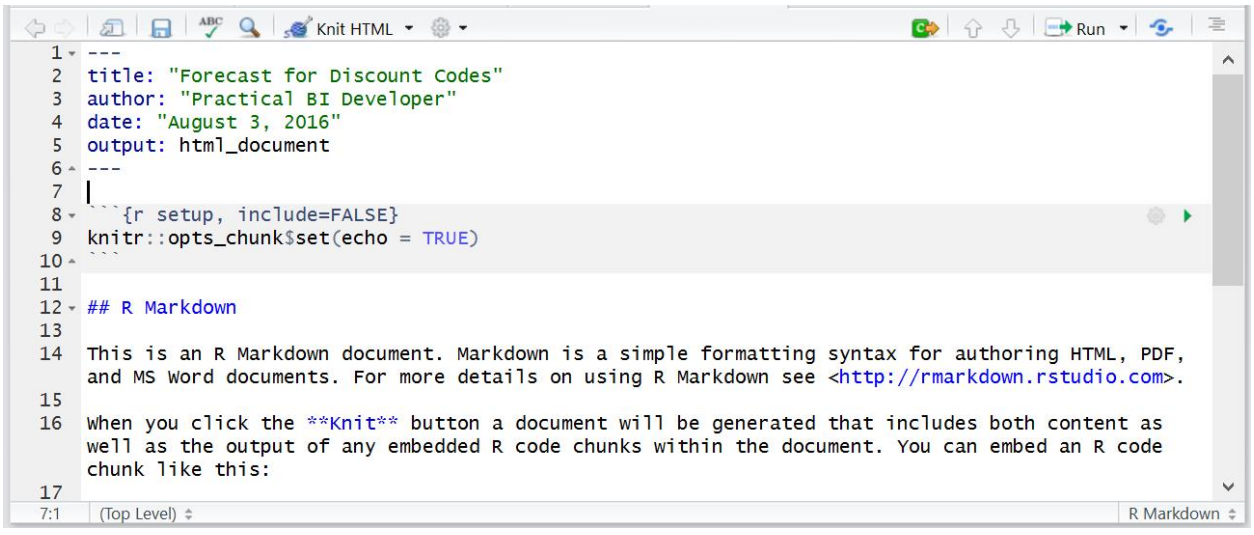

Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Forecasting 8 periods
Discount
0
10
20
30
0
10
20
30
40
50
60
Weeks (1-60)

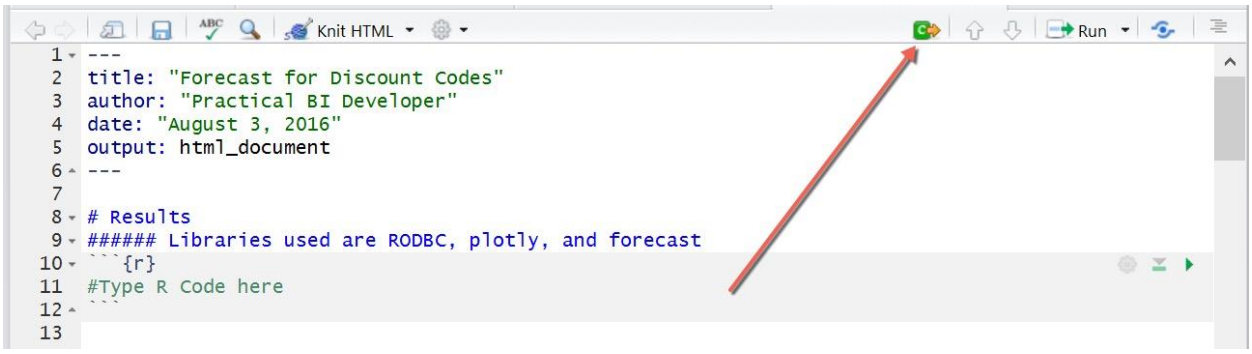

Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Time Series of Discount Code by Week
Discount
Week (1-52)
Holt-Winters filtering
Observed / Fitted
Time
Forecasting 8 periods
Discount
Weeks (1-60)


RStudio
File
Edit
Code
View
Plots
Session
Build
Debug
Tools
Help
New File
New Project...
Open File... Ctrl+O
Reopen with Encoding...
Recent Files
Open Project...
Open Project in New Session...
Recent Projects
Save Ctrl+S
R Script Ctrl+Shift+N
R Markdown...
Shiny Web App...
Text File
C++ File
R Sweave
R HTML
R Presentation
R Documentation


Install Required Packag...
?
Creating R Markdown documents requires updated versions of the following packages: evaluate, formatR, highr, markdown, caTools, knitr, rmarkdown.
Do you want to install these packages now?
Yes
No


New R Markdown
Document
Presentation
Shiny
From Template
Title:
Forecast for Discount Codes
Author:
Practical BI Developer
Default Output Format:
HTML
Recommended format for authoring (you can switch to PDF or Word output anytime).
PDF
PDF output requires TeX (MiKTeX on Windows, MacTeX 2013+ on OS X, TeX Live 2013+ on Linux).
Word
Previewing Word documents requires an installation of MS Word (or Libre/Open Office on Linux).
OK
Cancel


Knit HTML
Run
1 ---
2 title: "Forecast for Discount Codes"
3 author: "Practical BI Developer"
4 date: "August 3, 2016"
5 output: html_document
6 ---
7
8 ```{r setup, include=FALSE}
9 knitr::opts_chunk$set(echo = TRUE)
10 ```
11
12 ## R Markdown
13
14 This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.
15
16 When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:
17
7:1
(Top Level)
R Markdown



Forecast of Discount Codes

Practical BI Developer

August 3, 2016

Results

Libraries used are RODBC, plotly, and forecast

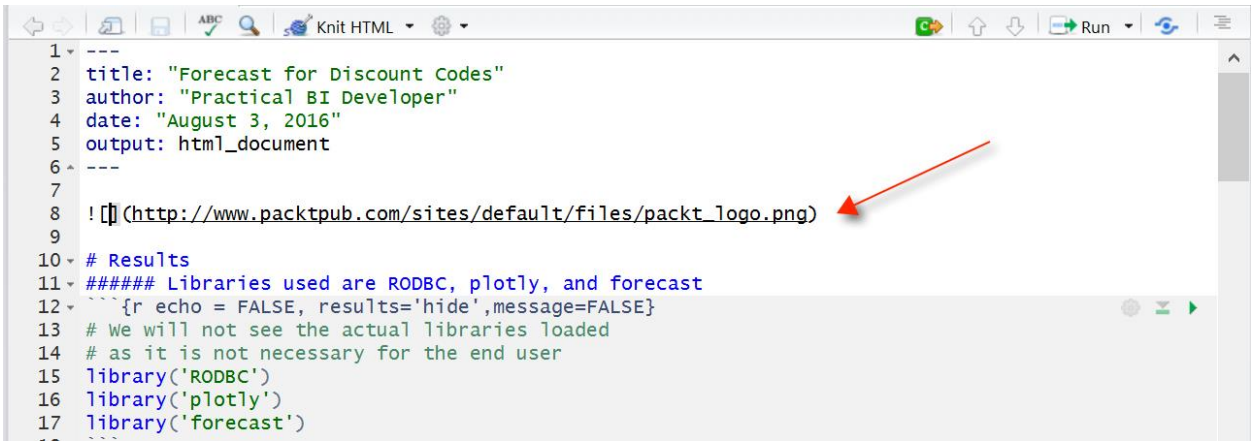
```
# We will not see the actual libraries loaded
# as it is not necessary for the end user
library('RODBC')
library('plotly')
```

```
## Loading required package: ggplot2
```

```
##
## Attaching package: 'plotly'
```

```
## The following object is masked from 'package:ggplot2':
##
##     last_plot
```

```
## The following object is masked from 'package:graphics':
##
##     layout
```


Knit HTML
Run
---
title: "Forecast for Discount Codes"
author: "Practical BI Developer"
date: "August 3, 2016"
output: html_document

Results
Libraries used are RODBC, plotly, and forecast
```{r echo = FALSE, results='hide',message=FALSE}
# We will not see the actual libraries loaded
# as it is not necessary for the end user
library('RODBC')
library('plotly')
library('forecast')
```

Forecast for Discount Codes

Practical BI Developer

August 3, 2016

Results

Libraries used are RODBC, plotly, and forecast

Connectivity to Data Source is through ODBC

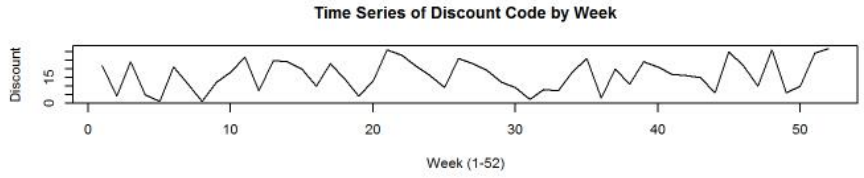
Preview of First 6 rows of data

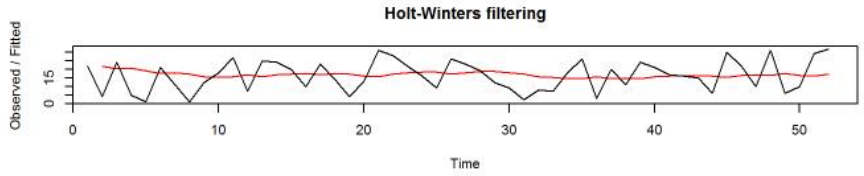
```
##   Weeks Discount
## 1     1       22
## 2     2        4
## 3     3       24
## 4     4        5
## 5     5        1
## 6     6       21
```

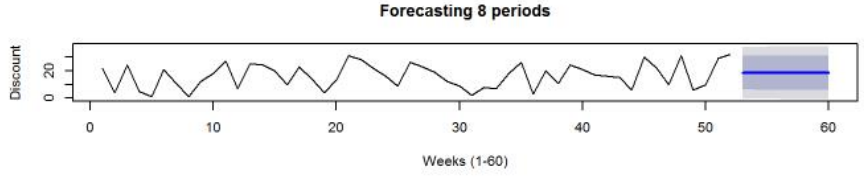
Summary of Table Observations

```
## 'data.frame':    52 obs. of  2 variables:
##  $ Weeks   : num  1 2 3 4 5 6 7 8 9 10 ...
##  $ Discount: int  22 4 24 5 1 21 11 1 12 18 ...
```

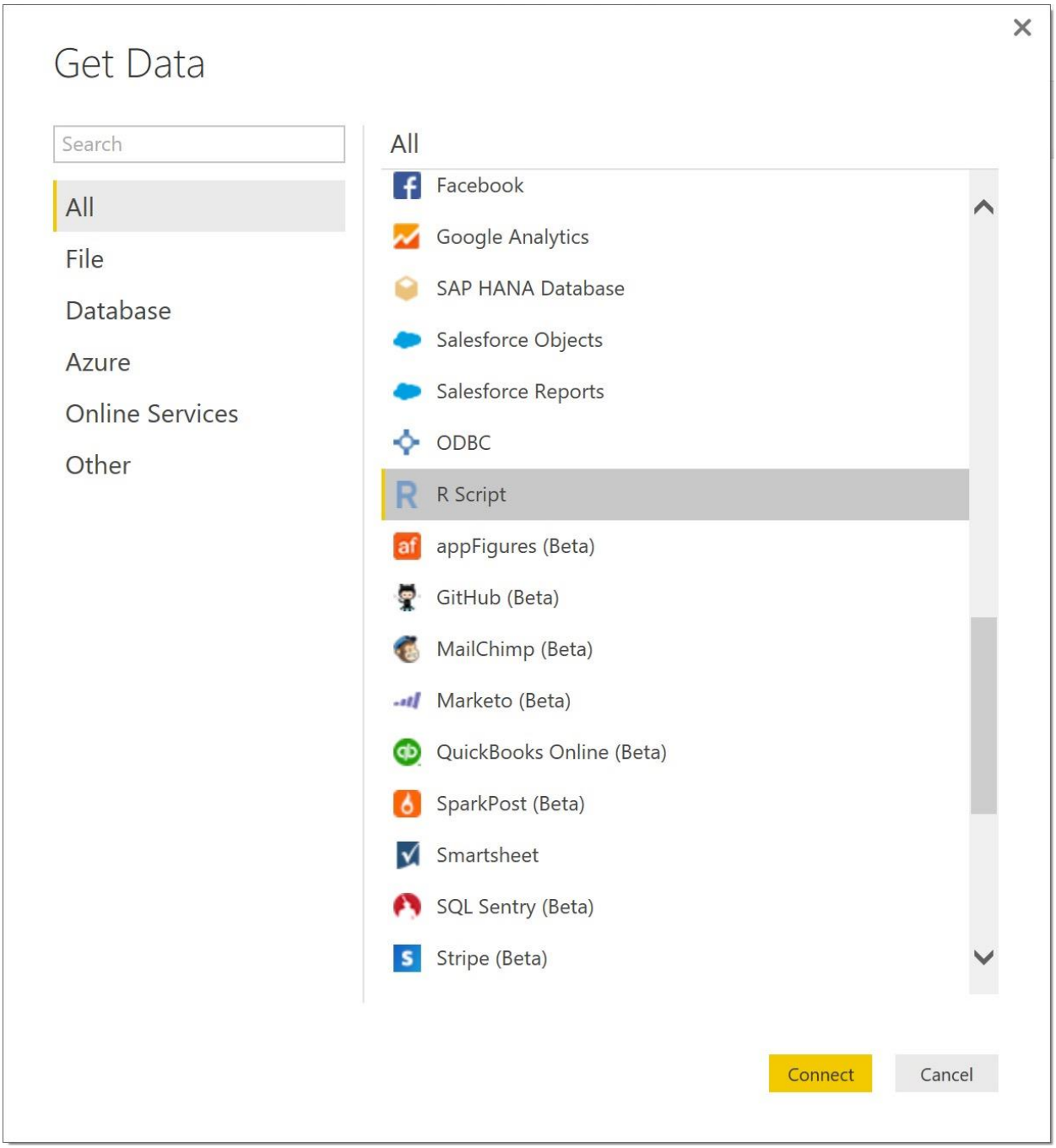
Time Series and Forecast Plots







```
> head(Regression_Dataframe)
  Week Weeks Discount   Fitted
1 "01"     1       22 13.65602
2 "02"     2        4 13.75775
3 "03"     3       24 13.85947
4 "04"     4        5 13.96120
5 "05"     5        1 14.06292
6 "06"     6       21 14.16465
```


Get Data
Search
All
File
Database
Azure
Online Services
Other
All
Facebook
Google Analytics
SAP HANA Database
Salesforce Objects
Salesforce Reports
ODBC
R Script
appFigures (Beta)
GitHub (Beta)
MailChimp (Beta)
Marketo (Beta)
QuickBooks Online (Beta)
SparkPost (Beta)
Smartsheet
SQL Sentry (Beta)
Stripe (Beta)
Connect
Cancel

Execute R Script

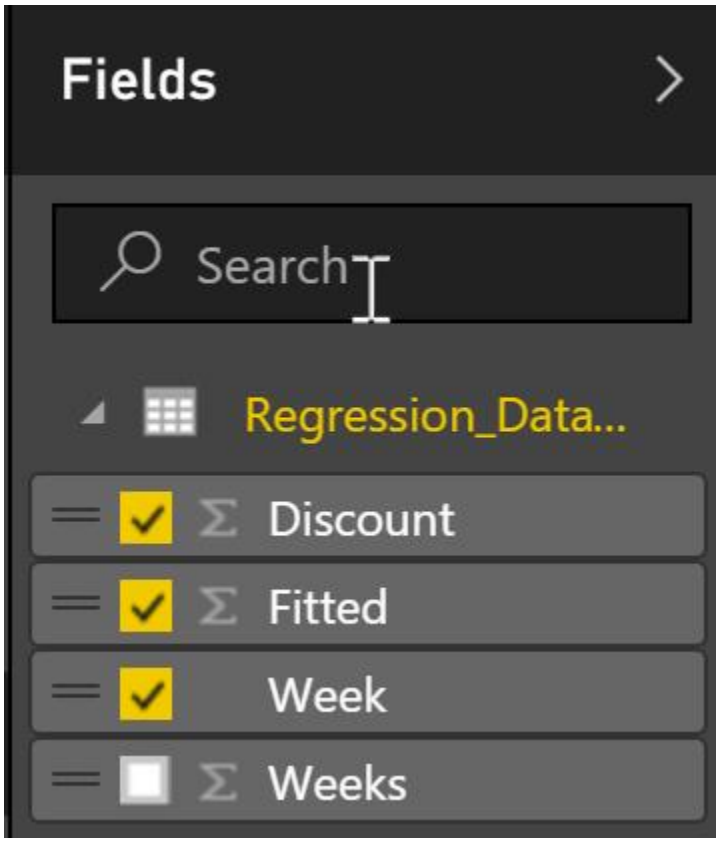
Execute an R script on a local R installation and import the resulting data frames.

```
library('RODBC')
connection_SQLBI<-odbcConnect("SQLBI")

SQL_Query_1<-sqlQuery(connection_SQLBI,
                      'SELECT ["WeekInYear"]
                      ,["DiscountCode"]
                      FROM [AdventureWorks2014].[dbo].[DiscountCodebyWeek]' )

attach(SQL_Query_1)

##Change Column Names##
colnames(SQL_Query_1)<- c("Week", "Discount")
```

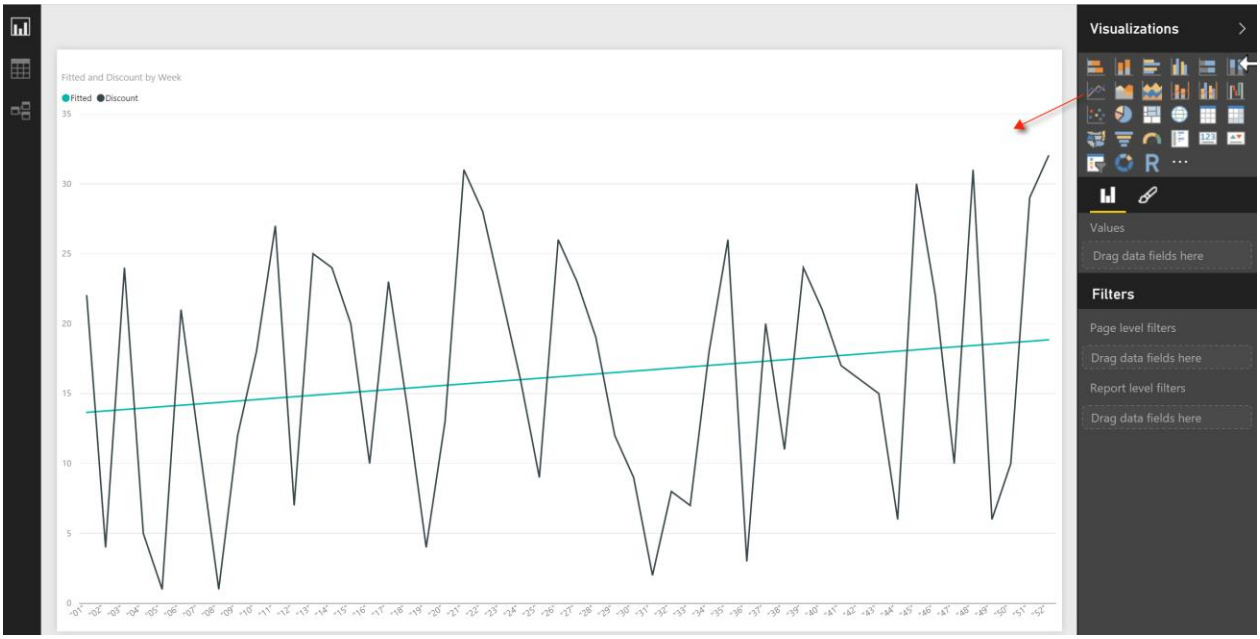
R is installed at C:\Program Files\R\R-3.2.5.

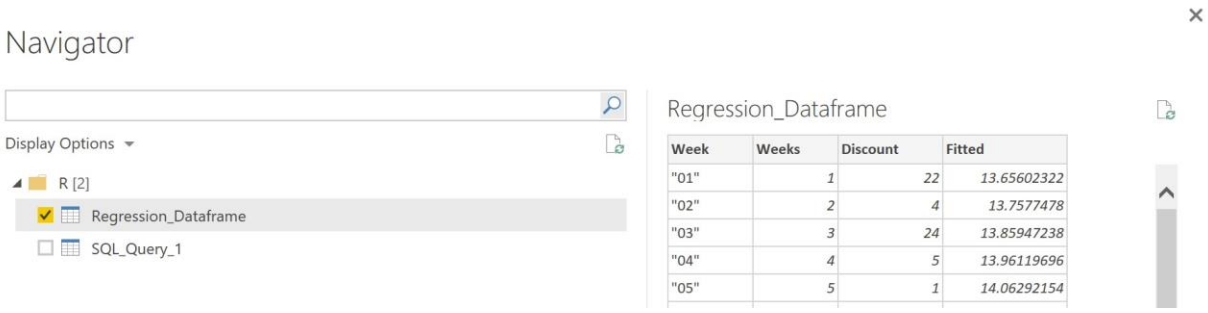
Go to Options & Settings to change which installation you want to run, and for more configuration options.

OK Cancel



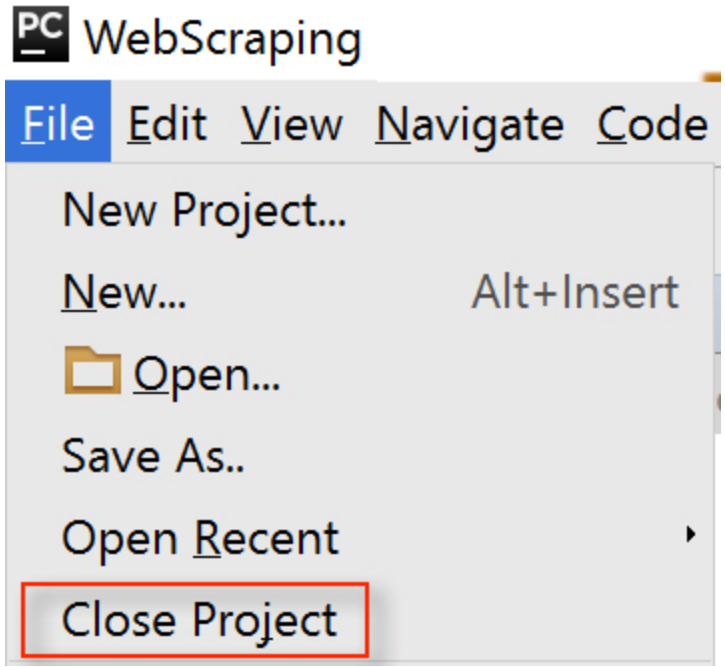
Week	Fitted	Discount
"01"	13.66	22
"02"	13.76	4
"03"	13.86	24
"04"	13.96	5
"05"	14.06	1
"06"	14.16	21
"07"	14.27	11
"08"	14.37	1
"09"	14.47	12
"10"	14.57	18
"11"	14.67	27
"12"	14.77	7
"13"	14.88	25
"14"	14.98	24
"15"	15.08	20
"16"	15.18	10
Total	**845.00**	**845**

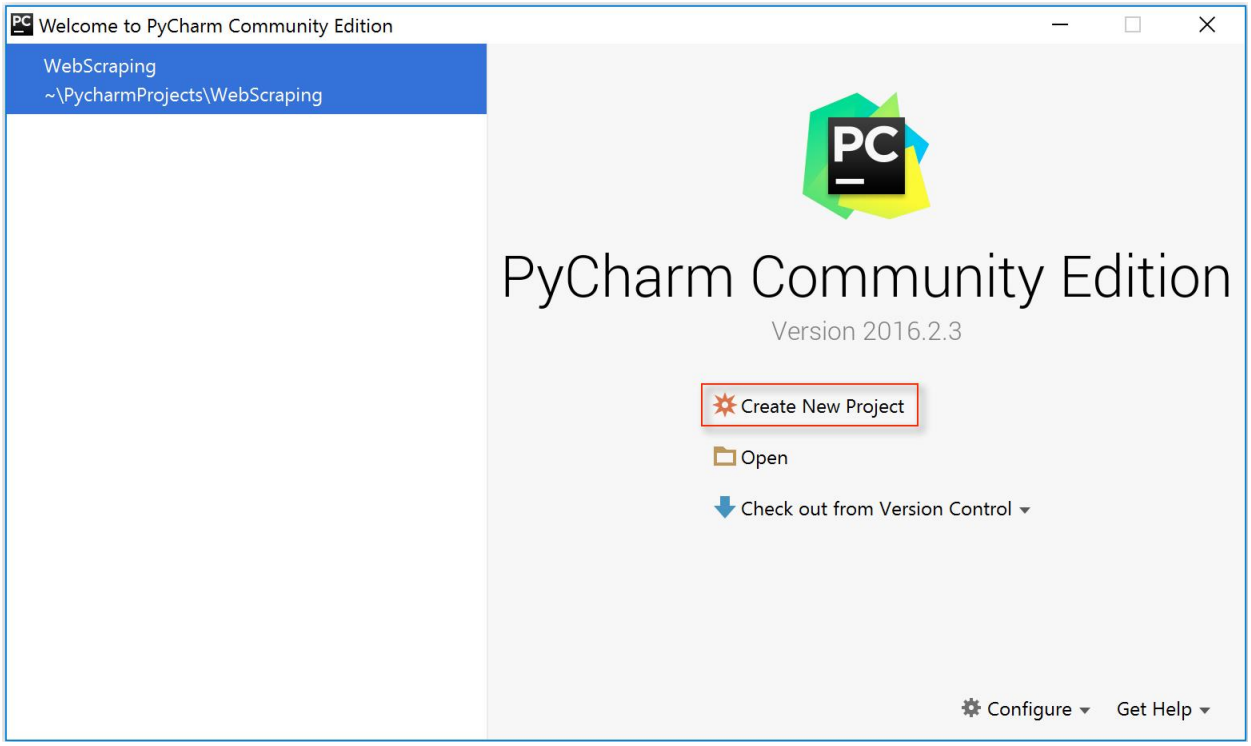


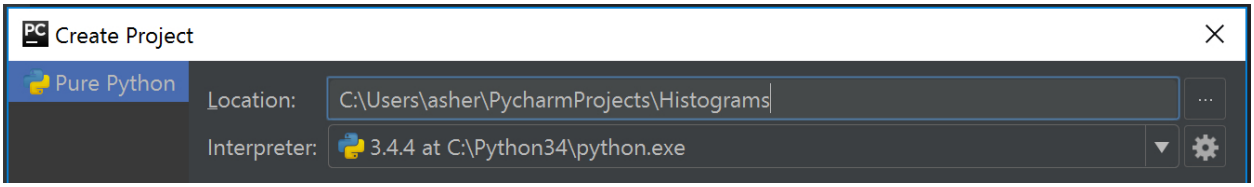

Navigator
Display Options
R [2]
Regression_Dataframe
SQL_Query_1
Regression_Dataframe
Week Weeks Discount Fitted
"01" 1 22 13.65602322
"02" 2 4 13.7577478
"03" 3 24 13.85947238
"04" 4 5 13.96119696
"05" 5 1 14.06292154

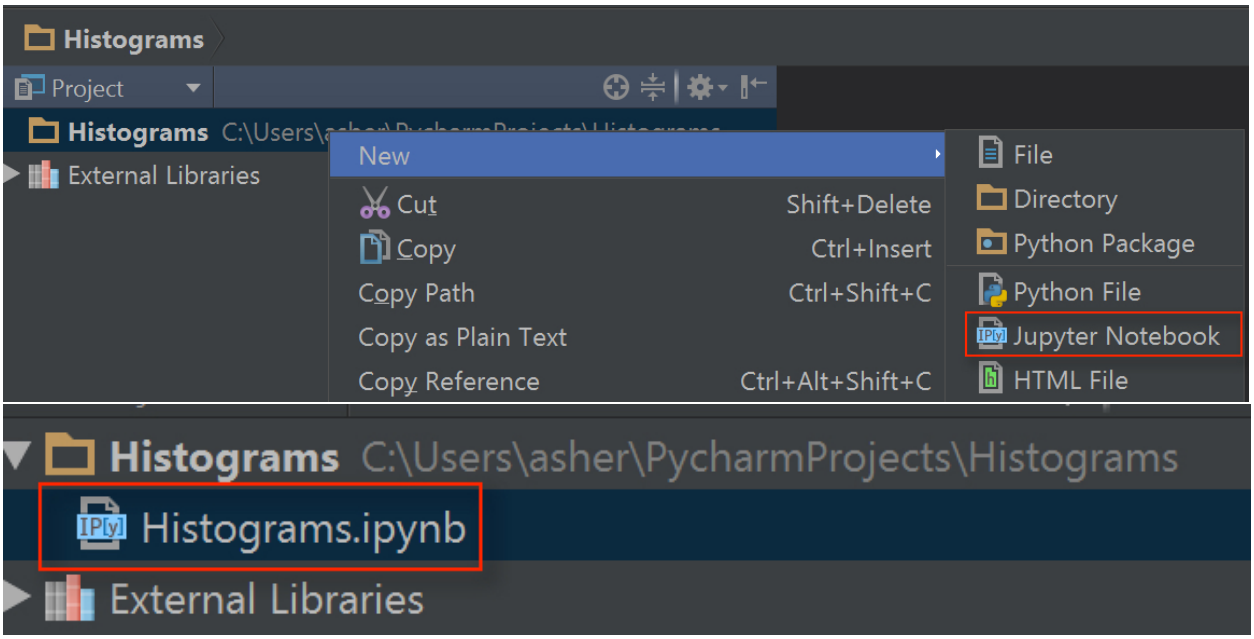
Results | Messages

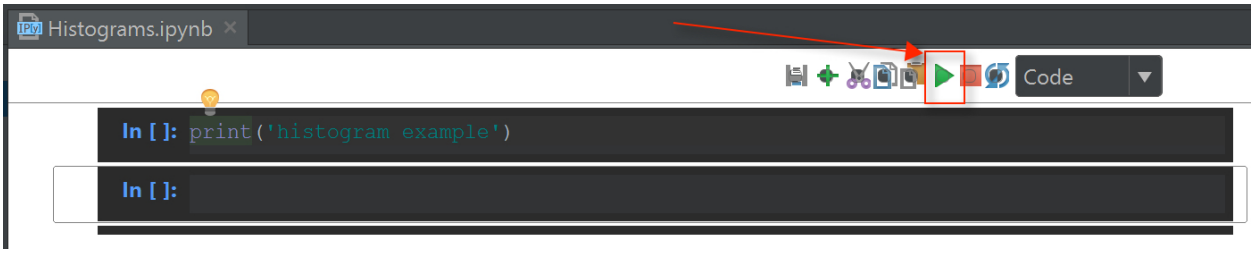
	JobTitle	VacationHours
1	Chief Financial Officer	0
2	Vice President of Engineering	1
3	Engineering Manager	2
4	Senior Design Engineer	3
5	Vice President of Sales	10
6	North American Sales Manager	14
7	Design Engineer	15
8	Tool Designer	17
9	Pacific Sales Manager	20
10	European Sales Manager	21

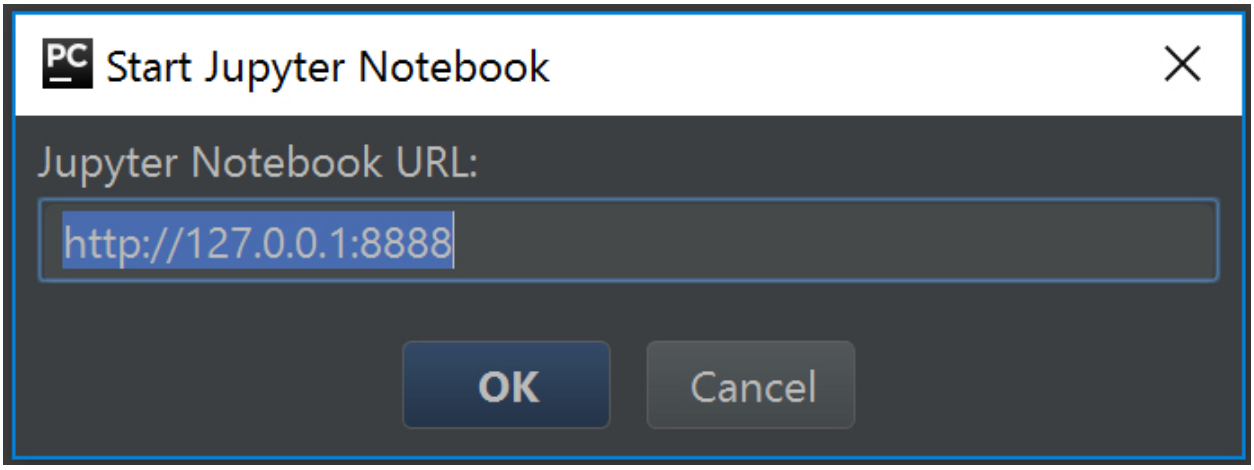


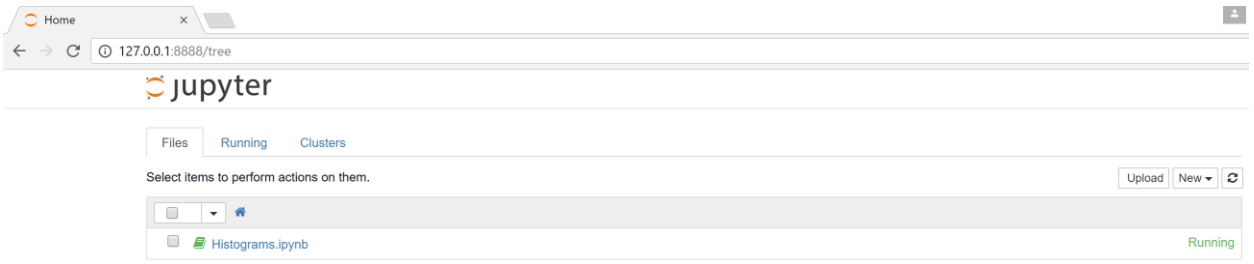

Welcome to PyCharm Community Edition
WebScraping
~\PycharmProjects\WebScraping
PyCharm Community Edition
Version 2016.2.3
Create New Project
Open
Check out from Version Control
Configure
Get Help

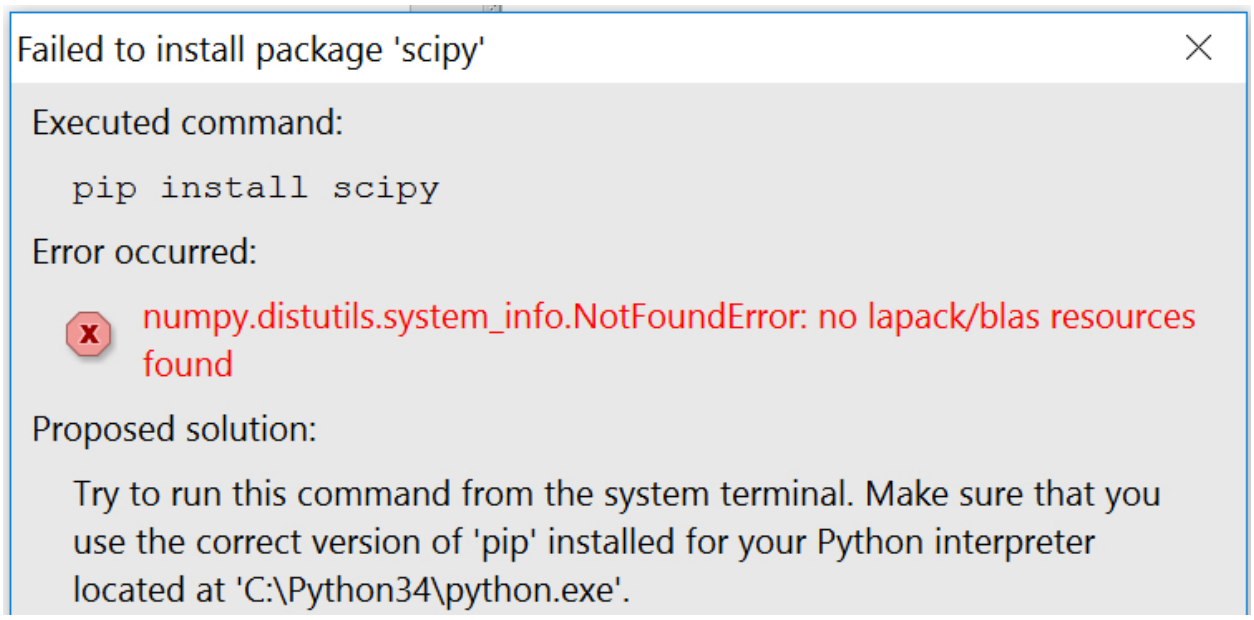

Create Project
Pure Python
Location:
C:\Users\asher\PycharmProjects\Histograms
Interpreter:
3.4.4 at C:\Python34\python.exe

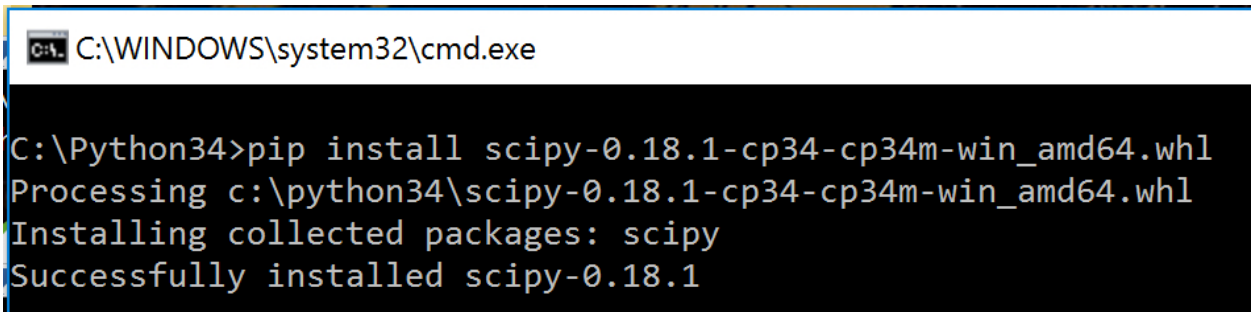

Histograms
Project
Histograms C:\Users\
External Libraries
New
Cut Shift+Delete
Copy Ctrl+Insert
Copy Path Ctrl+Shift+C
Copy as Plain Text
Copy Reference Ctrl+Alt+Shift+C
File
Directory
Python Package
Python File
Jupyter Notebook
HTML File
Histograms C:\Users\asher\PycharmProjects\Histograms
Histograms.ipynb
External Libraries

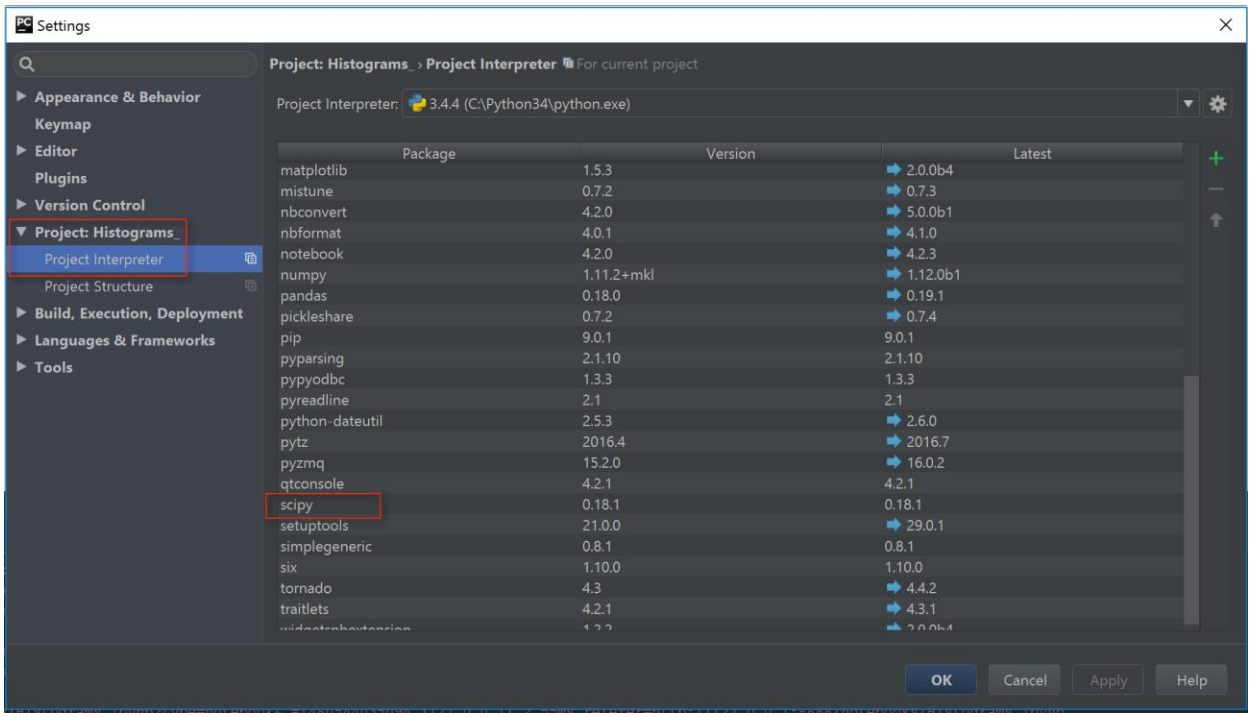

Histograms.ipynb
Code
In [ ]: print('histogram example')
In [ ]:

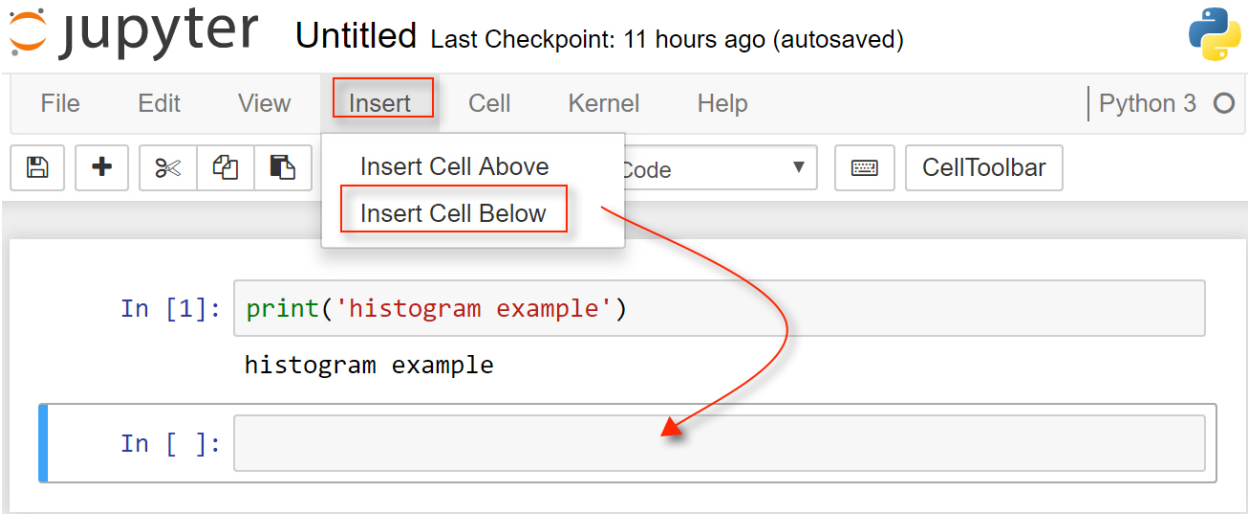

Start Jupyter Notebook
Jupyter Notebook URL:
http://127.0.0.1:8888
OK
Cancel

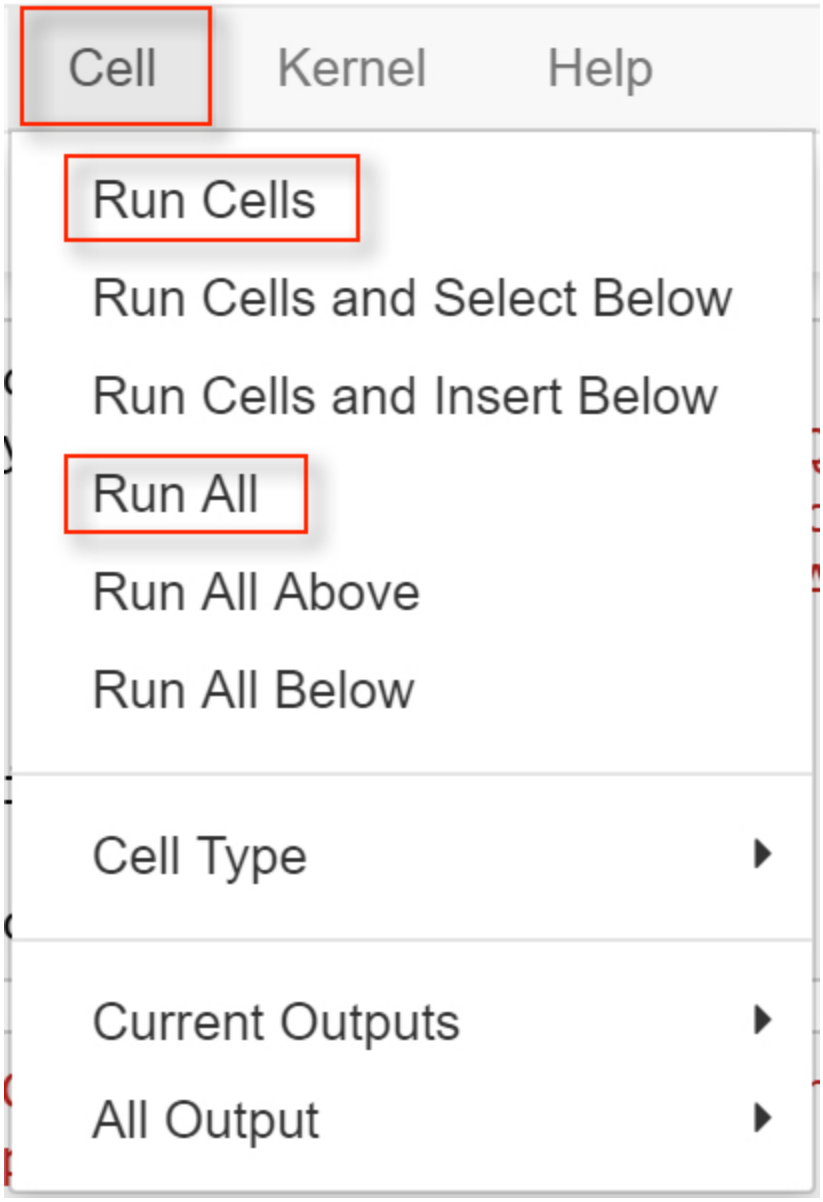

Home
127.0.0.1:8888/tree
jupyter
Files
Running
Clusters
Select items to perform actions on them.
Upload
New
Histograms.ipynb
Running


Failed to install package 'scipy'
Executed command:
pip install scipy
Error occurred:
numpy.distutils.system_info.NotFoundError: no lapack/blas resources found
Proposed solution:
Try to run this command from the system terminal. Make sure that you use the correct version of 'pip' installed for your Python interpreter located at 'C:\Python34\python.exe'.


C:\WINDOWS\system32\cmd.exe
C:\Python34>pip install scipy-0.18.1-cp34-cp34m-win_amd64.whl
Processing c:\python34\scipy-0.18.1-cp34-cp34m-win_amd64.whl
Installing collected packages: scipy
Successfully installed scipy-0.18.1


Settings
Project: Histograms_ › Project Interpreter For current project
Appearance & Behavior
Keymap
Editor
Plugins
Version Control
Project: Histograms_
Project Interpreter
Project Structure
Build, Execution, Deployment
Languages & Frameworks
Tools
Project Interpreter: 3.4.4 (C:\Python34\python.exe)
Package Version Latest
matplotlib 1.5.3 2.0.0b4
mistune 0.7.2 0.7.3
nbconvert 4.2.0 5.0.0b1
nbformat 4.0.1 4.1.0
notebook 4.2.0 4.2.3
numpy 1.11.2+mkl 1.12.0b1
pandas 0.18.0 0.19.1
pickleshare 0.7.2 0.7.4
pip 9.0.1 9.0.1
pyparsing 2.1.10 2.1.10
pypyodbc 1.3.3 1.3.3
pyreadline 2.1 2.1
python-dateutil 2.5.3 2.6.0
pytz 2016.4 2016.7
pyzmq 15.2.0 16.0.2
qtconsole 4.2.1 4.2.1
scipy 0.18.1 0.18.1
setuptools 21.0.0 29.0.1
simplegeneric 0.8.1 0.8.1
six 1.10.0 1.10.0
tornado 4.3 4.4.2
traitlets 4.2.1 4.3.1
OK
Cancel
Apply
Help


jupyter
Untitled
Last Checkpoint: 11 hours ago (autosaved)
File
Edit
View
Insert
Cell
Kernel
Help
Python 3
Insert Cell Above
Insert Cell Below
Code
CellToolbar
In [1]: print('histogram example')
histogram example
In [ ]:


Cell
Kernel
Help
Run Cells
Run Cells and Select Below
Run Cells and Insert Below
Run All
Run All Above
Run All Below
Cell Type
Current Outputs
All Output

Vacation Hours Distribution

In [1]:
```
import pypyodbc
connection = pypyodbc.connect(driver='{SQL Server}',
                              server='localhost\SQLBI',
                              database='AdventureWorks2014',
                trusted_connection='yes')

connection.getinfo

cursor = connection.cursor()
```

In [3]:
```
Query = ("SELECT [JobTitle],sum([VacationHours]) as VacationHours FROM"
         "[AdventureWorks2014].[HumanResources].[Employee]"
    "group by [JobTitle]"
    "order by [VacationHours] asc")
```

In [6]:
```
cursor.execute(Query)
results = cursor.fetchall()
type(results)
```

Out[6]: list

In [5]:
```
print(results)
```

```
[('Chief Financial Officer', 0), ('Vice President of Engineering', 1), ('Engineering Manager', 2), ('Senior Design Engineer',
 3), ('Vice President of Sales', 10), ('North American Sales Manager', 14), ('Design Engineer', 15), ('Tool Designer', 17), ('P
acific Sales Manager', 20), ('European Sales Manager', 21), ('Marketing Manager', 40), ('Production Control Manager', 43), ('Ma
ster Scheduler', 44), ('Purchasing Manager', 49), ('Benefits Specialist', 51), ('Human Resources Manager', 54), ('Finance Manag
er', 55), ('Senior Tool Designer', 55), ('Assistant to the Chief Financial Officer', 56), ('Accounts Manager', 57), ('Vice Pres
ident of Production', 64), ('Information Services Manager', 65), ('Network Manager', 68), ('Research and Development Manager',
 77), ('Document Control Manager', 77), ('Quality Assurance Manager', 80), ('Quality Assurance Supervisor', 81), ('Facilities M
anager', 86), ('Facilities Administrative Assistant', 87), ('Maintenance Supervisor', 92), ('Shipping and Receiving Superviso
r', 93), ('Recruiter', 99), ('Chief Executive Officer', 99), ('Purchasing Assistant', 101), ('Human Resources Administrative As
sistant', 105), ('Accountant', 117), ('Production Supervisor - WC20', 123), ('Research and Development Engineer', 125), ('Marke
ting Assistant', 126), ('Accounts Payable Specialist', 127), ('Database Administrator', 133), ('Network Administrator', 139),
 ('Control Specialist', 151), ('Document Control Assistant', 157), ('Accounts Receivable Specialist', 183), ('Scheduling Assist
ant', 186), ('Shipping and Receiving Clerk', 189), ('Production Supervisor - WC10', 198), ('Production Supervisor - WC30', 20
7), ('Production Supervisor - WC40', 216), ('Production Supervisor - WC45', 225), ('Marketing Specialist', 230), ('Production T
echnician - WC20', 231), ('Production Supervisor - WC50', 234), ('Production Supervisor - WC60', 243), ('Application Specialis
t', 290), ('Stocker', 291), ('Quality Assurance Technician', 334), ('Janitor', 358), ('Sales Representative', 434), ('Buyer', 5
04), ('Production Technician - WC60', 689), ('Production Technician - WC30', 850), ('Production Technician - WC45', 1200), ('Pr
oduction Technician - WC50', 1213), ('Production Technician - WC40', 1547), ('Production Technician - WC10', 1547)]
```

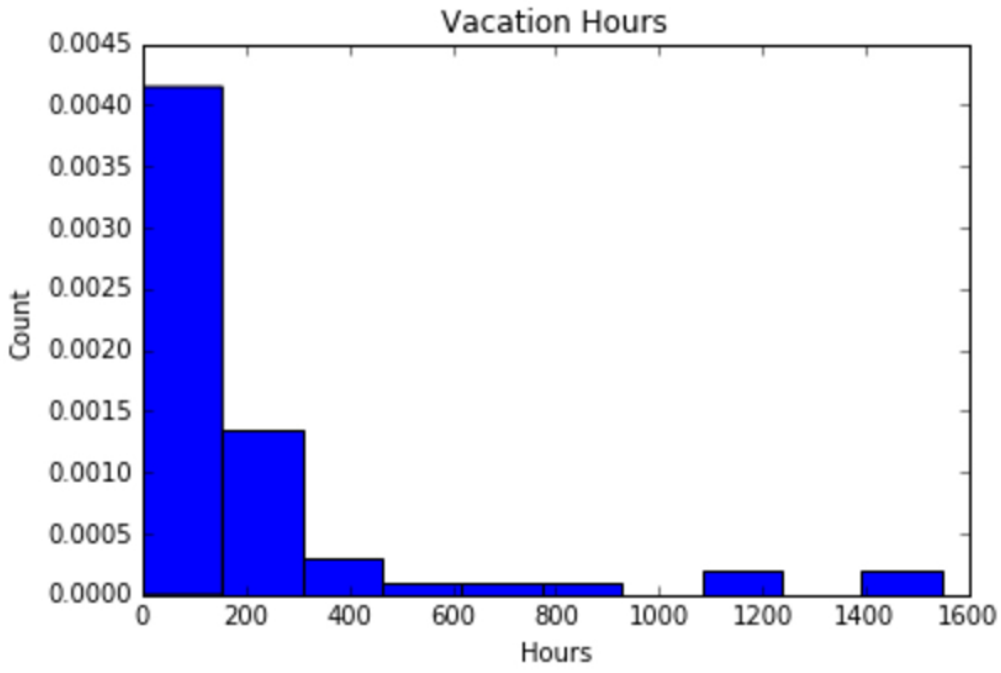
In [6]:
```
import pandas as pd
dataframe = pd.DataFrame(results, columns=["Job Title", "Vacation Hours"]
dataframe.head()
```

Out[6]:

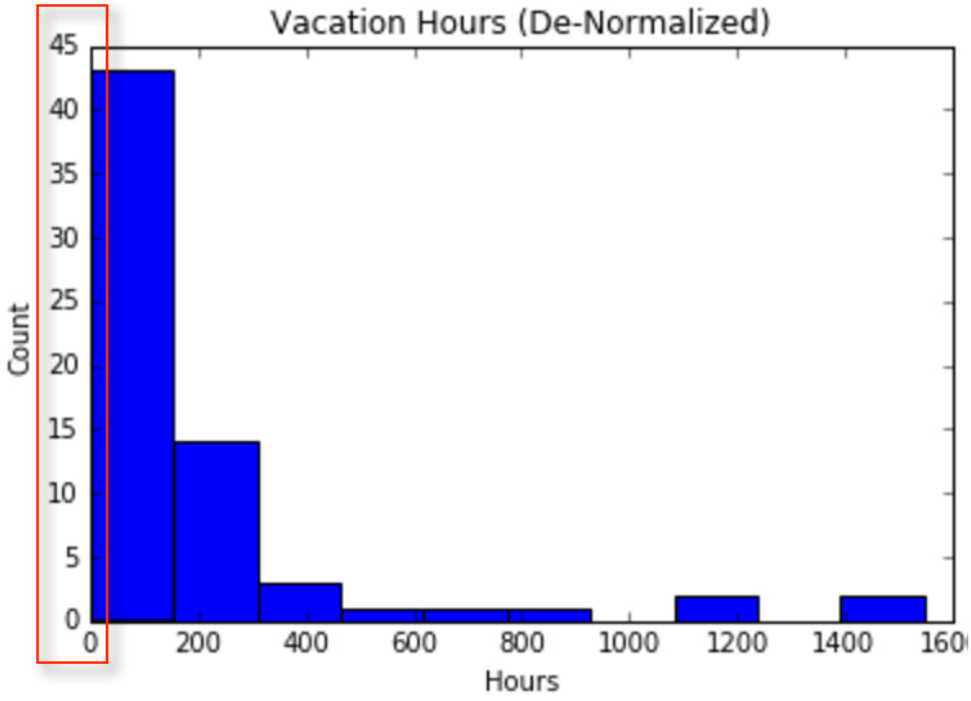
	Job Title	Vacation Hours
0	Chief Financial Officer	0
1	Vice President of Engineering	1
2	Engineering Manager	2
3	Senior Design Engineer	3
4	Vice President of Sales	10

In [7]:
```
import matplotlib.pyplot as plt
%matplotlib inline
```

In [8]:
```
VacationHours=dataframe["Vacation Hours"]
plt.hist(VacationHours, normed = True)
plt.title("Vacation Hours")
plt.xlabel("Hours")
plt.ylabel("Count")
plt.show()
```



In [9]:
```
VacationHours=dataframe["Vacation Hours"]
plt.hist(VacationHours)
plt.title("Vacation Hours (De-Normalized)")
plt.xlabel("Hours")
plt.ylabel("Count")
plt.show()
```

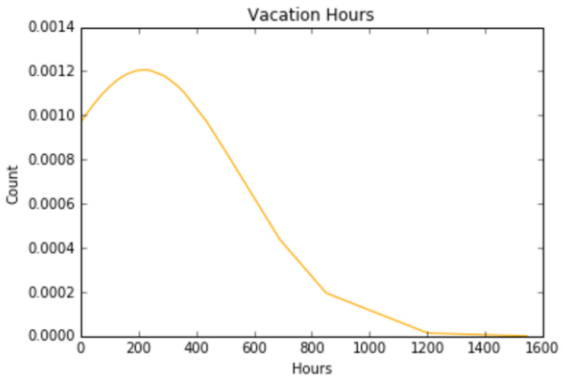


In [10]:
```
import numpy as np
import scipy.stats as stats

Vacation_Hours_mean = np.mean(VacationHours)
Vacation_Hours_std = np.std(VacationHours)

print('mean = '+str(Vacation_Hours_mean))
print('standard deviation = '+str(Vacation_Hours_std)
```

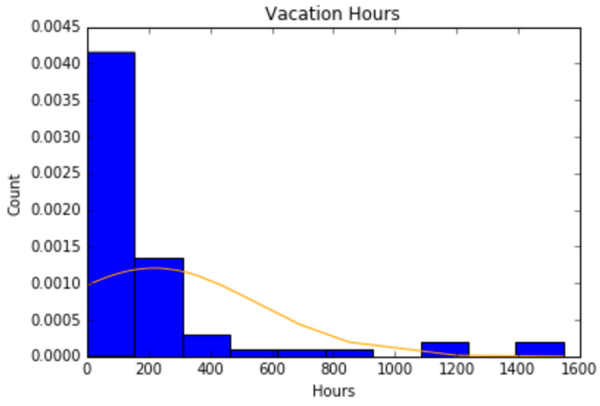
```
mean = 219.074626866
standard deviation = 330.817409775
```

In [11]:
```
normal_distribution_curve = stats.norm.pdf(VacationHours, Vacation_Hours_mean, Vacation_Hours_std
plt.title("Vacation Hours")
plt.xlabel("Hours")
plt.ylabel("Count")
plt.plot(VacationHours, normal_distribution_curve, color = "orange")
```

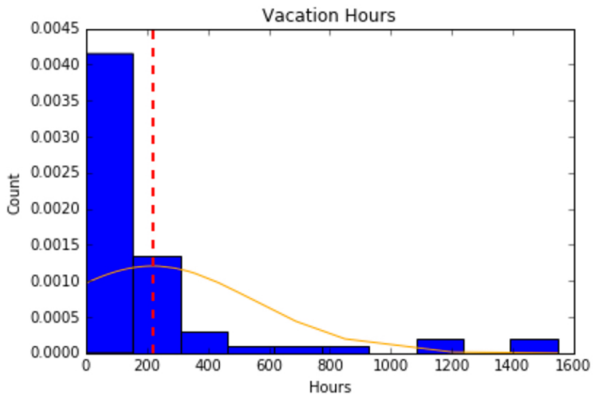
Out[11]:
```
[<matplotlib.lines.Line2D at 0x9dae4e0>]
```



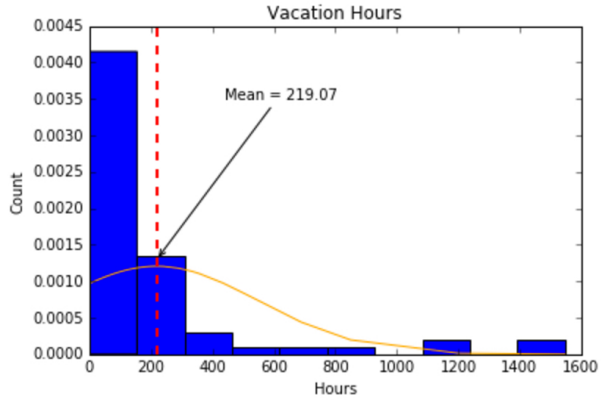
In [12]:
```
plt.hist(VacationHours, normed = True) # plotting histogram
plt.plot(VacationHours, normal_distribution_curve, color = "orange") #plotting normal curve
plt.title("Vacation Hours") #Assign title
plt.xlabel("Hours") #Assign x label
plt.ylabel("Count") #Assign y label
plt.show()
```



In [13]:
```
plt.hist(VacationHours, normed = True) # plotting histogram
plt.plot(VacationHours, normal_distribution_curve, color = "orange") #plotting normal curve
plt.title("Vacation Hours") #Assign title
plt.xlabel("Hours") #Assign x label
plt.ylabel("Count") #Assign y label
plt.axvline(Vacation_Hours_mean, color = "r", linestyle = "dashed", linewidth = 2)
#assigns the dashed line through the mean
plt.show()
```



In [14]:
```
plt.hist(VacationHours, normed = True) # plotting histogram
plt.plot(VacationHours, normal_distribution_curve, color = "orange") #plotting normal curve
plt.title("Vacation Hours") #Assign title
plt.xlabel("Hours") #Assign x label
plt.ylabel("Count") #Assign y label
plt.axvline(Vacation_Hours_mean, color = "r", linestyle = "dashed", linewidth = 2)
plt.annotate('Mean = '+ str(round(Vacation_Hours_mean,2)),
             xy=(Vacation_Hours_mean, 0.0013), xycoords='data',
             xytext=(Vacation_Hours_mean*2, 0.0035), textcoords='data',
             arrowprops=dict(arrowstyle="->",
                             connectionstyle="arc3"),)
plt.show()
```



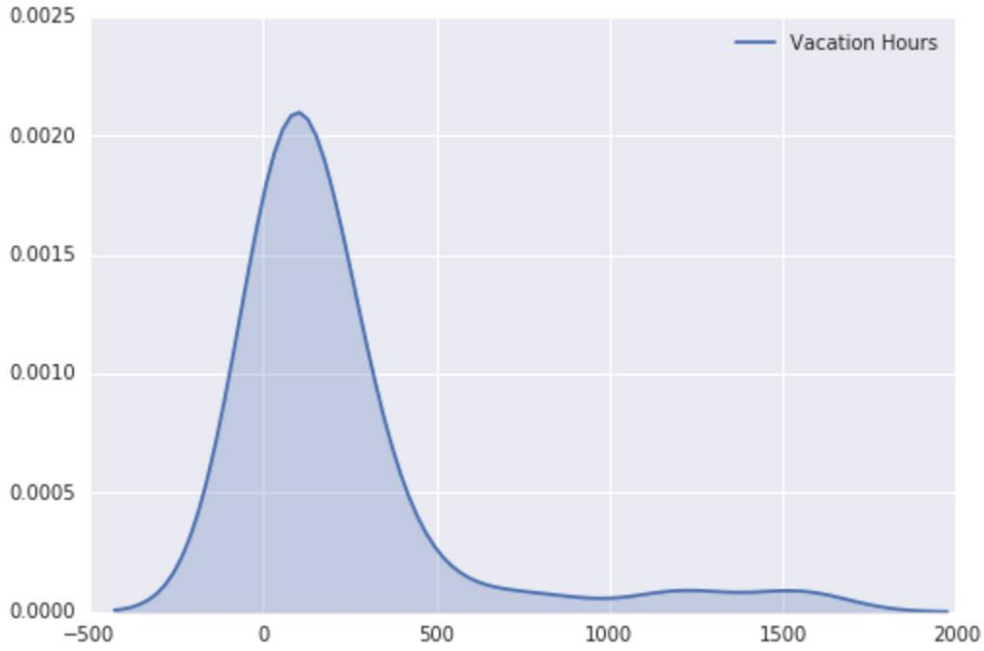
In [15]:
```
dataframe.tail(10)
```

Out[15]:

	Job Title	Vacation Hours
57	Quality Assurance Technician	334
58	Janitor	358
59	Sales Representative	434
60	Buyer	504
61	Production Technician - WC60	689
62	Production Technician - WC30	850
63	Production Technician - WC45	1200
64	Production Technician - WC50	1213
65	Production Technician - WC40	1547
66	Production Technician - WC10	1547

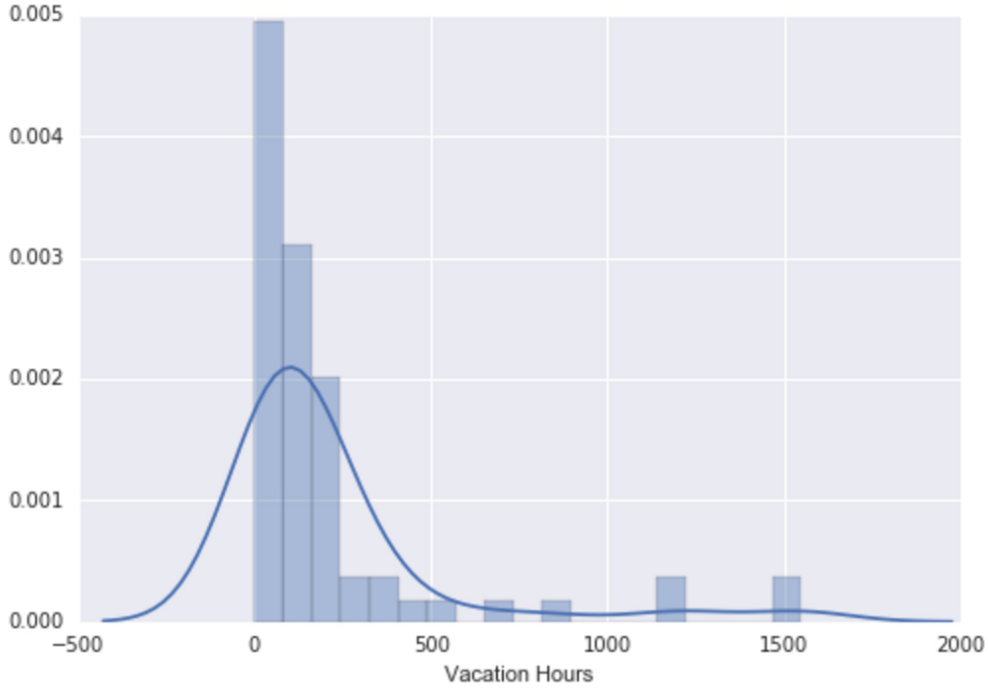
In [17]:
```
sb.kdeplot(VacationHours, shade = True)
```

Out[17]:
```
<matplotlib.axes._subplots.AxesSubplot at 0xafc4e80>
```

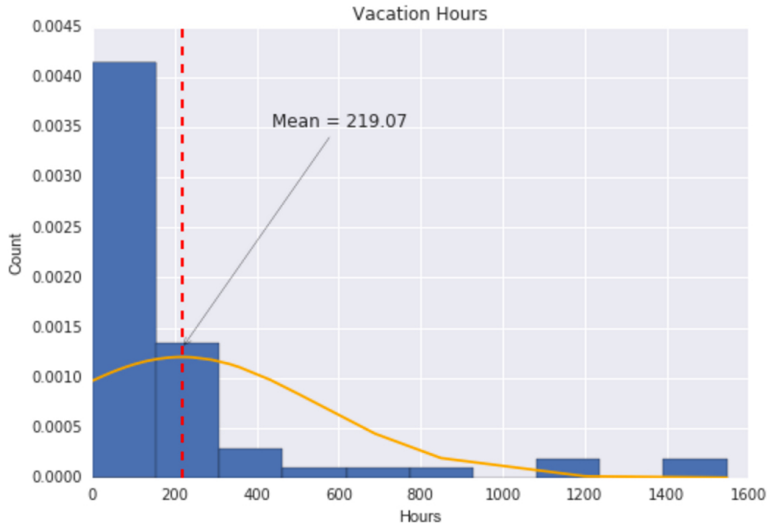


In [18]:
```
sb.distplot(VacationHours, kde = True, rug=False)
```

Out[18]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x9849c88>
```

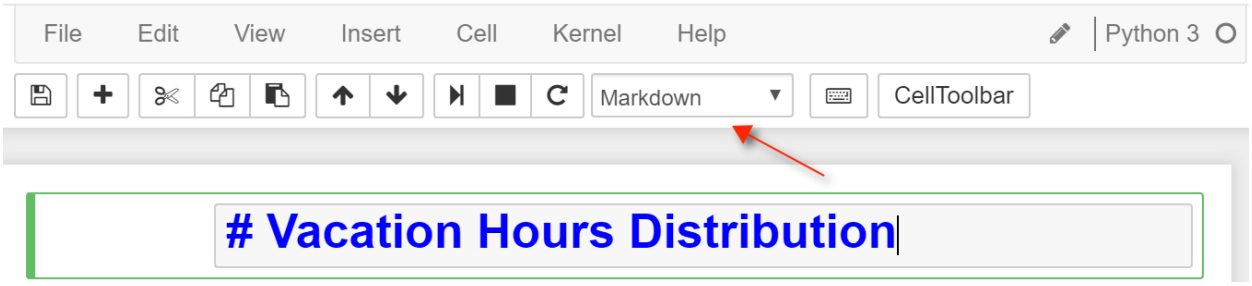


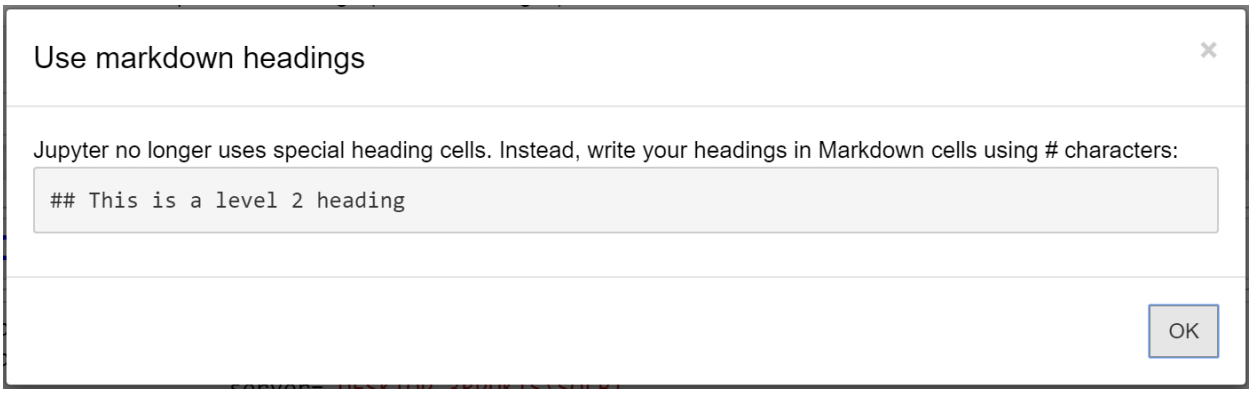
In [19]:
```
import seaborn as sb
plt.hist(VacationHours, normed = True) # plotting histogram
plt.plot(VacationHours, normal_distribution_curve, color = "orange") #plotting normal curve
plt.title("Vacation Hours") #Assign title
plt.xlabel("Hours") #Assign x label
plt.ylabel("Count") #Assign y label
plt.axvline(Vacation_Hours_mean, color = "r", linestyle = "dashed", linewidth = 2)
plt.annotate('Mean = '+ str(round(Vacation_Hours_mean,2)),
             xy=(Vacation_Hours_mean, 0.0013), xycoords='data',
             xytext=(Vacation_Hours_mean*2, 0.0035), textcoords='data',
             arrowprops=dict(arrowstyle="->",
                             connectionstyle="arc3"),)
plt.show()
```



In [1]:
```
print('Histogram Example')
```

```
Histogram Example
```





Vacation Hours Distribution

In [1]:
```
import pypyodbc
connection = pypyodbc.connect(driver='{SQL Server}',
                              server='localhost\SQLBI',
                              database='AdventureWorks2014'
                trusted_connection='yes')

connection.getinfo

cursor = connection.cursor()
```

Vacation Hours Distribution

Developer: Ahmed Sherif

Date: 12/31/2016

In [1]:
```
import pypyodbc
connection = pypyodbc.connect(driver='{SQL Server}',
                              server='localhost\SQLBI',
                              database='AdventureWorks2014',
                trusted_connection='yes')

connection.getinfo

cursor = connection.cursor()
```

2015 Rank		2015	Change%	2014	Change%	2013	Change%
1	Python	26.67%	-14.64%	31.24%	3.10%	30.30%	5.21%
2	Java	22.58%	15.37%	19.57%	-11.85%	22.20%	-13.95%
3	C++	9.96%	1.76%	9.79%	-24.70%	13.00%	3.17%
4	C#	9.39%	27.37%	7.37%	47.37%	5.00%	100.00%
5	C	7.37%	21.37%	6.07%	48.14%	4.10%	-16.33%
6	JavaScript	6.88%	6.09%	6.48%	24.66%	5.20%	33.33%
7	Ruby	5.88%	-17.27%	7.11%	-32.90%	10.60%	10.42%
8	PHP	3.82%	5.45%	3.62%	9.84%	3.30%	-54.79%
9	Haskell	1.77%	17.24%	1.51%	25.83%	1.20%	
10	Go	1.27%	-44.00%	2.26%	50.67%	1.50%	-25.00%

SciPy is software for mathematics, science, and engineering.

Requires numpy+mkl.

Install numpy+mkl before installing scipy.

scipy-0.18.1-cp27-cp27m-win32.whl

scipy-0.18.1-cp27-cp27m-win_amd64.whl

scipy-0.18.1-cp34-cp34m-win32.whl

scipy-0.18.1-cp34-cp34m-win_amd64.whl

scipy-0.18.1-cp35-cp35m-win32.whl

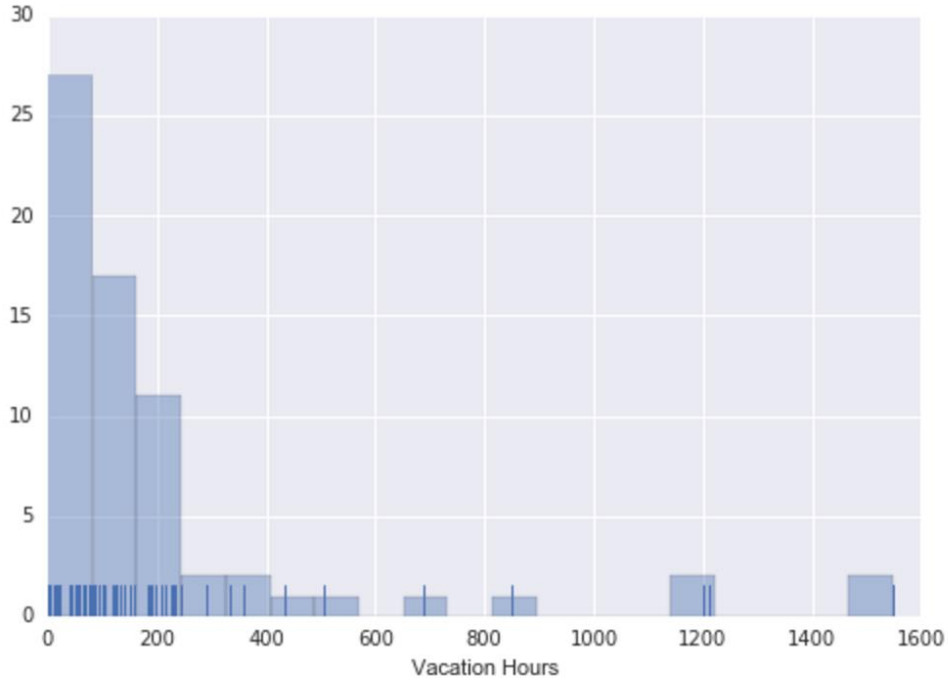
scipy-0.18.1-cp35-cp35m-win_amd64.whl

scipy-0.18.1-cp36-cp36m-win32.whl

scipy-0.18.1-cp36-cp36m-win_amd64.whl

In [16]:
```
import seaborn as sb
sb.distplot(VacationHours, kde = False, rug=True)
```

Out[16]:
```
<matplotlib.axes._subplots.AxesSubplot at 0xa750198>
```




CHALLENGERS
LEADERS
Tableau
Qlik
Microsoft
Birst
SAS
Alteryx
SAP
MicroStrategy
Domo
GoodData
Salesforce
Board International
Sisense
Pyramid Analytics
Information Builders
Logi Analytics
IBM
ClearStory Data
Pentaho
TIBCO Software
Yellowfin
BeyondCore
Platfora
Datawatch
NICHE PLAYERS
VISIONARIES
ABILITY TO EXECUTE
COMPLETENESS OF VISION
As of February 2016

```
select
*
from
AdventureWorks2014.Sales.SalesReason
```

100 %

Results | Messages

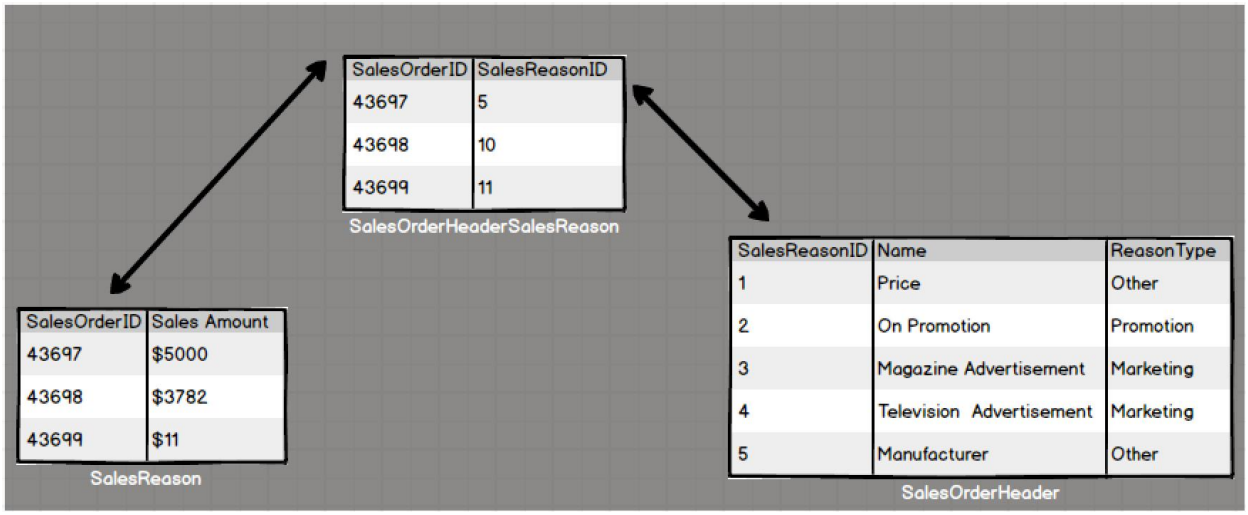
	SalesReasonID	Name	ReasonType	ModifiedDate
1	1	Price	Other	2008-04-30 00:00:00.000
2	2	On Promotion	Promotion	2008-04-30 00:00:00.000
3	3	Magazine Advertisement	Marketing	2008-04-30 00:00:00.000
4	4	Television Advertisement	Marketing	2008-04-30 00:00:00.000
5	5	Manufacturer	Other	2008-04-30 00:00:00.000
6	6	Review	Other	2008-04-30 00:00:00.000
7	7	Demo Event	Marketing	2008-04-30 00:00:00.000
8	8	Sponsorship	Marketing	2008-04-30 00:00:00.000
9	9	Quality	Other	2008-04-30 00:00:00.000
10	10	Other	Other	2008-04-30 00:00:00.000

```
select top 10 * from
AdventureWorks2014.sales.SalesOrderHeaderSalesReason
```

100 %

Results | Messages

	SalesOrderID	SalesReasonID	ModifiedDate
1	43697	5	2011-05-31 00:00:00.000
2	43697	9	2011-05-31 00:00:00.000
3	43702	5	2011-06-01 00:00:00.000
4	43702	9	2011-06-01 00:00:00.000
5	43703	5	2011-06-01 00:00:00.000
6	43703	9	2011-06-01 00:00:00.000
7	43706	5	2011-06-02 00:00:00.000
8	43706	9	2011-06-02 00:00:00.000
9	43707	5	2011-06-02 00:00:00.000
10	43707	9	2011-06-02 00:00:00.000



Results Messages

	Sale Reason Name	Sale Reason Type	Sales Amount	Tax	Freight Amount
1	Price	Other	10975842.56	878087.74	274380.29
2	On Promotion	Promotion	6361829.95	508951.68	159044.56
3	Manufacturer	Other	5998122.10	479847.59	149957.80
4	Quality	Other	5549896.77	443989.26	138752.46
5	Review	Other	1694882.19	135589.55	42374.17
6	Other	Other	248483.34	19880.75	6211.85
7	Television Advertisement	Marketing	27475.82	2198.68	687.24

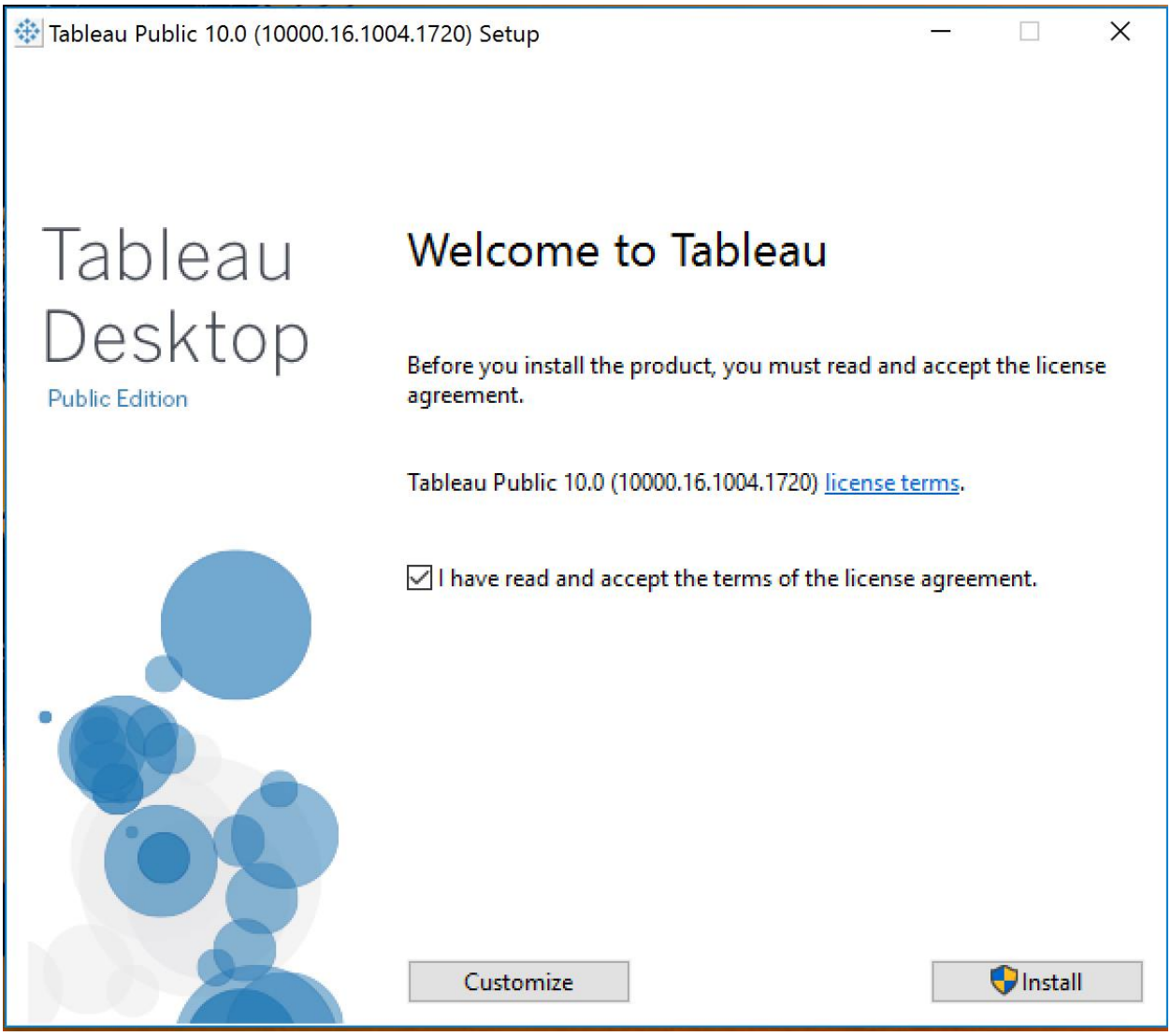


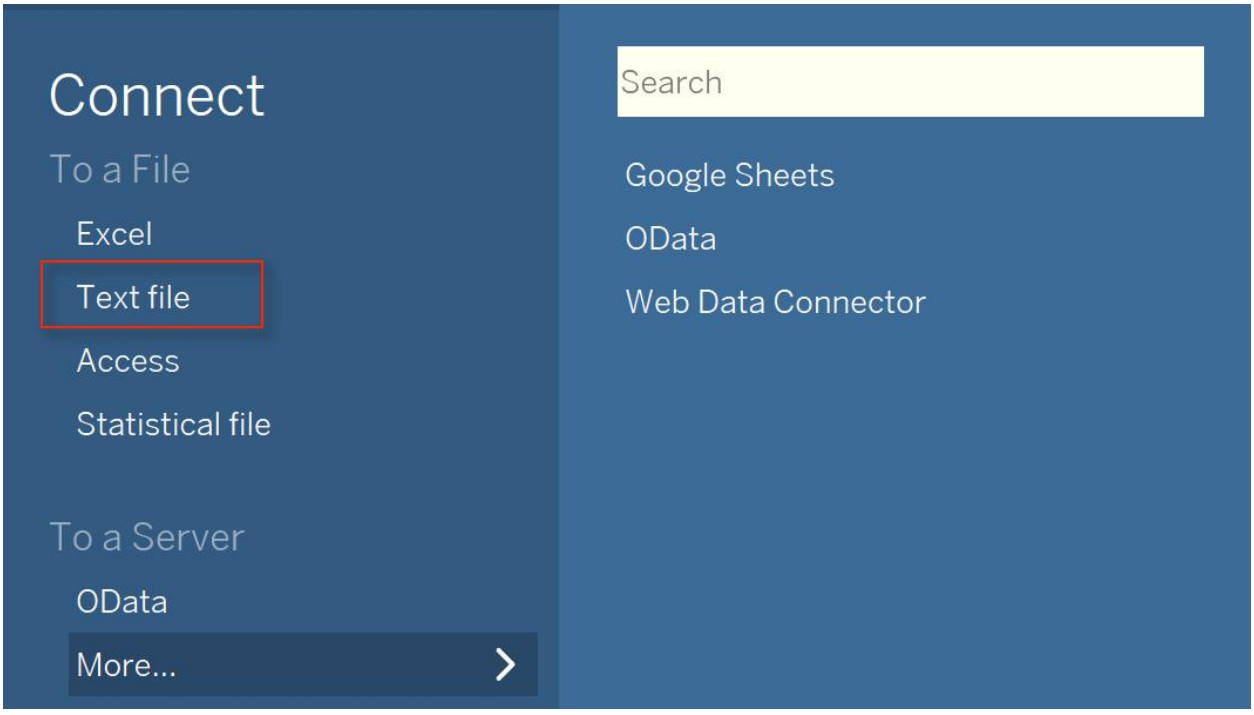
Tableau Public 10.0 (10000.16.1004.1720) Setup
Tableau Desktop
Public Edition
Welcome to Tableau
Before you install the product, you must read and accept the license agreement.
Tableau Public 10.0 (10000.16.1004.1720) license terms.
I have read and accept the terms of the license agreement.
Customize
Install

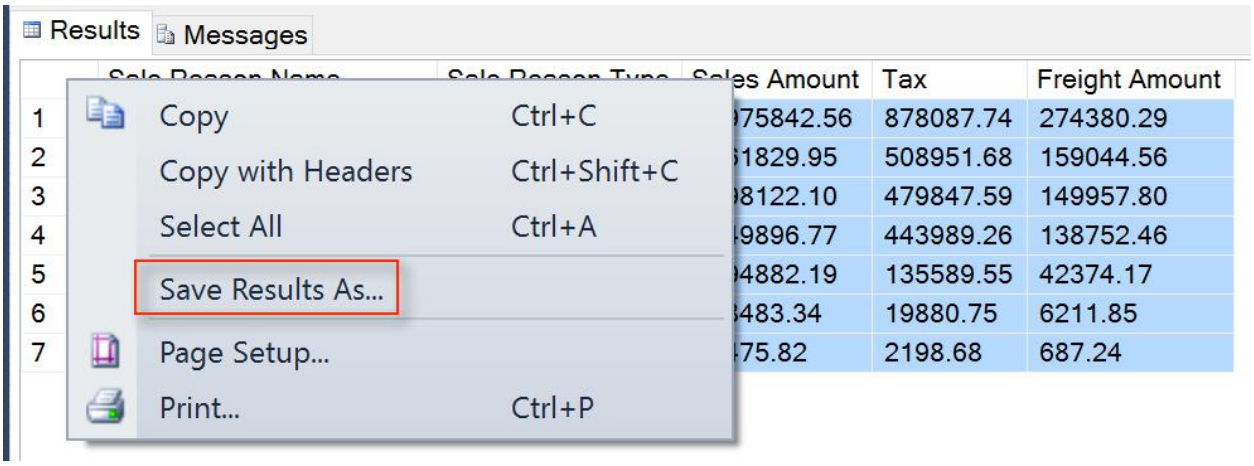
Tableau Public 10.0 (10000.16.1004.1720)

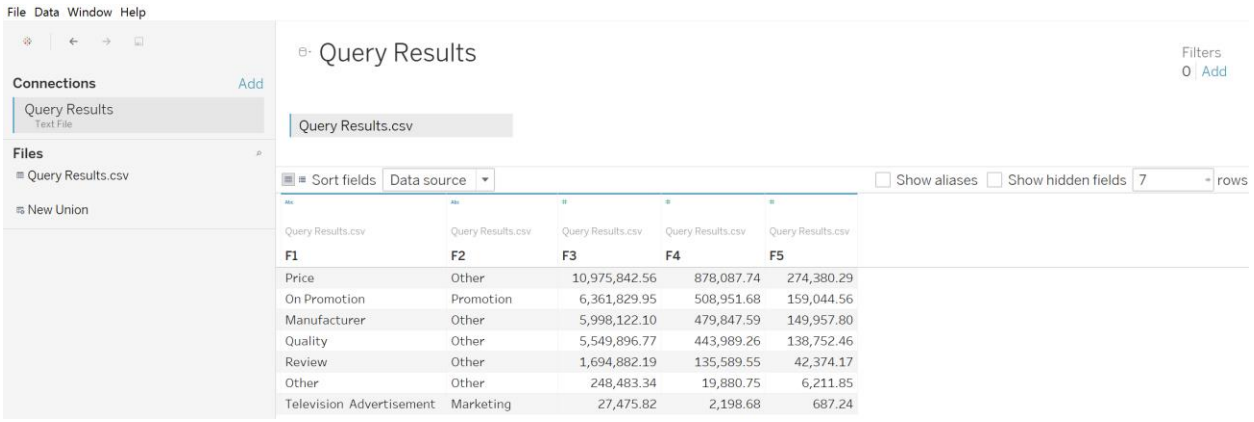
Progress

Installing:

Tableau Public 10.0 (10000.16.1004.1720)







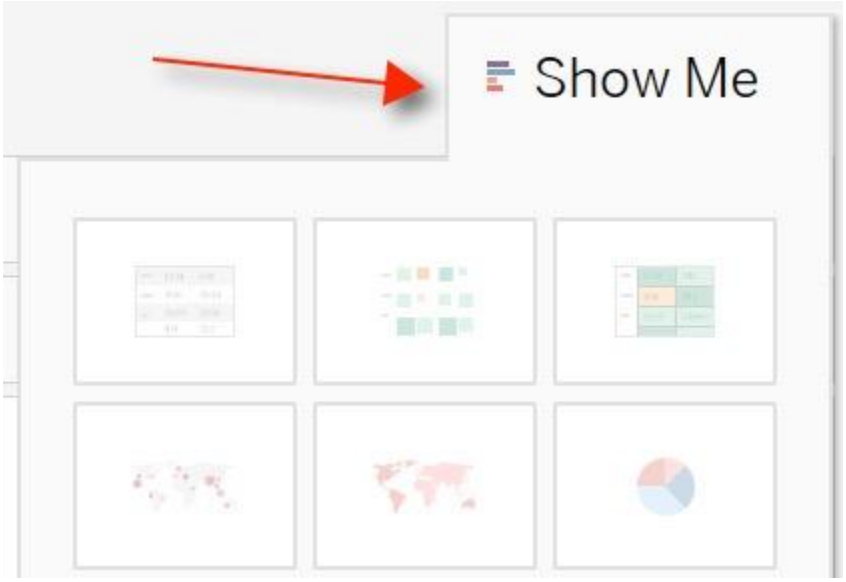
Query Results.csv Sales Reason	Query Results.csv Sales Reason Type	Query Results.csv Sales Amount	Query Results.csv Tax Amount	Query Results.csv Freight Amount
Television Advertisement	Marketing	27,475.82	2,198.68	687.24
Manufacturer	Other	5,998,122.10	479,847.59	149,957.80
Other	Other	248,483.34	19,880.75	6,211.85
Price	Other	10,975,842.56	878,087.74	274,380.29
Quality	Other	5,549,896.77	443,989.26	138,752.46
Review	Other	1,694,882.19	135,589.55	42,374.17
On Promotion	Promotion	6,361,829.95	508,951.68	159,044.56

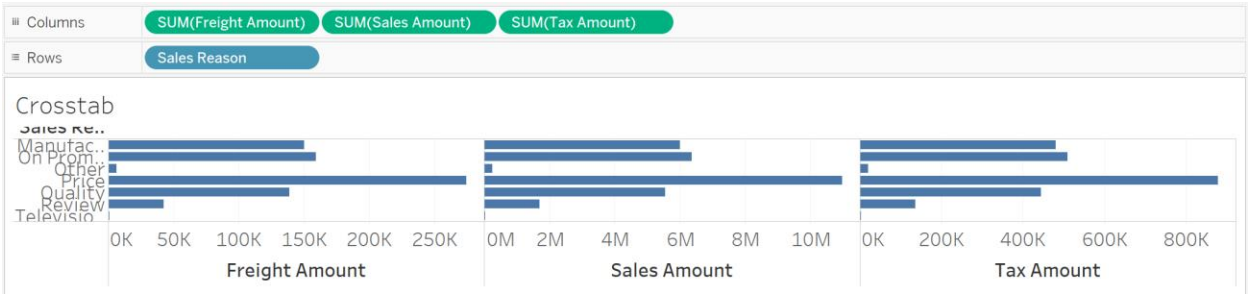
Dimensions

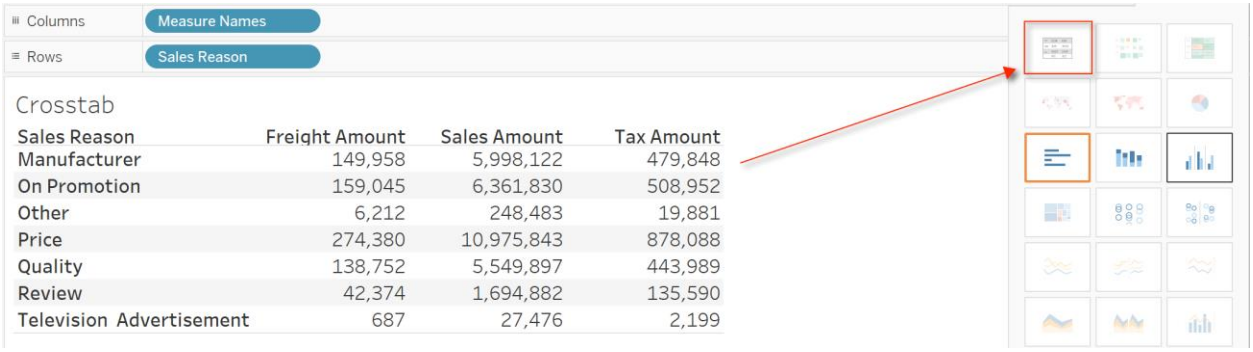
- Abc Sales Reason
- Abc Sales Reason Type
- Abc *Measure Names*

Measures

- # Freight Amount
- # Sales Amount
- # Tax Amount
- # *Number of Records*
- # *Measure Values*



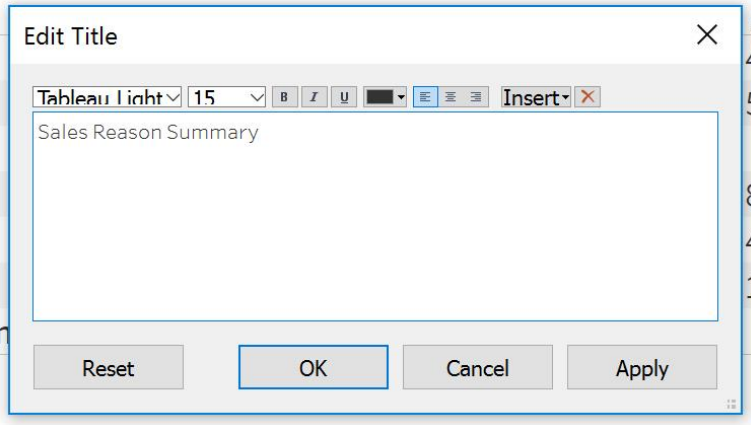


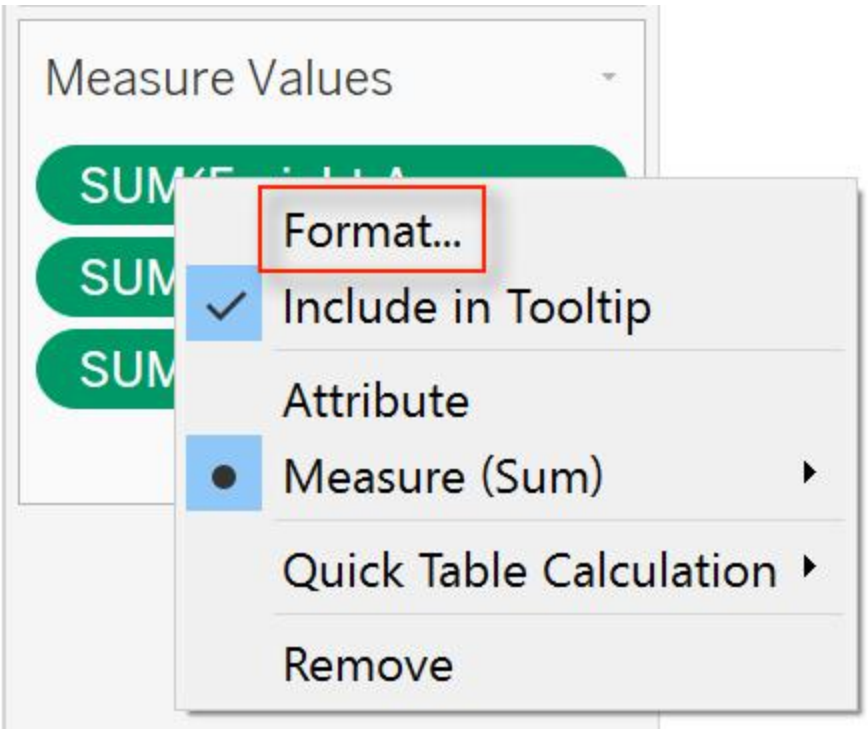


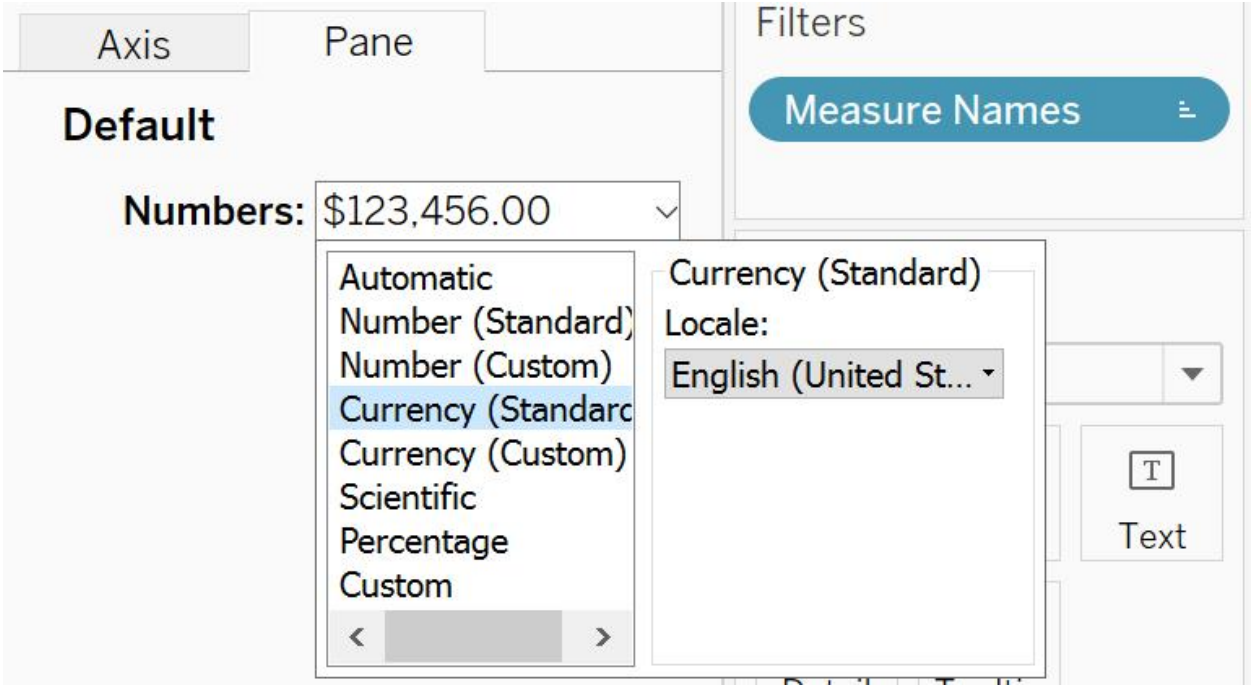
Sales Reason	Freight Amount	Sales Amount	Tax Amount
Manufacturer	149,958	5,998,122	479,848
On Promotion	159,045	6,361,830	508,952
Other	6,212	248,483	19,881
Price	274,380	10,975,843	878,088
Quality	138,752	5,549,897	443,989
Review	42,374	1,694,882	135,590
Television Advertisement	687	27,476	2,199

Sales Reason Summary

Sales Reason	Amount
Manufacturer	479,848
On Promotion	508,952
Other	19,881
Price	878,088
Quality	443,989
Review	135,590
Television Advertisem	2,199

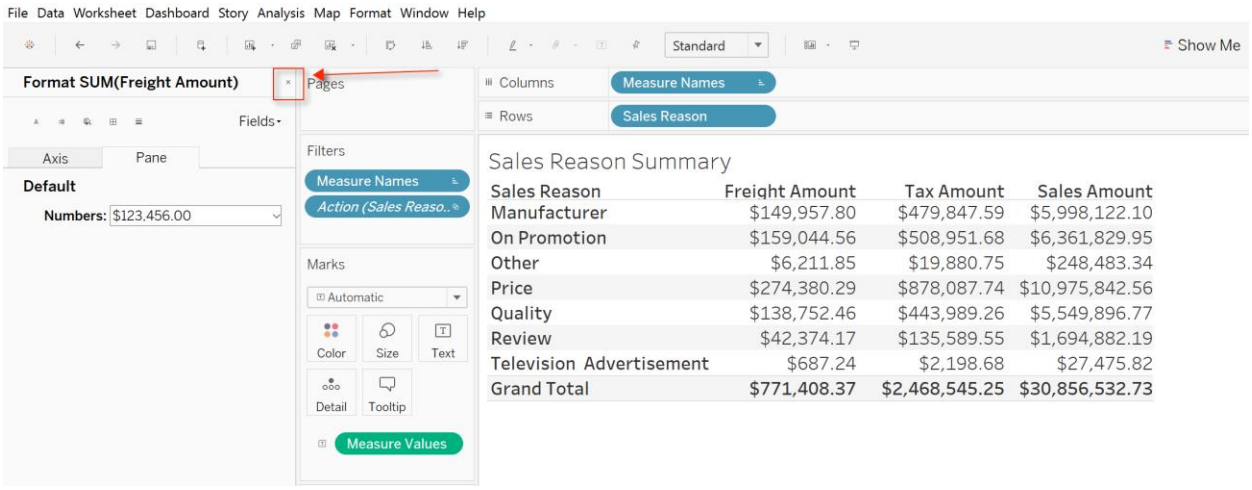


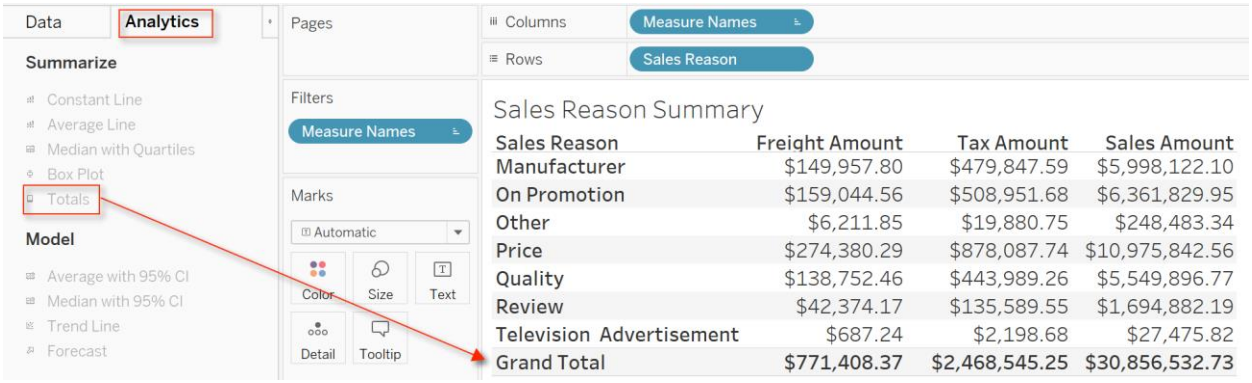

Measure Values
SUM
SUM
SUM
Format...
Include in Tooltip
Attribute
Measure (Sum)
Quick Table Calculation
Remove

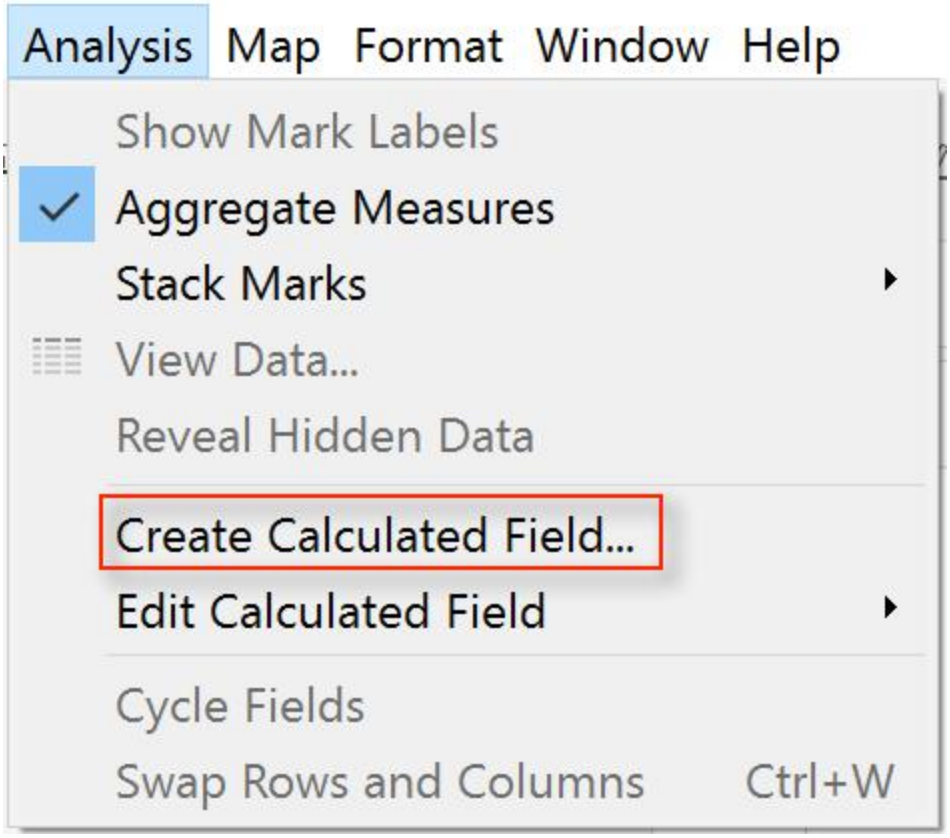

Axis
Pane
Default
Numbers:
$123,456.00
Automatic
Number (Standard)
Number (Custom)
Currency (Standard)
Currency (Custom)
Scientific
Percentage
Custom
Currency (Standard)
Locale:
English (United St...
Filters
Measure Names
Text

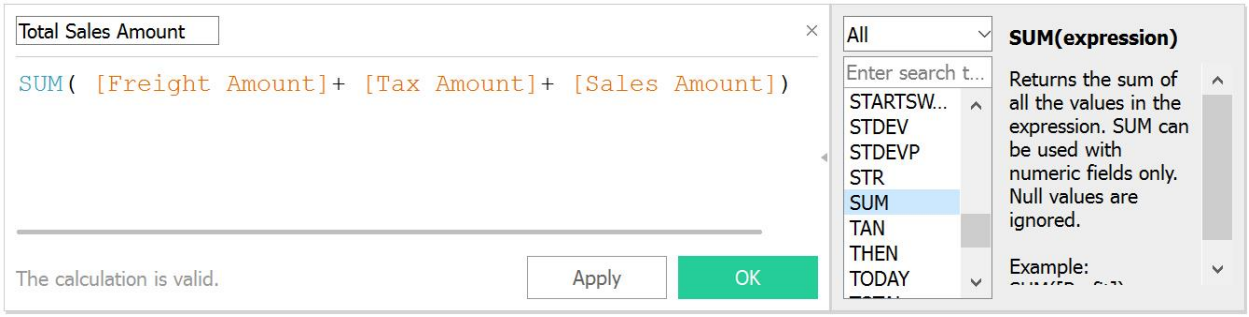
Sales Reason Summary

Sales Reason	Freight Amount	Tax Amount	Sales Amount
Manufacturer	$149,957.80	$479,847.59	$5,998,122.10
On Promotion	$159,044.56	$508,951.68	$6,361,829.95
Other	$6,211.85	$19,880.75	$248,483.34
Price	$274,380.29	$878,087.74	$10,975,842.56
Quality	$138,752.46	$443,989.26	$5,549,896.77
Review	$42,374.17	$135,589.55	$1,694,882.19
Television Advertisement	$687.24	$2,198.68	$27,475.82



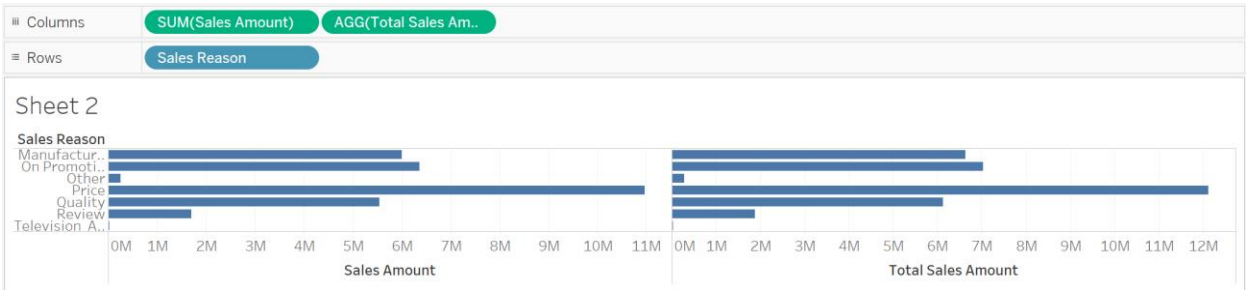


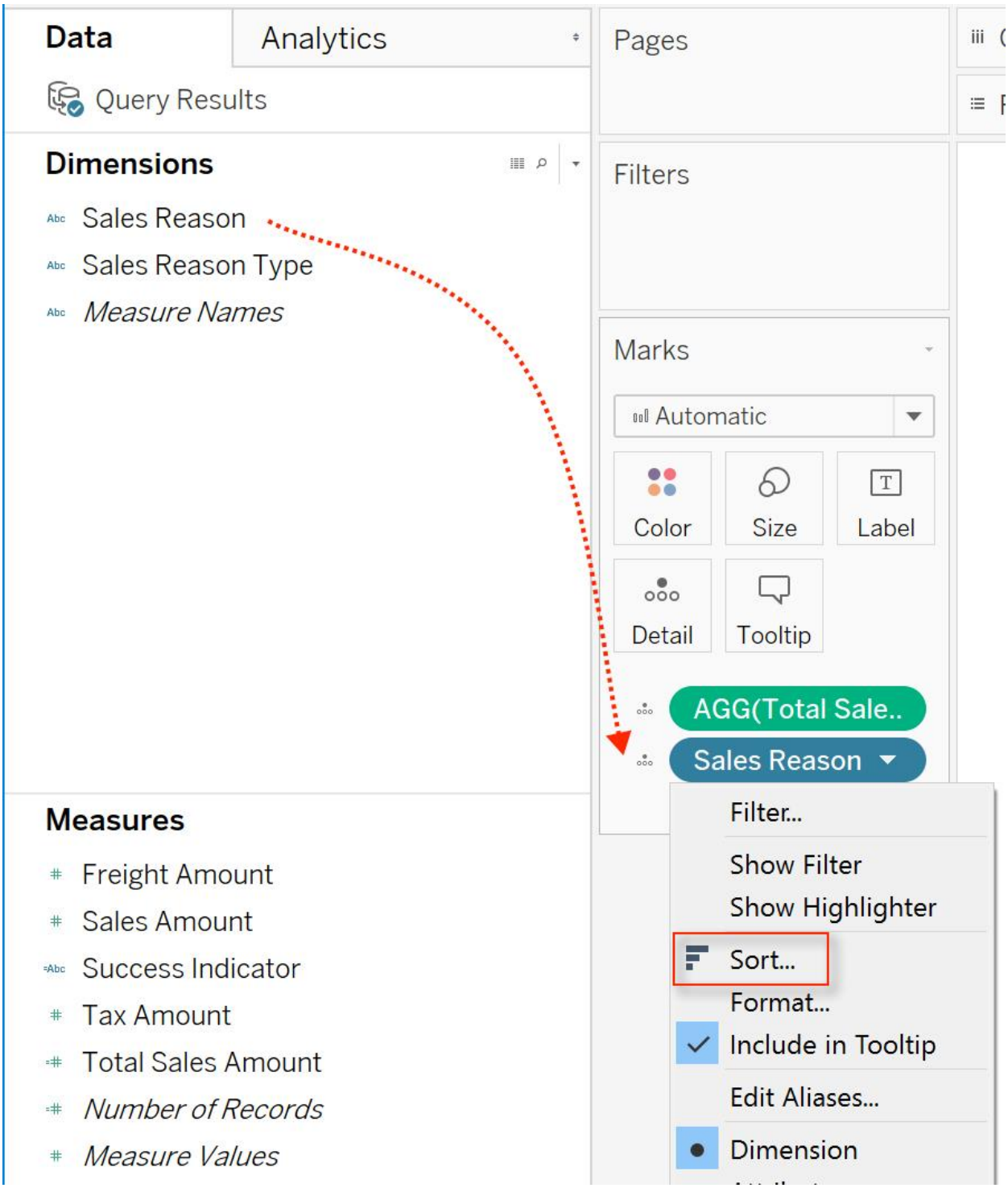

Analysis
Map
Format
Window
Help
Show Mark Labels
Aggregate Measures
Stack Marks
View Data...
Reveal Hidden Data
Create Calculated Field...
Edit Calculated Field
Cycle Fields
Swap Rows and Columns
Ctrl+W

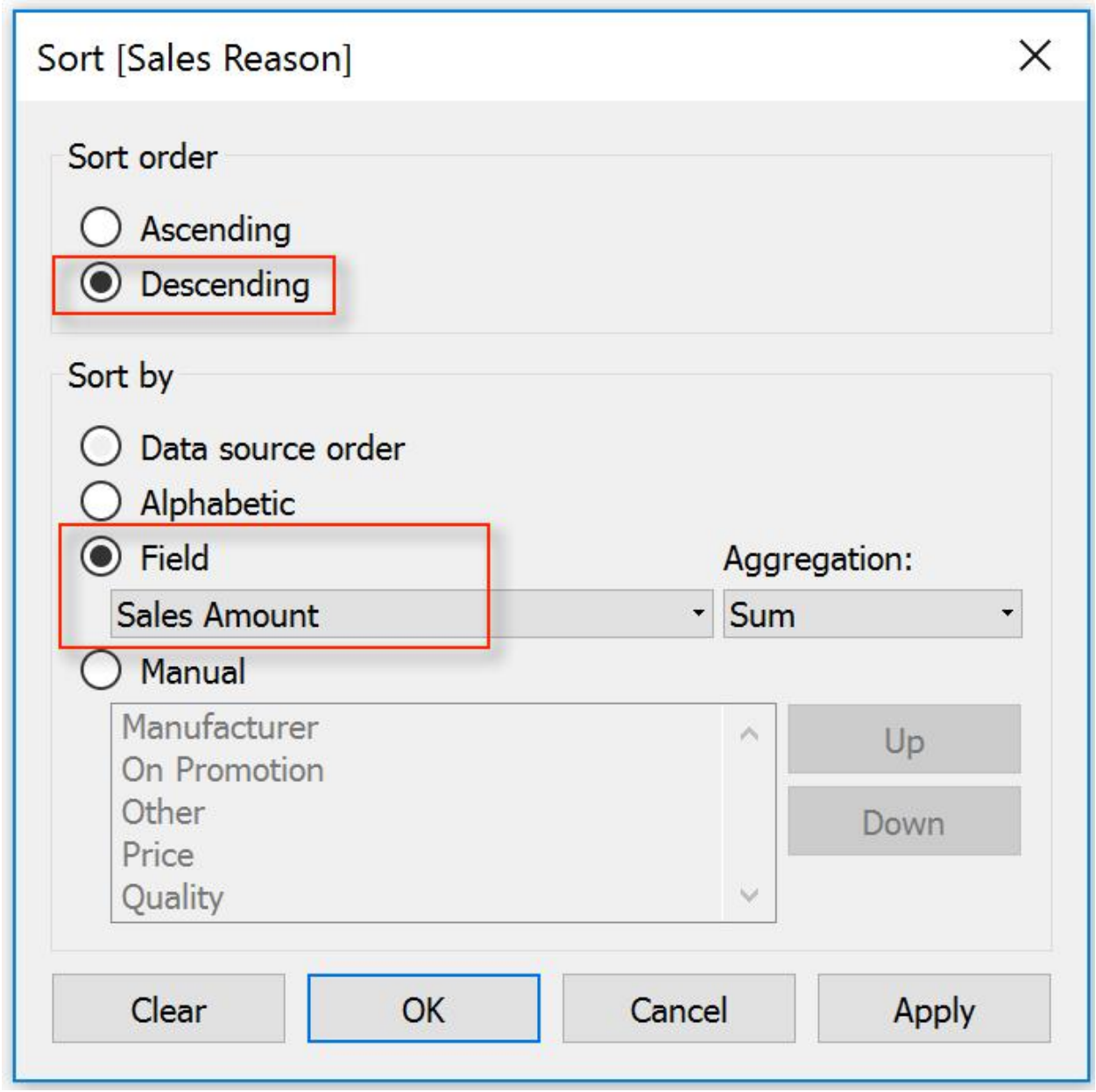

Total Sales Amount
SUM([Freight Amount]+ [Tax Amount]+ [Sales Amount])
The calculation is valid.
Apply
OK
All
Enter search t...
STARTSW...
STDEV
STDEVP
STR
SUM
TAN
THEN
TODAY
SUM(expression)
Returns the sum of all the values in the expression. SUM can be used with numeric fields only. Null values are ignored.
Example:

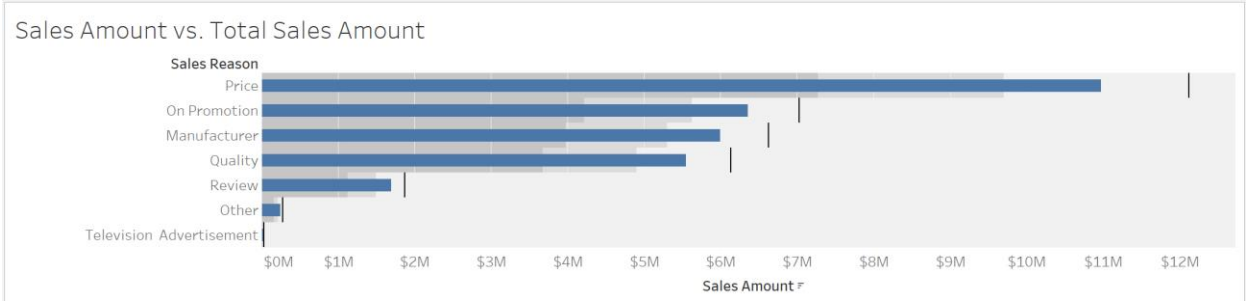
Measures

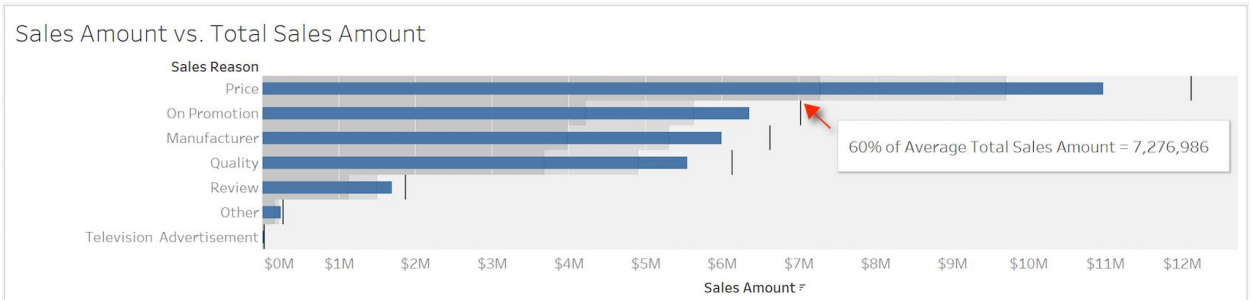
- # Freight Amount
- # Sales Amount
- # Tax Amount
- # Total Sales Amount
- # *Number of Records*
- # *Measure Values*

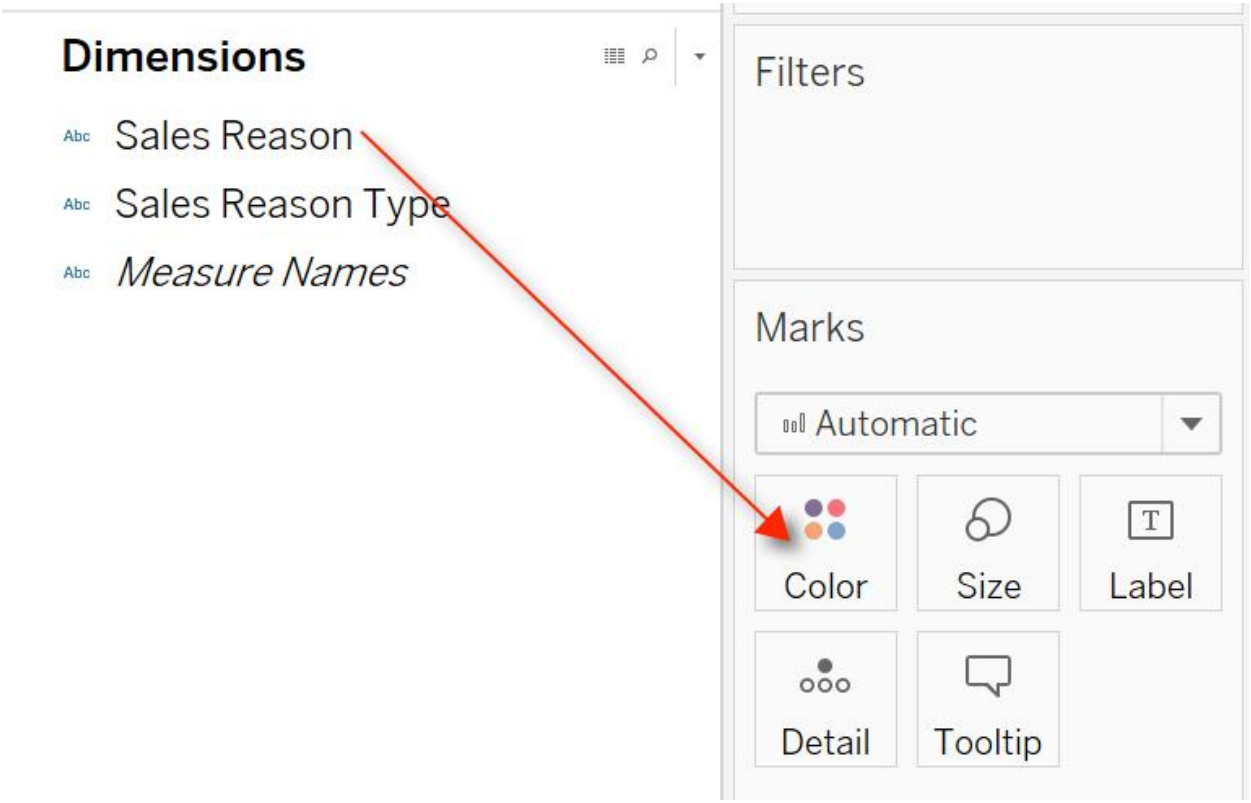


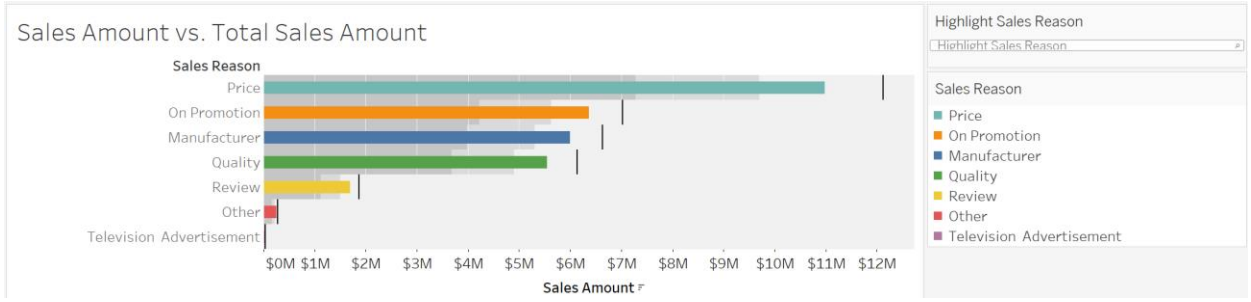

Data
Analytics
Query Results
Dimensions
Sales Reason
Sales Reason Type
Measure Names
Measures
Freight Amount
Sales Amount
Success Indicator
Tax Amount
Total Sales Amount
Number of Records
Measure Values
Pages
Filters
Marks
Automatic
Color
Size
Label
Detail
Tooltip
AGG(Total Sale..
Sales Reason
Filter...
Show Filter
Show Highlighter
Sort...
Format...
Include in Tooltip
Edit Aliases...
Dimension

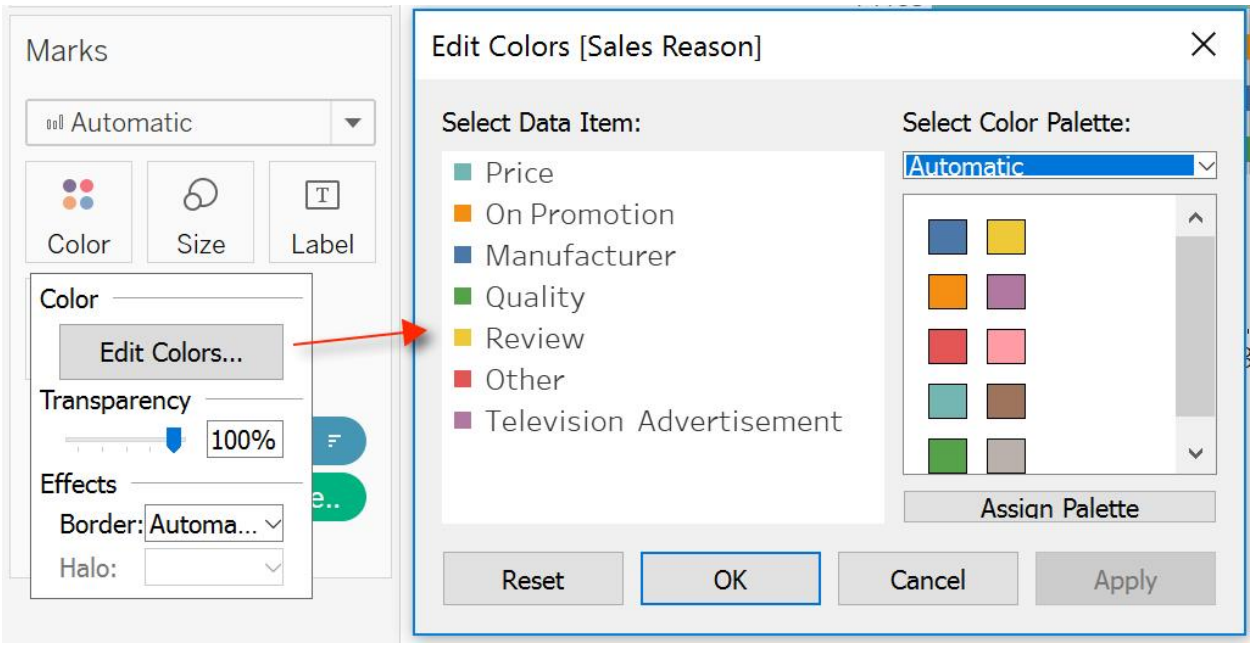

Sort [Sales Reason]
Sort order
Ascending
Descending
Sort by
Data source order
Alphabetic
Field
Aggregation:
Sales Amount
Sum
Manual
Manufacturer
On Promotion
Other
Price
Quality
Up
Down
Clear
OK
Cancel
Apply


Sales Amount vs. Total Sales Amount
Sales Reason
Price
On Promotion
Manufacturer
Quality
Review
Other
Television Advertisement
$0M
$1M
$2M
$3M
$4M
$5M
$6M
$7M
$8M
$9M
$10M
$11M
$12M
Sales Amount

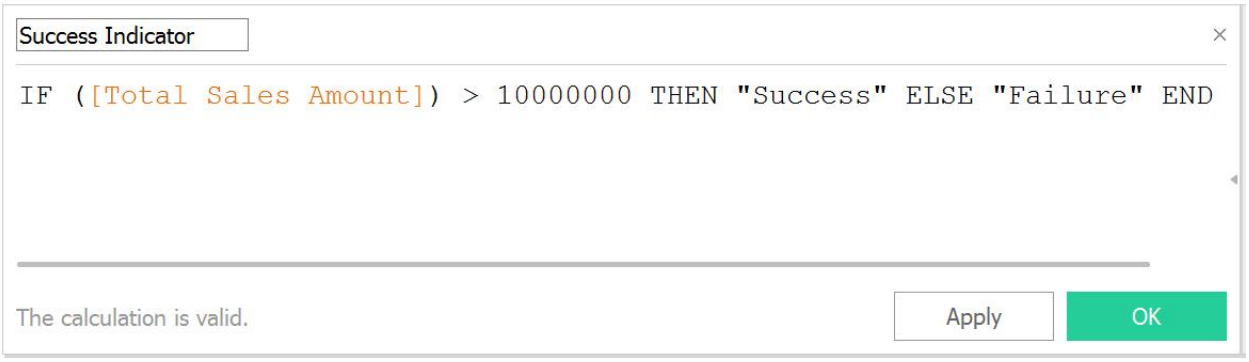

Sales Amount vs. Total Sales Amount
Sales Reason
Price
On Promotion
Manufacturer
Quality
Review
Other
Television Advertisement
60% of Average Total Sales Amount = 7,276,986
$0M $1M $2M $3M $4M $5M $6M $7M $8M $9M $10M $11M $12M
Sales Amount

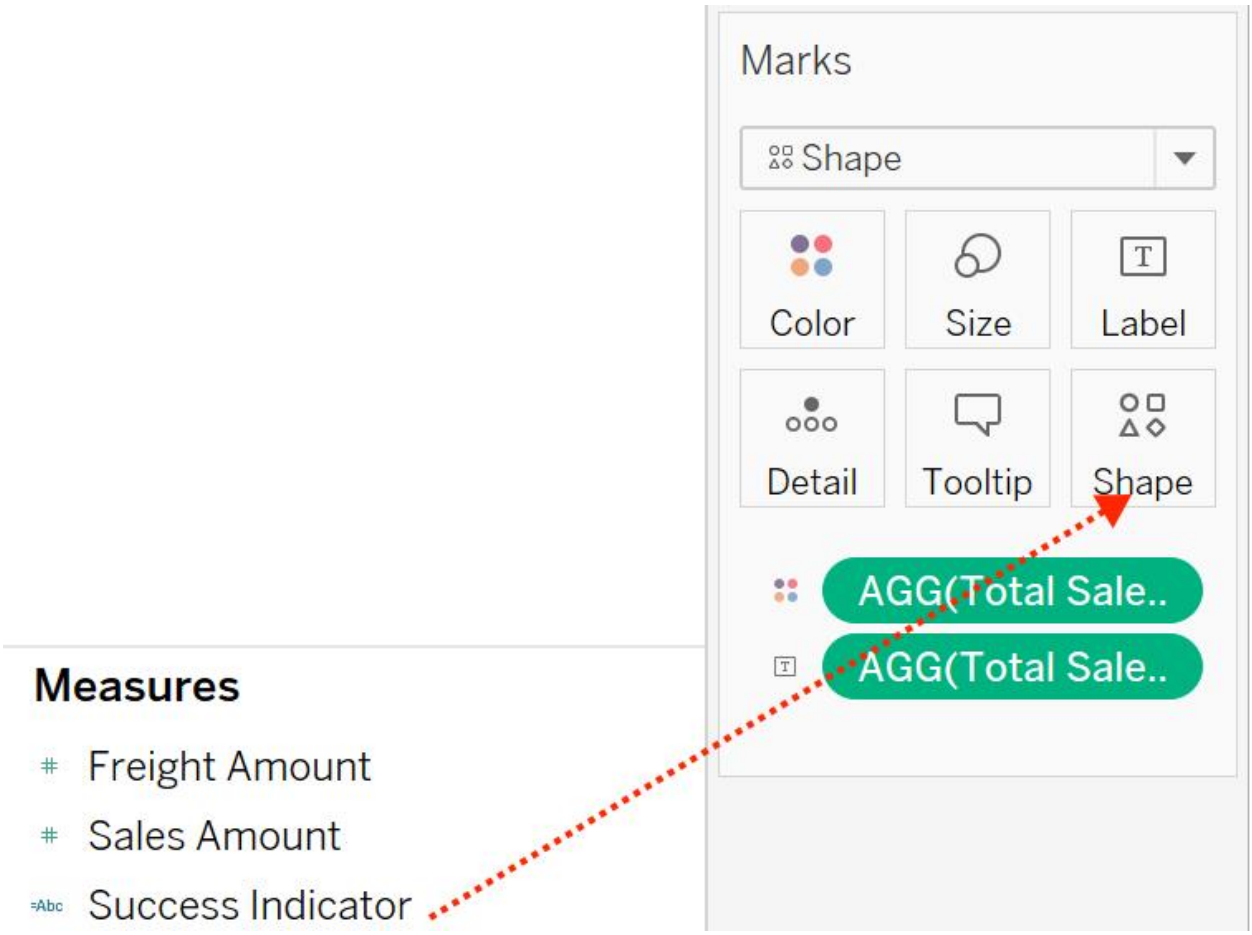

Dimensions
Abc Sales Reason
Abc Sales Reason Type
Abc Measure Names
Filters
Marks
Automatic
Color
Size
Label
Detail
Tooltip

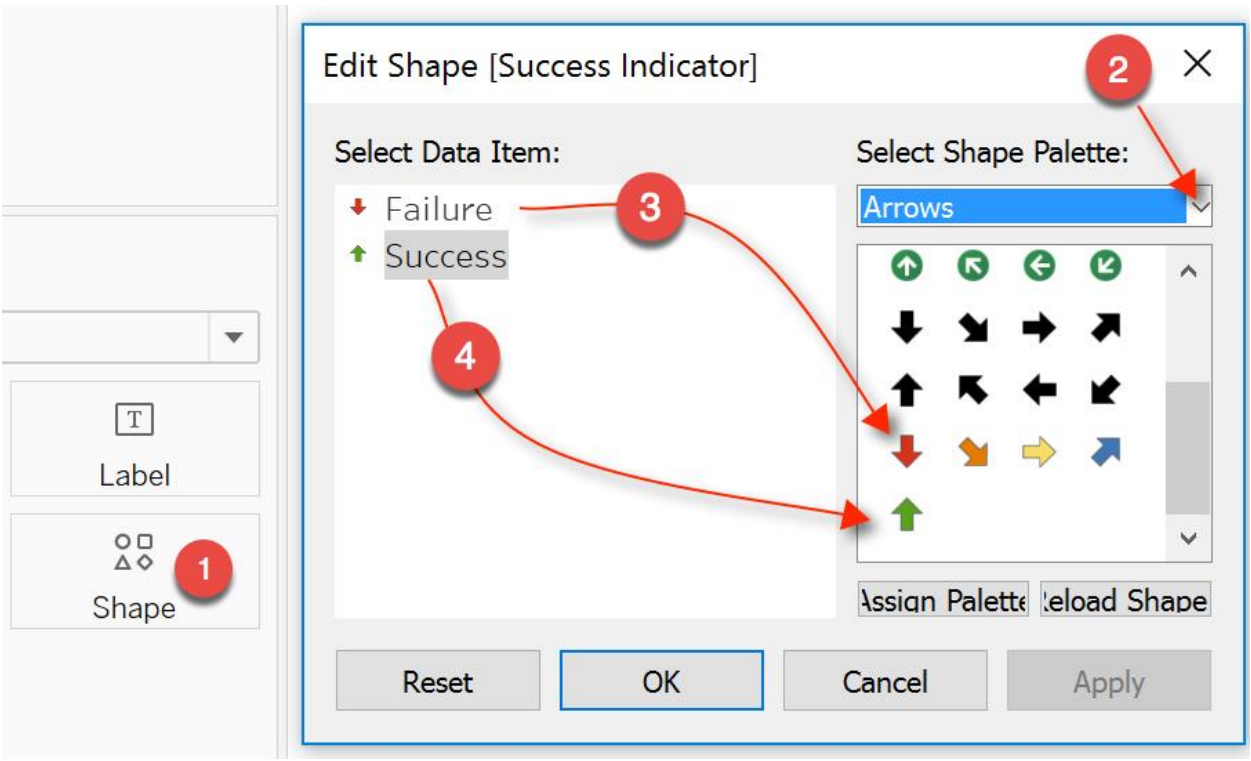

Sales Amount vs. Total Sales Amount
Sales Reason
Price
On Promotion
Manufacturer
Quality
Review
Other
Television Advertisement
$0M $1M $2M $3M $4M $5M $6M $7M $8M $9M $10M $11M $12M
Sales Amount
Highlight Sales Reason
Highlight Sales Reason
Sales Reason
Price
On Promotion
Manufacturer
Quality
Review
Other
Television Advertisement



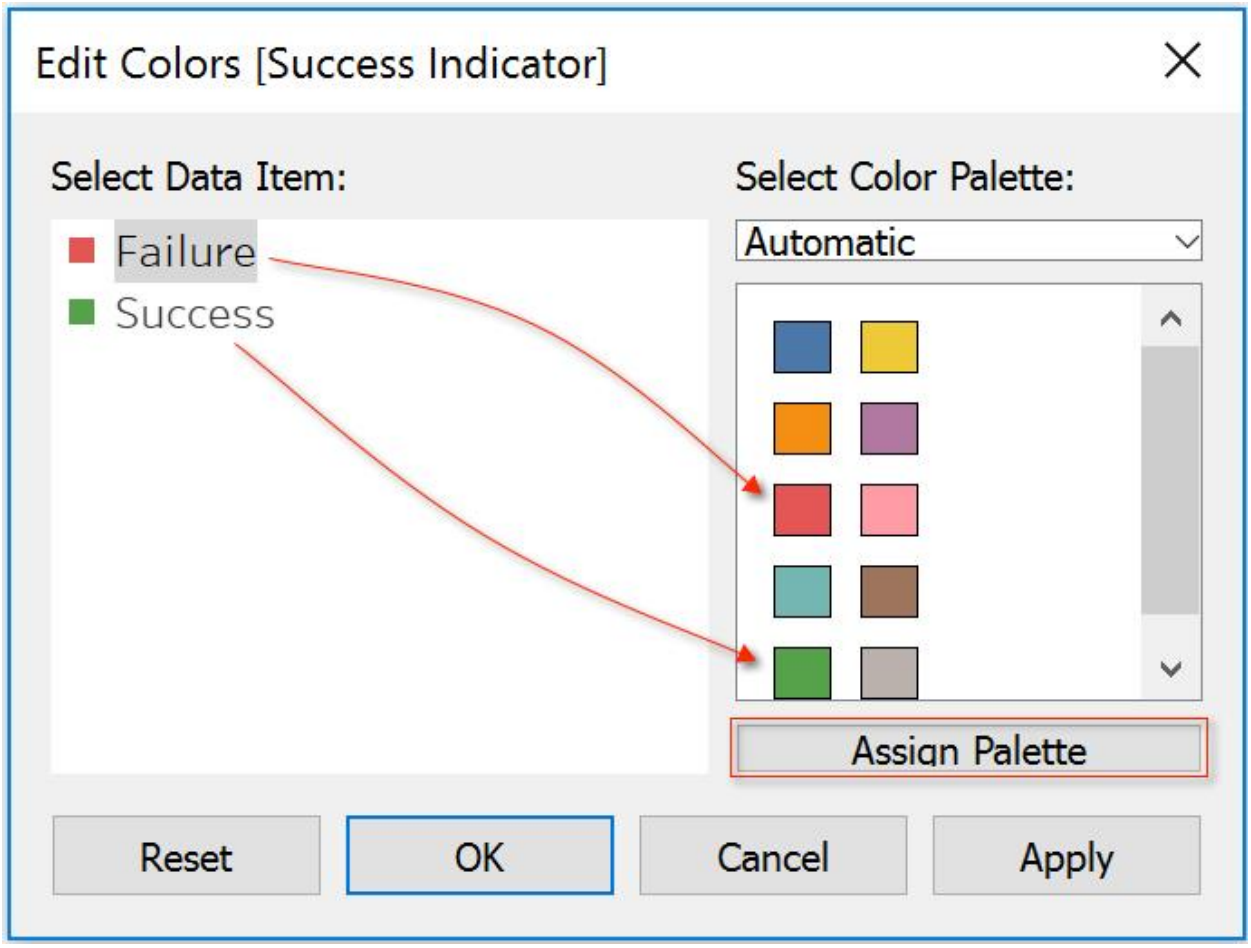
Sales Reason Type	
Marketing	30,362
Other	27,036,298
Promotion	7,029,826

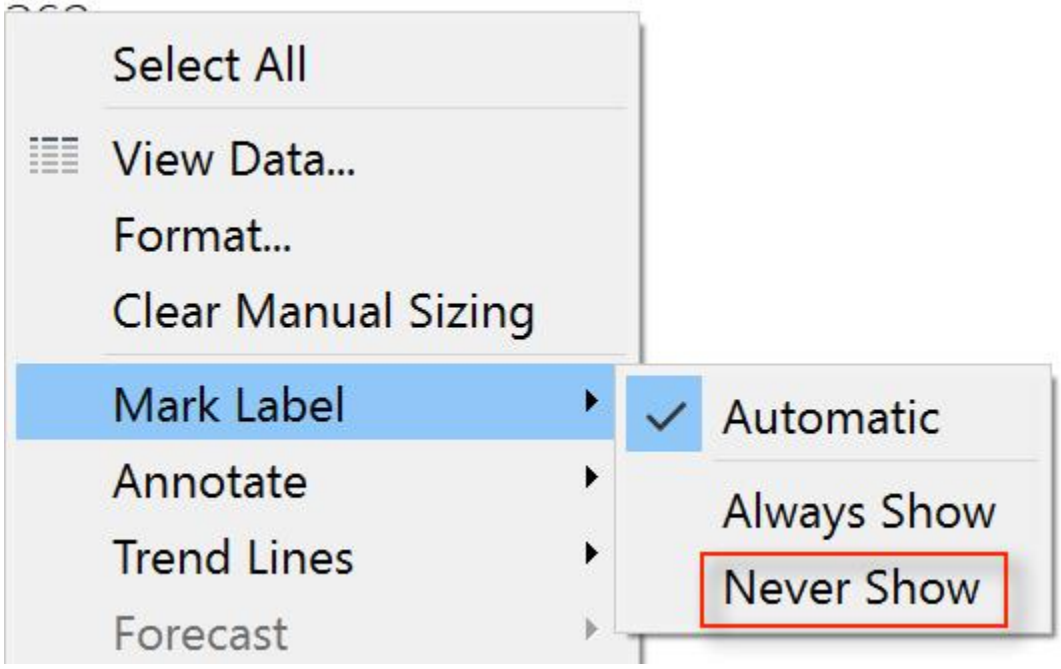


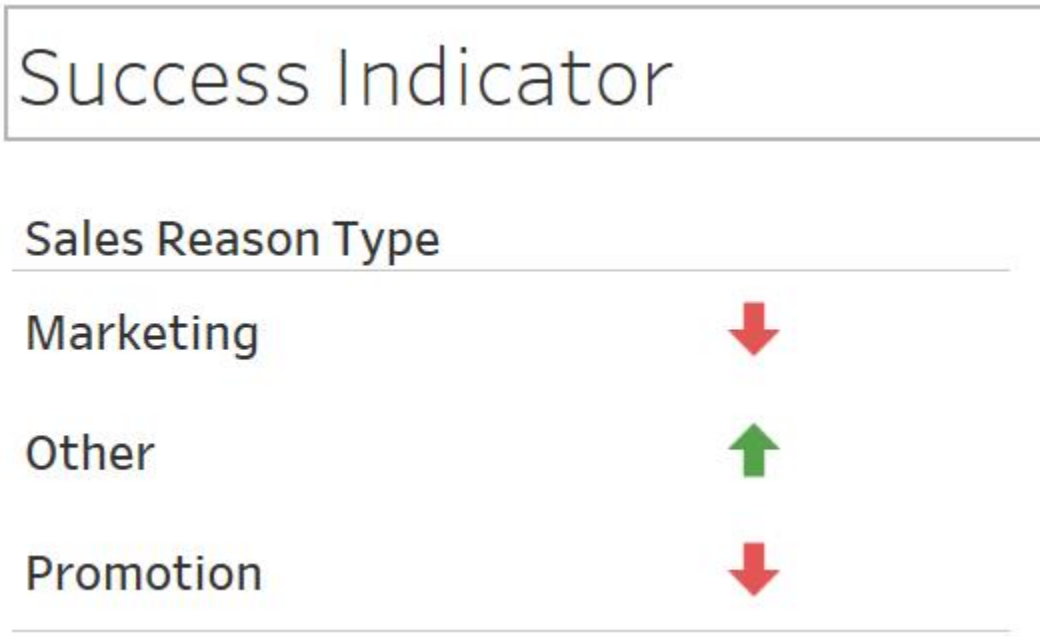

Marks
Shape
Color
Size
Label
Detail
Tooltip
Shape
AGG(Total Sale..
AGG(Total Sale..
Measures
Freight Amount
Sales Amount
Success Indicator

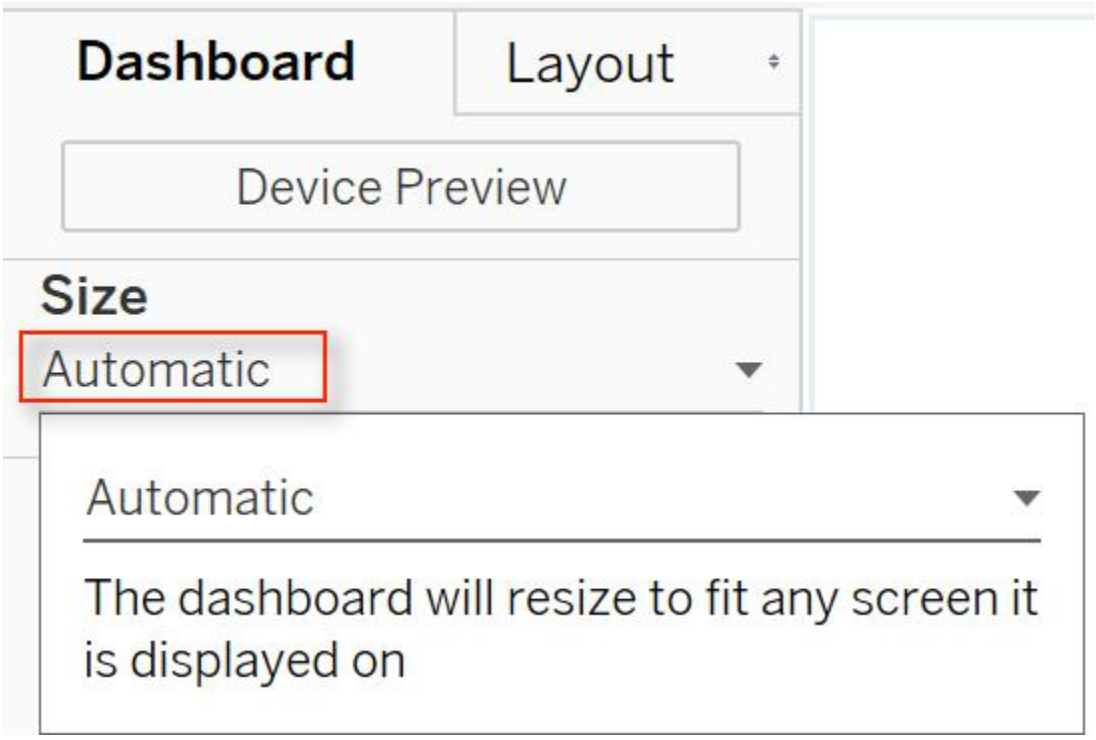


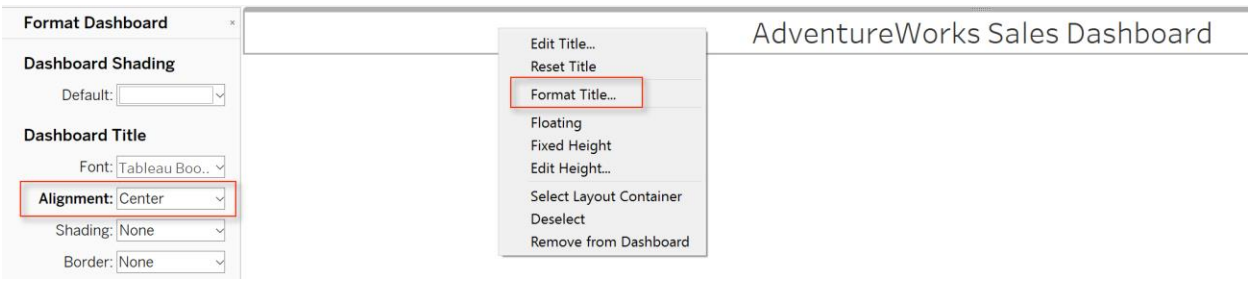
Sales Reason Type		
Marketing	↓	30,362
Other	↑	27,036,298
Promotion	↓	7,029,826

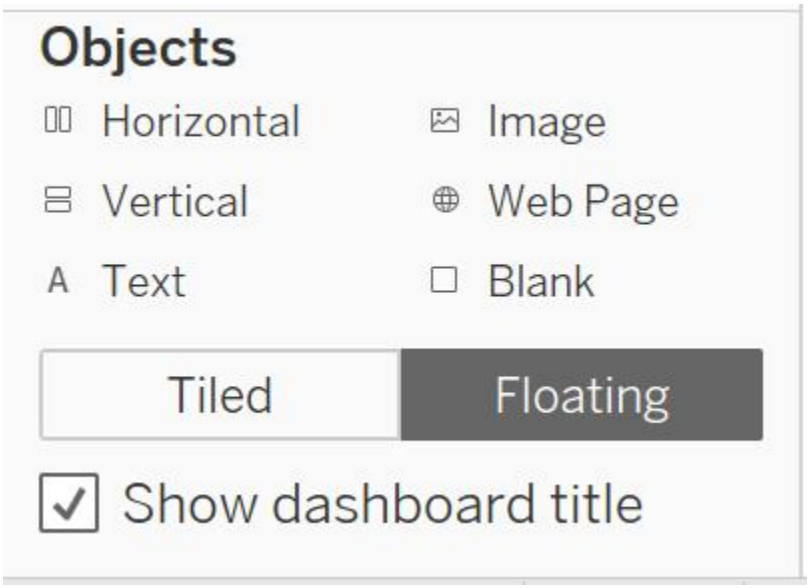

Edit Colors [Success Indicator]
Select Data Item:
Failure
Success
Select Color Palette:
Automatic
Assign Palette
Reset
OK
Cancel
Apply


Select All
View Data...
Format...
Clear Manual Sizing
Mark Label
Annotate
Trend Lines
Forecast
Automatic
Always Show
Never Show

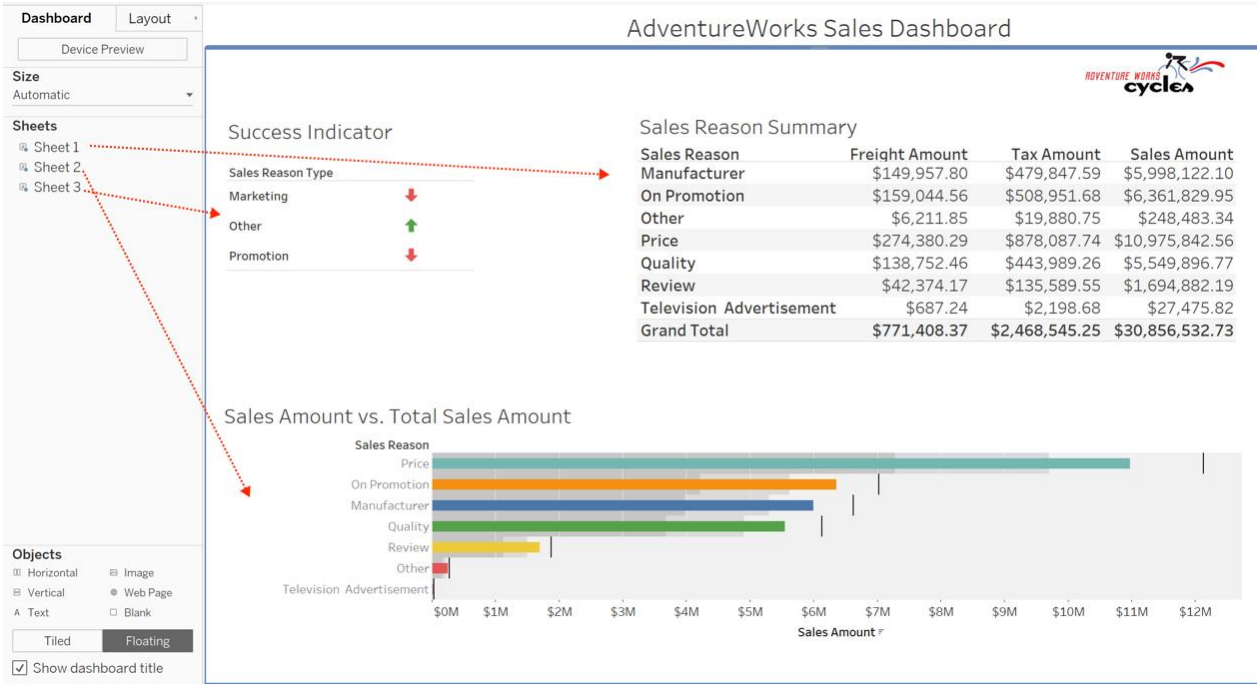

Success Indicator
Sales Reason Type
Marketing
Other
Promotion


Dashboard
Layout
Device Preview
Size
Automatic
Automatic
The dashboard will resize to fit any screen it is displayed on


Format Dashboard
Dashboard Shading
Default:
Dashboard Title
Font: Tableau Boo..
Alignment: Center
Shading: None
Border: None
AdventureWorks Sales Dashboard
Edit Title...
Reset Title
Format Title...
Floating
Fixed Height
Edit Height...
Select Layout Container
Deselect
Remove from Dashboard

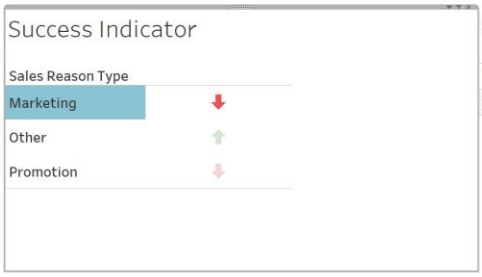

Objects
Horizontal
Image
Vertical
Web Page
Text
Blank
Tiled
Floating
Show dashboard title


ADVENTURE WORKS
cycles


Dashboard
Layout
Device Preview
Size
Automatic
Sheets
Sheet 1
Sheet 2
Sheet 3
Objects
Horizontal
Image
Vertical
Web Page
Text
Blank
Tiled
Floating
Show dashboard title
AdventureWorks Sales Dashboard
Success Indicator
Sales Reason Type
Marketing
Other
Promotion
Sales Reason Summary
Sales Reason | Freight Amount | Tax Amount | Sales Amount
Manufacturer | $149,957.80 | $479,847.59 | $5,998,122.10
On Promotion | $159,044.56 | $508,951.68 | $6,361,829.95
Other | $6,211.85 | $19,880.75 | $248,483.34
Price | $274,380.29 | $878,087.74 | $10,975,842.56
Quality | $138,752.46 | $443,989.26 | $5,549,896.77
Review | $42,374.17 | $135,589.55 | $1,694,882.19
Television Advertisement | $687.24 | $2,198.68 | $27,475.82
Grand Total | $771,408.37 | $2,468,545.25 | $30,856,532.73
Sales Amount vs. Total Sales Amount
Sales Reason
Price
On Promotion
Manufacturer
Quality
Review
Other
Television Advertisement
$0M
$1M
$2M
$3M
$4M
$5M
$6M
$7M
$8M
$9M
$10M
$11M
$12M
Sales Amount

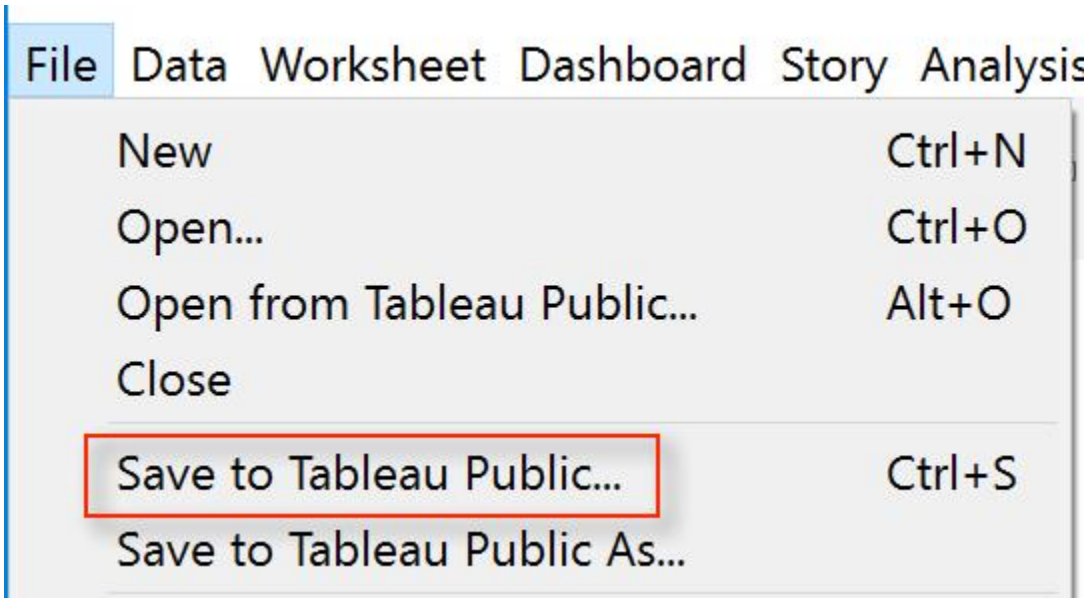

Success Indicator
Use as Filter
Sales Reason Type
Marketing
Other
Promotion

AdventureWorks Sales Dashboard



Sales Reason Summary

Sales Reason	Freight Amount	Tax Amount	Sales Amount
Television Advertisement	$687.24	$2,198.68	$27,475.82
Grand Total	$687.24	$2,198.68	$27,475.82



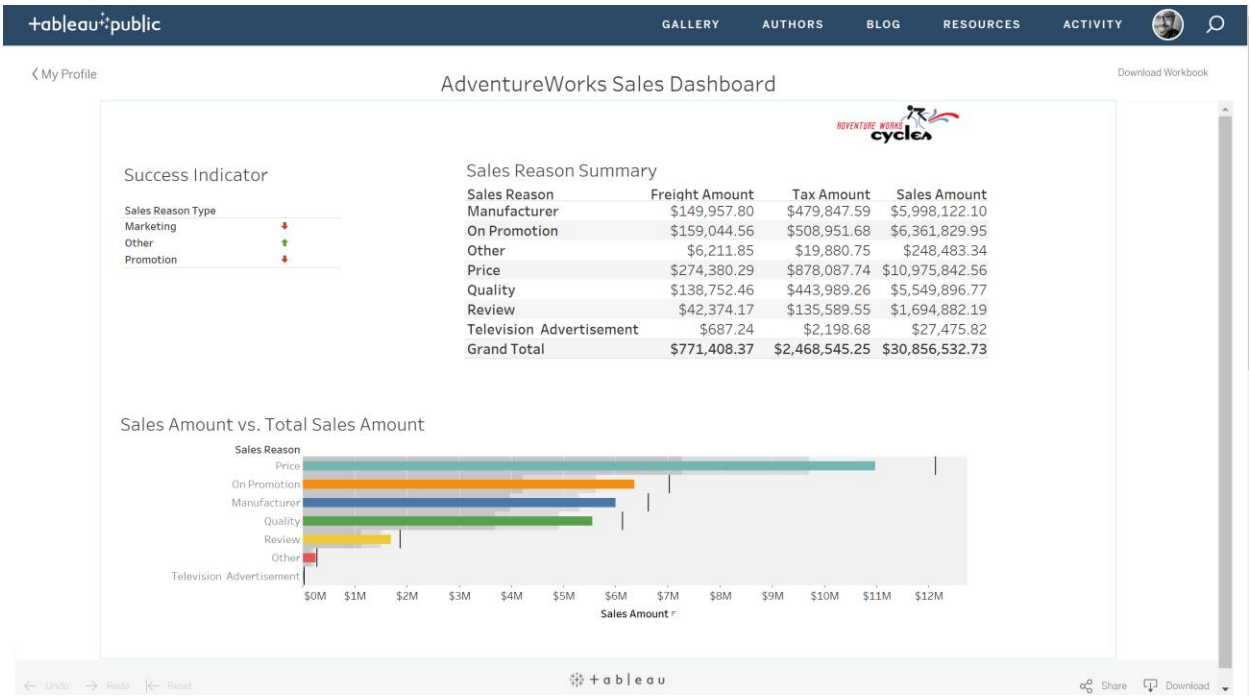
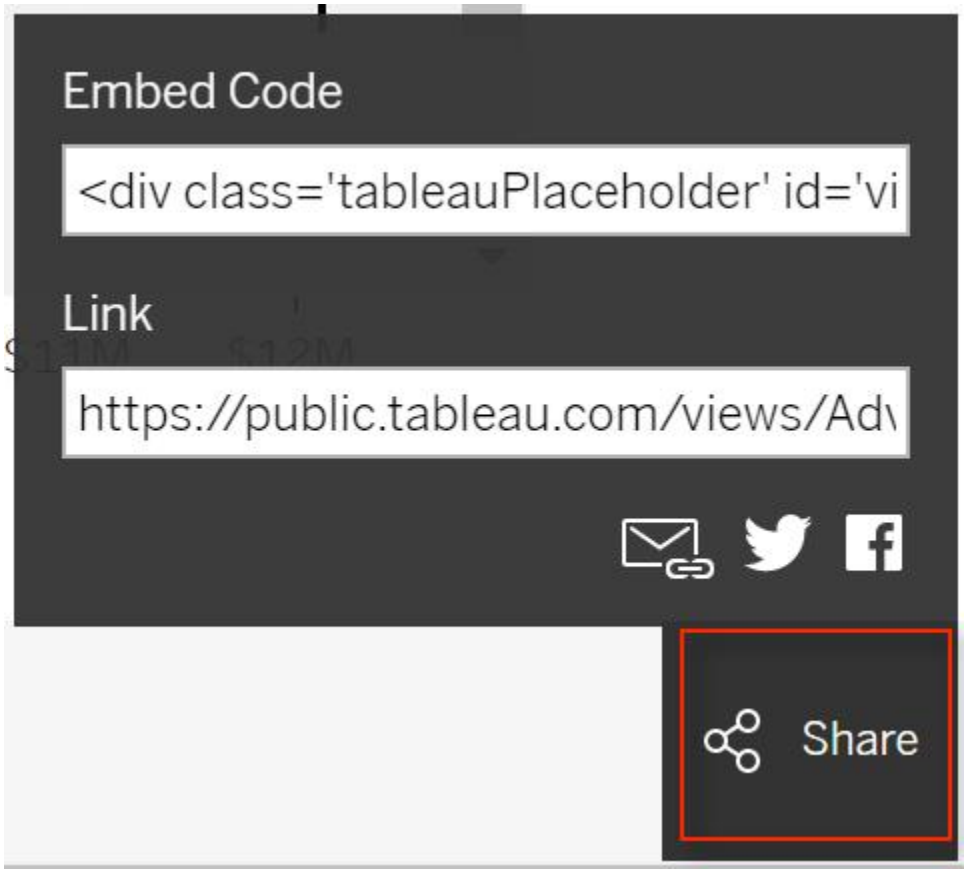


tableau public
GALLERY
AUTHORS
BLOG
RESOURCES
ACTIVITY
My Profile
AdventureWorks Sales Dashboard
Download Workbook
Success Indicator
Sales Reason Type
Marketing
Other
Promotion
Sales Reason Summary
Sales Reason | Freight Amount | Tax Amount | Sales Amount
Manufacturer | $149,957.80 | $479,847.59 | $5,998,122.10
On Promotion | $159,044.56 | $508,951.68 | $6,361,829.95
Other | $6,211.85 | $19,880.75 | $248,483.34
Price | $274,380.29 | $878,087.74 | $10,975,842.56
Quality | $138,752.46 | $443,989.26 | $5,549,896.77
Review | $42,374.17 | $135,589.55 | $1,694,882.19
Television Advertisement | $687.24 | $2,198.68 | $27,475.82
Grand Total | $771,408.37 | $2,468,545.25 | $30,856,532.73
Sales Amount vs. Total Sales Amount
Sales Reason
Price
On Promotion
Manufacturer
Quality
Review
Other
Television Advertisement
$0M $1M $2M $3M $4M $5M $6M $7M $8M $9M $10M $11M $12M
Sales Amount
Undo
Redo
Reset
tableau
Share
Download


Embed Code
<div class='tableauPlaceholder' id='vi
Link
https://public.tableau.com/views/Adv
Share

Sales Reason Type		
Marketing	↓	30,362
Other	↑	27,036,298
Promotion	↓	7,029,826

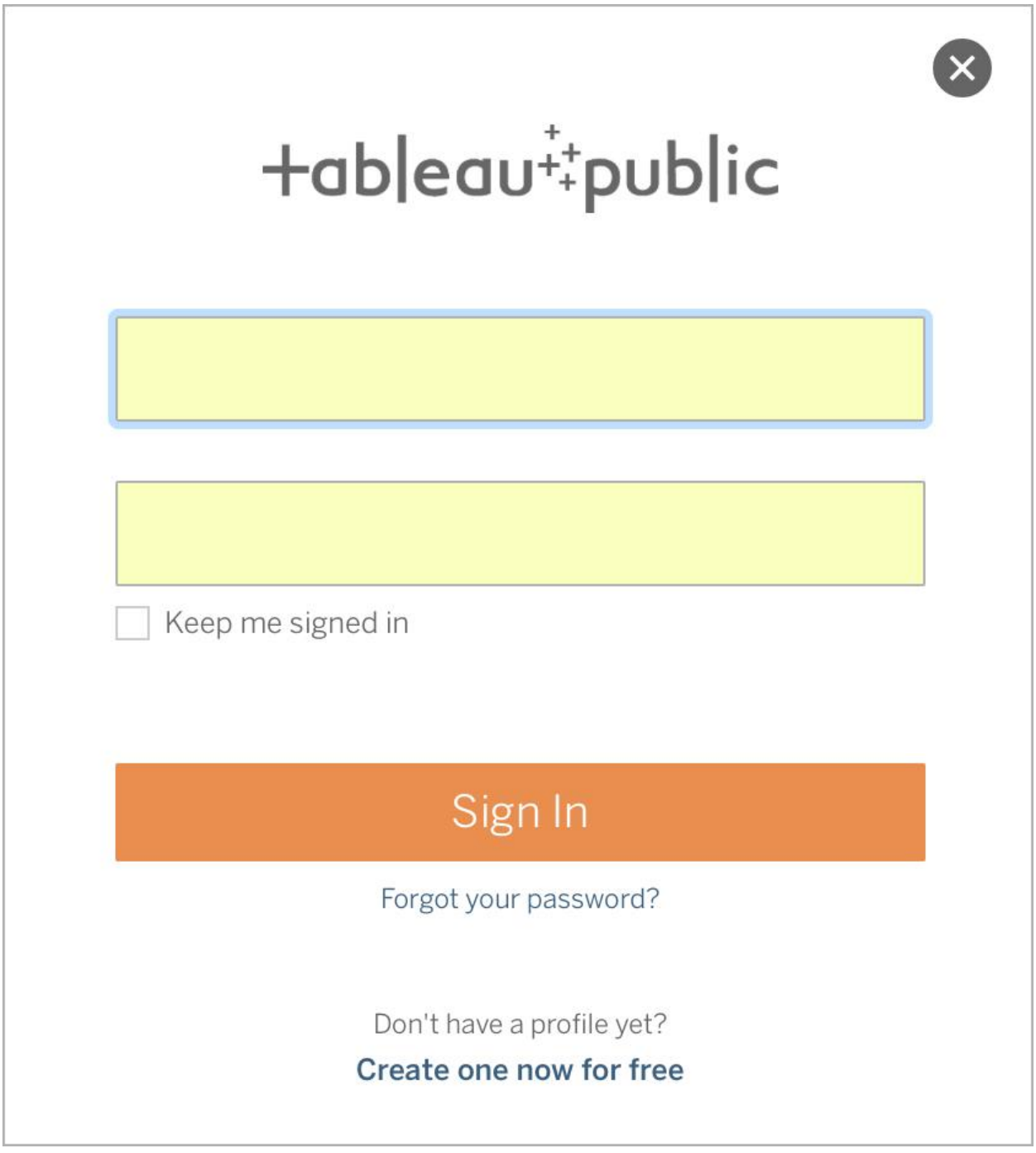
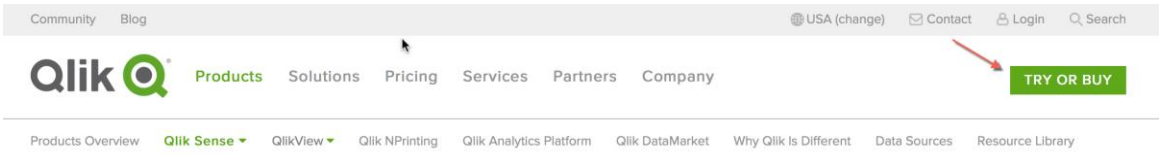
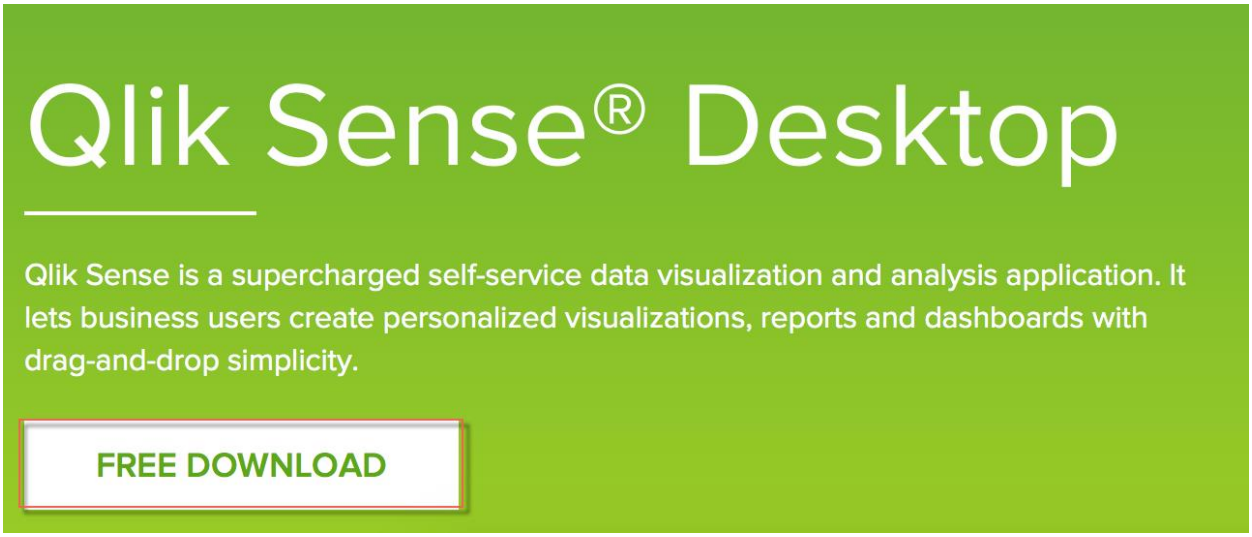
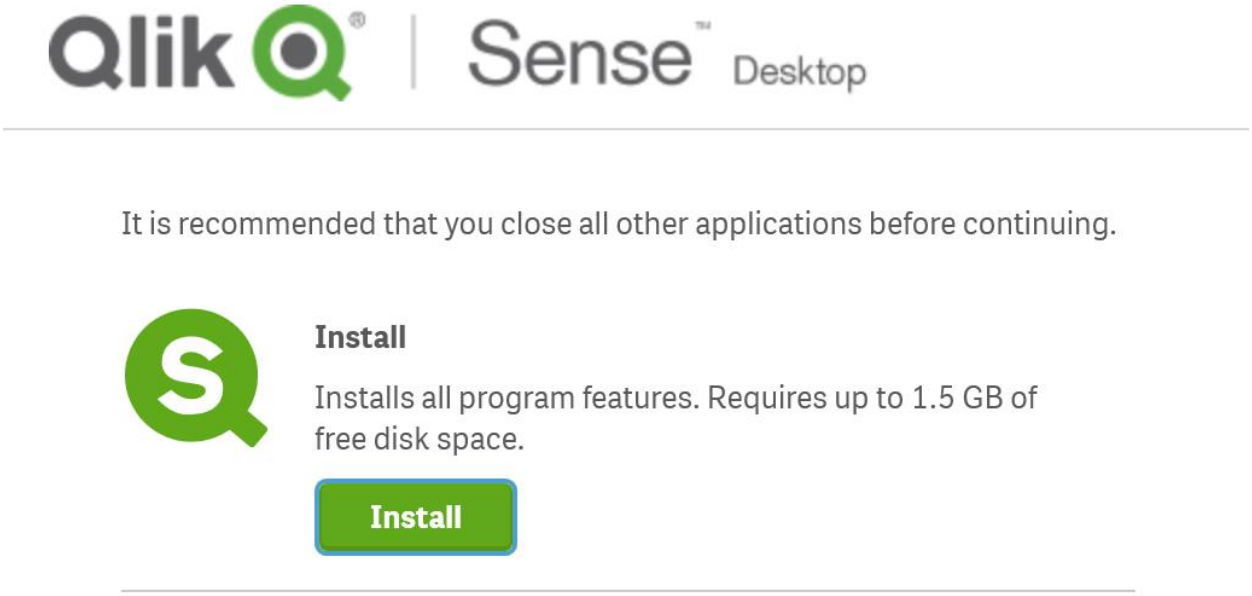


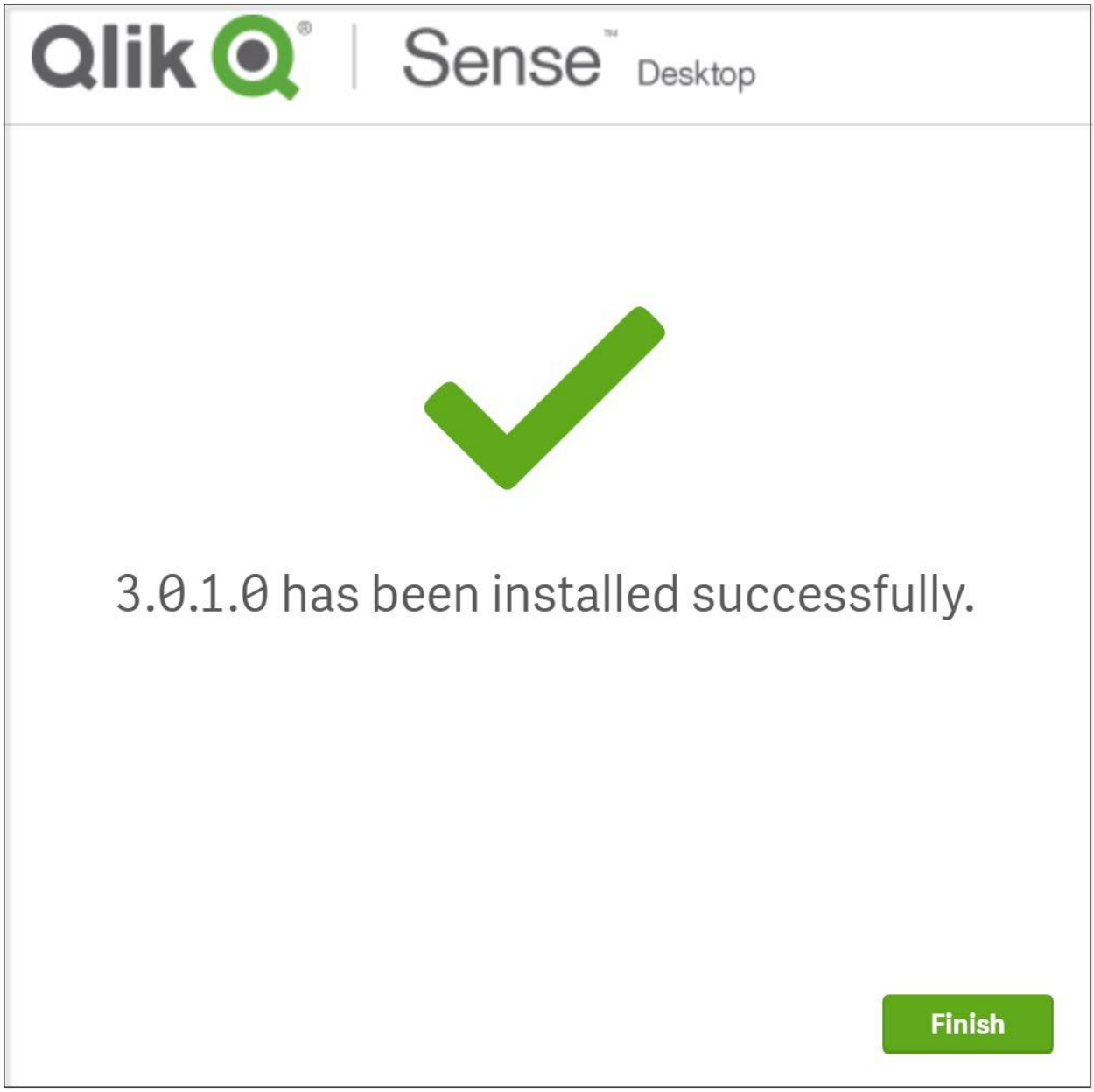
tableau public
Keep me signed in
Sign In
Forgot your password?
Don't have a profile yet?
Create one now for free

Chapter 8: Creating an Inventory Dashboard with QlikSense





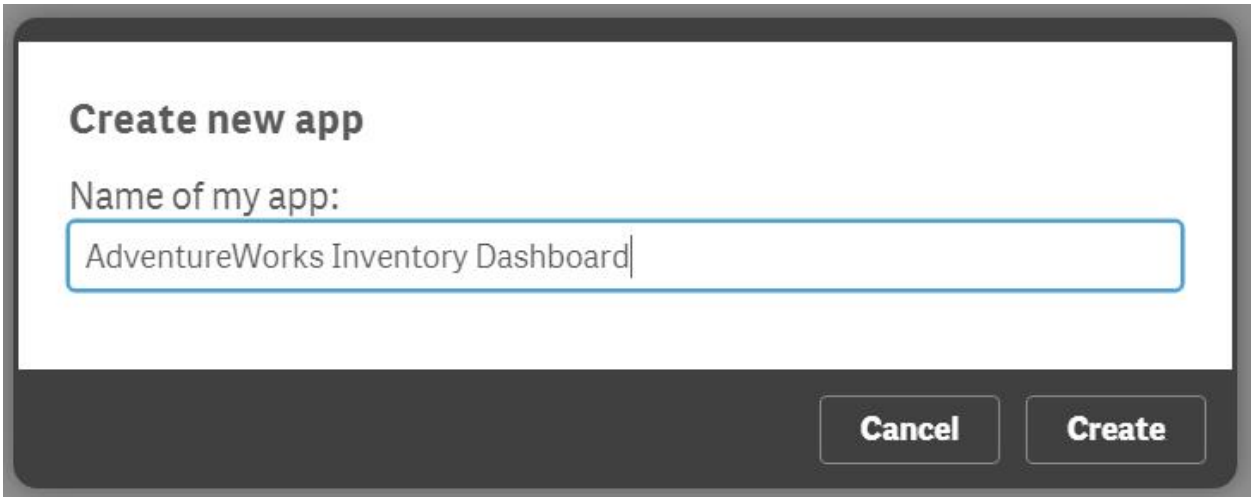




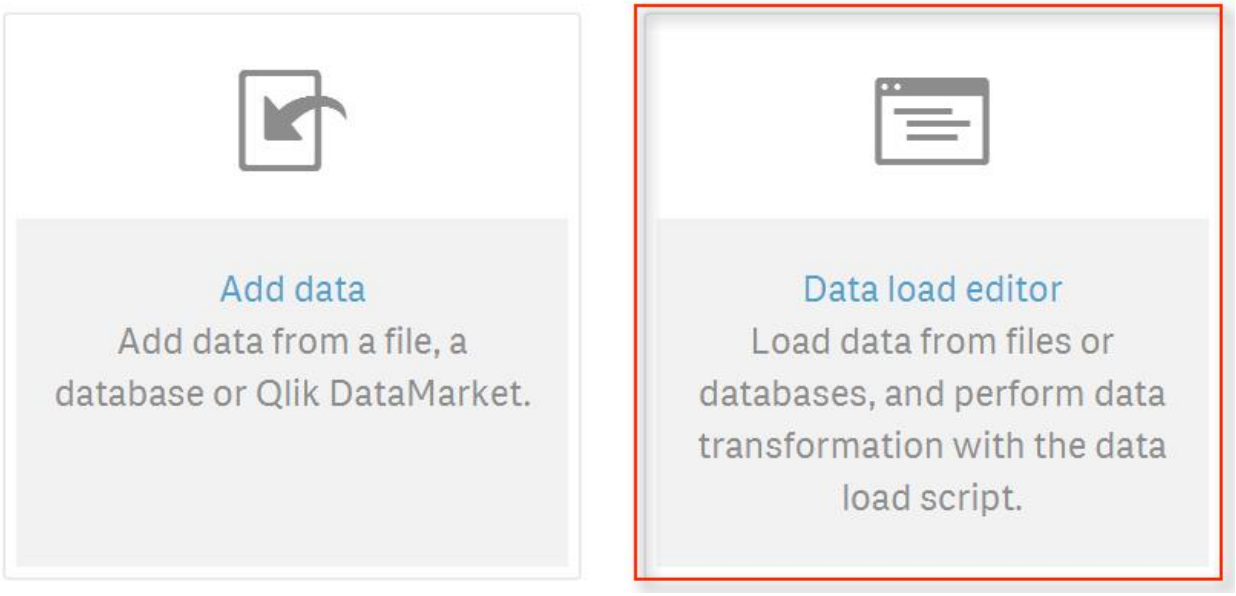
Results Messages

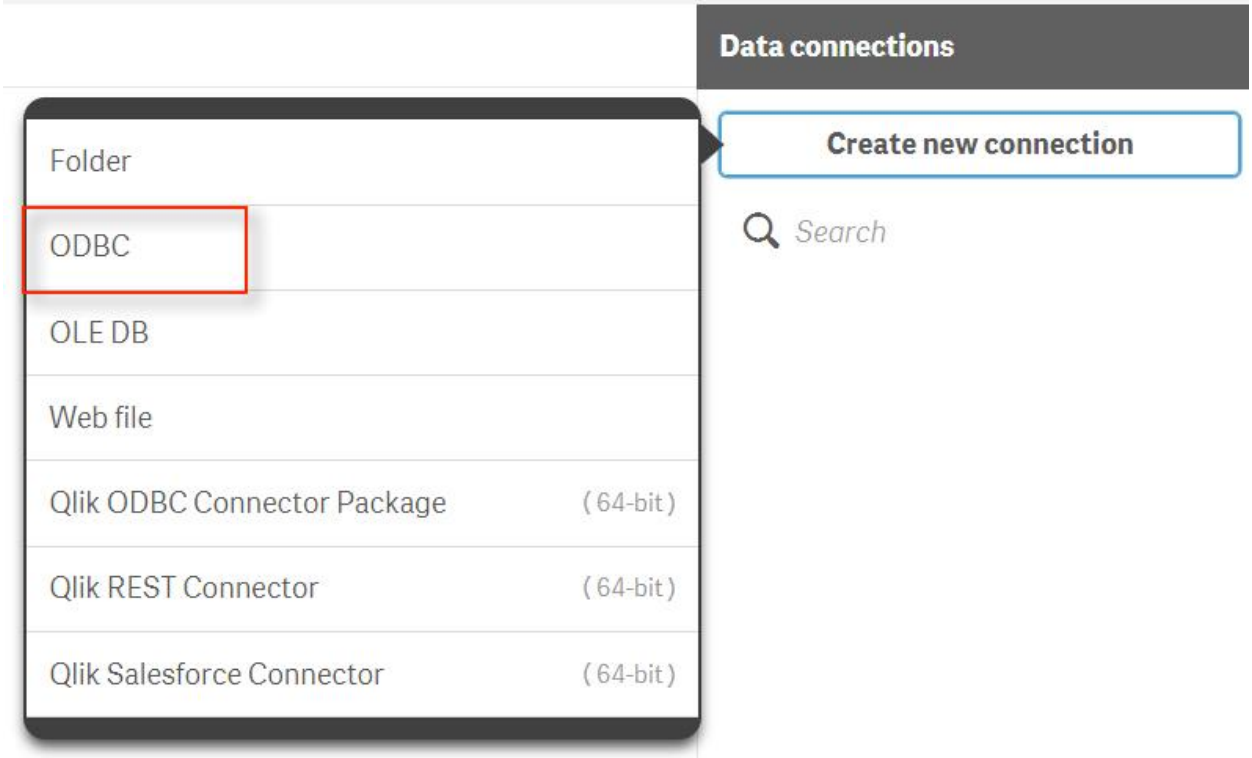
	WarehouseName	ProductID	ProductName	Inventory	ReorderPoint	ReorderFlag
1	Miscellaneous Storage	1	Adjustable Race	324	750	Y
2	Subassembly	1	Adjustable Race	353	750	Y
3	Tool Crib	1	Adjustable Race	408	750	Y

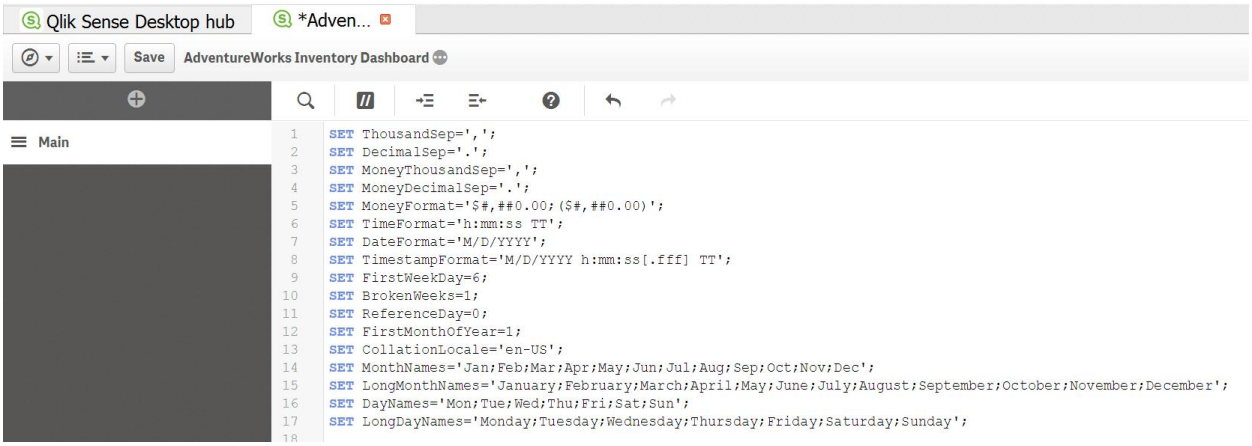

Qlik Sense Desktop
Welcome to Qlik Sense Desktop
CREATE A NEW APP
and start exploring your data.
Show this dialog at startup


Create new app
Name of my app:
AdventureWorks Inventory Dashboard
Cancel
Create

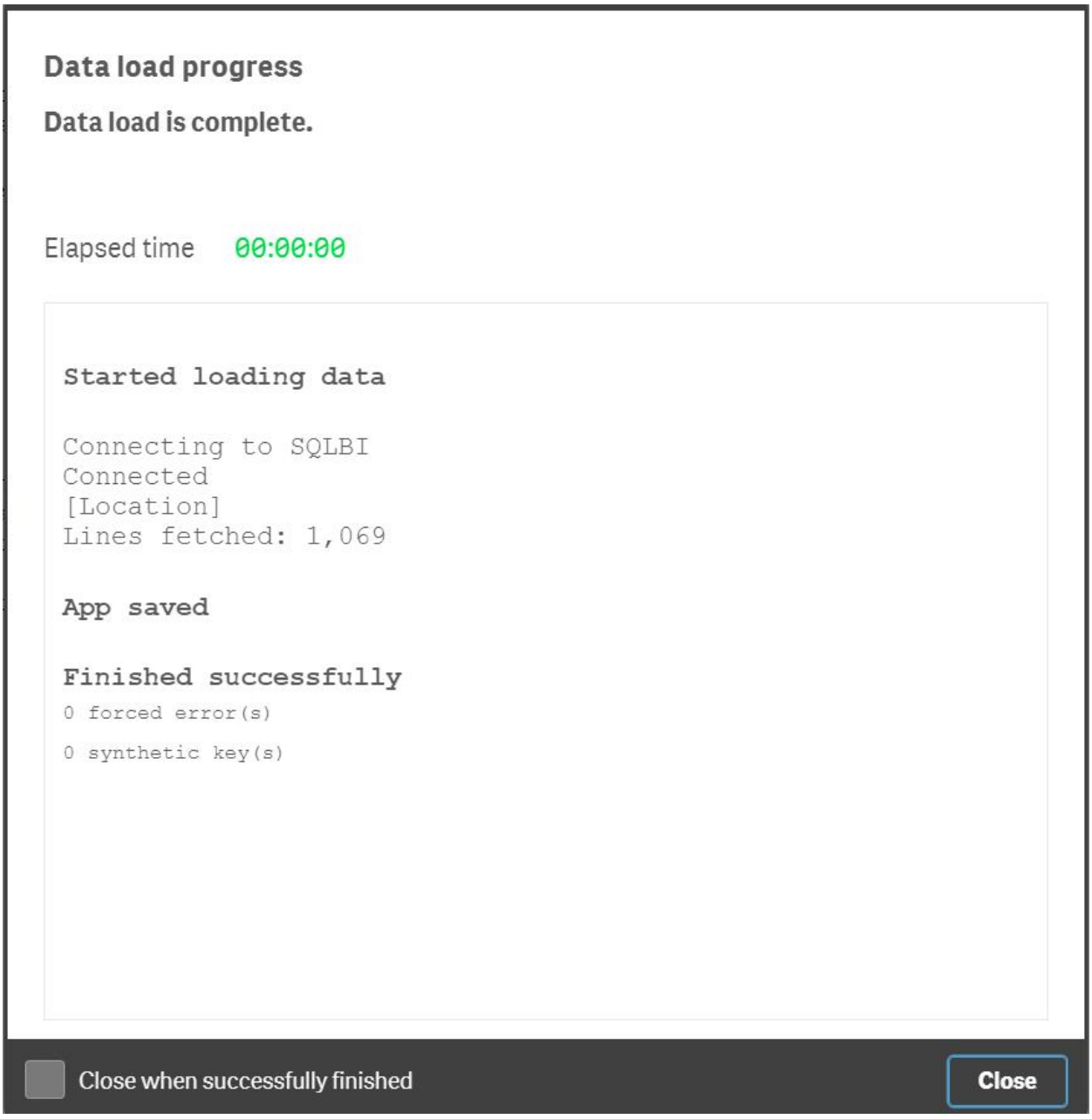
Get started adding data to your app.

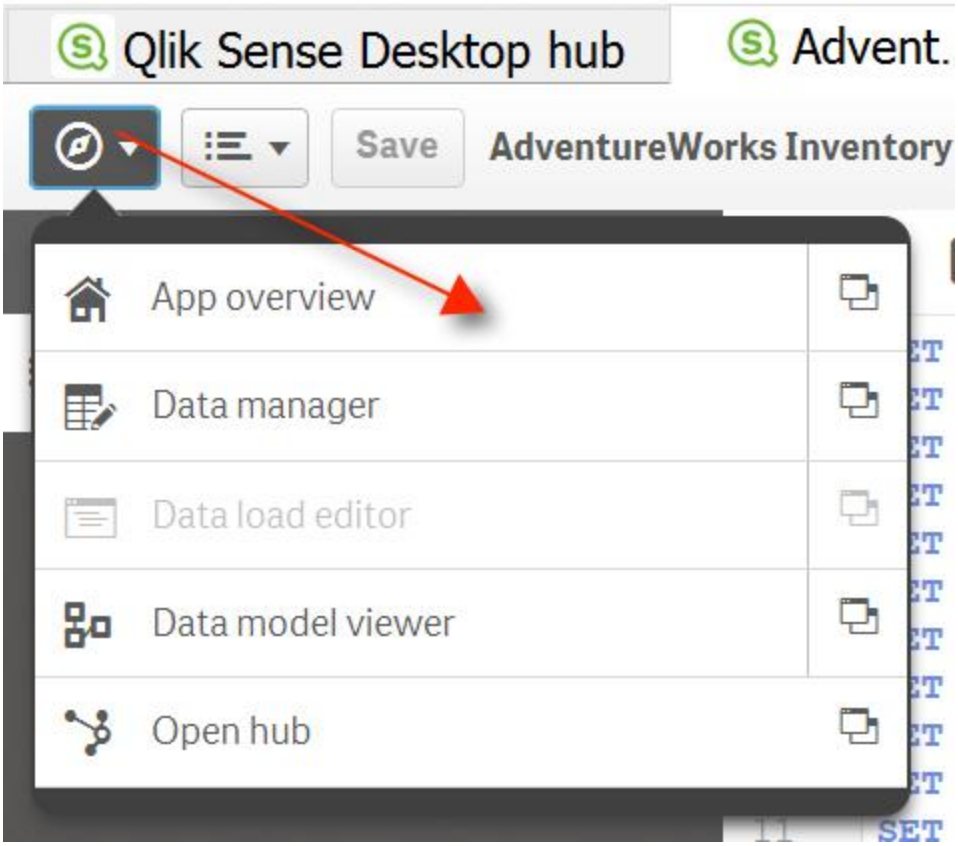




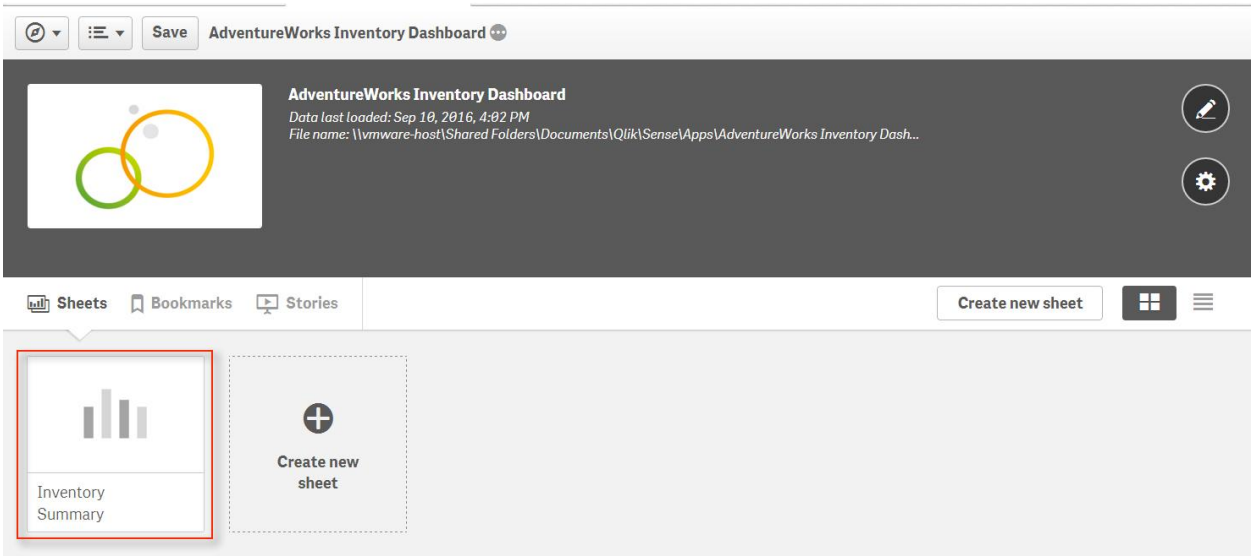



```
LIB CONNECT TO 'SQLBI';

SELECT
loc.Name as WarehouseName
,inv.ProductID
,prod.Name as ProductName
,sum(inv.Quantity) as Inventory
,sum(prod.ReorderPoint) as ReorderPoint
,case when sum(inv.Quantity) > sum(prod.ReorderPoint) then 'N' else 'Y' end as ReorderFlag
FROM [AdventureWorks2014].[Production].[Location] as loc
inner join [AdventureWorks2014].[Production].[ProductInventory] as inv on
loc.LocationID = inv.LocationID
inner join [AdventureWorks2014].[Production].[Product] as prod on
prod.ProductID =  inv.ProductID

group by
loc.Name
,inv.ProductID
,prod.Name;
```

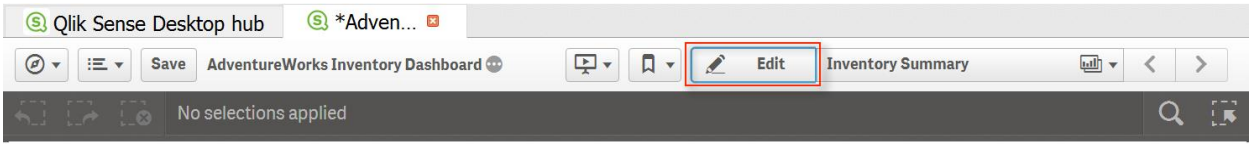

Data load progress
Data load is complete.
Elapsed time 00:00:00
Started loading data
Connecting to SQLBI
Connected
[Location]
Lines fetched: 1,069
App saved
Finished successfully
0 forced error(s)
0 synthetic key(s)
Close when successfully finished
Close


Qlik Sense Desktop hub
Advent.
Save
AdventureWorks Inventory
App overview
Data manager
Data load editor
Data model viewer
Open hub


Sheets
Bookmarks
Stories
Create new sheet
My new sheet
Create new sheet
Title
Inventory Summary
Description
Inventory Summary


Save
AdventureWorks Inventory Dashboard
AdventureWorks Inventory Dashboard
Data last loaded: Sep 10, 2016, 4:02 PM
File name: \\vmware-host\Shared Folders\Documents\Qlik\Sense\Apps\AdventureWorks Inventory Dash...
Sheets
Bookmarks
Stories
Create new sheet
Inventory Summary
Create new sheet


The sheet is empty
Click at the top right, to start editing your sheet and create visualizations.


Qlik Sense Desktop hub
*Adven...
Save
AdventureWorks Inventory Dashboard
Edit
Inventory Summary
No selections applied

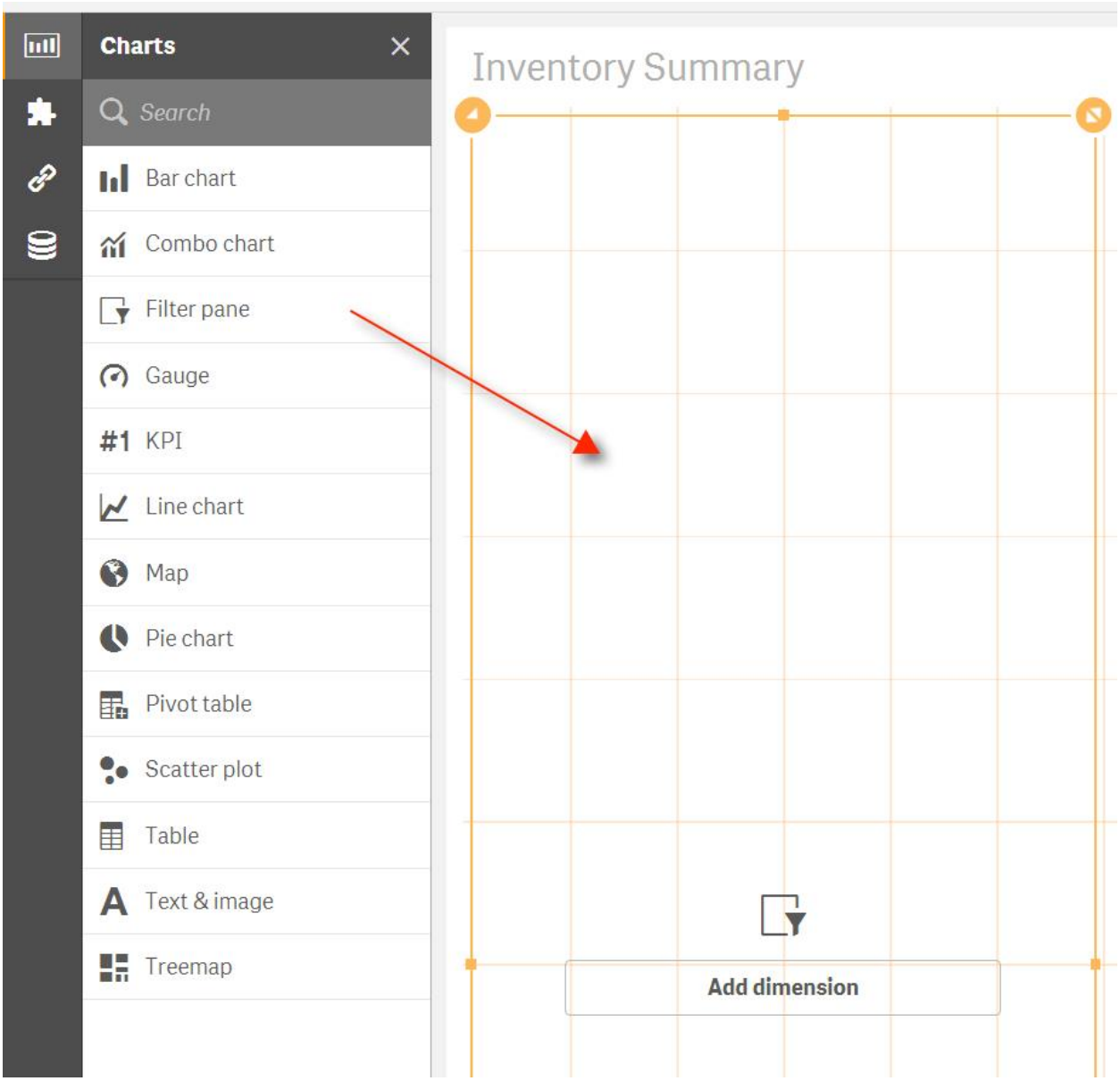
SQLQuery1.sql - DE...RPUKTS\asher (52))*

```sql
select
distinct
x.WarehouseName
from
(
SELECT
loc.Name as WarehouseName
,inv.ProductID
,prod.Name as ProductName
,sum(inv.Quantity) as Inventory
,sum(prod.ReorderPoint) as ReorderPoint
,case when sum(inv.Quantity) > sum(prod.ReorderPoint) then 'N' else 'Y' end as ReorderFlag
FROM [AdventureWorks2014].[Production].[Location] as loc
inner join [AdventureWorks2014].[Production].[ProductInventory] as inv on
loc.LocationID = inv.LocationID
inner join [AdventureWorks2014].[Production].[Product] as prod on
prod.ProductID =  inv.ProductID
group by
loc.Name
,inv.ProductID
,prod.Name
) x
```

100 %

Results | Messages

	WarehouseName
1	Debur and Polish
2	Final Assembly
3	Finished Goods Storage
4	Frame Forming
5	Frame Welding
6	Metal Storage
7	Miscellaneous Storage
8	Paint
9	Paint Shop
10	Paint Storage
11	Sheet Metal Racks
12	Specialized Paint
13	Subassembly
14	Tool Crib


Charts
Search
Bar chart
Combo chart
Filter pane
Gauge
#1 KPI
Line chart
Map
Pie chart
Pivot table
Scatter plot
Table
Text & image
Treemap
Inventory Summary
Add dimension

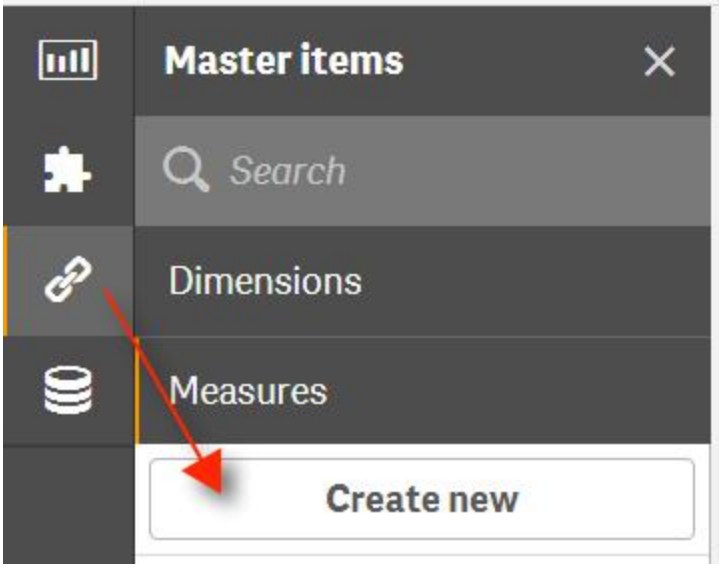
Inventory Summary

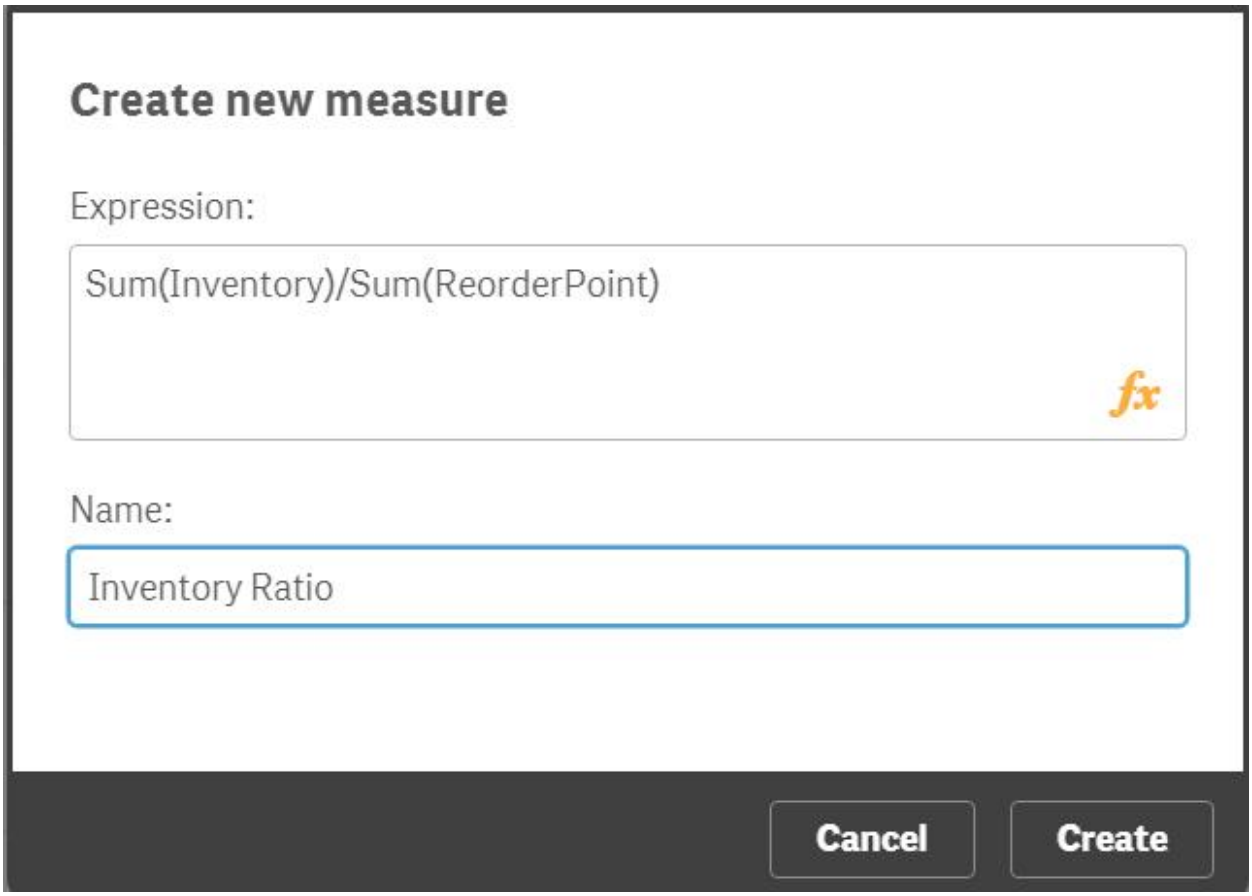
Warehouse Name

- Debur and Polish
- Final Assembly
- Finished Goods Storage
- Frame Forming
- Frame Welding
- Metal Storage
- Miscellaneous Storage
- Paint
- Paint Shop
- Paint Storage
- Sheet Metal Racks
- Specialized Paint
- Subassembly
- Tool Crib

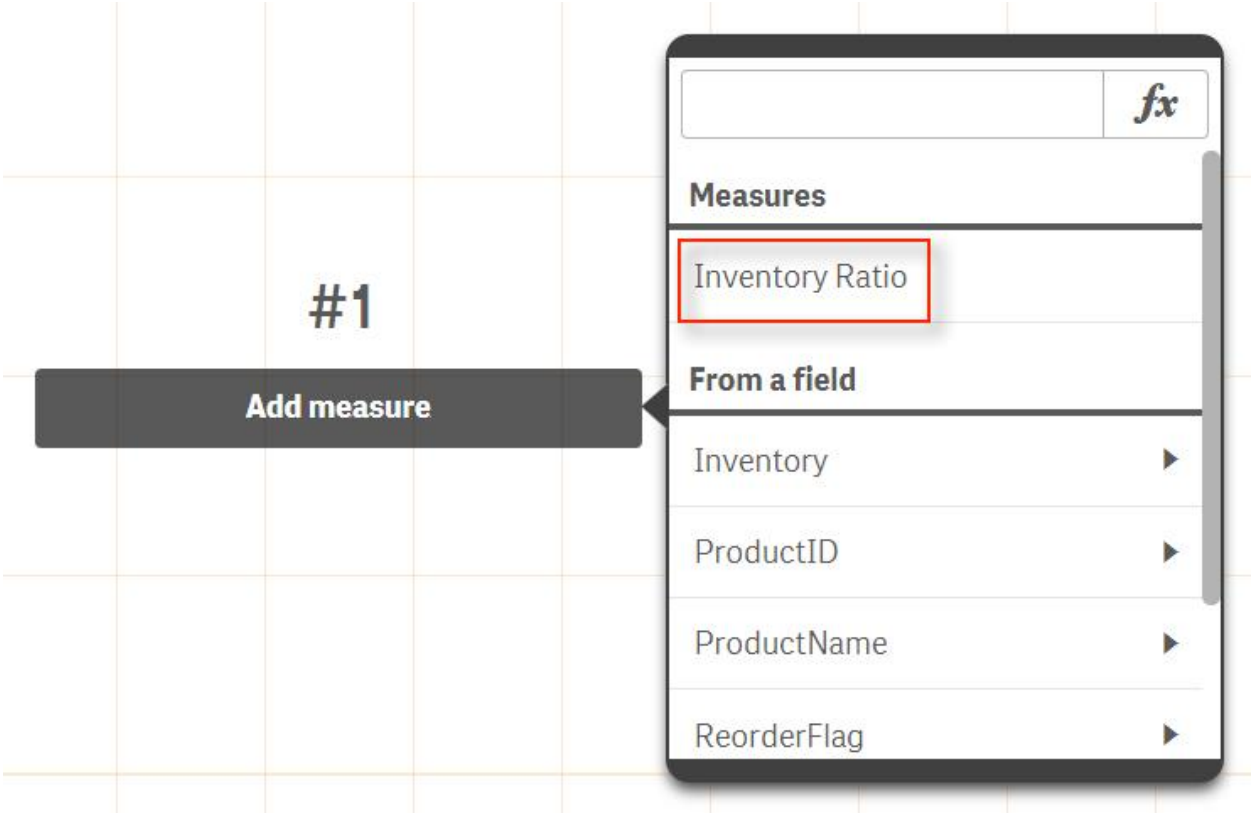
Reorder Flag

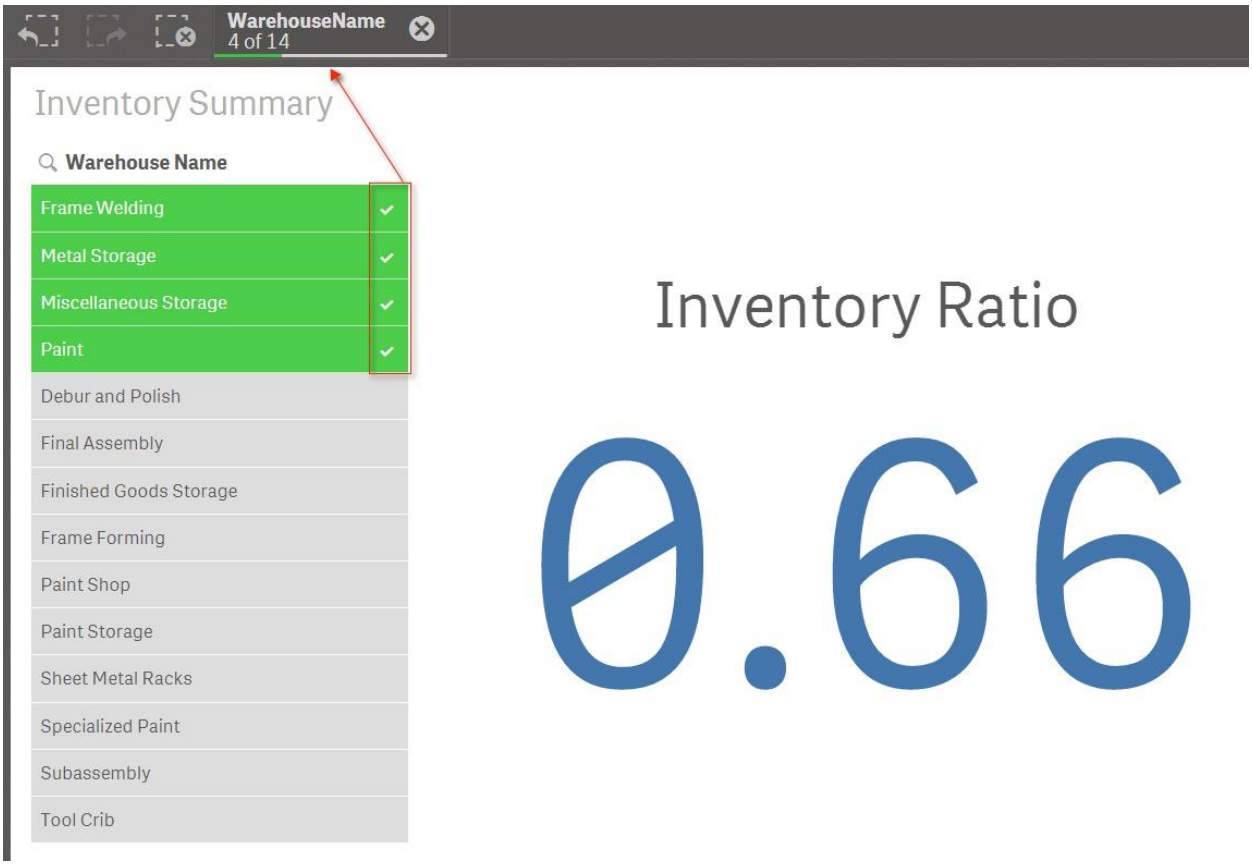
- N
- Y

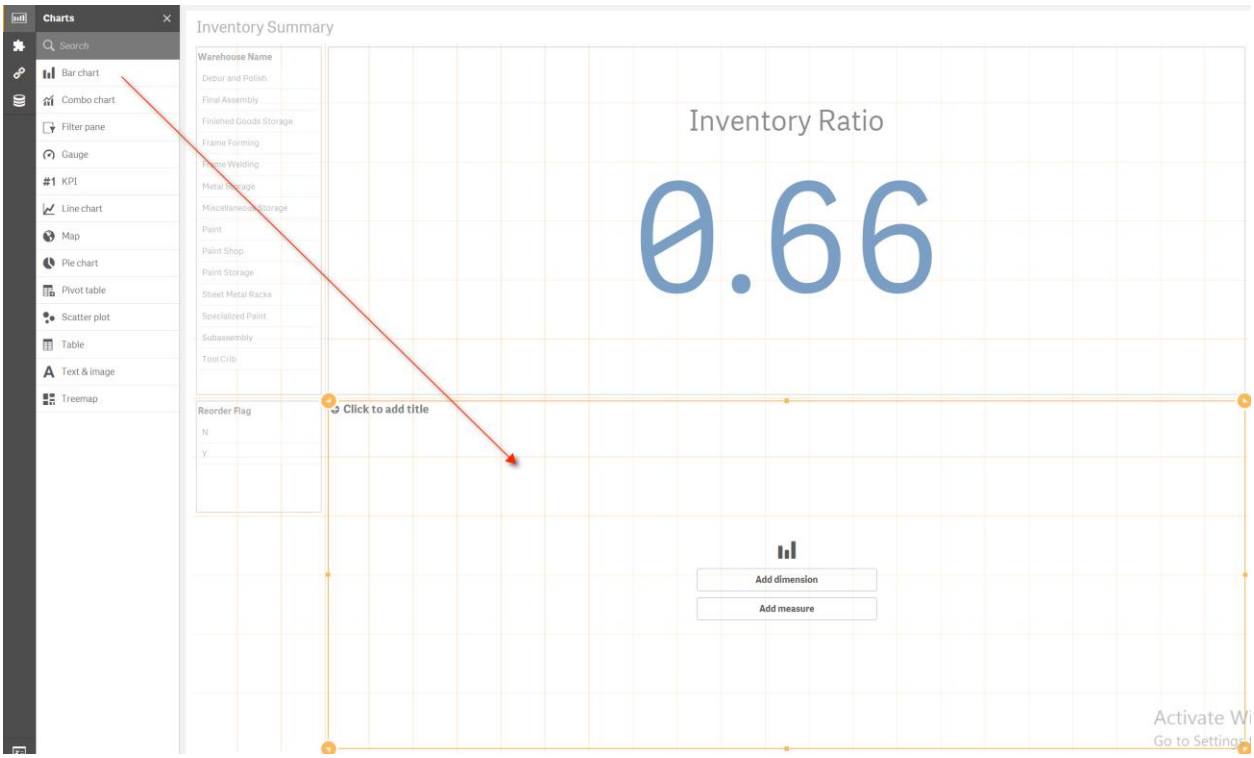

Master items
Search
Dimensions
Measures
Create new

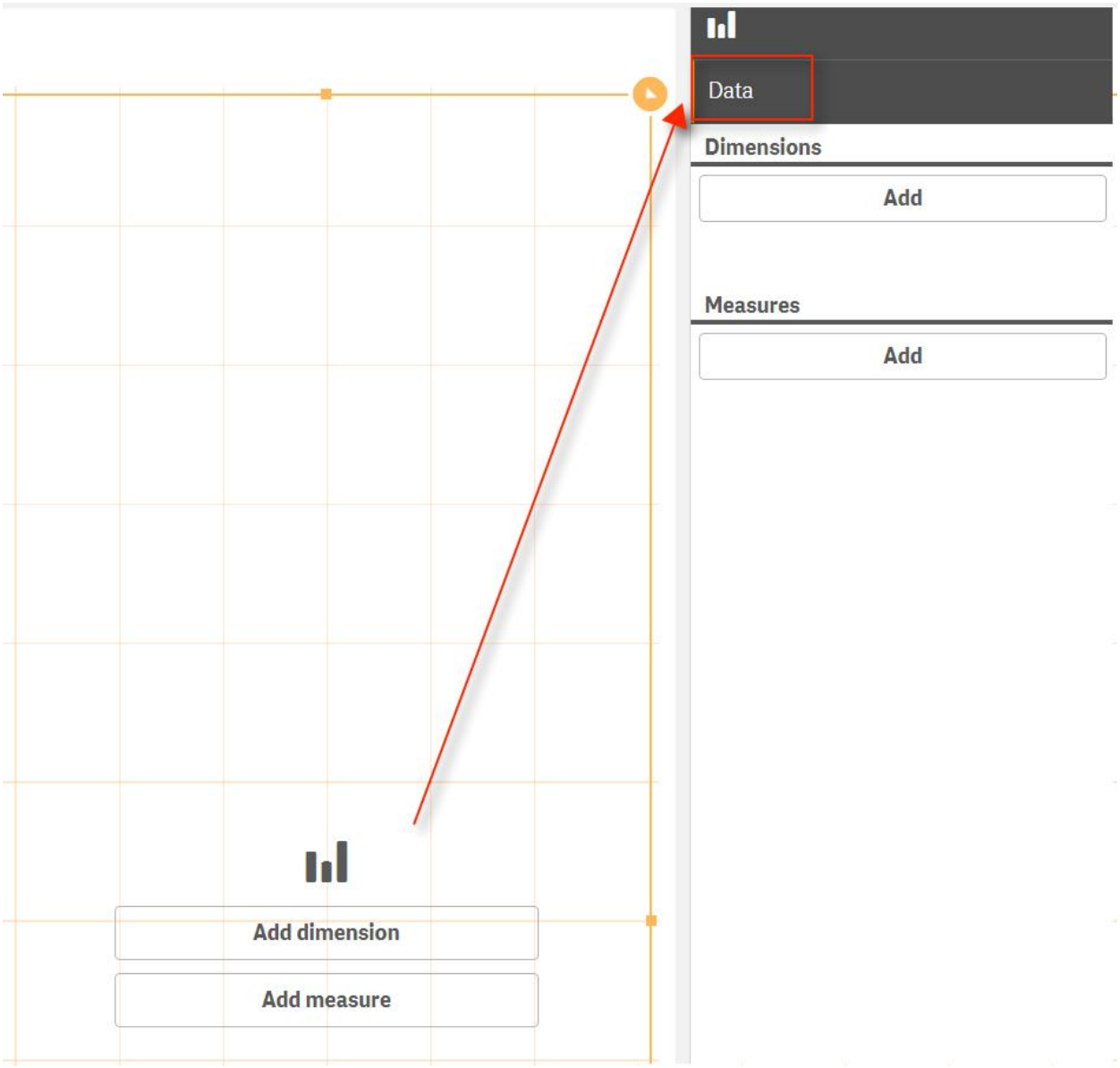

Create new measure
Expression:
Sum(Inventory)/Sum(ReorderPoint)
fx
Name:
Inventory Ratio
Cancel
Create

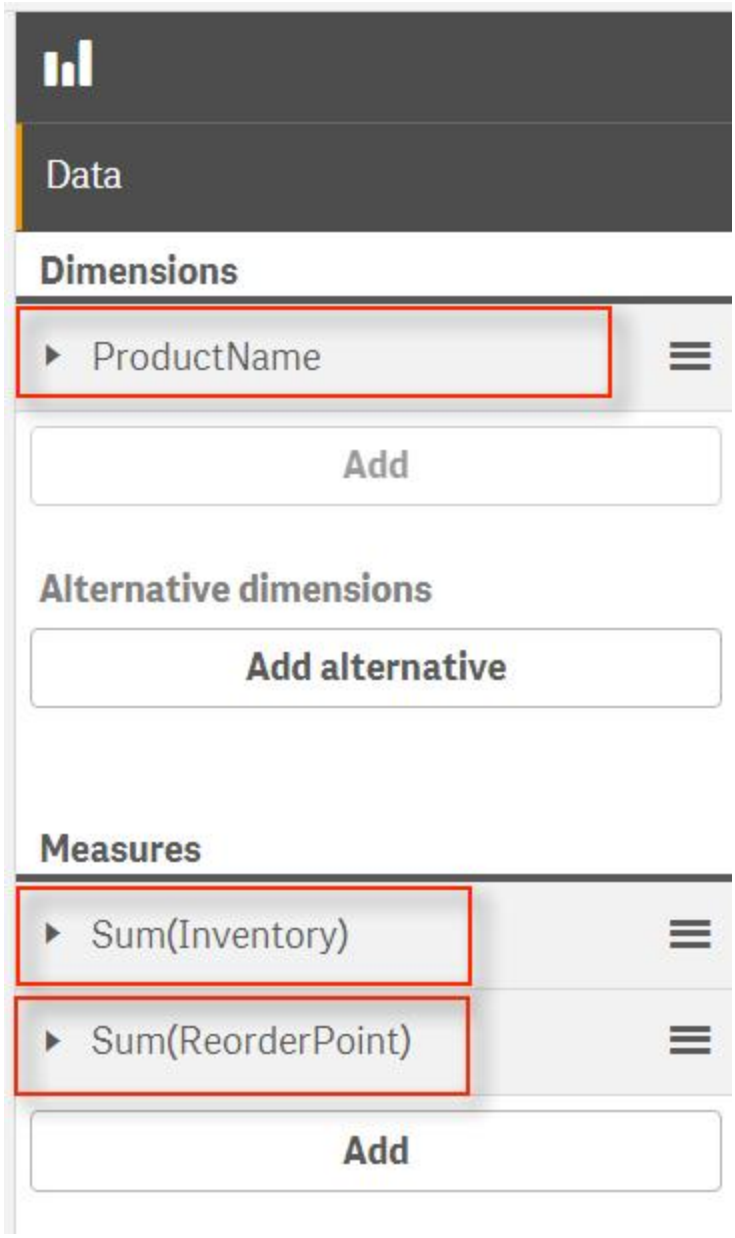

Charts
Search
Bar chart
Combo chart
Filter pane
Gauge
#1 KPI
Line chart
Map
Inventory Summary
Warehouse Name
Debur and Polish
Final Assembly
Finished Goods Storage
Frame Forming
Frame Welding
Metal Storage
Miscellaneous Storage
Paint
#1
Add measure

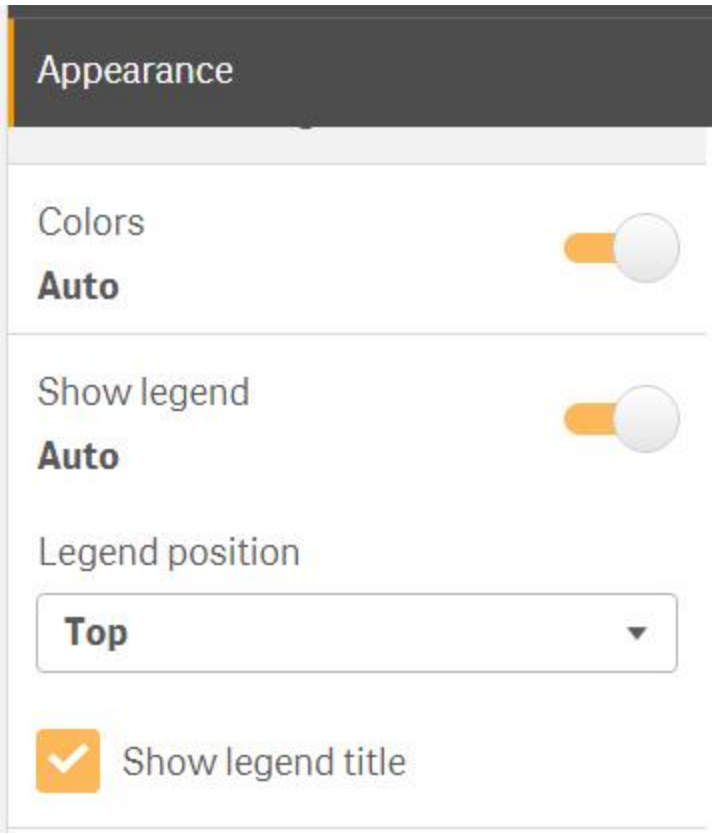

#1
Add measure
fx
Measures
Inventory Ratio
From a field
Inventory
ProductID
ProductName
ReorderFlag


WarehouseName
4 of 14
Inventory Summary
Warehouse Name
Frame Welding
Metal Storage
Miscellaneous Storage
Paint
Debur and Polish
Final Assembly
Finished Goods Storage
Frame Forming
Paint Shop
Paint Storage
Sheet Metal Racks
Specialized Paint
Subassembly
Tool Crib
Inventory Ratio
0.66

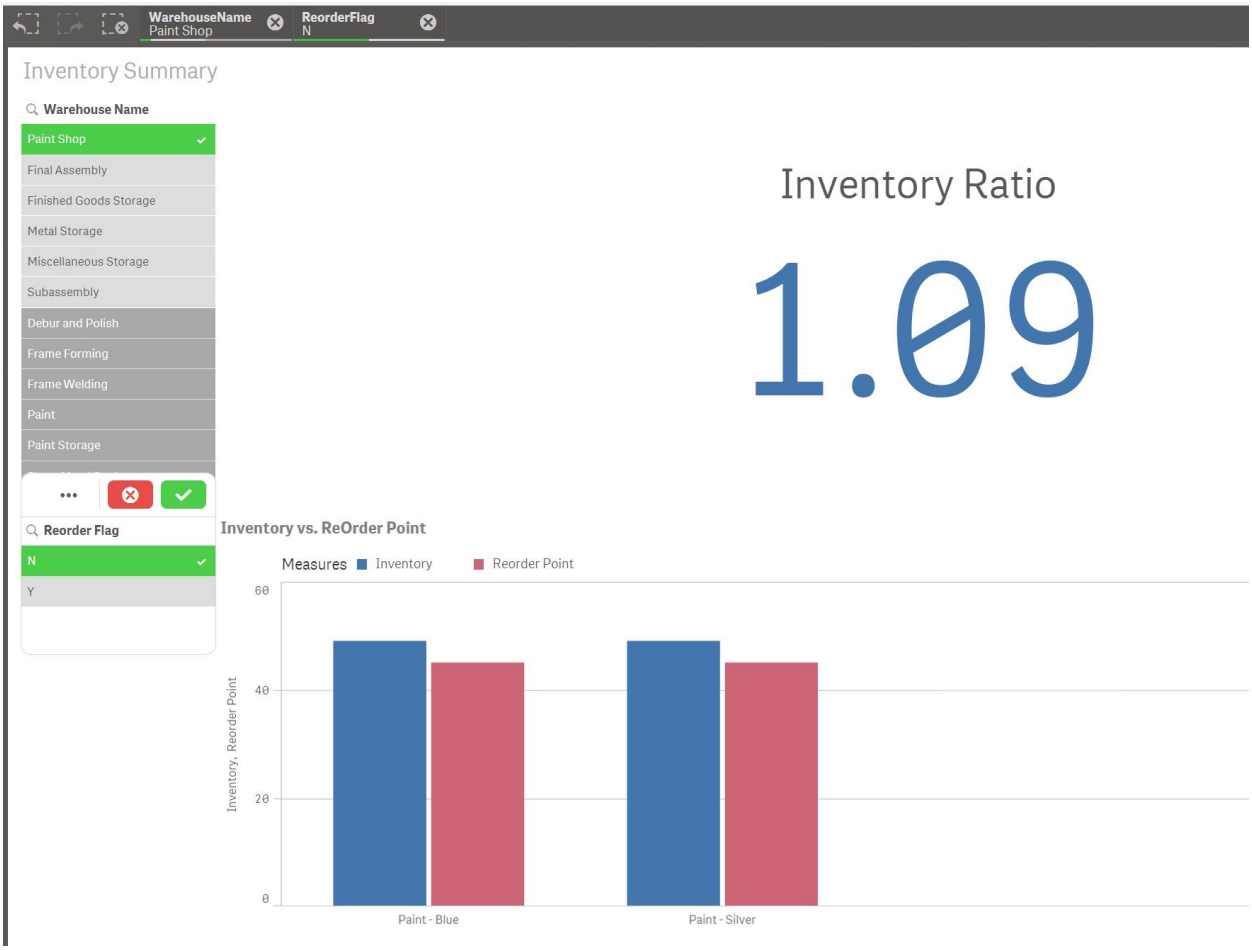

Charts
Search
Bar chart
Combo chart
Filter pane
Gauge
KPI
Line chart
Map
Pie chart
Pivot table
Scatter plot
Table
Text & image
Treemap
Inventory Summary
Warehouse Name
Inventory Ratio
0.66
Reorder Flag
Click to add title
Add dimension
Add measure

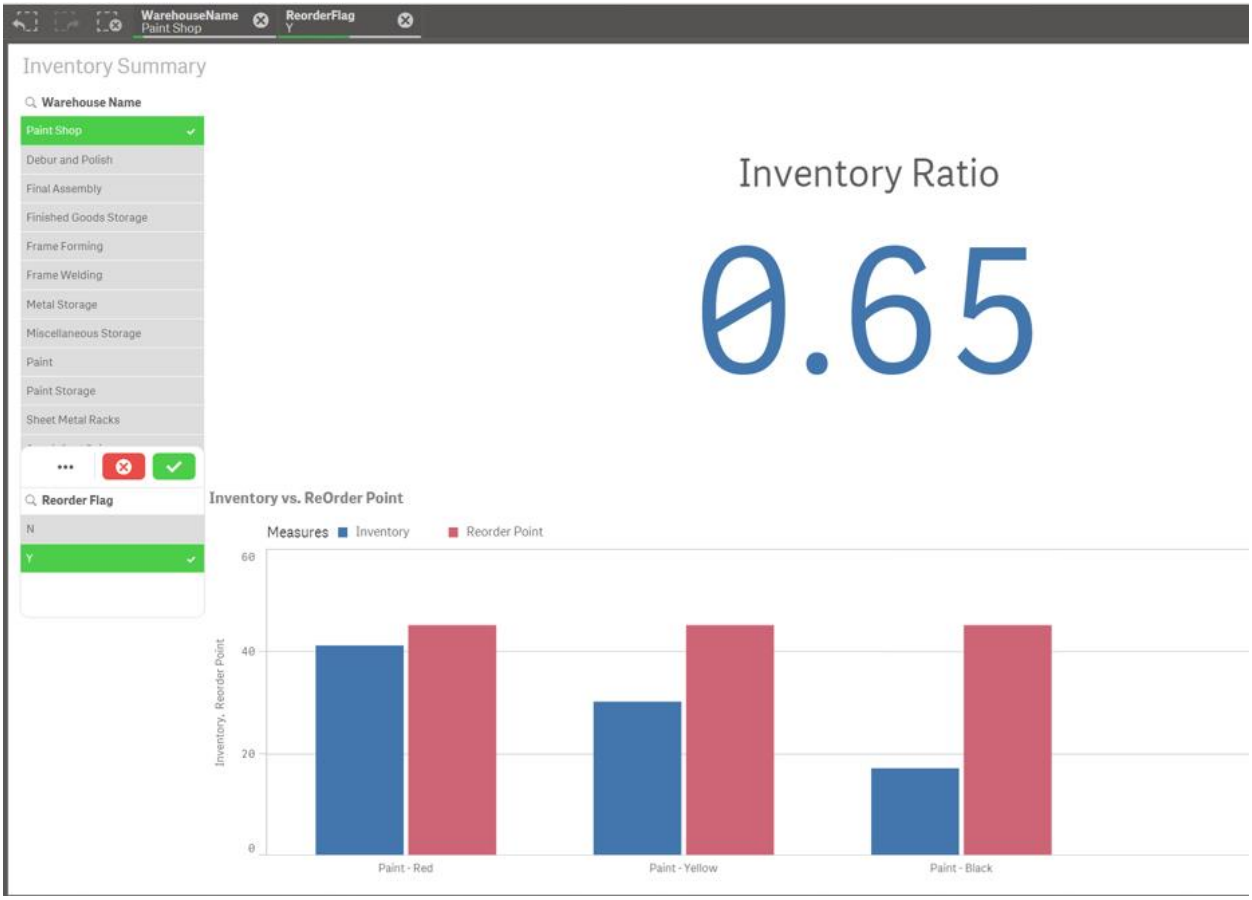

Data
Dimensions
Add
Measures
Add
Add dimension
Add measure


Data
Dimensions
ProductName
Add
Alternative dimensions
Add alternative
Measures
Sum(Inventory)
Sum(ReorderPoint)
Add

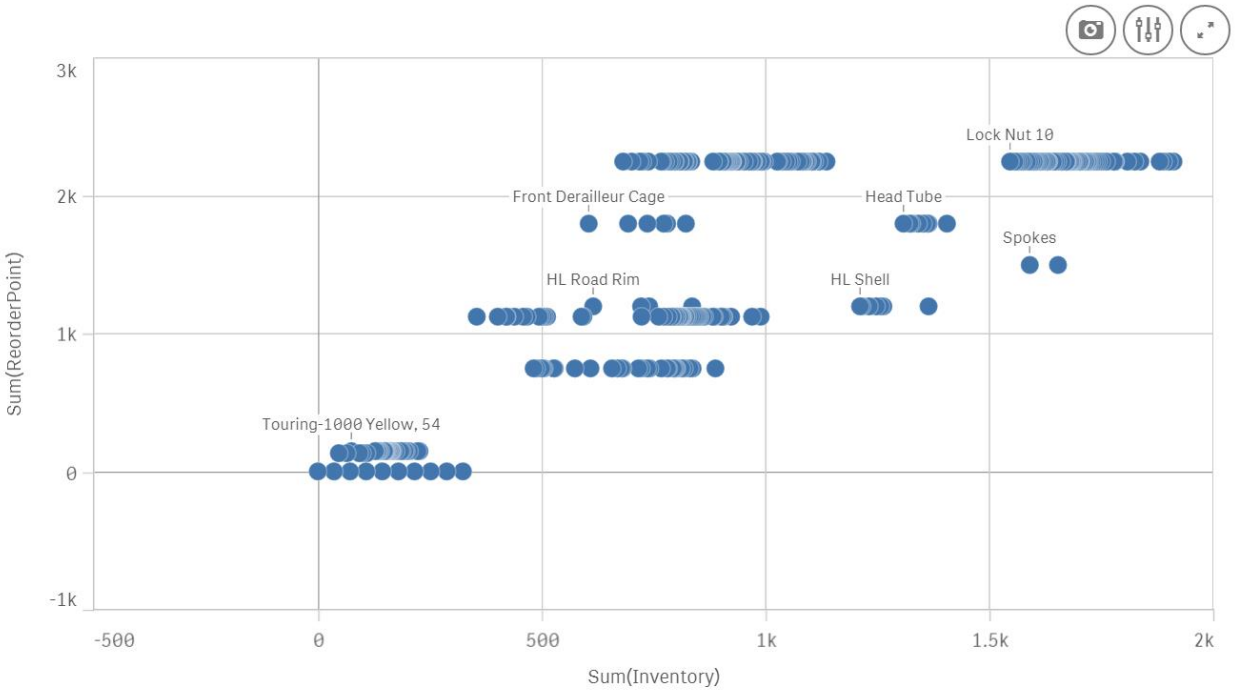

Appearance
Colors
Auto
Show legend
Auto
Legend position
Top
Show legend title

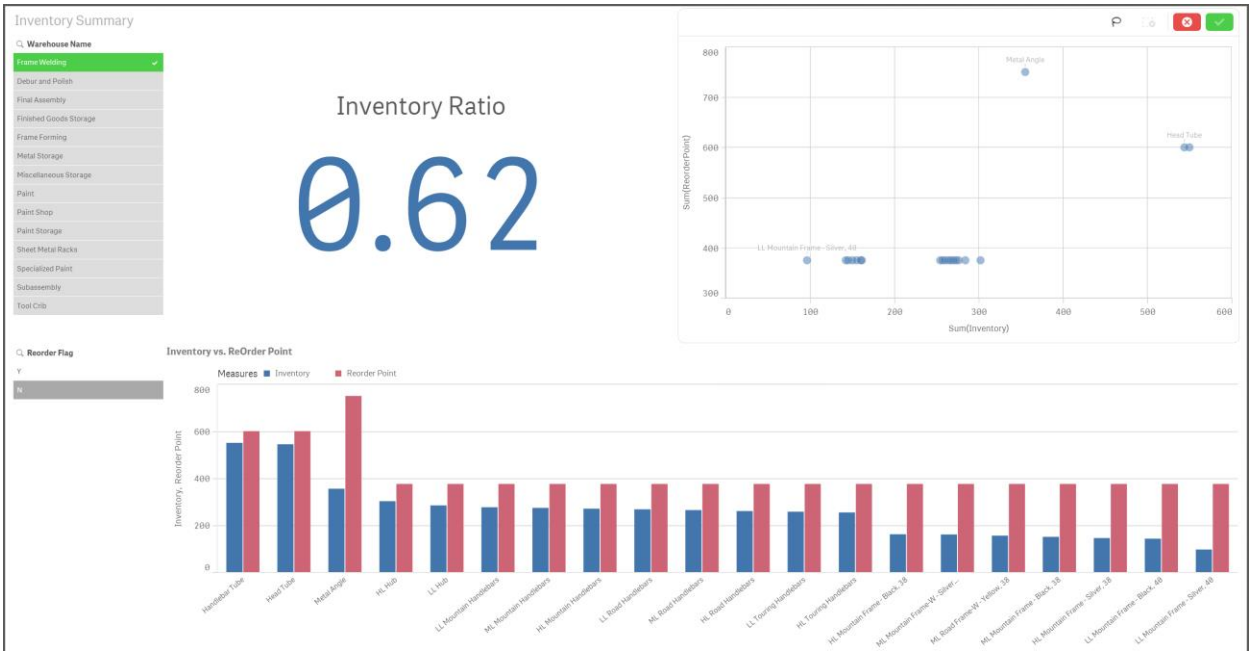

WarehouseName
Paint Shop
Warehouse Name
Paint Shop
Debur and Polish
Final Assembly
Finished Goods Storage
Frame Forming
Frame Welding
Metal Storage
Miscellaneous Storage
Paint
Paint Storage
Sheet Metal Racks
Specialized Paint
Subassembly
Reorder Flag
N
Y
Inventory Ratio
0.83
Inventory vs. ReOrder Point
Measures
Inventory
Reorder Point
60
40
20
0
Inventory, Reorder Point
Paint - Blue
Paint - Silver
Paint - Red
Paint - Yellow
Paint - Black

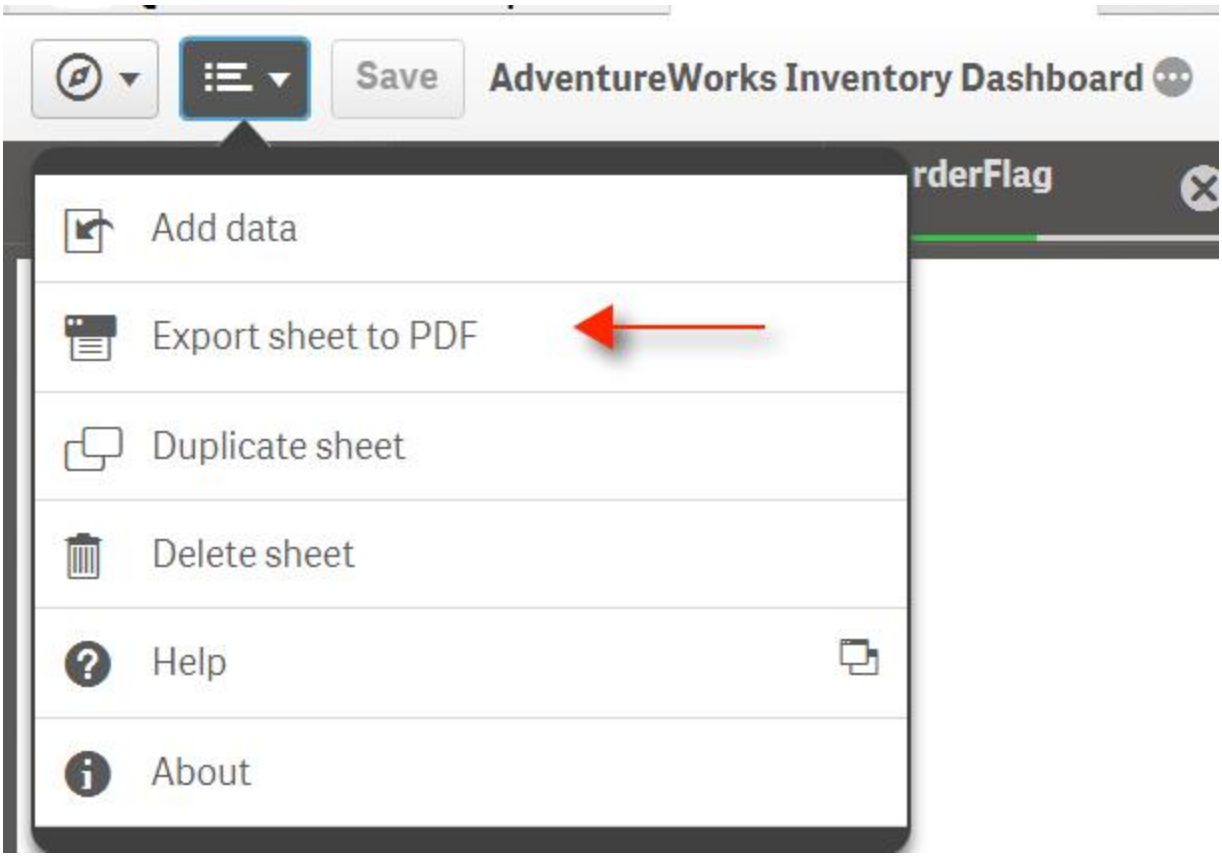

WarehouseName
Paint Shop
ReorderFlag
N
Inventory Summary
Warehouse Name
Paint Shop
Final Assembly
Finished Goods Storage
Metal Storage
Miscellaneous Storage
Subassembly
Debur and Polish
Frame Forming
Frame Welding
Paint
Paint Storage
Reorder Flag
N
Y
Inventory Ratio
1.09
Inventory vs. ReOrder Point
Measures
Inventory
Reorder Point
60
40
20
0
Inventory, Reorder Point
Paint - Blue
Paint - Silver

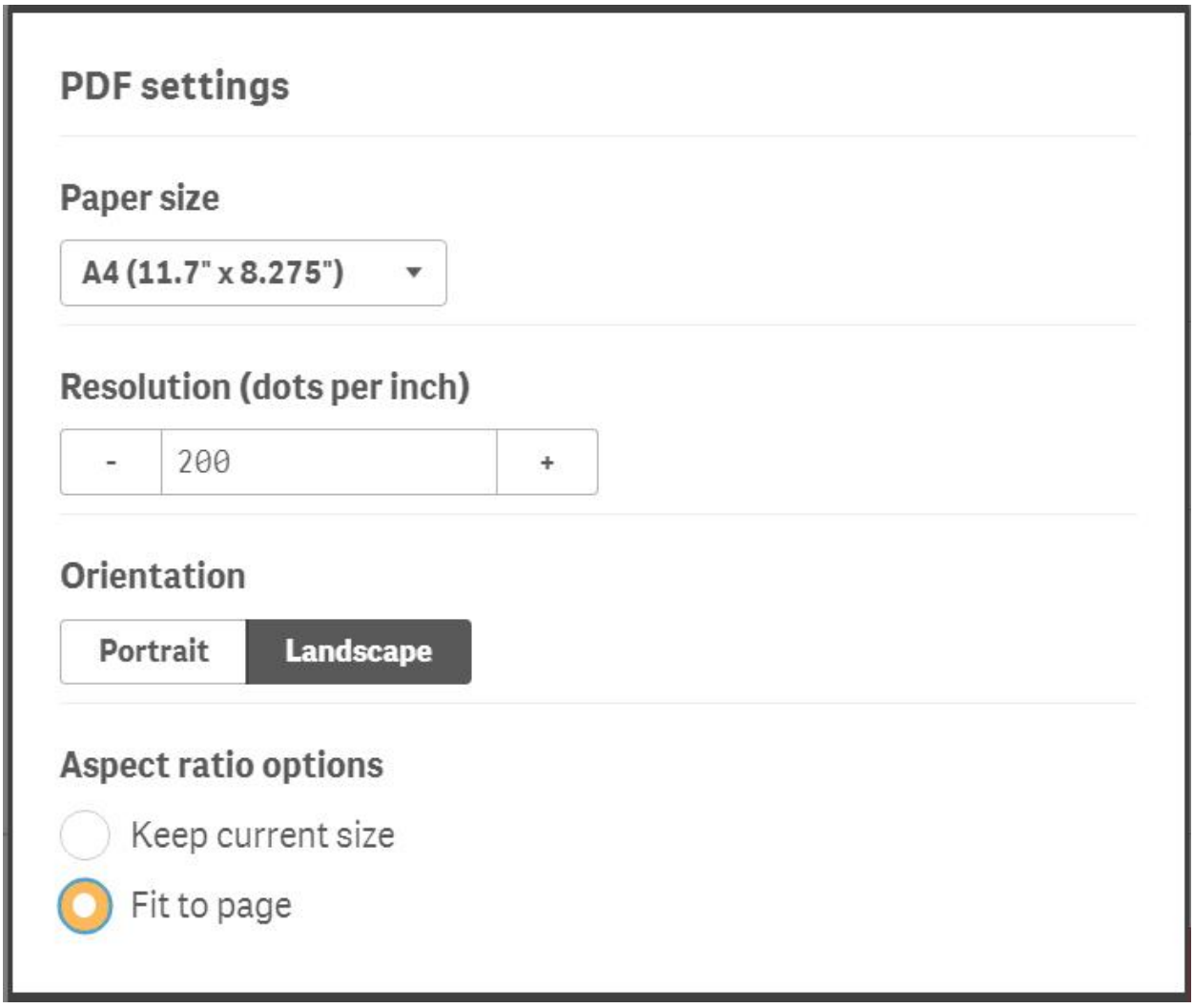

WarehouseName
Paint Shop
ReorderFlag
Y
Inventory Summary
Warehouse Name
Paint Shop
Debur and Polish
Final Assembly
Finished Goods Storage
Frame Forming
Frame Welding
Metal Storage
Miscellaneous Storage
Paint
Paint Storage
Sheet Metal Racks
Reorder Flag
N
Y
Inventory Ratio
0.65
Inventory vs. ReOrder Point
Measures
Inventory
Reorder Point
60
40
20
0
Inventory, Reorder Point
Paint - Red
Paint - Yellow
Paint - Black


Charts
Search
Bar chart
Combo chart
Filter pane
Gauge
KPI
Line chart
Map
Pie chart
Pivot table
Scatter plot
Table
Text & image
Inventory Summary
Warehouse Name
Inventory Ratio
0.66
Click to add title
Add dimension
Add measure
Add measure


3k
2k
1k
0
-1k
-500
0
500
1k
1.5k
2k
Sum(ReorderPoint)
Sum(Inventory)
Lock Nut 10
Front Derailleur Cage
Head Tube
Spokes
HL Road Rim
HL Shell
Touring-1000 Yellow, 54


Inventory Summary
Warehouse Name
Frame Welding
Debur and Polish
Final Assembly
Finished Goods Storage
Frame Forming
Metal Storage
Miscellaneous Storage
Paint
Paint Shop
Paint Storage
Sheet Metal Racks
Specialized Paint
Subassembly
Tool Crib
Inventory Ratio
0.62
Reorder Flag
Y
N
Inventory vs. ReOrder Point
Measures
Inventory
Reorder Point
Inventory, Reorder Point
Sum(ReorderPoint)
Sum(Inventory)
Metal Angle
Head Tube

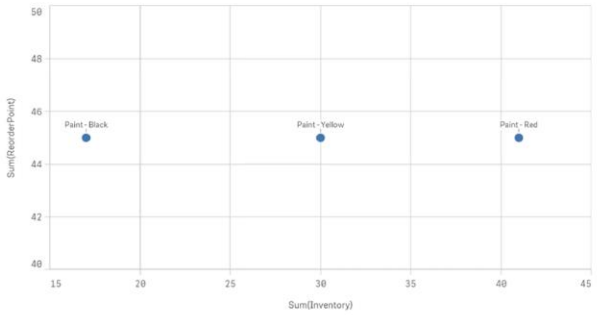

Save
AdventureWorks Inventory Dashboard
rderFlag
Add data
Export sheet to PDF
Duplicate sheet
Delete sheet
Help
About

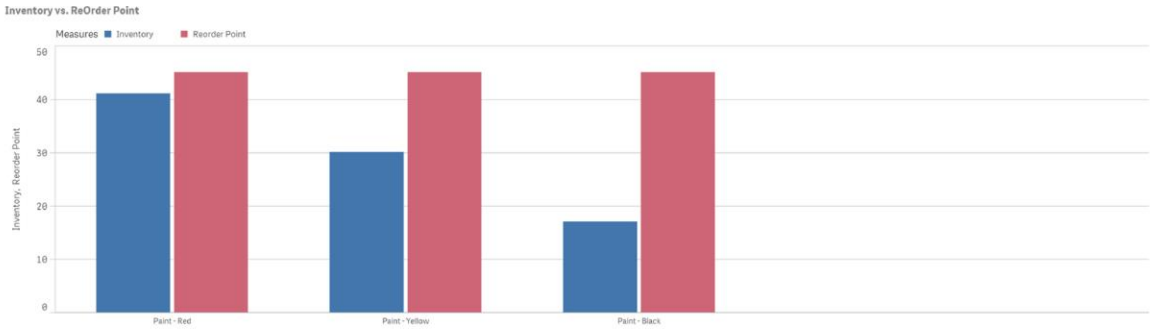

PDF settings
Paper size
A4 (11.7" x 8.275")
Resolution (dots per inch)
-
200
+
Orientation
Portrait
Landscape
Aspect ratio options
Keep current size
Fit to page

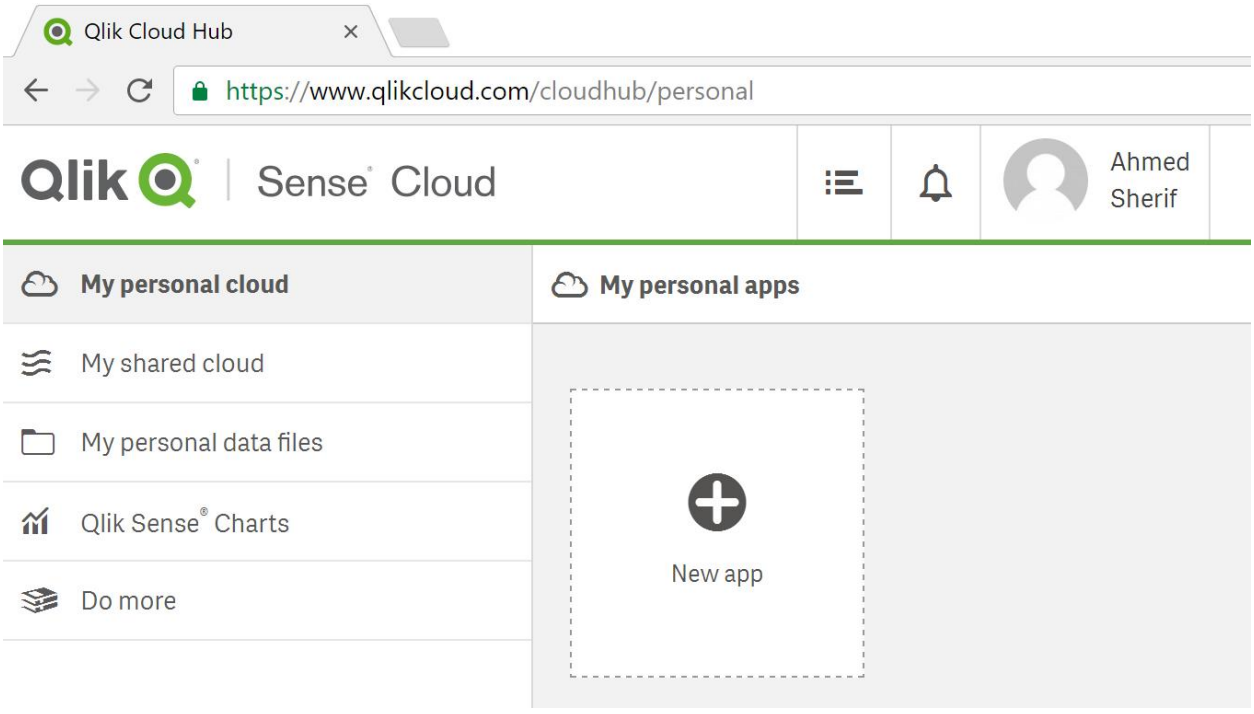

Click here to download your PDF file.
Cancel
Export

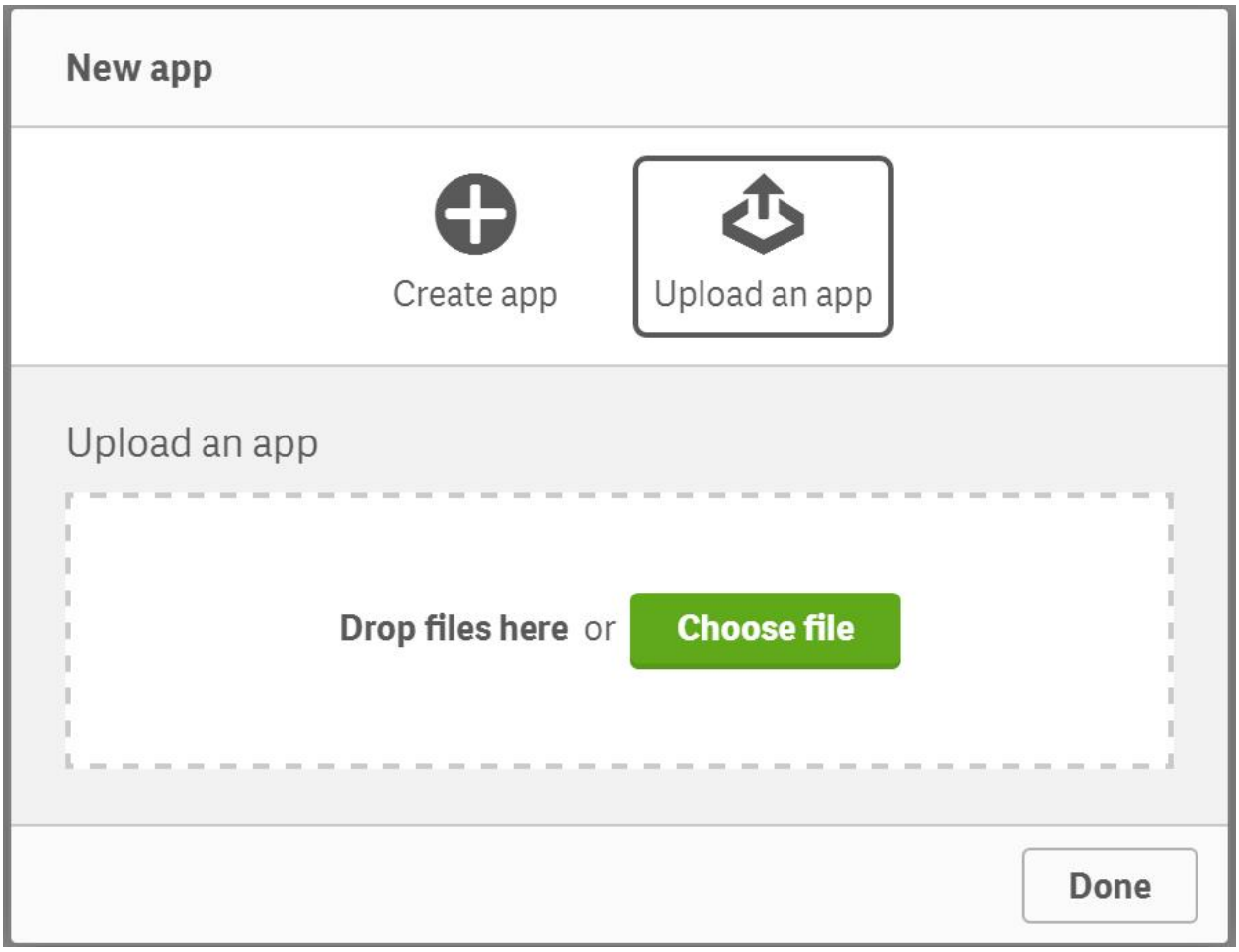
Inventory Ratio

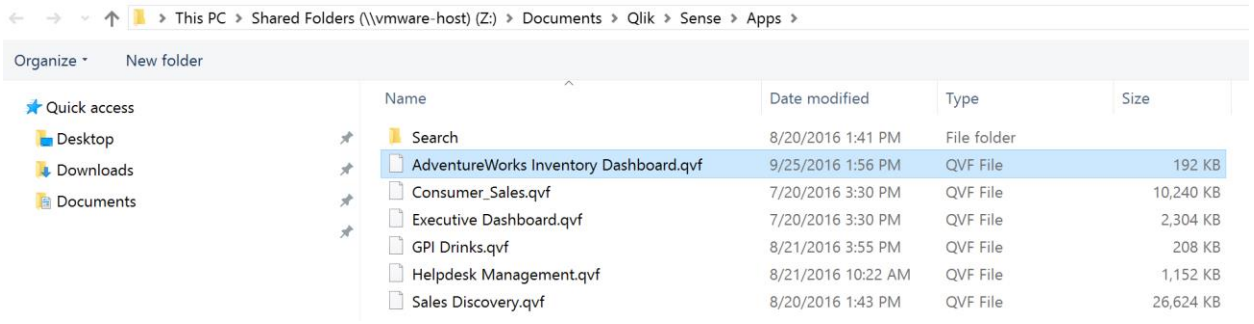
0.65

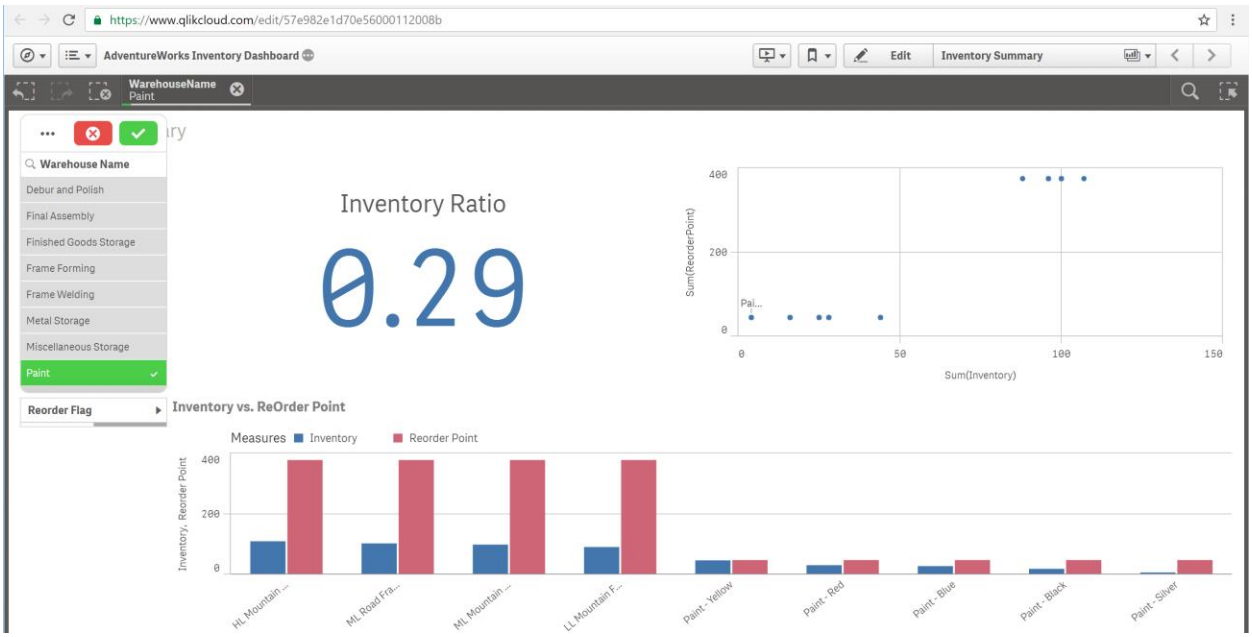


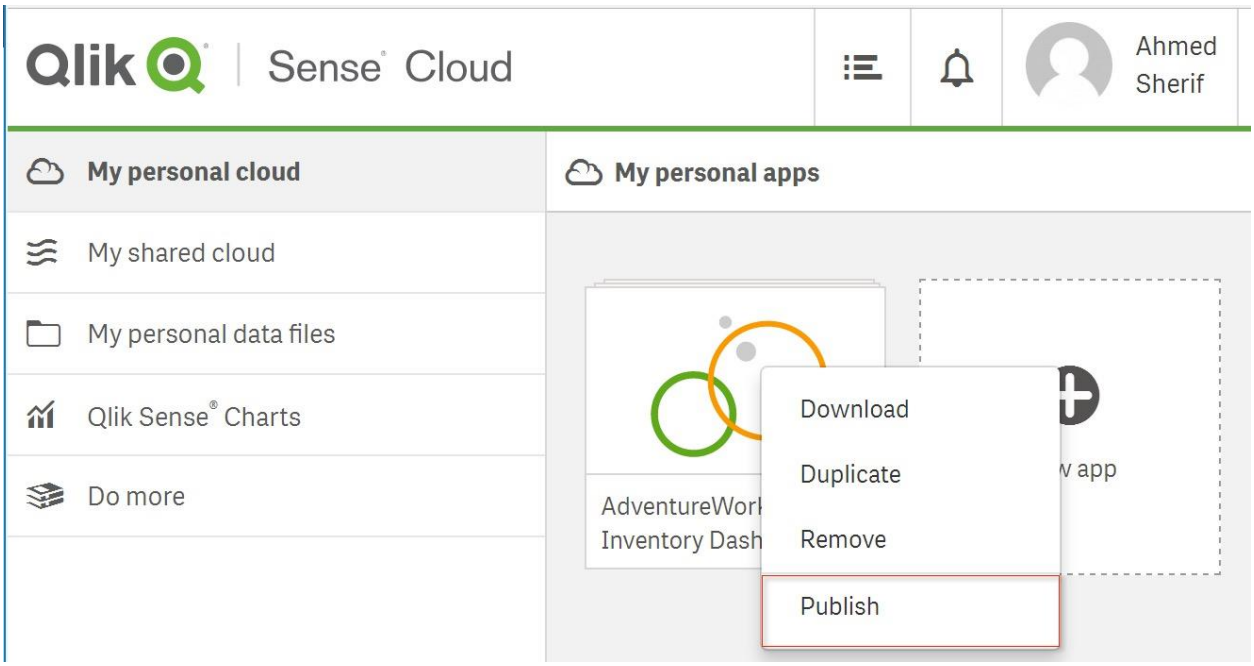


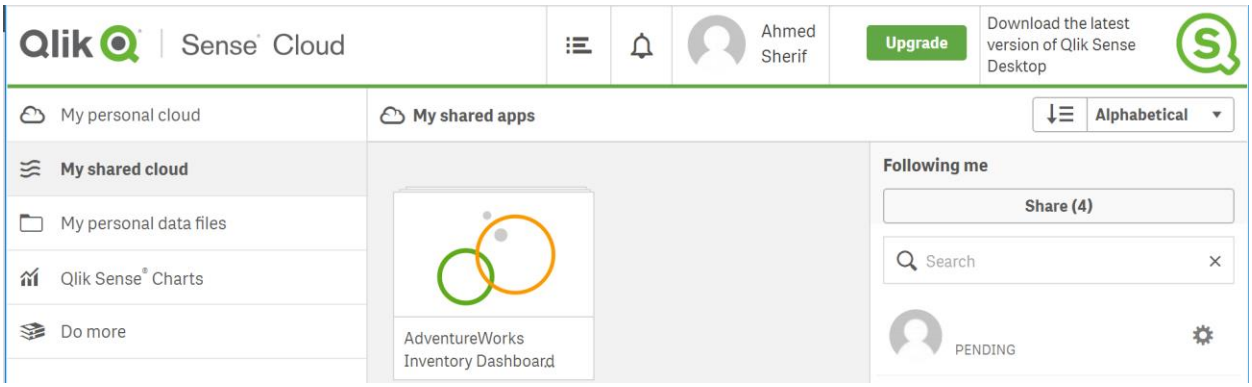


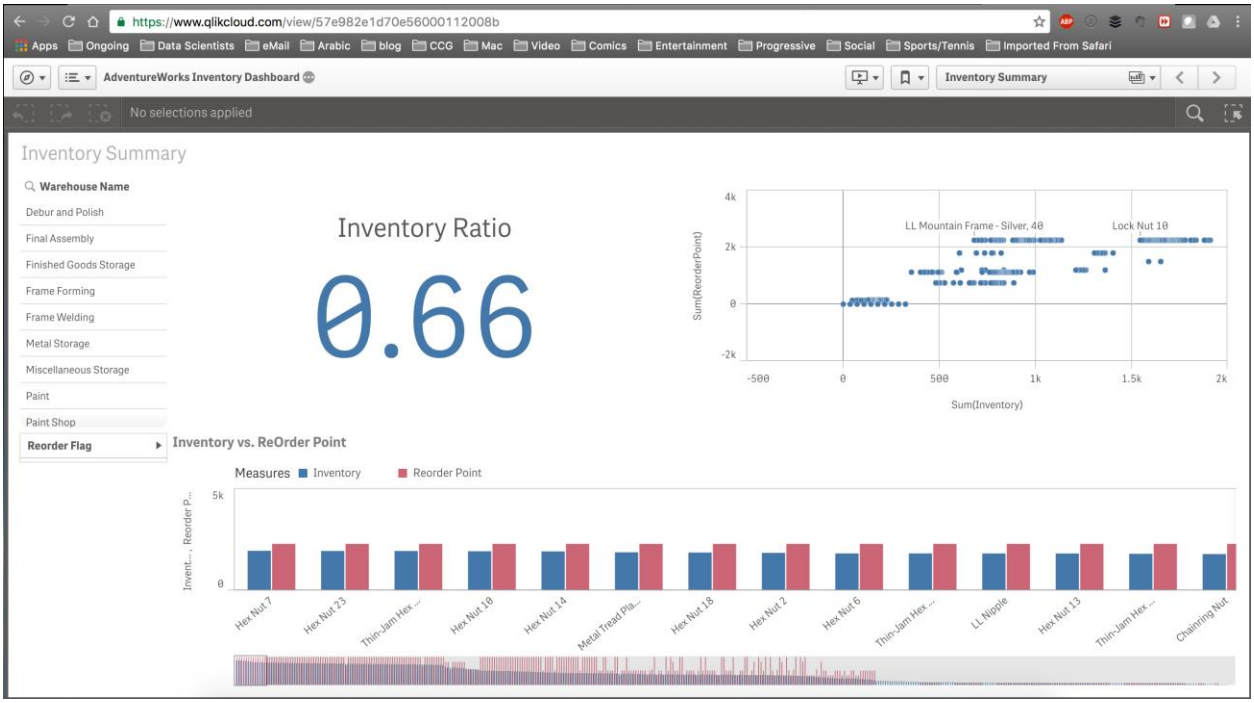

New app
Create app
Upload an app
Upload an app
Drop files here or
Choose file
Done

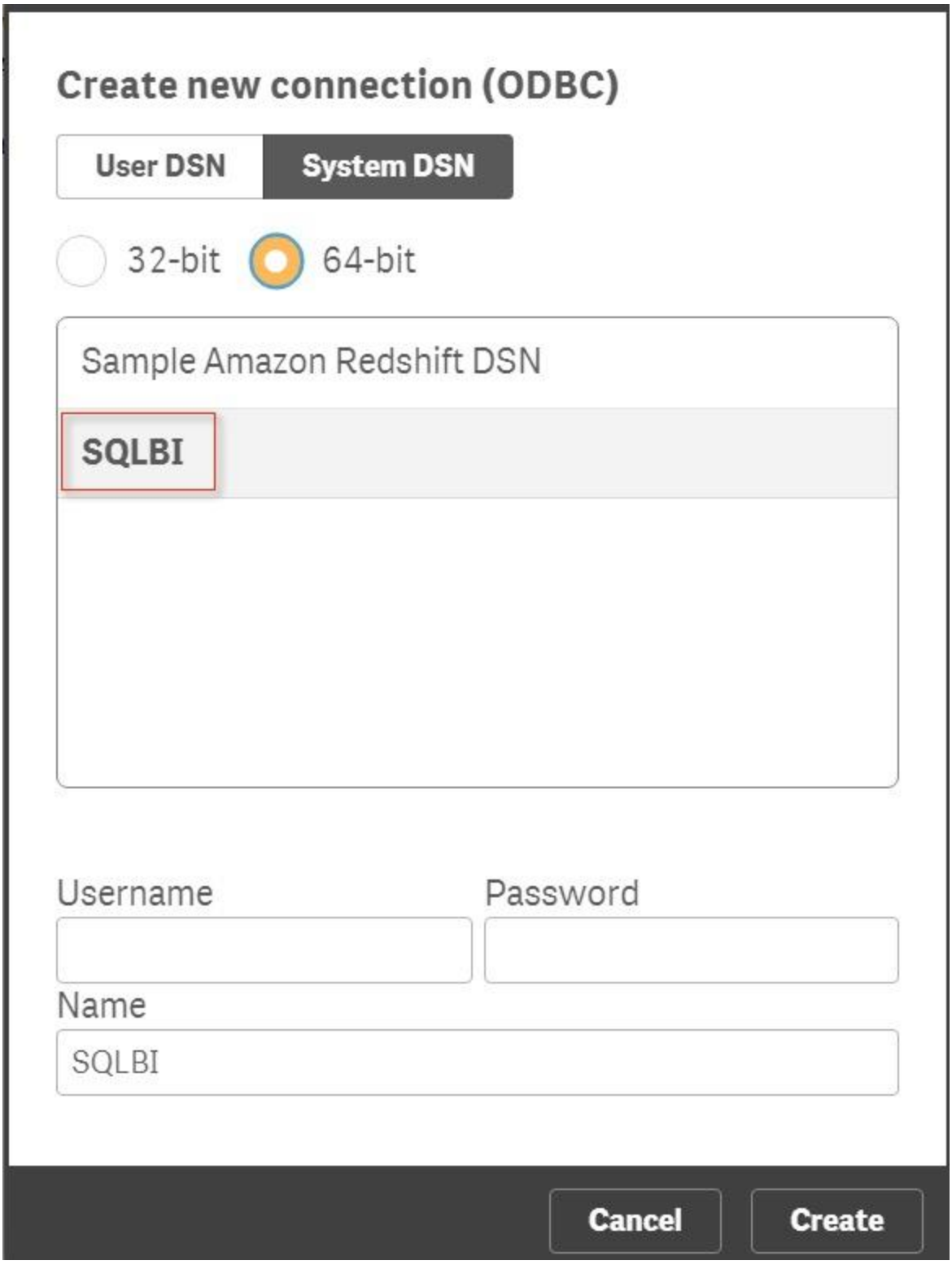

This PC › Shared Folders (\\vmware-host) (Z:) › Documents › Qlik › Sense › Apps ›
Organize
New folder
Quick access
Desktop
Downloads
Documents
Name
Date modified
Type
Size
Search 8/20/2016 1:41 PM File folder
AdventureWorks Inventory Dashboard.qvf 9/25/2016 1:56 PM QVF File 192 KB
Consumer_Sales.qvf 7/20/2016 3:30 PM QVF File 10,240 KB
Executive Dashboard.qvf 7/20/2016 3:30 PM QVF File 2,304 KB
GPI Drinks.qvf 8/21/2016 3:55 PM QVF File 208 KB
Helpdesk Management.qvf 8/21/2016 10:22 AM QVF File 1,152 KB
Sales Discovery.qvf 8/20/2016 1:43 PM QVF File 26,624 KB

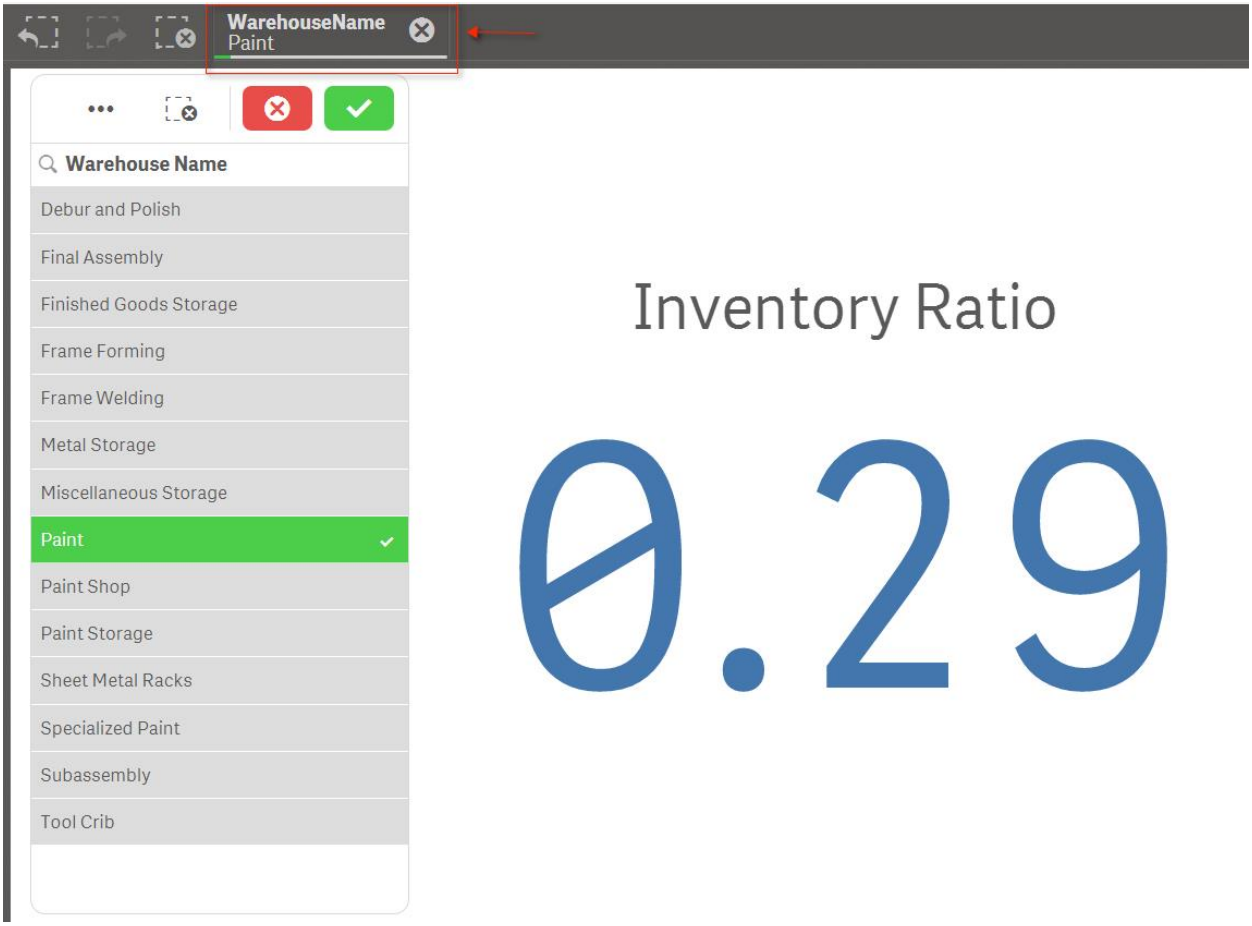

https://www.qlikcloud.com/edit/57e982e1d70e56000112008b
AdventureWorks Inventory Dashboard
Edit
Inventory Summary
WarehouseName
Paint
Warehouse Name
Debur and Polish
Final Assembly
Finished Goods Storage
Frame Forming
Frame Welding
Metal Storage
Miscellaneous Storage
Paint
Reorder Flag
Inventory Ratio
0.29
Sum(ReorderPoint)
Sum(Inventory)
Inventory vs. ReOrder Point
Measures
Inventory
Reorder Point
Inventory, Reorder Point
HL Mountain ...
ML Road Fra...
ML Mountain ...
LL Mountain F...
Paint - Yellow
Paint - Red
Paint - Blue
Paint - Black
Paint - Silver


Qlik Sense Cloud
Ahmed Sherif
My personal cloud
My shared cloud
My personal data files
Qlik Sense® Charts
Do more
My personal apps
Download
Duplicate
Remove
Publish
v app


Qlik Sense Cloud
Ahmed Sherif
Upgrade
Download the latest version of Qlik Sense Desktop
My personal cloud
My shared cloud
My personal data files
Qlik Sense® Charts
Do more
My shared apps
Alphabetical
AdventureWorks Inventory Dashboard
Following me
Share (4)
Search
PENDING


https://www.qlikcloud.com/view/57e982e1d70e56000112008b
AdventureWorks Inventory Dashboard
Inventory Summary
No selections applied
Inventory Summary
Warehouse Name
Debur and Polish
Final Assembly
Finished Goods Storage
Frame Forming
Frame Welding
Metal Storage
Miscellaneous Storage
Paint
Paint Shop
Reorder Flag
Inventory Ratio
0.66
LL Mountain Frame - Silver, 40
Lock Nut 10
Sum(ReorderPoint)
Sum(Inventory)
Inventory vs. ReOrder Point
Measures
Inventory
Reorder Point
Hex Nut 7
Hex Nut 23
Thin Jam Hex ...
Hex Nut 10
Hex Nut 14
Metal Tread Pla...
Hex Nut 18
Hex Nut 2
Hex Nut 6
Thin Jam Hex ...
LL Nipple
Hex Nut 13
Thin Jam Hex ...
Chainring Nut


Create new connection (ODBC)
User DSN
System DSN
32-bit
64-bit
Sample Amazon Redshift DSN
SQLBI
Username
Password
Name
SQLBI
Cancel
Create

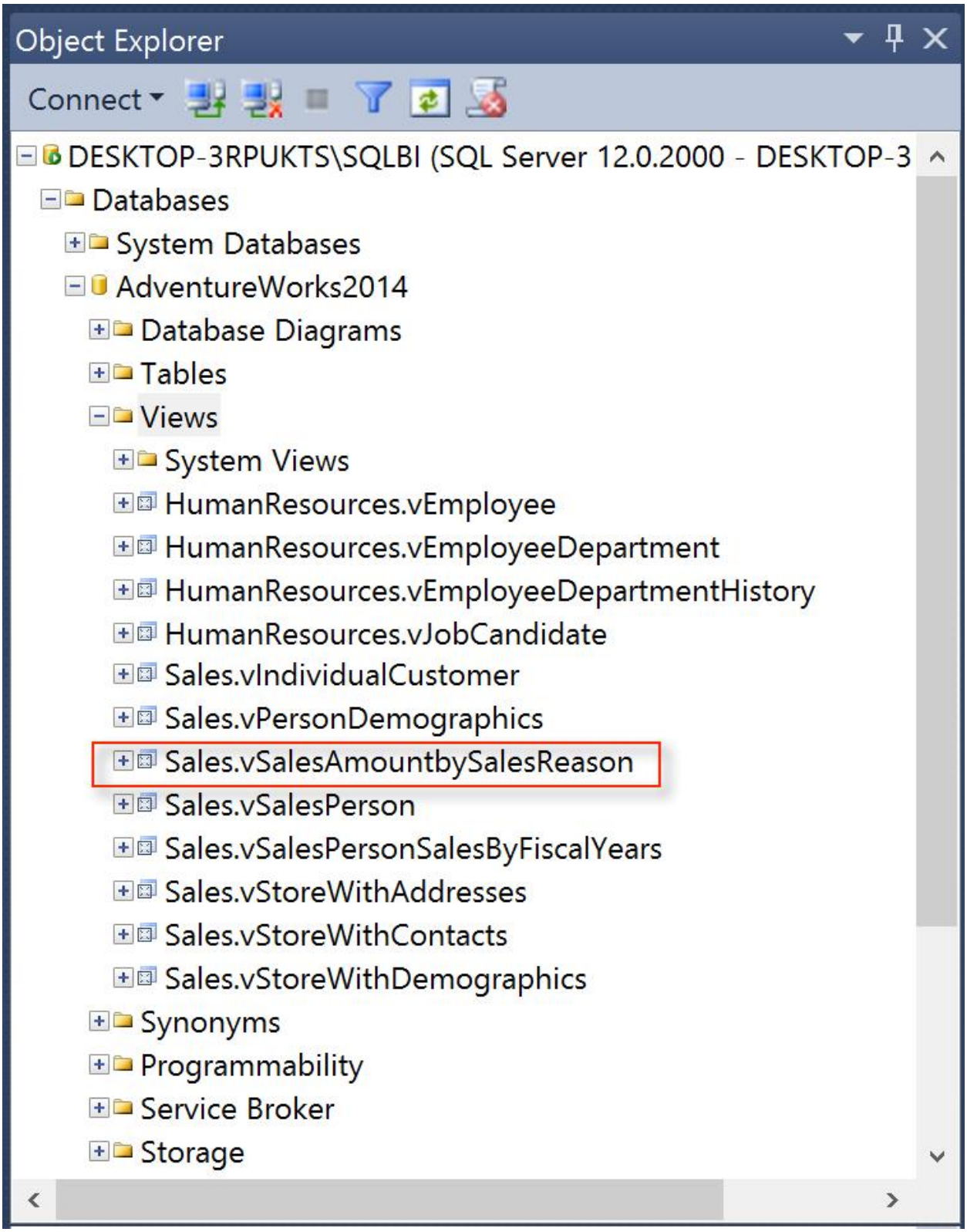

WarehouseName
Paint
Warehouse Name
Debur and Polish
Final Assembly
Finished Goods Storage
Frame Forming
Frame Welding
Metal Storage
Miscellaneous Storage
Paint
Paint Shop
Paint Storage
Sheet Metal Racks
Specialized Paint
Subassembly
Tool Crib
Inventory Ratio
0.29

Results Messages

	Sale Reason Name	Sale Reason Type	Sales Amount	Tax	Freight Amount
1	Price	Other	10975842.56	878087.74	274380.29
2	On Promotion	Promotion	6361829.95	508951.68	159044.56
3	Manufacturer	Other	5998122.10	479847.59	149957.80
4	Quality	Other	5549896.77	443989.26	138752.46
5	Review	Other	1694882.19	135589.55	42374.17
6	Other	Other	248483.34	19880.75	6211.85
7	Television Advertisement	Marketing	27475.82	2198.68	687.24

Results Messages

	Sale Reason Name	Sale Reason Type	Sales Amount	Tax	Freight Amount
1	Price	Other	10975842.56	878087.74	274380.29
2	On Promotion	Promotion	6361829.95	508951.68	159044.56
3	Manufacturer	Other	5998122.10	479847.59	149957.80
4	Quality	Other	5549896.77	443989.26	138752.46
5	Review	Other	1694882.19	135589.55	42374.17
6	Television Advertisement	Marketing	27475.82	2198.68	687.24


Object Explorer
Connect
DESKTOP-3RPUKTS\SQLBI (SQL Server 12.0.2000 - DESKTOP-3
Databases
System Databases
AdventureWorks2014
Database Diagrams
Tables
Views
System Views
HumanResources.vEmployee
HumanResources.vEmployeeDepartment
HumanResources.vEmployeeDepartmentHistory
HumanResources.vJobCandidate
Sales.vIndividualCustomer
Sales.vPersonDemographics
Sales.vSalesAmountbySalesReason
Sales.vSalesPerson
Sales.vSalesPersonSalesByFiscalYears
Sales.vStoreWithAddresses
Sales.vStoreWithContacts
Sales.vStoreWithDemographics
Synonyms
Programmability
Service Broker
Storage

```
SELECT *
FROM
AdventureWorks2014.Sales.vSalesAmountbySalesReason
```

100 %

Results | Messages

	Sale Reason Name	Sale Reason Type	Sales Amount	Tax	Freight Amount
1	Television Advertisement	Marketing	27475.82	2198.68	687.24
2	Manufacturer	Other	5998122.10	479847.59	149957.80
3	Price	Other	10975842.56	878087.74	274380.29
4	Quality	Other	5549896.77	443989.26	138752.46
5	Review	Other	1694882.19	135589.55	42374.17
6	On Promotion	Promotion	6361829.95	508951.68	159044.56

```
SELECT
      [CountryRegionCode]
      ,[PercentBikeRides]
  FROM [AdventureWorks2014].[dbo].[CountryRegionBikes]
```

100 %

Results | Messages

	CountryRegionCode	PercentBikeRides
1	AS	32
2	AU	34
3	CA	27
4	DE	23
5	FM	18
6	FR	38
7	GB	35
8	MH	25
9	MP	60
10	PW	45
11	US	22
12	VI	33

```
SELECT
      CountryRegion.Name as 'Country Name'
      ,CountryRegionBikes.[PercentBikeRides] as 'Percent Bike Riders'
      ,RANK() OVER (ORDER BY [PercentBikeRides] DESC) AS 'Ranking'
  FROM [AdventureWorks2014].[dbo].[CountryRegionBikes] as CountryRegionBikes
  inner join [AdventureWorks2014].[Person].[CountryRegion] as CountryRegion on
  CountryRegion.CountryRegionCode = CountryRegionBikes.CountryRegionCode
  order by 3 asc
```

100 %

Results | Messages

	Country Name	Percent Bike Riders	Ranking
1	Northern Mariana Islands	60	1
2	Palau	45	2
3	France	38	3
4	United Kingdom	35	4
5	Australia	34	5
6	Virgin Islands, U.S.	33	6
7	American Samoa	32	7
8	Canada	27	8
9	Marshall Islands	25	9
10	Germany	23	10
11	United States	22	11
12	Micronesia	18	12

```
SELECT
      CountryRegion.Name as 'Country Name'
      ,CountryRegionBikes.[PercentBikeRides] as 'Percent Bike Riders'
      ,RANK() OVER (ORDER BY [PercentBikeRides] DESC) AS 'Ranking'
  FROM [AdventureWorks2014].[dbo].[CountryRegionBikes] as CountryRegionBikes
  inner join [AdventureWorks2014].[Person].[CountryRegion] as CountryRegion on
  CountryRegion.CountryRegionCode = CountryRegionBikes.CountryRegionCode
  order by 1 asc
```

100 %

Results | Messages

	Country Name	Percent Bike Riders	Ranking
1	American Samoa	32	7
2	Australia	34	5
3	Canada	27	8
4	France	38	3
5	Germany	23	10
6	Marshall Islands	25	9
7	Micronesia	18	12
8	Northern Mariana Islands	60	1
9	Palau	45	2
10	United Kingdom	35	4
11	United States	22	11
12	Virgin Islands, U.S.	33	6

```
SELECT *

  FROM [AdventureWorks2014].[dbo].[CountryRegionBikes]
```

100 %

Results | Messages

	Index	CountryRegionCode	PercentBikeRides
1	0	AS	32
2	1	AU	34
3	2	CA	27
4	3	DE	23
5	4	FM	18
6	5	FR	38
7	6	GB	35
8	7	MH	25
9	8	MP	60
10	9	PW	45
11	10	US	22
12	11	VI	33
13	12	AL	32

```sql
SELECT
      CountryRegion.Name as 'Country Name'
      ,CountryRegionBikes.[PercentBikeRides] as 'Percent Bike Riders'
      ,RANK() OVER (ORDER BY [PercentBikeRides] DESC) AS 'Ranking'
  FROM [AdventureWorks2014].[dbo].[CountryRegionBikes] as CountryRegionBikes
  inner join [AdventureWorks2014].[Person].[CountryRegion] as CountryRegion on
  CountryRegion.CountryRegionCode = CountryRegionBikes.CountryRegionCode
  order by 1 asc
```

100 %

Results | Messages

	Country Name	Percent Bike Riders	Ranking
1	Albania	32	7
2	American Samoa	32	7
3	Australia	34	5
4	Canada	27	9
5	France	38	3
6	Germany	23	11
7	Marshall Islands	25	10
8	Micronesia	18	13
9	Northern Mariana Islands	60	1
10	Palau	45	2
11	United Kingdom	35	4
12	United States	22	12
13	Virgin Islands, U.S.	33	6

```sql
SELECT
      CountryRegion.Name as 'Country Name'
      ,CountryRegionBikes.[PercentBikeRides] as 'Percent Bike Riders'
      ,RANK() OVER (ORDER BY [PercentBikeRides] DESC) AS 'Ranking'
      ,DENSE_RANK() OVER (ORDER BY [PercentBikeRides] DESC) AS 'Dense Ranking'
  FROM [AdventureWorks2014].[dbo].[CountryRegionBikes] as CountryRegionBikes
  inner join [AdventureWorks2014].[Person].[CountryRegion] as CountryRegion on
  CountryRegion.CountryRegionCode = CountryRegionBikes.CountryRegionCode
  order by 2 desc
```

100 %

Results | Messages

	Country Name	Percent Bike Riders	Ranking	Dense Ranking
1	Northern Mariana Islands	60	1	1
2	Palau	45	2	2
3	France	38	3	3
4	United Kingdom	35	4	4
5	Australia	34	5	5
6	Virgin Islands, U.S.	33	6	6
7	Albania	32	7	7
8	American Samoa	32	7	7
9	Canada	27	9	8
10	Marshall Islands	25	10	9
11	Germany	23	11	10
12	United States	22	12	11
13	Micronesia	18	13	12

```
SELECT
      CountryRegion.Name as 'Country Name'
      ,CountryRegionBikes.[PercentBikeRides] as 'Percent Bike Riders'
      ,RANK() OVER (ORDER BY [PercentBikeRides] DESC) AS 'Ranking'
      ,DENSE_RANK() OVER (ORDER BY [PercentBikeRides] DESC) AS 'Dense Ranking'
      ,ROW_NUMBER() OVER (ORDER BY [PercentBikeRides] DESC) AS 'Row Number'
  FROM [AdventureWorks2014].[dbo].[CountryRegionBikes] as CountryRegionBikes
  inner join [AdventureWorks2014].[Person].[CountryRegion] as CountryRegion on
  CountryRegion.CountryRegionCode = CountryRegionBikes.CountryRegionCode
  order by 2 desc
```

100 %

Results | Messages

	Country Name	Percent Bike Riders	Ranking	Dense Ranking	Row Number
1	Northern Mariana Islands	60	1	1	1
2	Palau	45	2	2	2
3	France	38	3	3	3
4	United Kingdom	35	4	4	4
5	Australia	34	5	5	5
6	Virgin Islands, U.S.	33	6	6	6
7	Albania	32	7	7	7
8	American Samoa	32	7	7	8
9	Canada	27	9	8	9
10	Marshall Islands	25	10	9	10
11	Germany	23	11	10	11
12	United States	22	12	11	12
13	Micronesia	18	13	12	13

100 %

Results | Messages

	FirstName	MiddleName	LastName	Email Promotion Count
1	Syed	E	Abbas	0
2	Kim	B	Abercrombie	2
3	Hazem	E	Abolrous	0
4	Pilar	G	Ackerman	0
5	Jay	G	Adams	0
6	François	P	Ajenstat	0
7	Amy	E	Alberts	1
8	Greg	F	Alderson	0
9	Sean	P	Alexander	2
10	Gary	E.	Altman	0
11	Nancy	A	Anderson	1
12	Pamela	O	Ansman-Wolfe	1
13	Zainal	T	Arifin	1
14	Dan	K	Bacon	0
15	Bryan	NULL	Baker	0

```
SELECT
 [FirstName]
 ,[MiddleName]
 ,[LastName]
 ,[EmailPromotion] as 'Email Promotion Count'
 ,sum([EmailPromotion]) OVER (order BY [LastName], [MiddleName], [FirstName] asc) as 'Running Sum'
 FROM [AdventureWorks2014].[HumanResources].[vEmployee]
 order by [LastName] asc
```

100 %

Results | Messages

	FirstName	MiddleName	LastName	Email Promotion Count	Running Sum
1	Syed	E	Abbas	0	0
2	Kim	B	Abercrombie	2	2
3	Hazem	E	Abolrous	0	2
4	Pilar	G	Ackerman	0	2
5	Jay	G	Adams	0	2
6	François	P	Ajenstat	0	2
7	Amy	E	Alberts	1	3
8	Greg	F	Alderson	0	3
9	Sean	P	Alexander	2	5
10	Gary	E.	Altman	0	5
11	Nancy	A	Anderson	1	6
12	Pamela	O	Ansman-Wolfe	1	7
13	Zainal	T	Arifin	1	8
14	Dan	K	Bacon	0	8
15	Bryan	NULL	Baker	0	8

```
SELECT
[WeekInYear] as 'Week'
,[DiscountCode] as 'Discount Code'
FROM [AdventureWorks2014].[dbo].[DiscountCodebyWeek]
```

100 %

Results | Messages

	Week	Discount Code
1	"01"	22
2	"02"	4
3	"03"	24
4	"04"	5
5	"05"	1
6	"06"	21
7	"07"	11
8	"08"	1
9	"09"	12
10	"10"	18
11	"11"	27
12	"12"	7
13	"13"	25

```
SELECT
[WeekInYear] as 'Week'
,[DiscountCode] as 'Discount Code'
,avg([DiscountCode]) over(order by [WeekInYear]) as 'Running Average'

  FROM [AdventureWorks2014].[dbo].[DiscountCodebyWeek]
```

100 %

Results | Messages

	Week	Discount Code	Running Average
1	"01"	22	22.000000
2	"02"	4	13.000000
3	"03"	24	16.666666
4	"04"	5	13.750000
5	"05"	1	11.200000
6	"06"	21	12.833333
7	"07"	11	12.571428
8	"08"	1	11.125000
9	"09"	12	11.222222
10	"10"	18	11.900000
11	"11"	27	13.272727
12	"12"	7	12.750000
13	"13"	25	13.692307
14	"14"	24	14.428571
15	"15"	20	14.800000

```
SELECT Top 10
    [CountryRegionName] as 'Country'
      ,[StateProvinceName] as 'State'
      ,count([BusinessEntityID]) as 'Unit Counts'

  FROM [AdventureWorks2014].[Sales].[vIndividualCustomer]
  Group by
    [CountryRegionName]
      ,[StateProvinceName]
```

100 %

Results | Messages

	Country	State	Unit Counts
1	Canada	Alberta	11
2	France	Pas de Calais	16
3	France	Charente-Maritime	21
4	France	Val d'Oise	30
5	United States	Montana	1
6	United States	Arizona	2
7	United States	Alabama	1
8	United States	Kentucky	1
9	United States	Illinois	6
10	United States	Georgia	3

Row Labels	Canada	France	United Kingdom
Alberta	11		
British Columbia	1559		
Charente-Maritime		21	
England			1913
Essonne		150	
Garonne (Haute)		30	
Hauts de Seine		195	
Loir et Cher		17	
Loiret		60	
Moselle		56	
Nord		284	
Ontario	1		
Pas de Calais		16	
Seine (Paris)		386	
Seine et Marne		60	
Seine Saint Denis		285	
Somme		22	
Val de Marne		30	
Val d'Oise		30	
Yveline		168	

```sql
SELECT
[StateProvinceName] as 'State'
,case when [CountryRegionName] = 'Canada' then count([BusinessEntityID]) else 0 end as 'Canada'
,case when [CountryRegionName] = 'France' then count([BusinessEntityID]) else 0 end as 'France'
,case when [CountryRegionName] = 'United Kingdom' then count([BusinessEntityID]) else 0 end as 'United Kingdom'


FROM [AdventureWorks2014].[Sales].[vIndividualCustomer]
Group by
[CountryRegionName]
,[StateProvinceName]
Order by 1 asc;
```

100 %

Results | Messages

	State	Canada	France	United Kingdom
1	Alabama	0	0	0
2	Alberta	11	0	0
3	Arizona	0	0	0
4	Bayern	0	0	0
5	Brandenburg	0	0	0
6	British Columbia	1559	0	0
7	California	0	0	0
8	Charente-Maritime	0	21	0
9	England	0	0	1913
10	Essonne	0	150	0

```sql
SELECT
[StateProvinceName] as 'State'
,case when [CountryRegionName] = 'Canada' then count([BusinessEntityID]) else 0 end as 'Canada'
,case when [CountryRegionName] = 'France' then count([BusinessEntityID]) else 0 end as 'France'
,case when [CountryRegionName] = 'United Kingdom' then count([BusinessEntityID]) else 0 end as 'United Kingdom


FROM [AdventureWorks2014].[Sales].[vIndividualCustomer]
where [CountryRegionName] IN ('Canada', 'France', 'United Kingdom')
Group by
[CountryRegionName]
,[StateProvinceName]
Order by 1 asc;
```

100 %

Results | Messages

	State	Canada	France	United Kingdom
1	Alberta	11	0	0
2	British Columbia	1559	0	0
3	Charente-Maritime	0	21	0
4	England	0	0	1913
5	Essonne	0	150	0
6	Garonne (Haute)	0	30	0
7	Hauts de Seine	0	195	0
8	Loir et Cher	0	17	0
9	Loiret	0	60	0
10	Moselle	0	56	0
11	Nord	0	284	0
12	Ontario	1	0	0
13	Pas de Calais	0	16	0
14	Seine (Paris)	0	386	0
15	Seine et Marne	0	60	0
16	Seine Saint Denis	0	285	0
17	Somme	0	22	0
18	Val de Marne	0	30	0
19	Val d'Oise	0	30	0
20	Yveline	0	168	0

```
SELECT *
FROM
(SELECT
[CountryRegionName]
,[StateProvinceName]
,[BusinessEntityID]
FROM [AdventureWorks2014].[Sales].[vIndividualCustomer]
where CountryRegionName IN ('Canada', 'France', 'United Kingdom')
) as tabular
```

100 %

Results | Messages

	CountryRegionName	StateProvinceName	BusinessEntityID
1	Canada	British Columbia	10798
2	France	Seine Saint Denis	12283
3	United Kingdom	England	4944
4	United Kingdom	England	11536
5	Canada	British Columbia	16352
6	Canada	British Columbia	15319
7	United Kingdom	England	14021
8	United Kingdom	England	3500
9	Canada	British Columbia	5964
10	Canada	British Columbia	4950

```sql
SELECT *
FROM
(SELECT
[CountryRegionName]
,[StateProvinceName]
,[BusinessEntityID]
FROM [AdventureWorks2014].[Sales].[vIndividualCustomer]
where CountryRegionName IN ('Canada', 'France', 'United Kingdom')
) as tabular

PIVOT (
Count([BusinessEntityID])
FOR [CountryRegionName]
IN
([Canada],[France],[United Kingdom])) as NewPivot
```

100 %

Results | Messages

	StateProvinceName	Canada	France	United Kingdom
1	Moselle	0	56	0
2	Garonne (Haute)	0	30	0
3	Seine et Marne	0	60	0
4	Seine (Paris)	0	386	0
5	Loir et Cher	0	17	0
6	Seine Saint Denis	0	285	0
7	England	0	0	1913
8	Essonne	0	150	0
9	Ontario	1	0	0
10	Pas de Calais	0	16	0
11	Val de Marne	0	30	0
12	Val d'Oise	0	30	0
13	Nord	0	284	0
14	Charente-Maritime	0	21	0
15	Alberta	11	0	0
16	British Columbia	1559	0	0
17	Loiret	0	60	0
18	Yveline	0	168	0
19	Somme	0	22	0
20	Hauts de Seine	0	195	0

```
SELECT DISTINCT quotename(CountryRegionName)+','
  FROM [AdventureWorks2014].[Sales].[vIndividualCustomer]
```

100 %

Results | Messages

	(No column name)
1	[Australia],
2	[Canada],
3	[France],
4	[Germany],
5	[United Kingdom],
6	[United States],

```
Declare @CountryNames NVARCHAR(4000)= ''

SELECT @CountryNames += quotename(CountryRegionName)+','
  FROM [AdventureWorks2014].[Sales].[vIndividualCustomer]
group by CountryRegionName

print @CountryNames
```

100 %

Messages

```
[Australia],[Canada],[Germany],[France],[United Kingdom],[United States],
```

```
Declare @CountryNames NVARCHAR(4000)= ''

SELECT @CountryNames += quotename(CountryRegionName)+','
  FROM [AdventureWorks2014].[Sales].[vIndividualCustomer]
group by CountryRegionName

set @CountryNames = substring(@CountryNames,1, len(@CountryNames)-1)

print @CountryNames
```

100 %

Messages

```
[Australia],[Canada],[Germany],[France],[United Kingdom],[United States]
```

```
Declare @SQL_Statement NVARCHAR(4000) = ''

set @SQL_Statement =
'SELECT *
FROM
(SELECT
[CountryRegionName],[StateProvinceName],[BusinessEntityID]
FROM [AdventureWorks2014].[Sales].[vIndividualCustomer]
) as tabular

PIVOT (
Count([BusinessEntityID])
FOR [CountryRegionName]
IN
('
+@CountryNames+
')) as NewPivot '

print @SQL_Statement
```

100 %

Messages

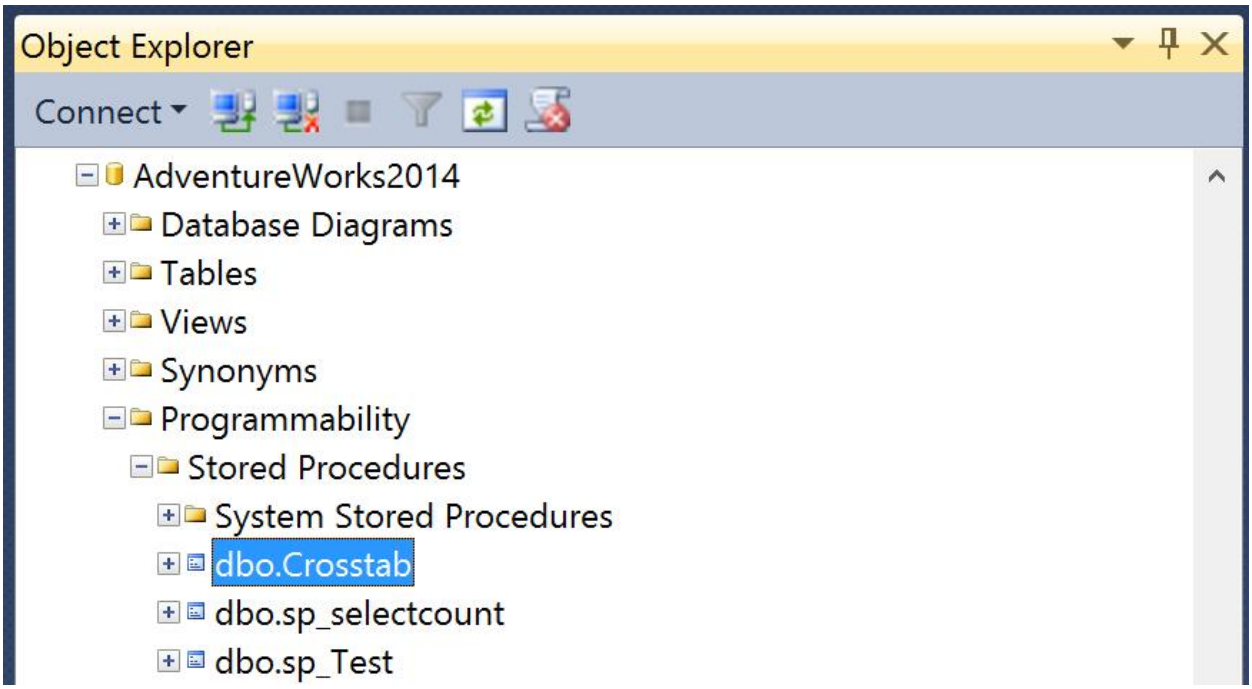
```
SELECT *
FROM
(SELECT
[CountryRegionName]
,[StateProvinceName]
,[BusinessEntityID]
FROM [AdventureWorks2014].[Sales].[vIndividualCustomer]
) as tabular

PIVOT (
Count([BusinessEntityID])
FOR [CountryRegionName]
IN
([Australia],[Canada],[Germany],[France],[United Kingdom],[United States])) as NewPivot
```

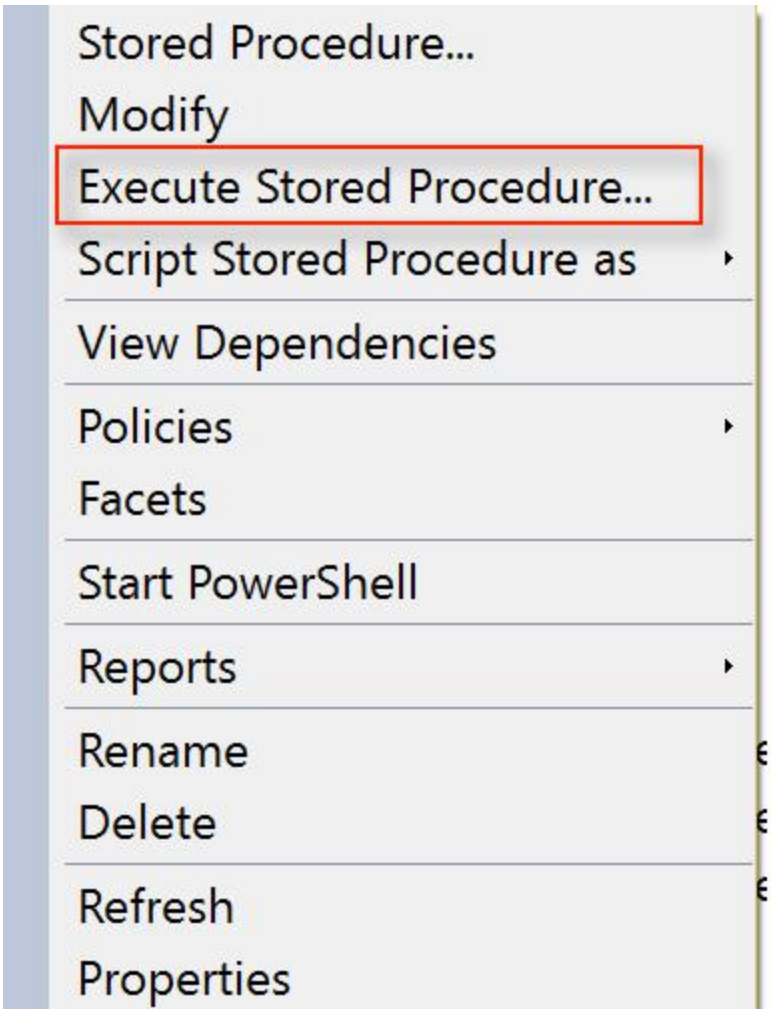
```
execute sp_executesql @SQL_Statement
```

100 %

Results | Messages

	StateProvinceName	Australia	Canada	Germany	France	United Kingdom	United States
1	Moselle	0	0	0	56	0	0
2	Garonne (Haute)	0	0	0	30	0	0
3	Illinois	0	0	0	0	0	6
4	Seine et Marne	0	0	0	60	0	0
5	Brandenburg	0	0	30	0	0	0
6	Hessen	0	0	377	0	0	0
7	Massachusetts	0	0	0	0	0	1
8	Ohio	0	0	0	0	0	4
9	Seine (Paris)	0	0	0	386	0	0
10	Oregon	0	0	0	0	0	1073
11	Wyoming	0	0	0	0	0	2
12	Arizona	0	0	0	0	0	2
13	Saarland	0	0	442	0	0	0
14	Loir et Cher	0	0	0	17	0	0
15	Seine Saint Denis	0	0	0	285	0	0
16	Virginia	0	0	0	0	0	1
17	England	0	0	0	0	1913	0
18	Essonne	0	0	0	150	0	0
19	New York	0	0	0	0	0	3
20	Maryland	0	0	0	0	0	1
21	New South Wales	1559	0	0	0	0	0
22	Ontario	0	1	0	0	0	0
23	Queensland	793	0	0	0	0	0
24	Pas de Calais	0	0	0	16	0	0
25	California	0	0	0	0	0	4445
26	Val de Marne	0	0	0	30	0	0
27	Missouri	0	0	0	0	0	1
28	Val d'Oise	0	0	0	30	0	0
29	Nord	0	0	0	284	0	0
30	Nordrhein-Westfa...	0	0	406	0	0	0
31	Minnesota	0	0	0	0	0	1
32	Florida	0	0	0	0	0	3
33	Charente-Maritime	0	0	0	21	0	0
34	Washington	0	0	0	0	0	2285
35	Alberta	0	11	0	0	0	0


Object Explorer
Connect
AdventureWorks2014
Database Diagrams
Tables
Views
Synonyms
Programmability
Stored Procedures
System Stored Procedures
dbo.Crosstab
dbo.sp_selectcount
dbo.sp_Test


Stored Procedure...
Modify
Execute Stored Procedure...
Script Stored Procedure as
View Dependencies
Policies
Facets
Start PowerShell
Reports
Rename
Delete
Refresh
Properties