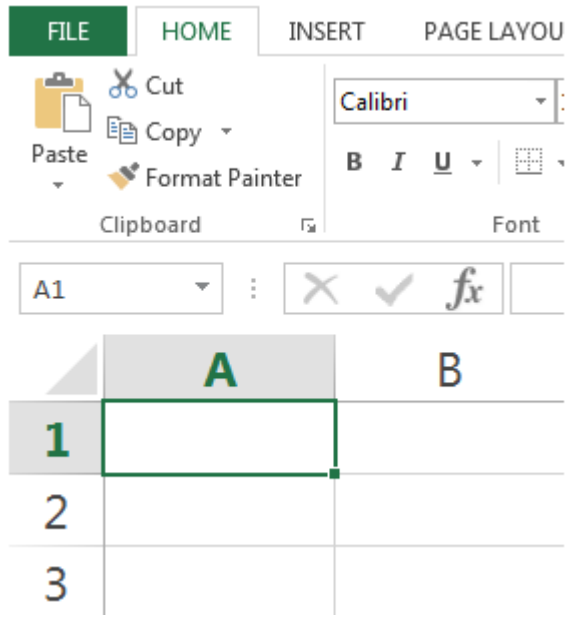
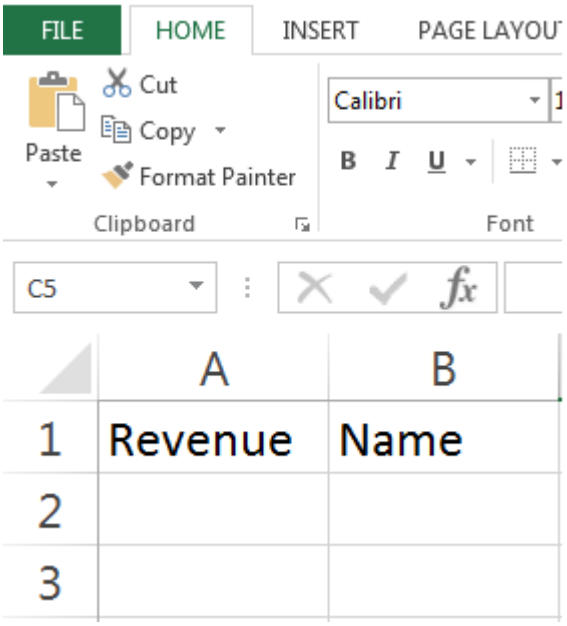
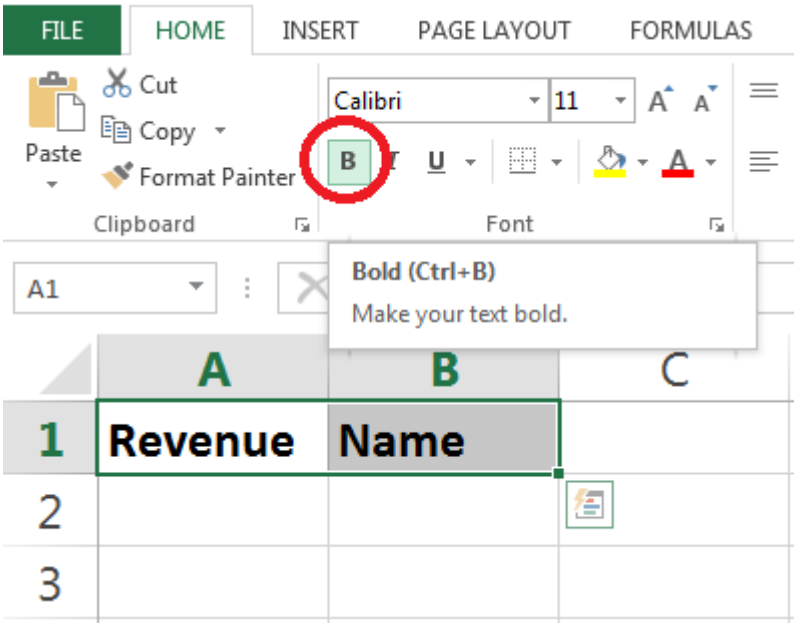
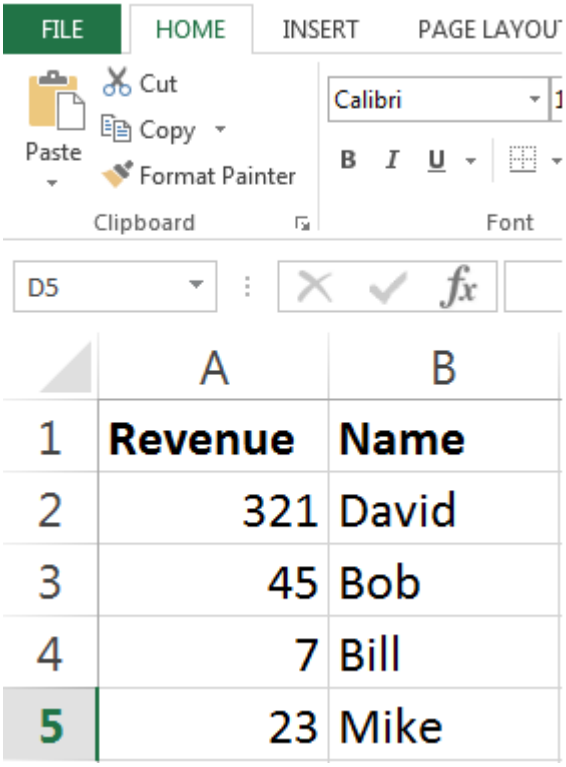
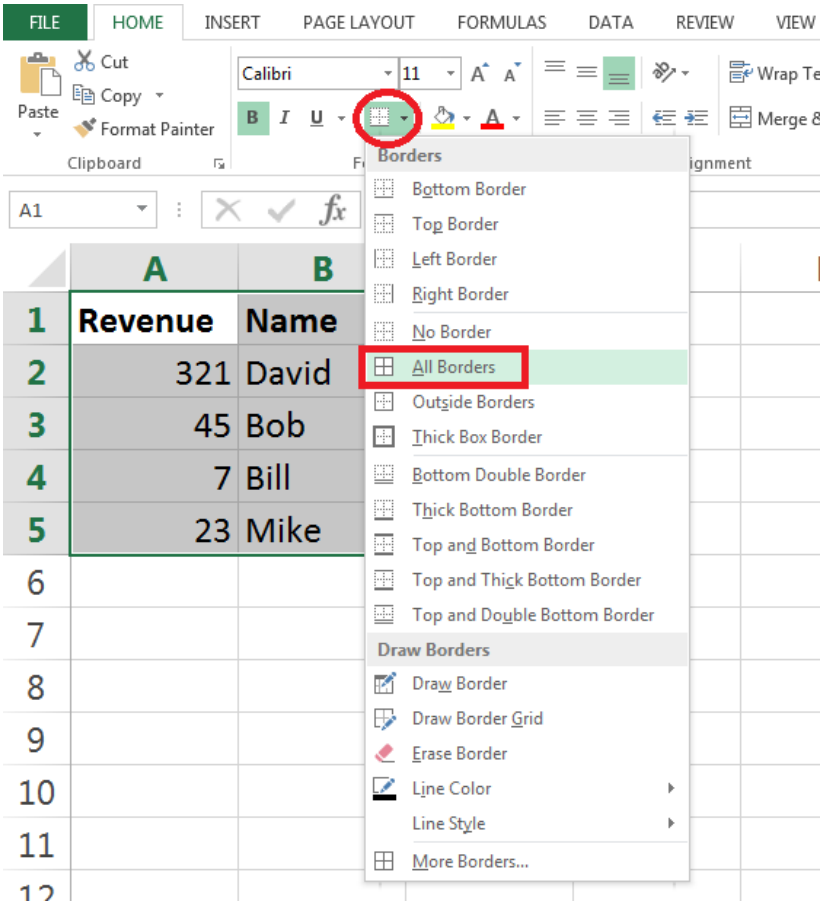
Chapter 1

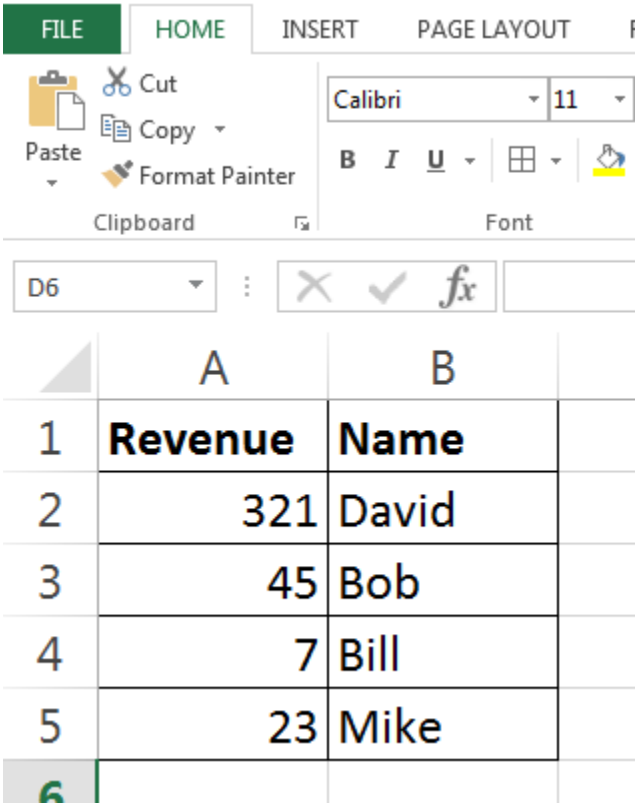

FILE
HOME
INSERT
PAGE LAYOU
Cut
Copy
Paste
Format Painter
Calibri
Clipboard
Font
A1
A
B
1
2
3

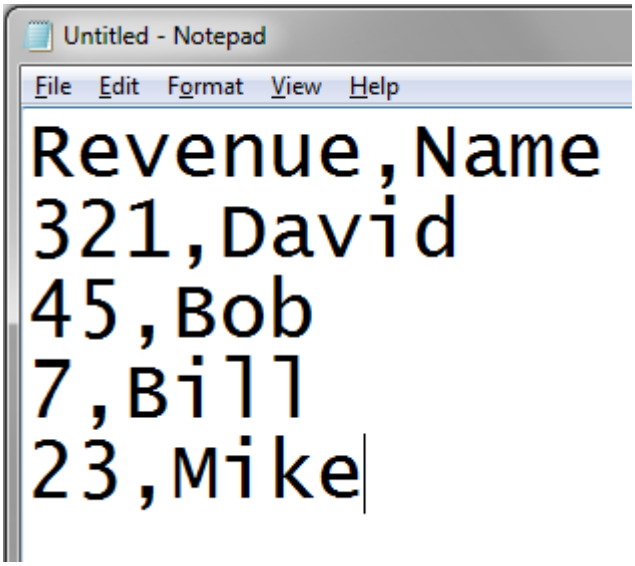

FILE
HOME
INSERT
PAGE LAYOU
Cut
Copy
Paste
Format Painter
Calibri
Clipboard
Font
C5
A
B
1
Revenue
Name
2
3

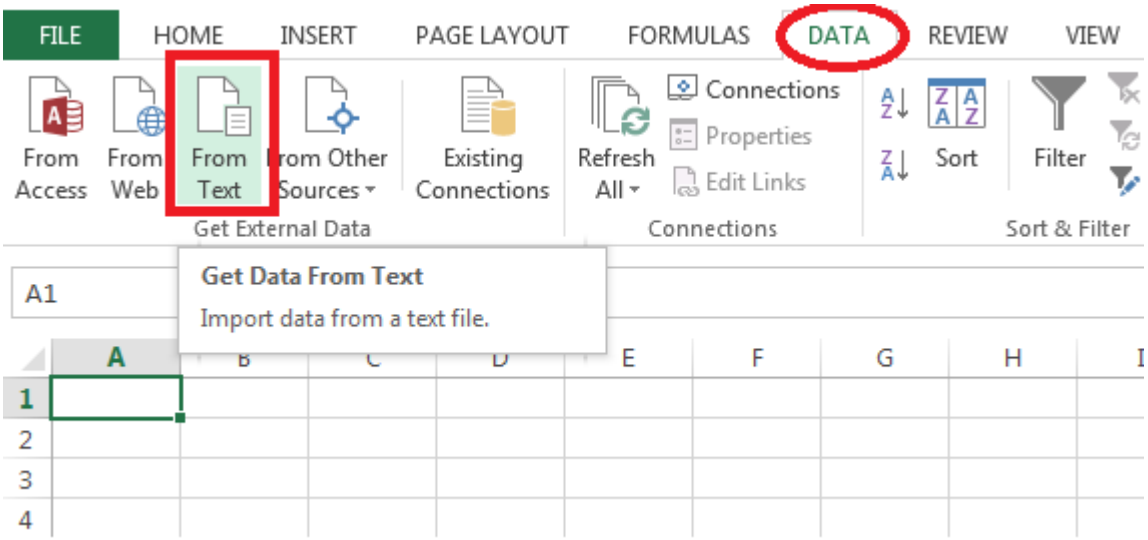

FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
Cut
Copy
Format Painter
Paste
Calibri
11
B
I
U
Clipboard
Font
Bold (Ctrl+B)
Make your text bold.
A1
A
B
C
1
Revenue
Name
2
3

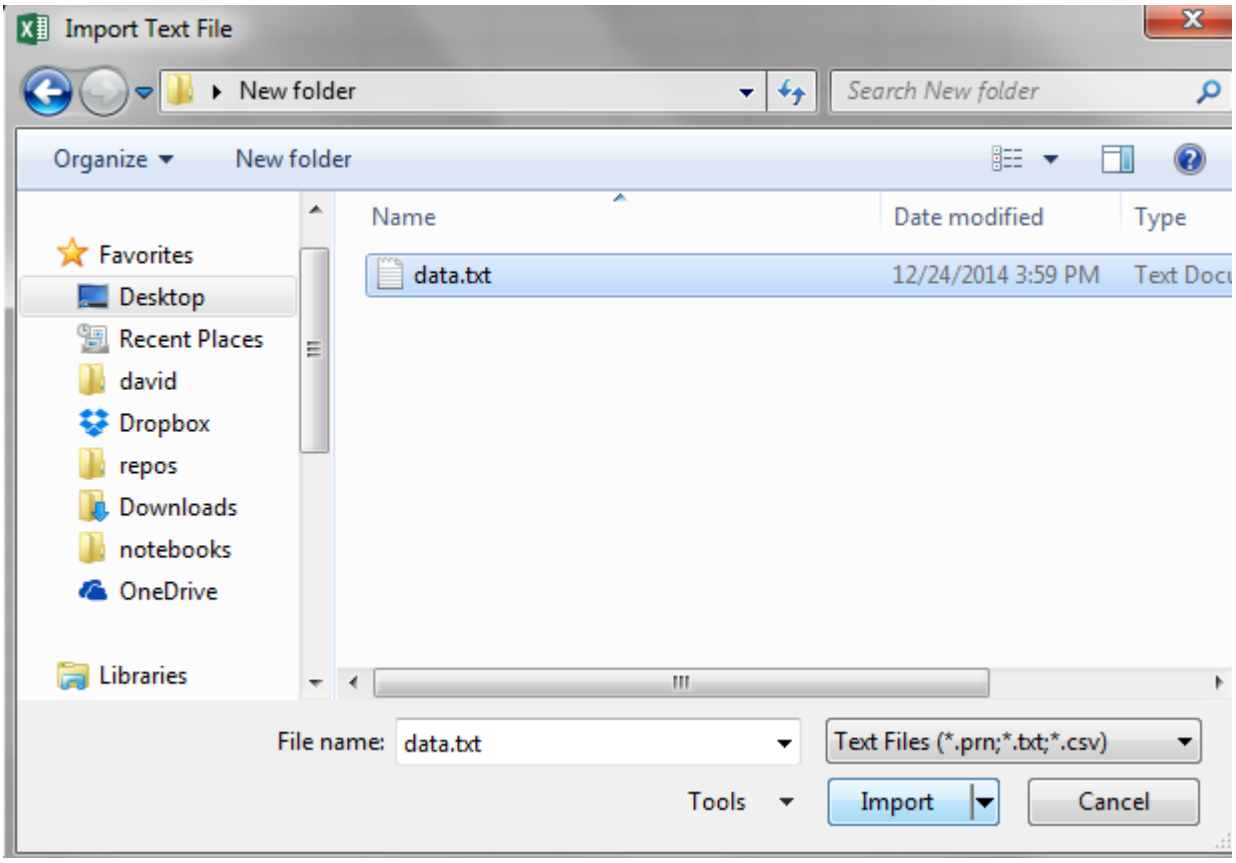

FILE
HOME
INSERT
PAGE LAYOU
Cut
Copy
Format Painter
Paste
Calibri
B
I
U
Clipboard
Font
D5
A
B
1
Revenue
Name
2
321
David
3
45
Bob
4
7
Bill
5
23
Mike

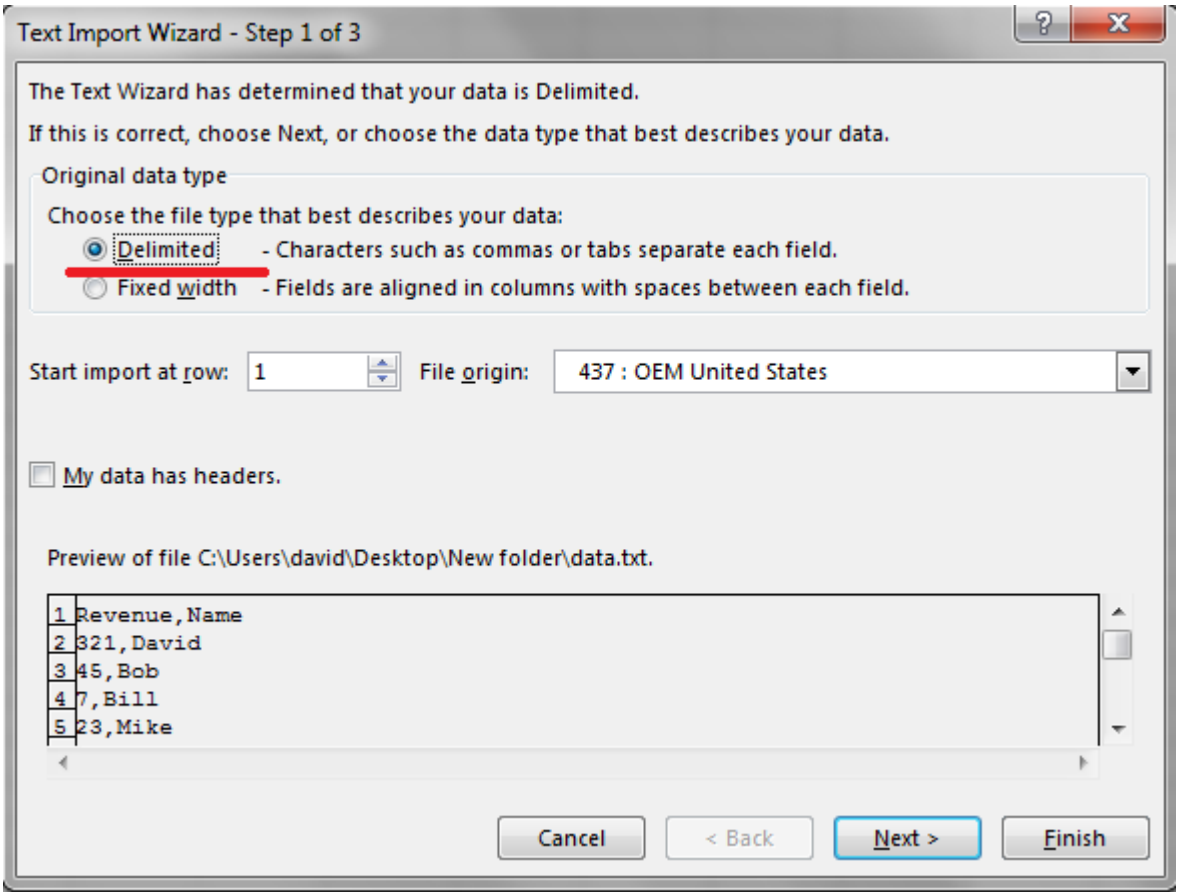

FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
Cut
Copy
Format Painter
Paste
Clipboard
Calibri
11
Wrap Te
Merge &
A1
Borders
Bottom Border
Top Border
Left Border
Right Border
No Border
All Borders
Outside Borders
Thick Box Border
Bottom Double Border
Thick Bottom Border
Top and Bottom Border
Top and Thick Bottom Border
Top and Double Bottom Border
Draw Borders
Draw Border
Draw Border Grid
Erase Border
Line Color
Line Style
More Borders...
A
B
1 Revenue Name
2 321 David
3 45 Bob
4 7 Bill
5 23 Mike
6
7
8
9
10
11

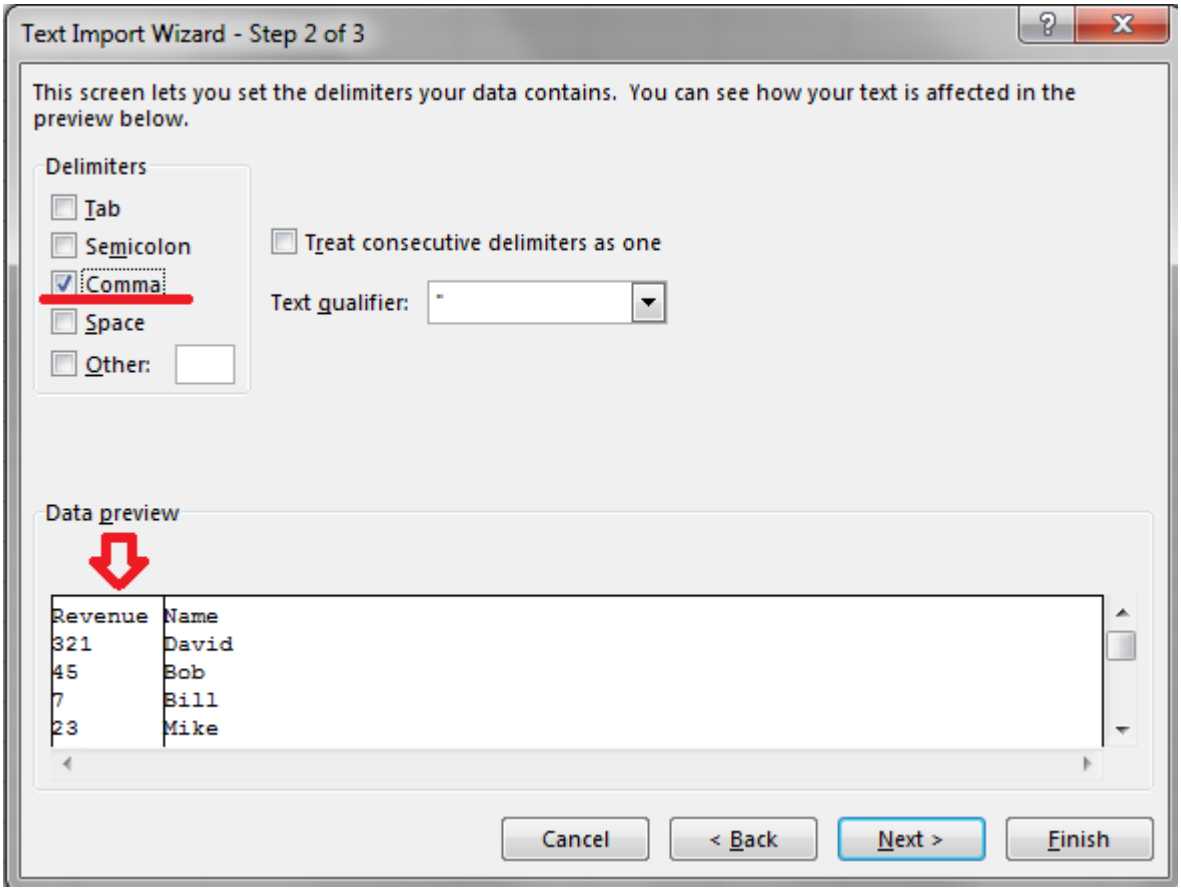

FILE
HOME
INSERT
PAGE LAYOUT
Cut
Copy
Format Painter
Paste
Clipboard
Calibri
11
Font
D6
A
B
1 Revenue Name
2 321 David
3 45 Bob
4 7 Bill
5 23 Mike
6

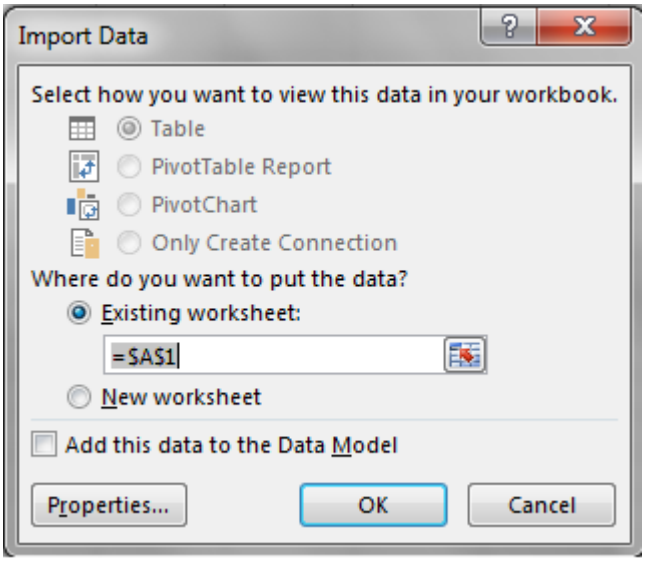

Untitled - Notepad
File Edit Format View Help
Revenue,Name
321,David
45,Bob
7,Bill
23,Mike


FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
From Access
From Web
From Text
From Other Sources
Existing Connections
Get External Data
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Sort & Filter
A1
Get Data From Text
Import data from a text file.
A
B
C
D
E
F
G
H
1
2
3
4


Import Text File
New folder
Search New folder
Organize
New folder
Name
Date modified
Type
Favorites
Desktop
Recent Places
david
Dropbox
repos
Downloads
notebooks
OneDrive
Libraries
data.txt
12/24/2014 3:59 PM
File name:
data.txt
Text Files (*.prn;*.txt;*.csv)
Tools
Import
Cancel

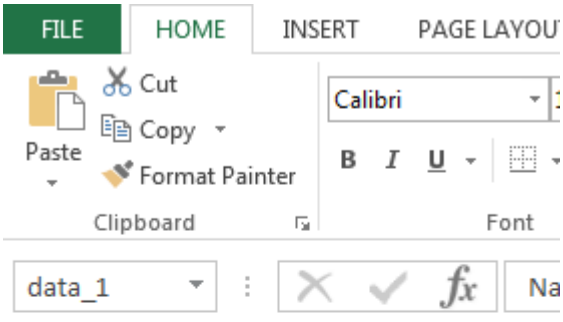

Text Import Wizard - Step 1 of 3
The Text Wizard has determined that your data is Delimited.
If this is correct, choose Next, or choose the data type that best describes your data.
Original data type
Choose the file type that best describes your data:
Delimited - Characters such as commas or tabs separate each field.
Fixed width - Fields are aligned in columns with spaces between each field.
Start import at row: 1
File origin: 437 : OEM United States
My data has headers.
Preview of file C:\Users\david\Desktop\New folder\data.txt.
1 Revenue,Name
2 321,David
3 45,Bob
4 7,Bill
5 23,Mike
Cancel
< Back
Next >
Finish


Text Import Wizard - Step 2 of 3
This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.
Delimiters
Tab
Semicolon
Comma
Space
Other:
Treat consecutive delimiters as one
Text qualifier:
"
Data preview
Revenue Name
321 David
45 Bob
7 Bill
23 Mike
Cancel
< Back
Next >
Finish

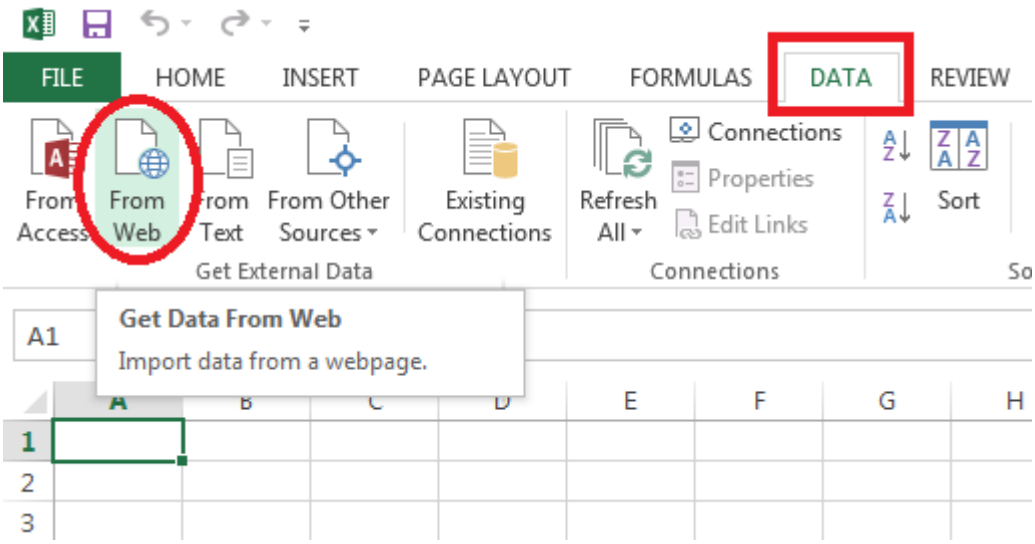

Import Data
Select how you want to view this data in your workbook.
Table
PivotTable Report
PivotChart
Only Create Connection
Where do you want to put the data?
Existing worksheet:
=$A$1
New worksheet
Add this data to the Data Model
Properties...
OK
Cancel

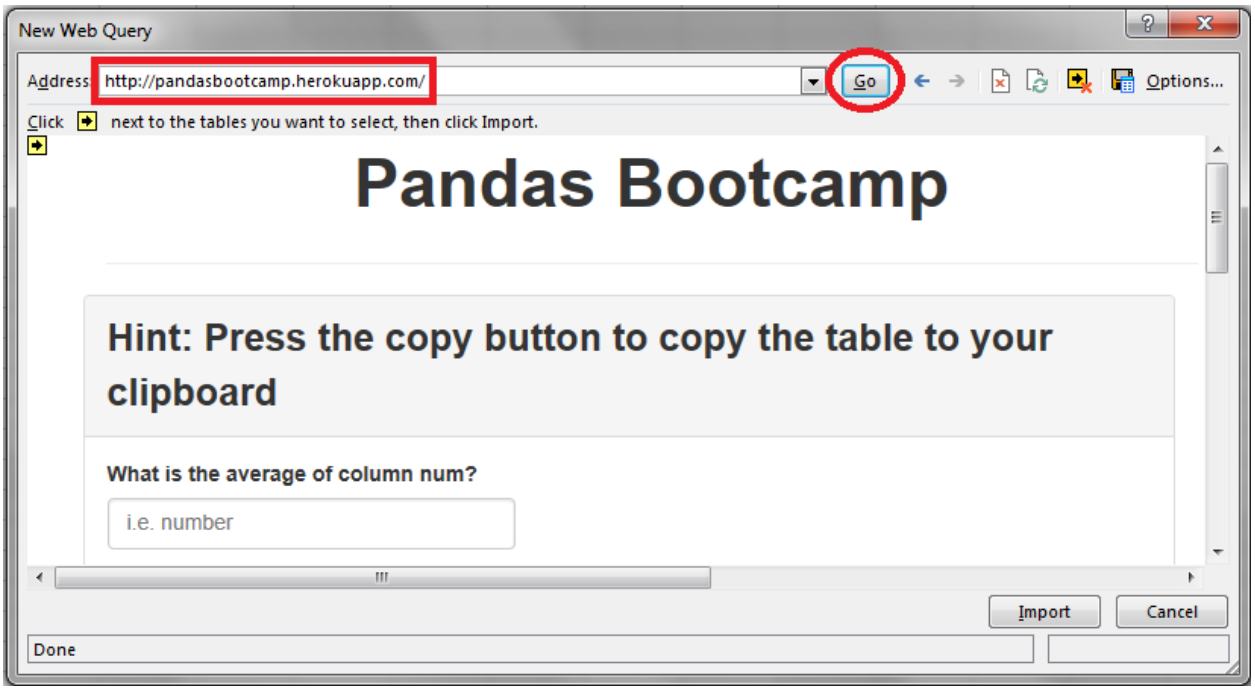
	A	B
1	Revenue	
2	321	
3	45	
4	7	
5	23	

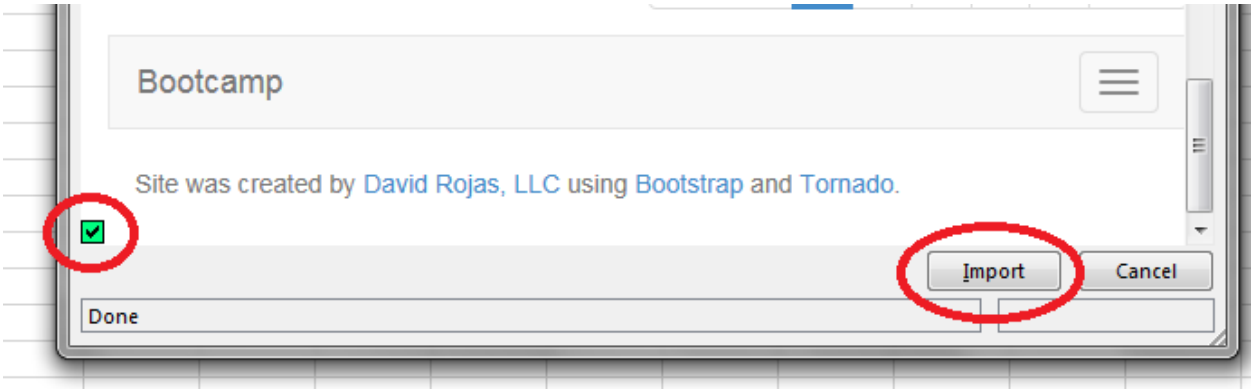
	A	B
1	Name	
2	David	
3	Bob	
4	Bill	
5	Mike	

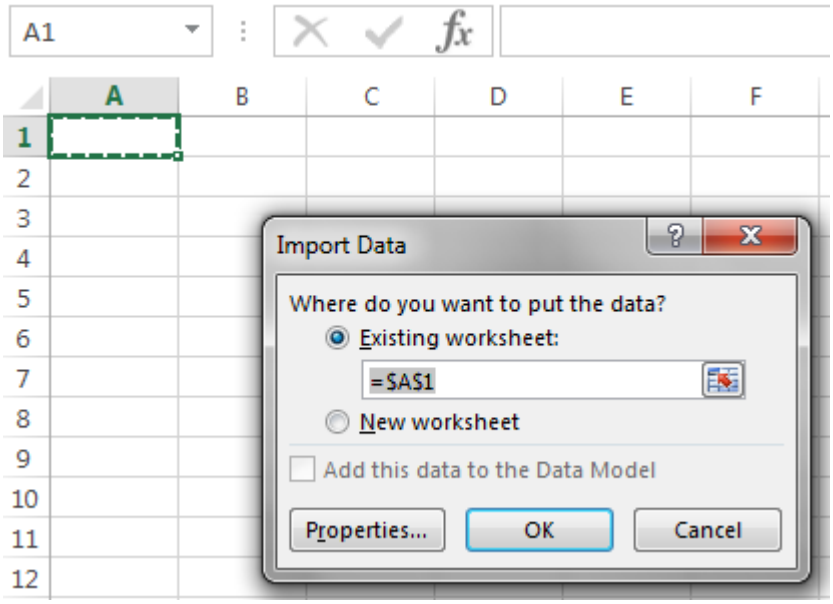


	A	B
1	Revenue	Name
2	321	David
3	45	Bob
4	7	Bill
5	23	Mike

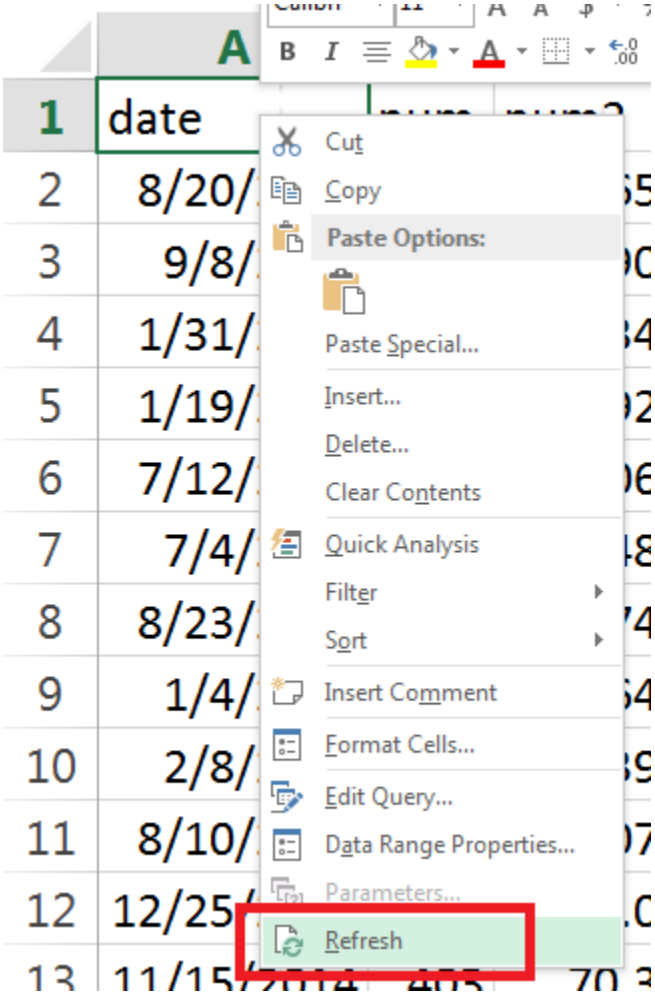

FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
From Access
From Web
From Text
From Other Sources
Existing Connections
Refresh All
Connections
Properties
Edit Links
Sort
Get External Data
Connections
Get Data From Web
Import data from a webpage.
A1

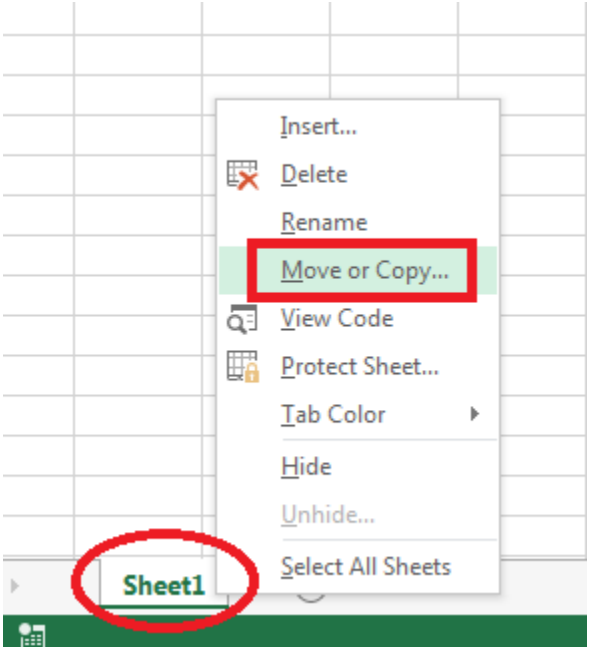

New Web Query
Address
http://pandasbootcamp.herokuapp.com/
Go
Options...
Click
next to the tables you want to select, then click Import.
Pandas Bootcamp
Hint: Press the copy button to copy the table to your clipboard
What is the average of column num?
i.e. number
Import
Cancel
Done

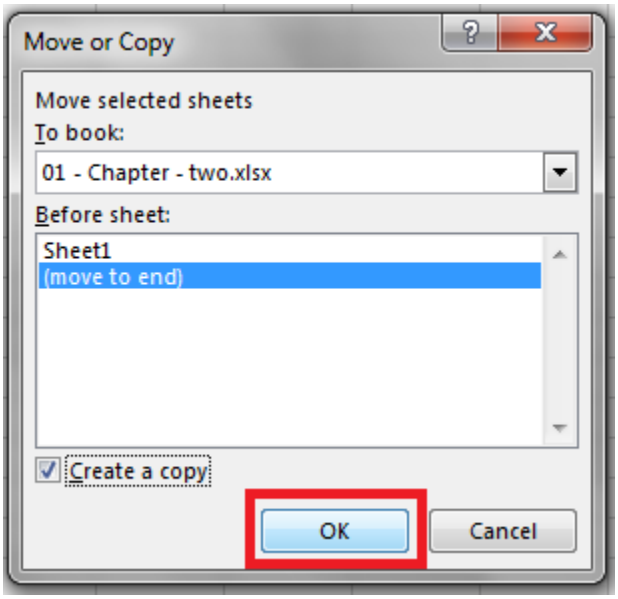

Bootcamp
Site was created by David Rojas, LLC using Bootstrap and Tornado.
Import
Cancel
Done


A1
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10
11
12
Import Data
Where do you want to put the data?
Existing worksheet:
=$A$1
New worksheet
Add this data to the Data Model
Properties...
OK
Cancel

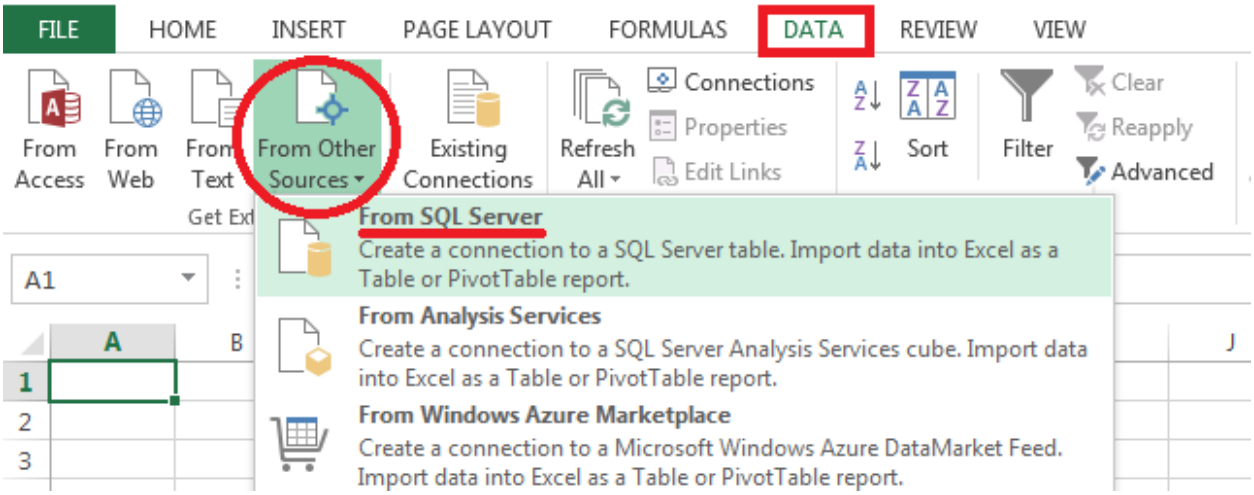
	A	B	C	D	E
1	date	num	num2	str	str2
2	8/20/2015	392	569.658797	boy	yellow
3	9/8/2015	592	726.905288	girl	green
4	1/31/2015	99	724.342905	girl	yellow
5	1/19/2015	361	2.920015	girl	green
6	7/12/2014	603	828.063695	girl	yellow
7	7/4/2016	950	876.482364	girl	blue
8	8/23/2015	672	368.749061	girl	purple
9	1/4/2014	806	939.647914	boy	blue
10	2/8/2015	750	240.394564	girl	purple

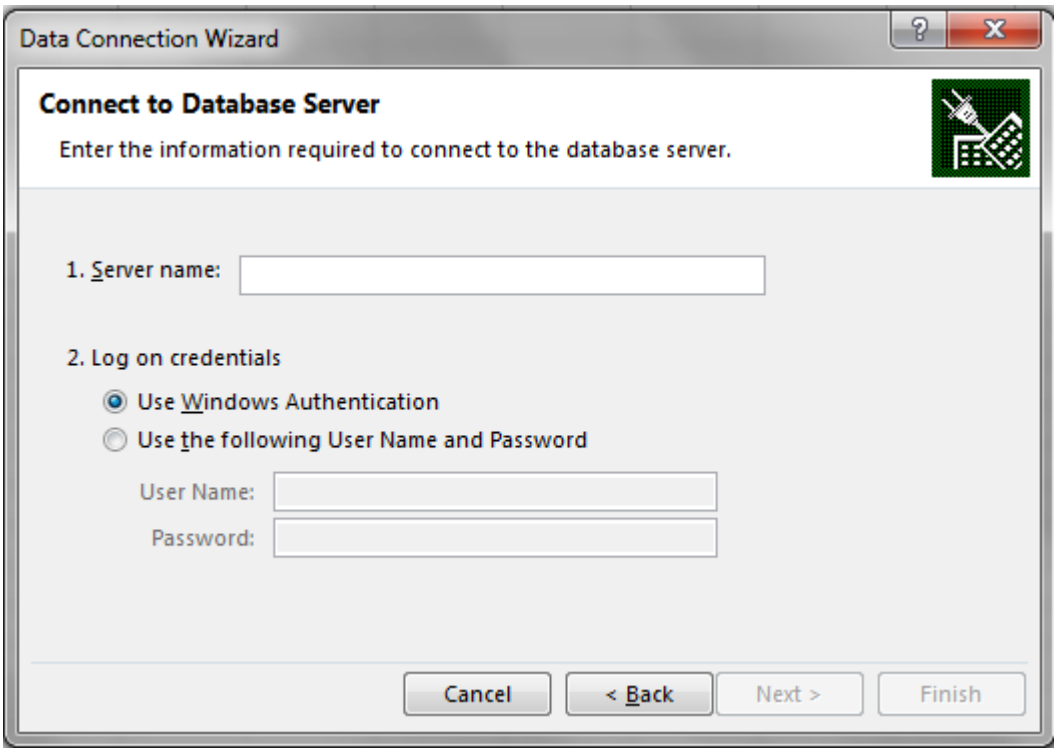

A
1
date
2
8/20/
3
9/8/
4
1/31/
5
1/19/
6
7/12/
7
7/4/
8
8/23/
9
1/4/
10
2/8/
11
8/10/
12
12/25/
13
Cut
Copy
Paste Options:
Paste Special...
Insert...
Delete...
Clear Contents
Quick Analysis
Filter
Sort
Insert Comment
Format Cells...
Edit Query...
Data Range Properties...
Parameters...
Refresh

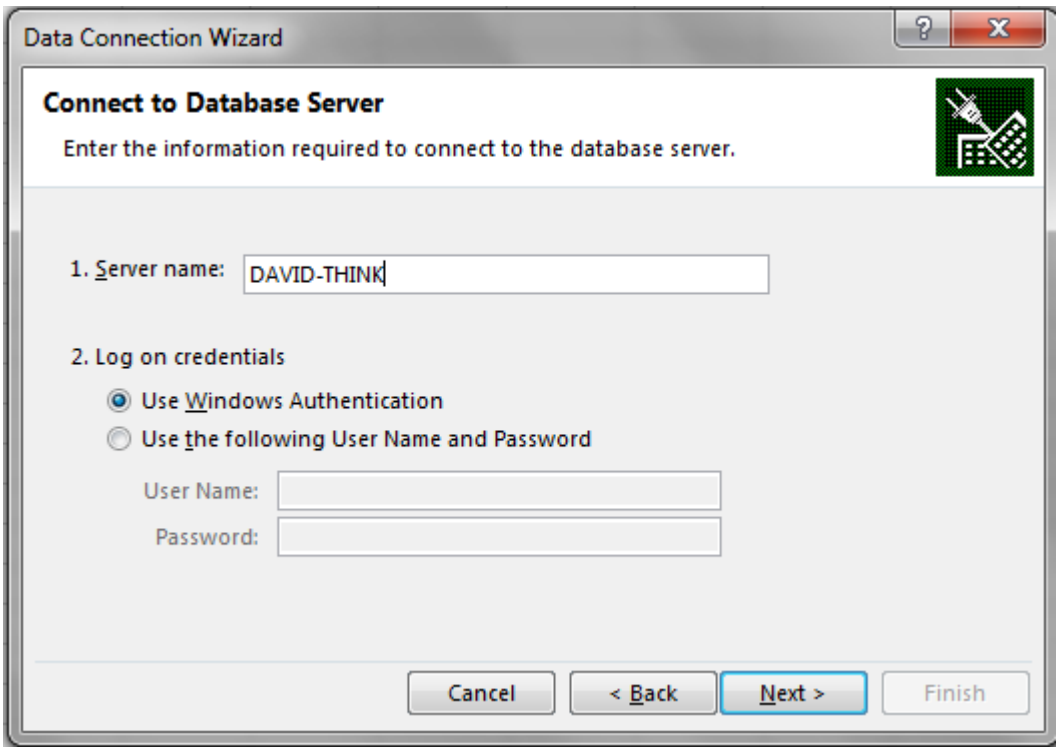

Insert...
Delete
Rename
Move or Copy...
View Code
Protect Sheet...
Tab Color
Hide
Unhide...
Select All Sheets
Sheet1

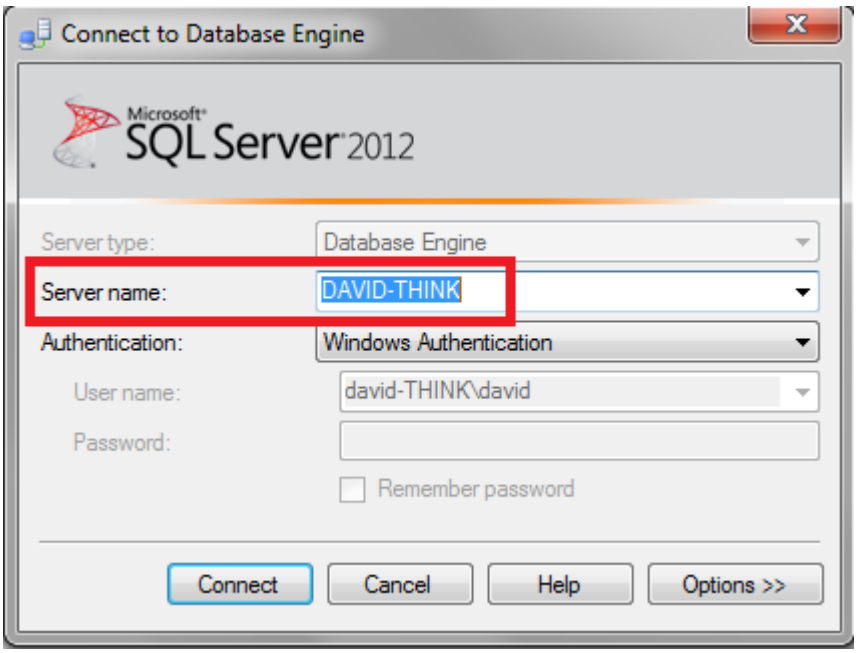

Move or Copy
Move selected sheets
To book:
01 - Chapter - two.xlsx
Before sheet:
Sheet1
(move to end)
Create a copy
OK
Cancel

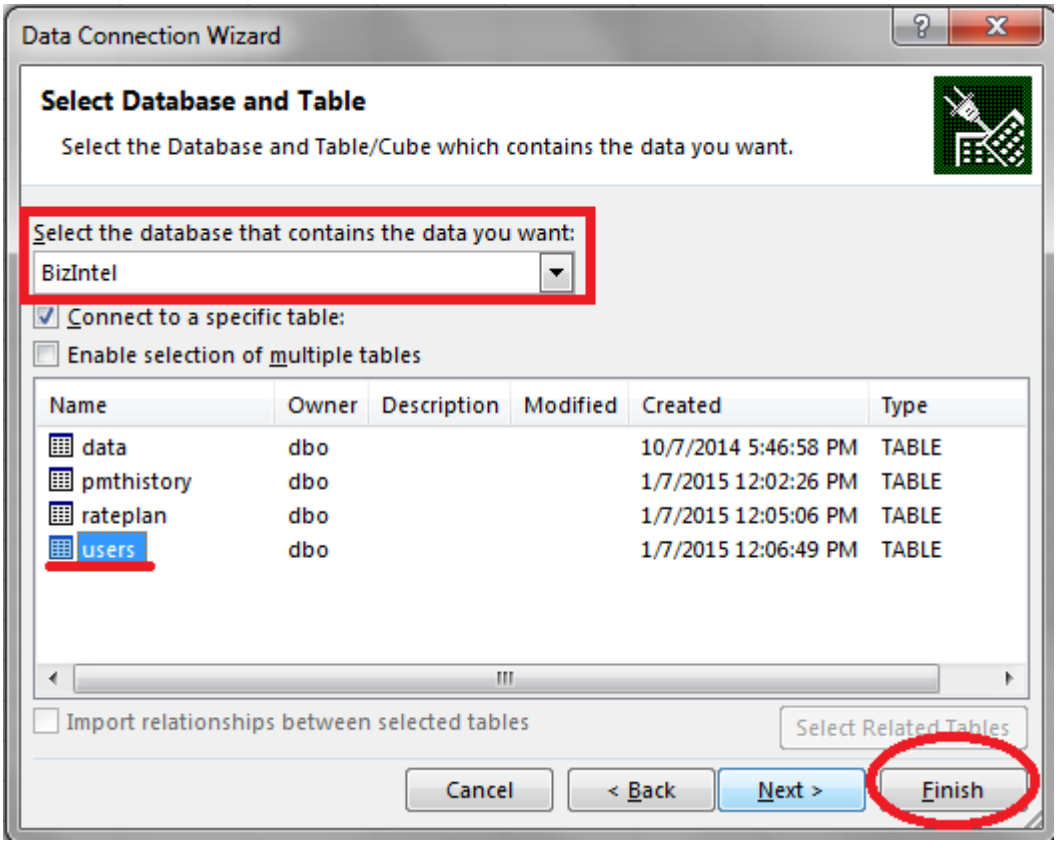
Chapter 2:

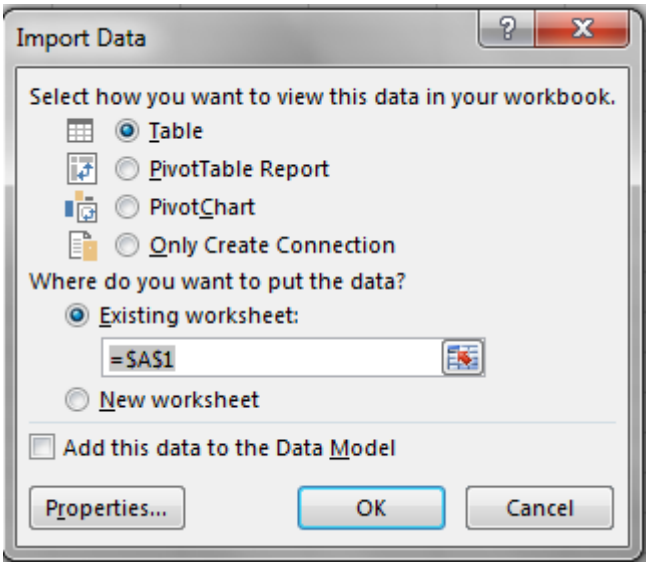

FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
From Access
From Web
From Text
From Other Sources
Existing Connections
Refresh All
Connections
Properties
Edit Links
Sort
Filter
Clear
Reapply
Advanced
Get Ext
A1
From SQL Server
Create a connection to a SQL Server table. Import data into Excel as a Table or PivotTable report.
From Analysis Services
Create a connection to a SQL Server Analysis Services cube. Import data into Excel as a Table or PivotTable report.
From Windows Azure Marketplace
Create a connection to a Microsoft Windows Azure DataMarket Feed. Import data into Excel as a Table or PivotTable report.

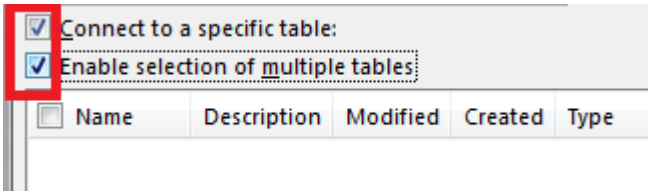

Data Connection Wizard
Connect to Database Server
Enter the information required to connect to the database server.
1. Server name:
2. Log on credentials
Use Windows Authentication
Use the following User Name and Password
User Name:
Password:
Cancel
< Back
Next >
Finish

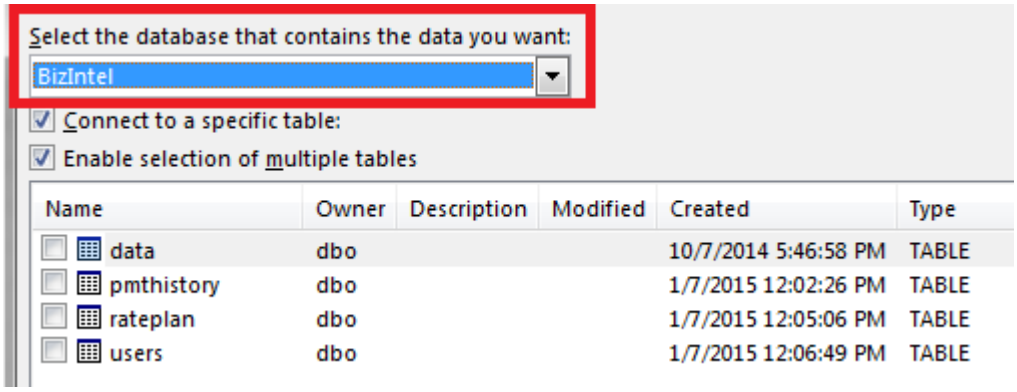

Data Connection Wizard
Connect to Database Server
Enter the information required to connect to the database server.
1. Server name:
DAVID-THINK
2. Log on credentials
Use Windows Authentication
Use the following User Name and Password
User Name:
Password:
Cancel
< Back
Next >
Finish

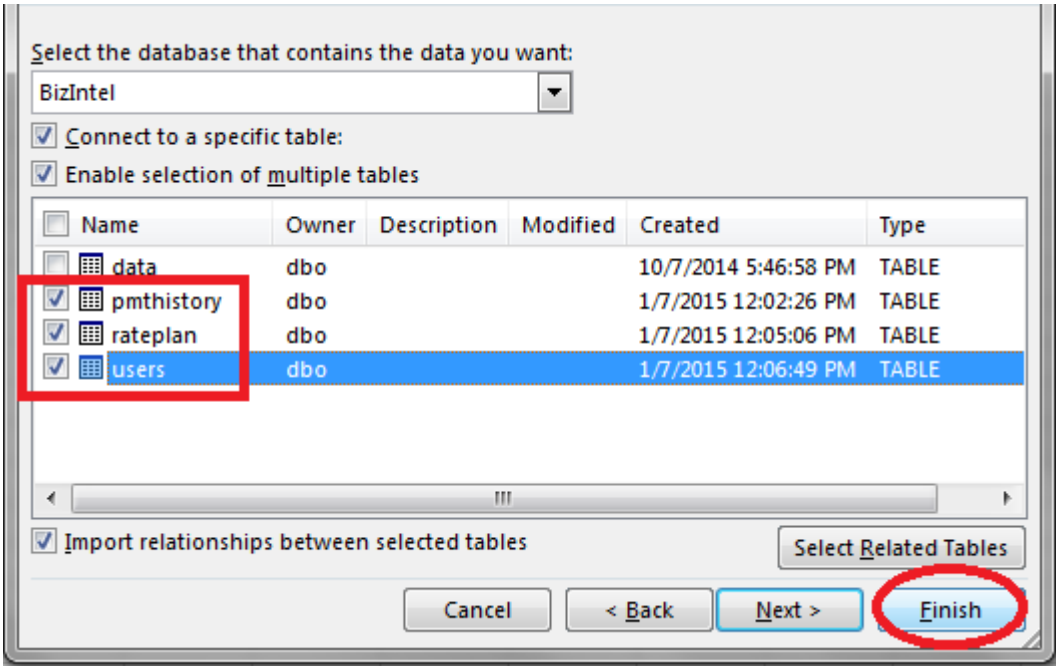

Connect to Database Engine
Microsoft SQL Server 2012
Server type:
Database Engine
Server name:
DAVID-THINK
Authentication:
Windows Authentication
User name:
david-THINK\david
Password:
Remember password
Connect
Cancel
Help
Options >>

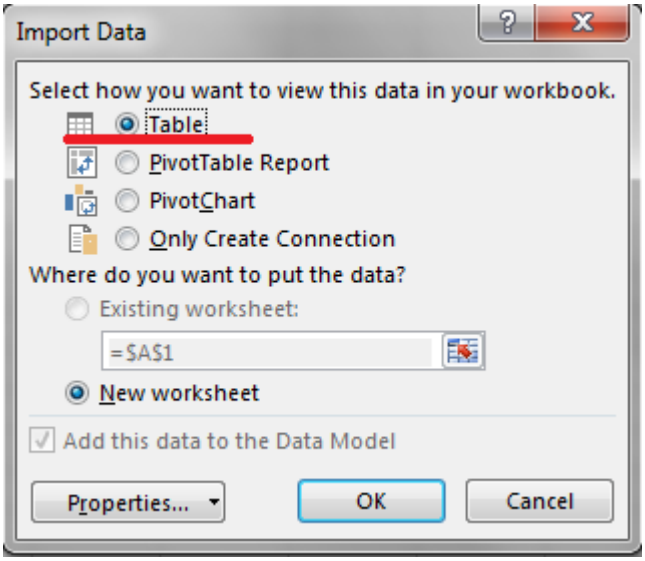

Data Connection Wizard
Select Database and Table
Select the Database and Table/Cube which contains the data you want.
Select the database that contains the data you want:
BizIntel
Connect to a specific table:
Enable selection of multiple tables
Name
Owner
Description
Modified
Created
Type
data
dbo
10/7/2014 5:46:58 PM
TABLE
pmthistory
dbo
1/7/2015 12:02:26 PM
TABLE
rateplan
dbo
1/7/2015 12:05:06 PM
TABLE
users
dbo
1/7/2015 12:06:49 PM
TABLE
Import relationships between selected tables
Select Related Tables
Cancel
< Back
Next >
Finish


Import Data
Select how you want to view this data in your workbook.
Table
PivotTable Report
PivotChart
Only Create Connection
Where do you want to put the data?
Existing worksheet:
=$A$1
New worksheet
Add this data to the Data Model
Properties...
OK
Cancel


Connect to a specific table:
Enable selection of multiple tables
Name
Description
Modified
Created
Type


Select the database that contains the data you want:
BizIntel
Connect to a specific table:
Enable selection of multiple tables
Name
Owner
Description
Modified
Created
Type
data
dbo
10/7/2014 5:46:58 PM
TABLE
pmthistory
dbo
1/7/2015 12:02:26 PM
TABLE
rateplan
dbo
1/7/2015 12:05:06 PM
TABLE
users
dbo
1/7/2015 12:06:49 PM
TABLE





	A	B	C	D	E
1	id	ip	propertyname	firstname	lastname
2	1	10.220.202.80	property1	David	Rojas
3	3	10.226.67.253	property2	Bob	Rojas
4	2	10.220.202.80	property3	Mike	Stuff
5	4	10.93.15.240	property4	Mike	Stuff

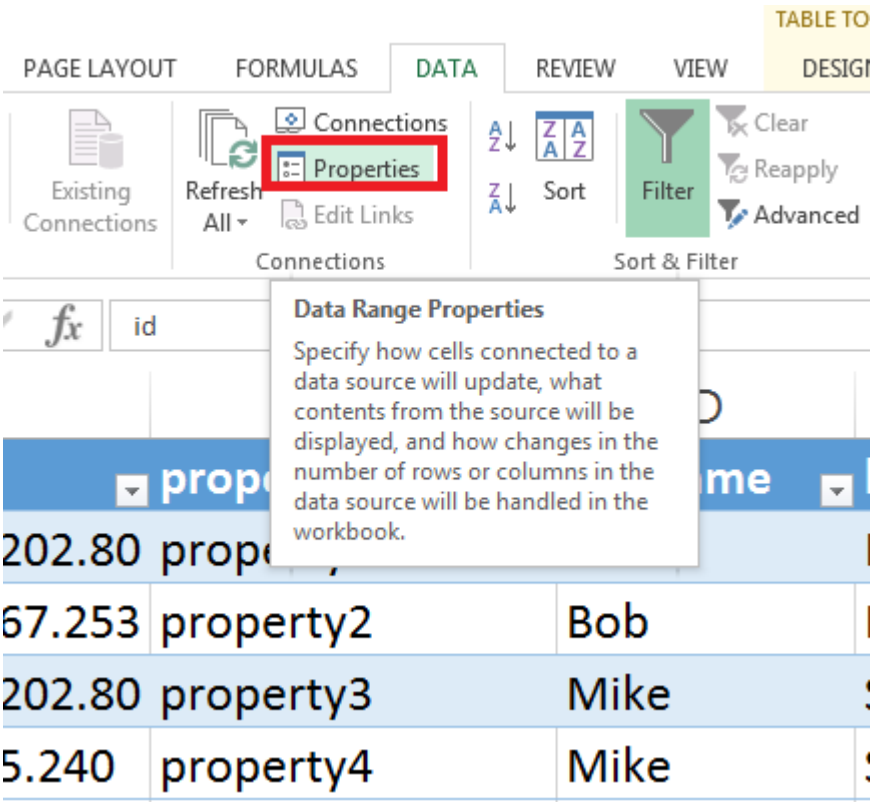
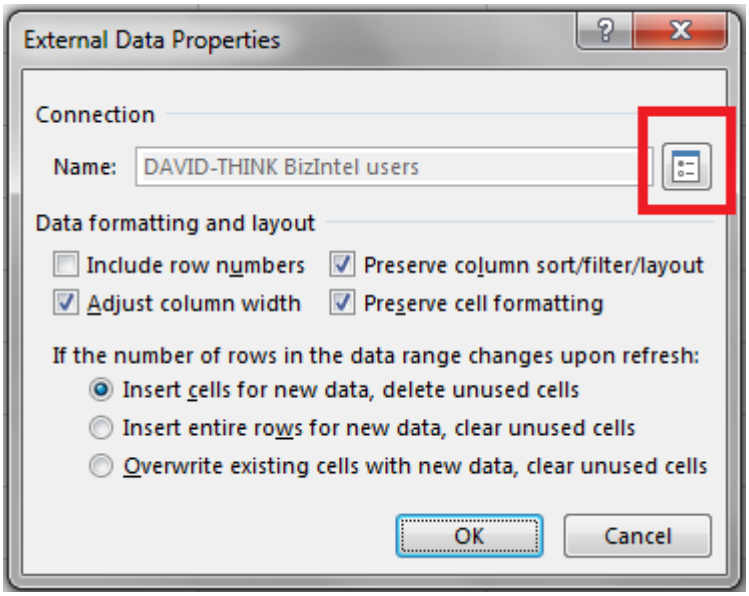
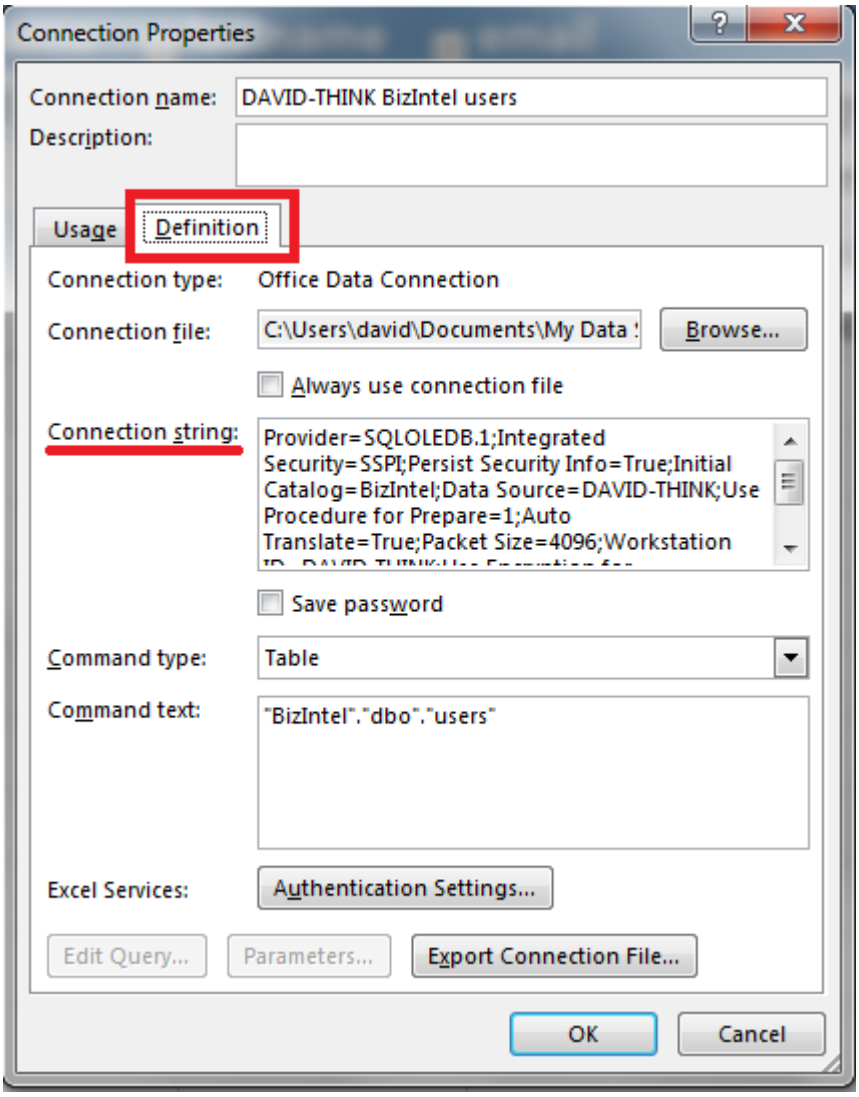
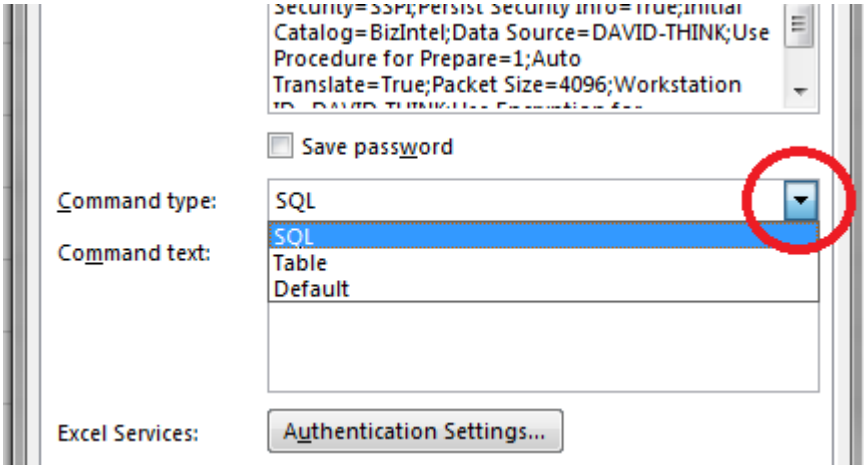
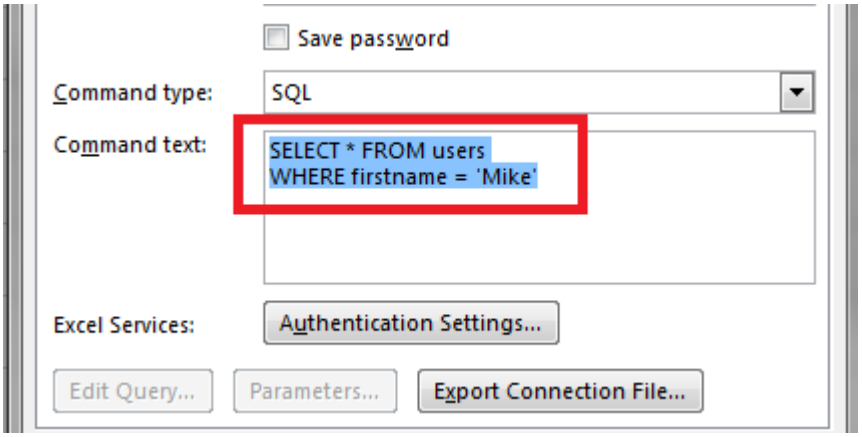


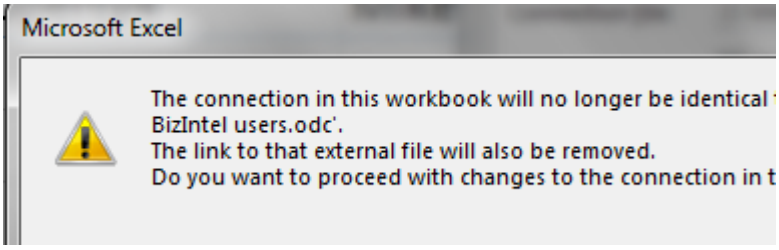
TABLE TO
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
DESIGI
Existing Connections
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Data Range Properties
Specify how cells connected to a data source will update, what contents from the source will be displayed, and how changes in the number of rows or columns in the data source will be handled in the workbook.
id
202.80 prope
67.253 property2 Bob
202.80 property3 Mike
5.240 property4 Mike

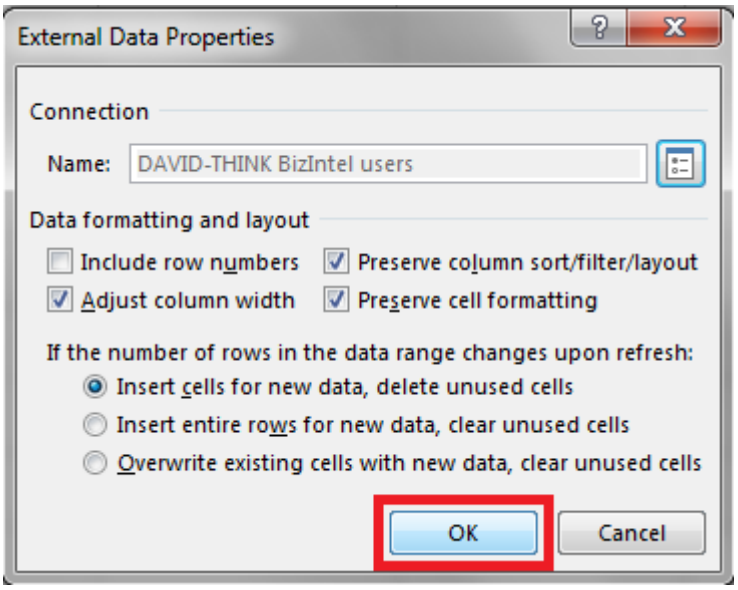

External Data Properties
Connection
Name:
DAVID-THINK BizIntel users
Data formatting and layout
Include row numbers
Preserve column sort/filter/layout
Adjust column width
Preserve cell formatting
If the number of rows in the data range changes upon refresh:
Insert cells for new data, delete unused cells
Insert entire rows for new data, clear unused cells
Overwrite existing cells with new data, clear unused cells
OK
Cancel


Connection Properties
Connection name:
DAVID-THINK BizIntel users
Description:
Usage
Definition
Connection type:
Office Data Connection
Connection file:
C:\Users\david\Documents\My Data
Browse...
Always use connection file
Connection string:
Provider=SQLOLEDB.1;Integrated
Security=SSPI;Persist Security Info=True;Initial
Catalog=BizIntel;Data Source=DAVID-THINK;Use
Procedure for Prepare=1;Auto
Translate=True;Packet Size=4096;Workstation
Save password
Command type:
Table
Command text:
"BizIntel"."dbo"."users"
Excel Services:
Authentication Settings...
Edit Query...
Parameters...
Export Connection File...
OK
Cancel


Catalog=BizIntel;Data Source=DAVID-THINK;Use
Procedure for Prepare=1;Auto
Translate=True;Packet Size=4096;Workstation
Save password
Command type:
SQL
Command text:
SQL
Table
Default
Excel Services:
Authentication Settings...


Save password
Command type:
SQL
Command text:
SELECT * FROM users
WHERE firstname = 'Mike'
Excel Services:
Authentication Settings...
Edit Query...
Parameters...
Export Connection File...

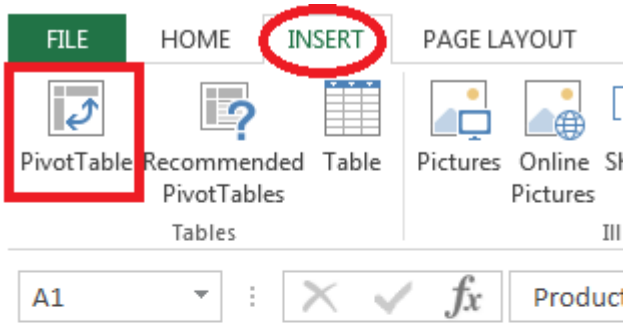

Microsoft Excel
The connection in this workbook will no longer be identical
BizIntel users.odc'.
The link to that external file will also be removed.
Do you want to proceed with changes to the connection in t


External Data Properties
Connection
Name:
DAVID-THINK BizIntel users
Data formatting and layout
Include row numbers
Preserve column sort/filter/layout
Adjust column width
Preserve cell formatting
If the number of rows in the data range changes upon refresh:
Insert cells for new data, delete unused cells
Insert entire rows for new data, clear unused cells
Overwrite existing cells with new data, clear unused cells
OK
Cancel

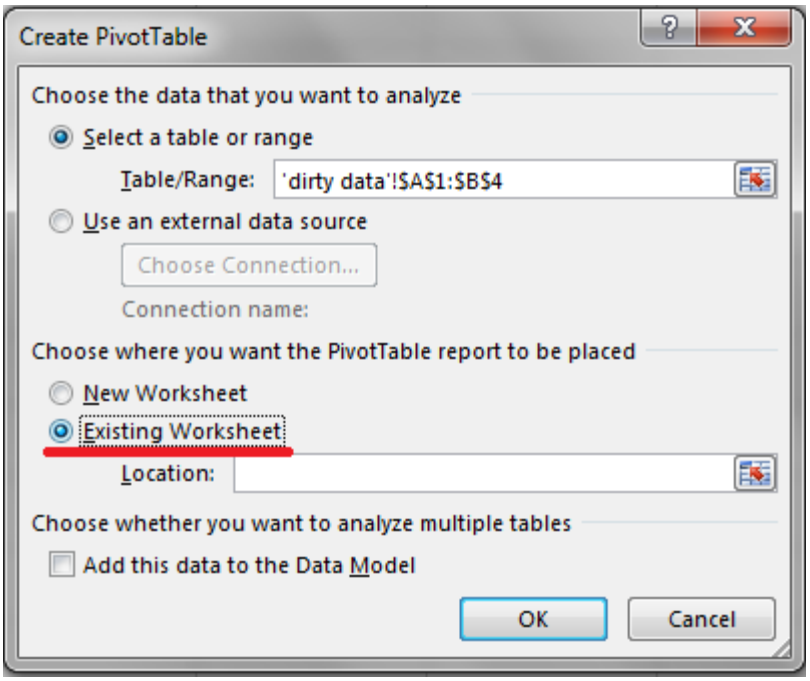
Chapter 3:

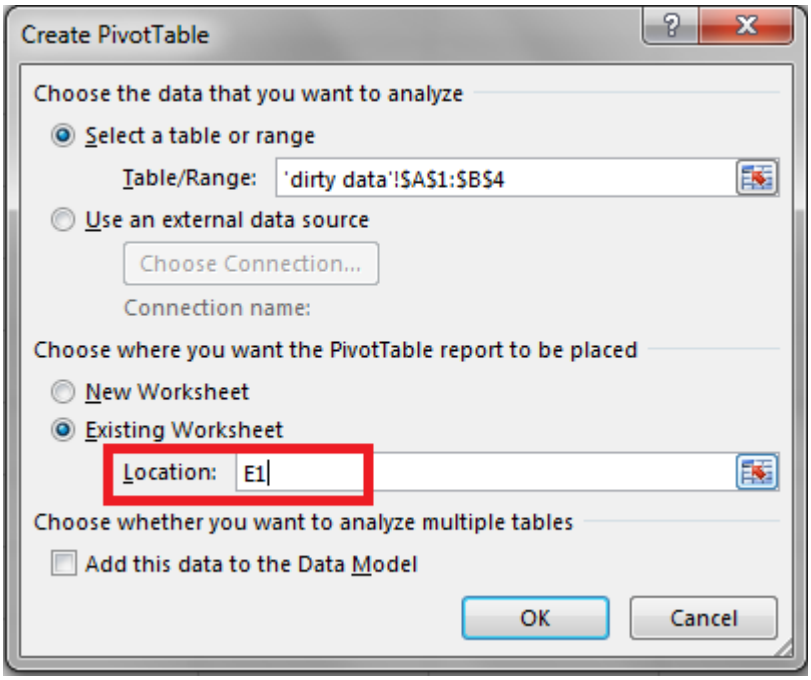
	A	B
1	**Product**	**Sales**
2	red apples	10
3	red apples	10
4	red apples	10

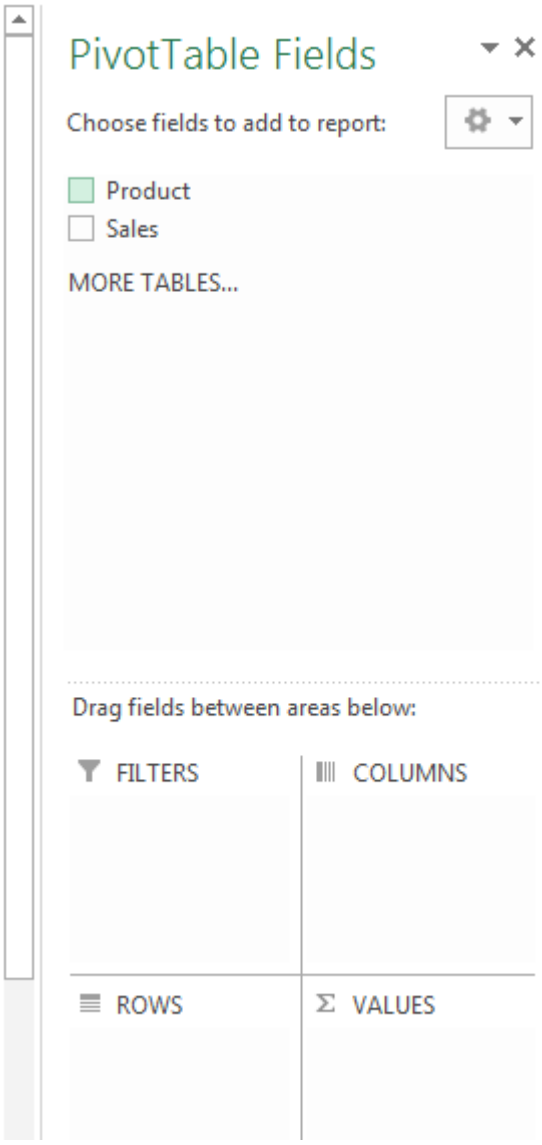
	A	B
1	**Product**	**Sales**
2	red apples	30

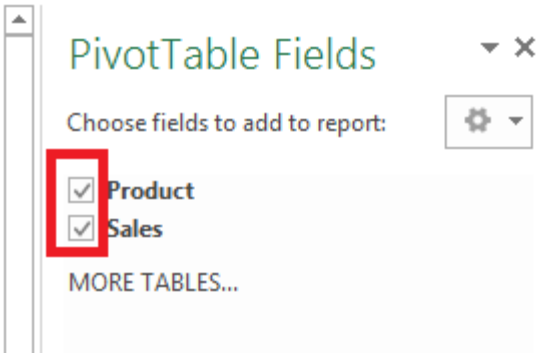


	A	B
1	**Product**	**Sales**
2	red apples	10
3	red apples	10
4	red apples	10

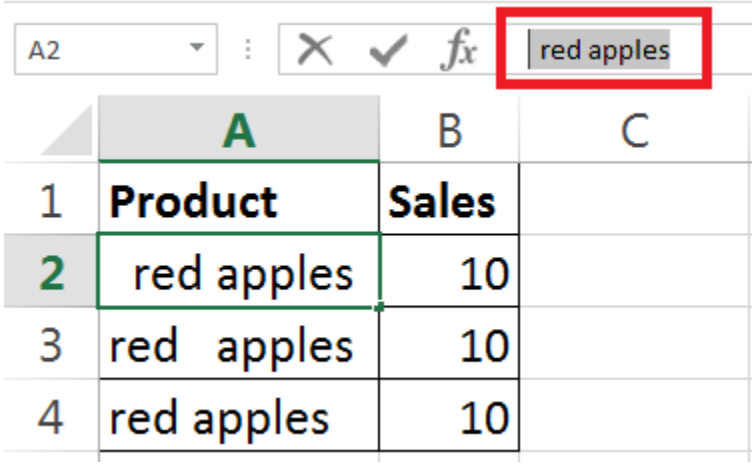

Create PivotTable
Choose the data that you want to analyze
Select a table or range
Table/Range: 'dirty data'!$A$1:$B$4
Use an external data source
Choose Connection...
Connection name:
Choose where you want the PivotTable report to be placed
New Worksheet
Existing Worksheet
Location:
Choose whether you want to analyze multiple tables
Add this data to the Data Model
OK
Cancel

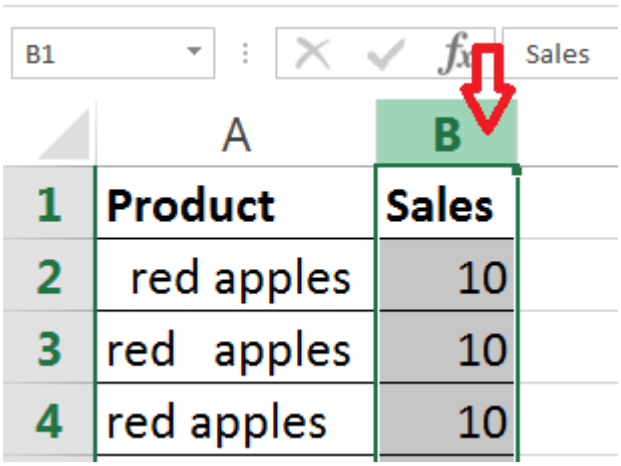

Create PivotTable
Choose the data that you want to analyze
Select a table or range
Table/Range: 'dirty data'!$A$1:$B$4
Use an external data source
Choose Connection...
Connection name:
Choose where you want the PivotTable report to be placed
New Worksheet
Existing Worksheet
Location: E1
Choose whether you want to analyze multiple tables
Add this data to the Data Model
OK
Cancel

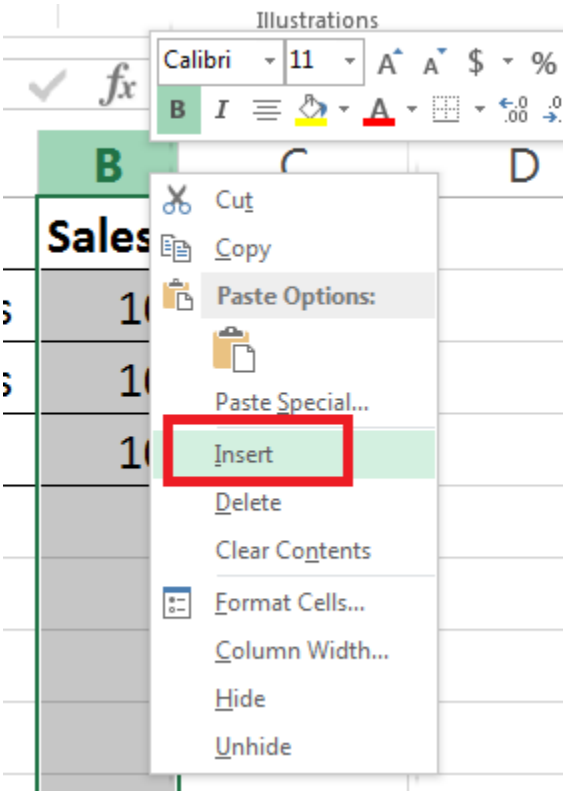

PivotTable Fields
Choose fields to add to report:
Product
Sales
MORE TABLES...
Drag fields between areas below:
FILTERS
COLUMNS
ROWS
VALUES


PivotTable Fields
Choose fields to add to report:
Product
Sales
MORE TABLES...

E	F
Row Labels	**Sum of Sales**
red apples	10
red apples	10
red apples	10
Grand Total	**30**







	A	B	C
1	**Product**	**Product_Clean**	**Sales**
2	red apples		10
3	red apples		10
4	red apples		10

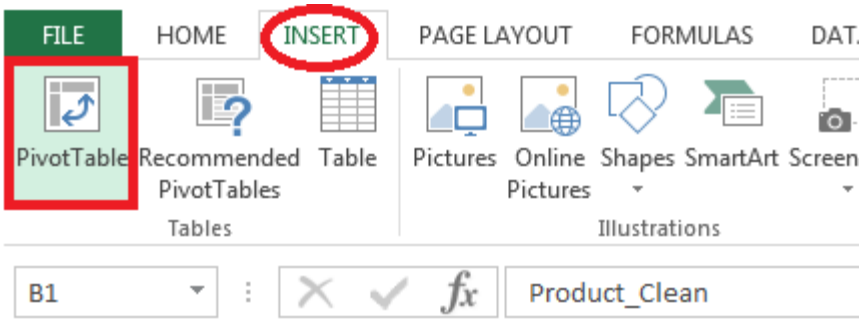
A2 =trim(A2

	A	B	C
1	**Product**	**Product_Clean**	**Sales**
2	red apples	=trim(A2	10
3	red apples		10
4	red apples		10

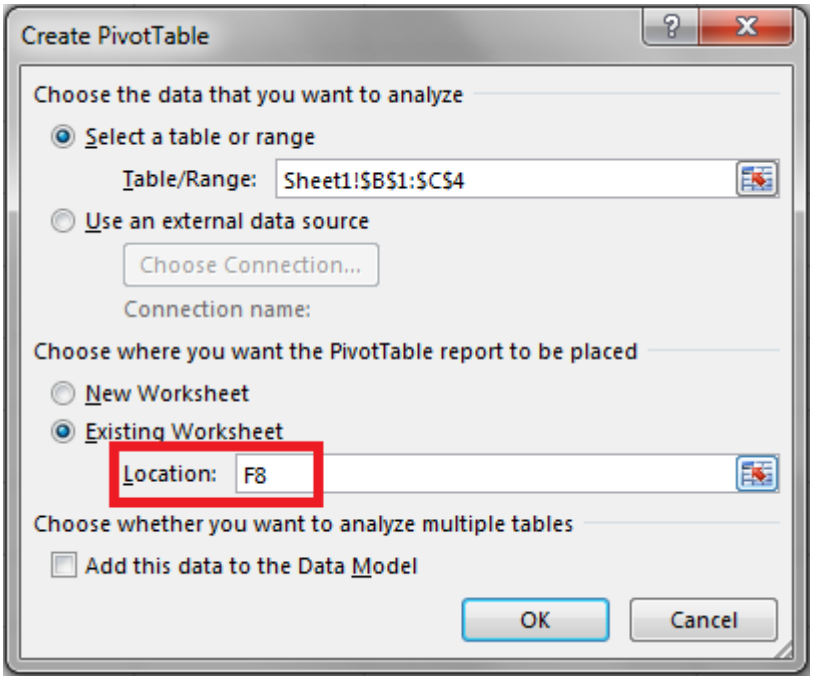
TRIM(text)

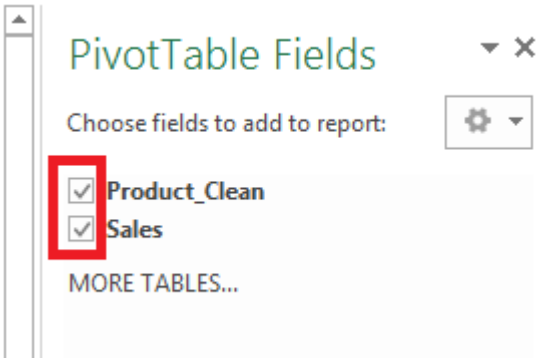
	A	B	C
1	**Product**	**Product_Clean**	**Sales**
2	red apples	red apples	10
3	red apples		10
4	red apples		10

	A	B	C
1	**Product**	**Product_Clean**	**Sales**
2	red apples	red apples	10
3	red apples	red apples	10
4	red apples	red apples	10
5			



	A	B	C
1	**Product**	**Product_Clean**	**Sales**
2	red apples	red apples	10
3	red apples	red apples	10
4	red apples	red apples	10





Row Labels	Sum of Sales
red apples	30
Grand Total	**30**

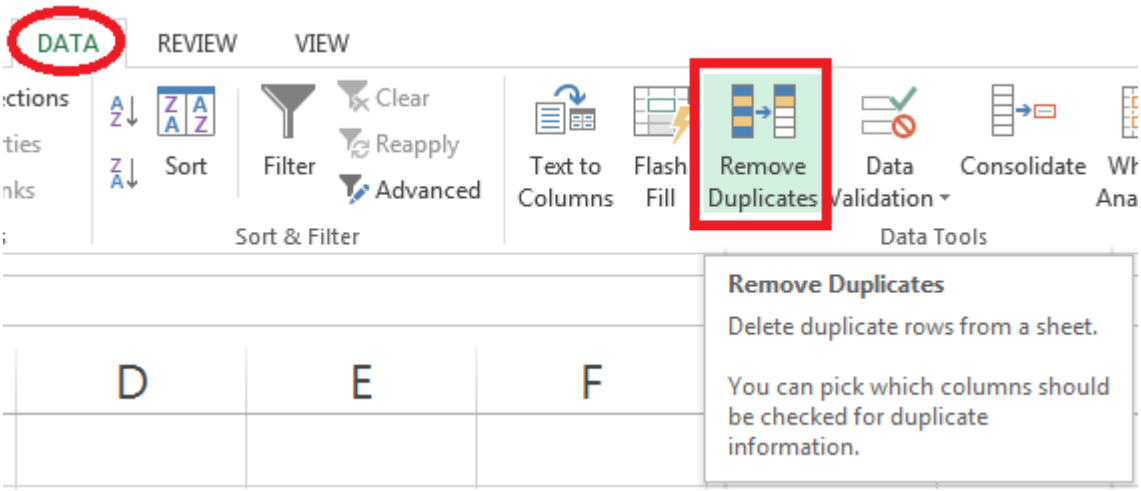
	A
1	**Name**
2	david Rojas
3	Bill Fergus
4	Mary blue
5	BOB BOBBY
6	MikE HoPe

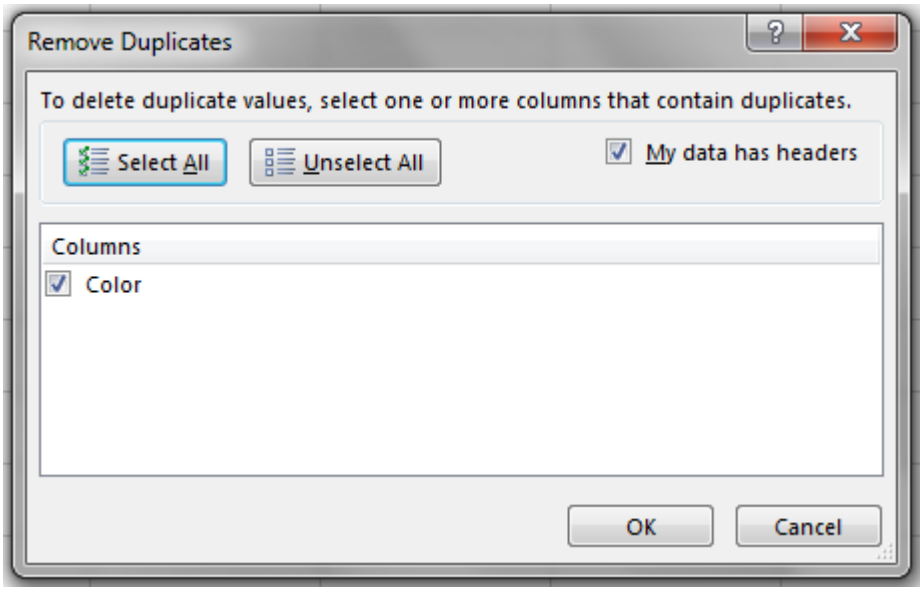
	A	B
1	**Name**	
2	david Rojas	=proper(A2
3	Bill Fergus	
4	Mary blue	
5	BOB BOBBY	
6	MikE HoPe	

PROPER(**text**)

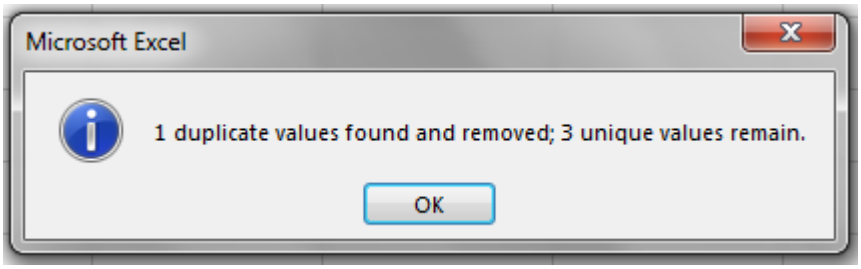
	A	B
1	**Name**	
2	david Rojas	David Rojas
3	Bill Fergus	Bill Fergus
4	Mary blue	Mary Blue
5	BOB BOBBY	Bob Bobby
6	MikE HoPe	Mike Hope

	A
1	**Color**
2	blue
3	blue
4	red
5	green

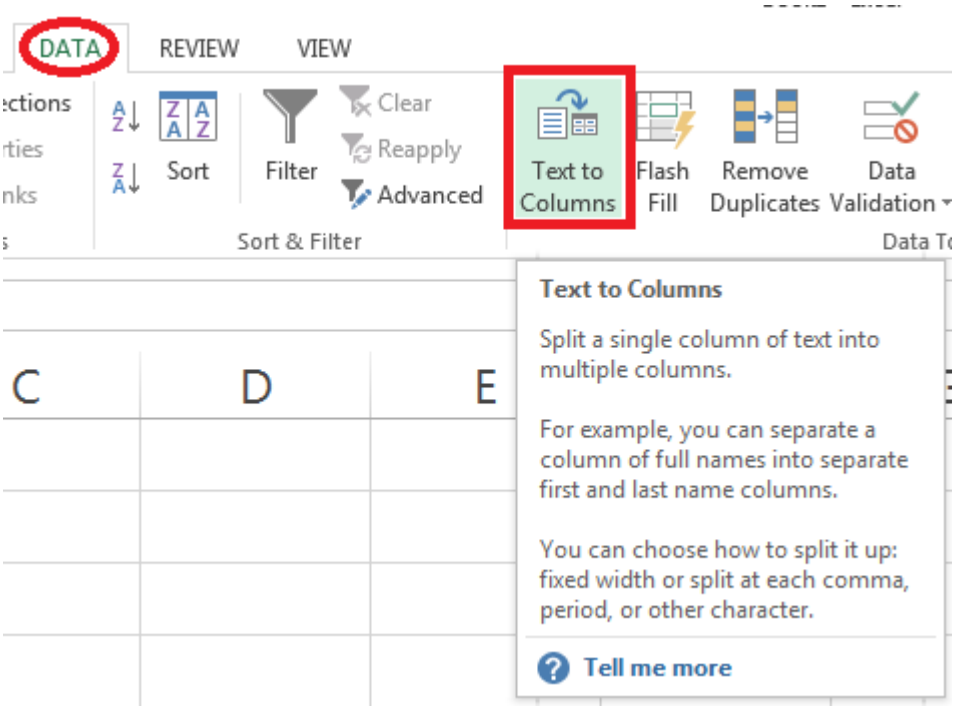


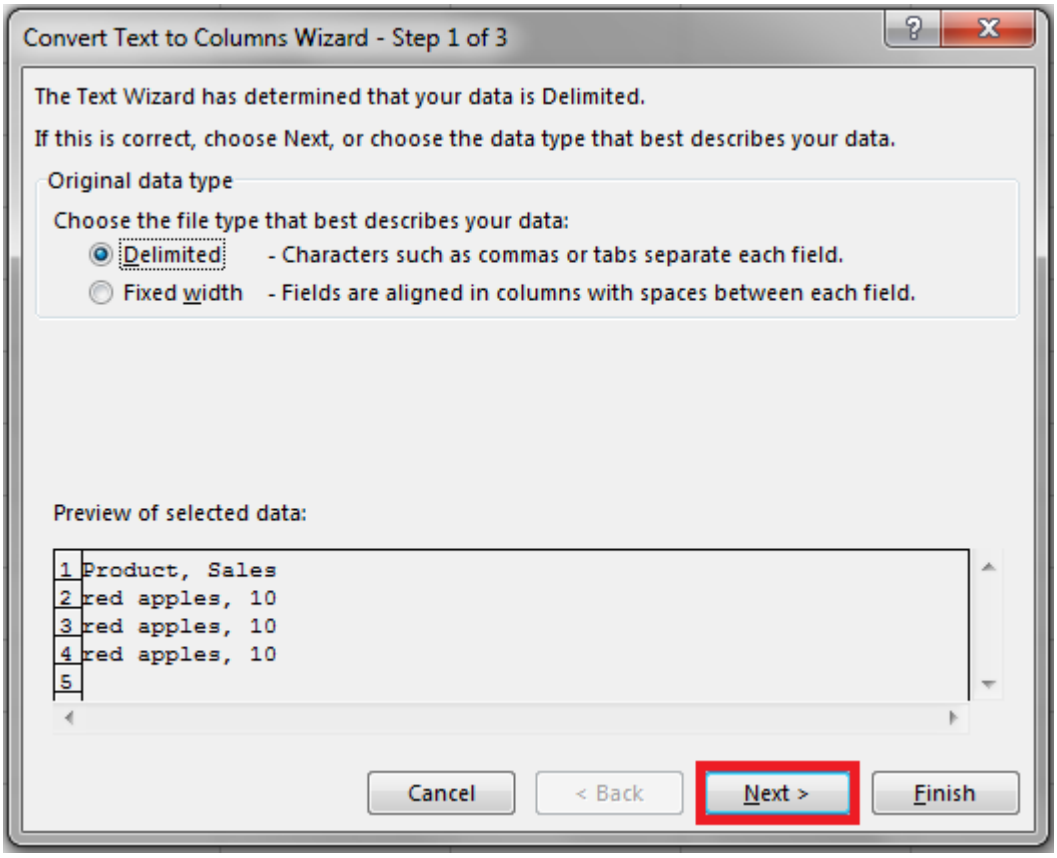


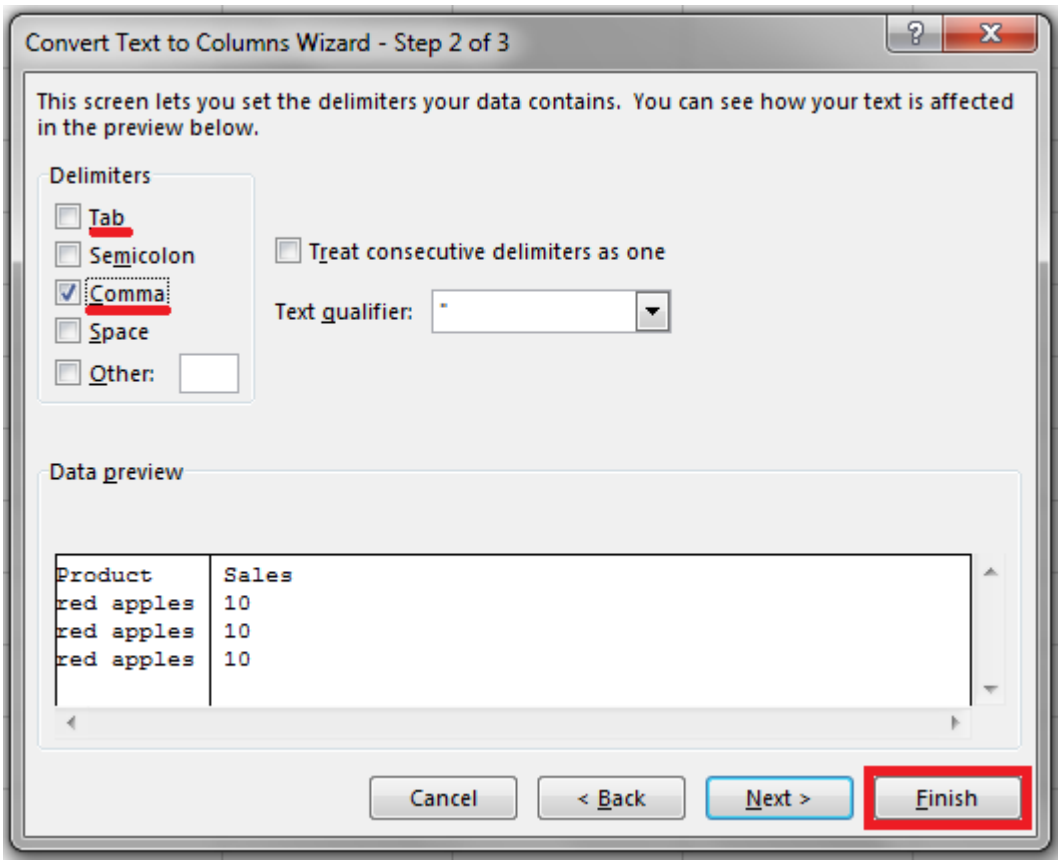
	A
1	**Color**
2	blue
3	red
4	green
5	



	A
1	*Product, Sales*
2	*red apples, 10*
3	*red apples, 10*
4	*red apples, 10*


DATA
REVIEW
VIEW
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove Duplicates
Data Validation
Data To
Text to Columns
Split a single column of text into multiple columns.
For example, you can separate a column of full names into separate first and last name columns.
You can choose how to split it up: fixed width or split at each comma, period, or other character.
Tell me more
C
D
E


Convert Text to Columns Wizard - Step 1 of 3
The Text Wizard has determined that your data is Delimited.
If this is correct, choose Next, or choose the data type that best describes your data.
Original data type
Choose the file type that best describes your data:
Delimited - Characters such as commas or tabs separate each field.
Fixed width - Fields are aligned in columns with spaces between each field.
Preview of selected data:
1 Product, Sales
2 red apples, 10
3 red apples, 10
4 red apples, 10
5
Cancel
< Back
Next >
Finish



	A	B
1	*Product*	Sales
2	*red apples*	10
3	*red apples*	10
4	*red apples*	10

	A	B
1	**First**	**Last**
2	David	Rojas
3	Bill	Fergus
4	Mary	Blue
5	Bob	Bobby
6	Mike	Hope

	A	B	C
1	**First**	**Last**	
2	David	Rojas	=A2
3	Bill	Fergus	
4	Mary	Blue	
5	Bob	Bobby	
6	Mike	Hope	

	A	B	C
1	**First**	**Last**	
2	David	Rojas	=A2&B2
3	Bill	Fergus	
4	Mary	Blue	
5	Bob	Bobby	
6	Mike	Hope	

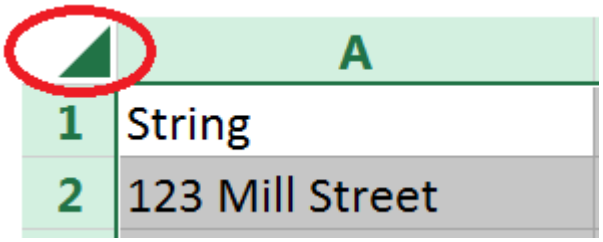
	A	B	C
1	**First**	**Last**	
2	David	Rojas	DavidRojas
3	Bill	Fergus	

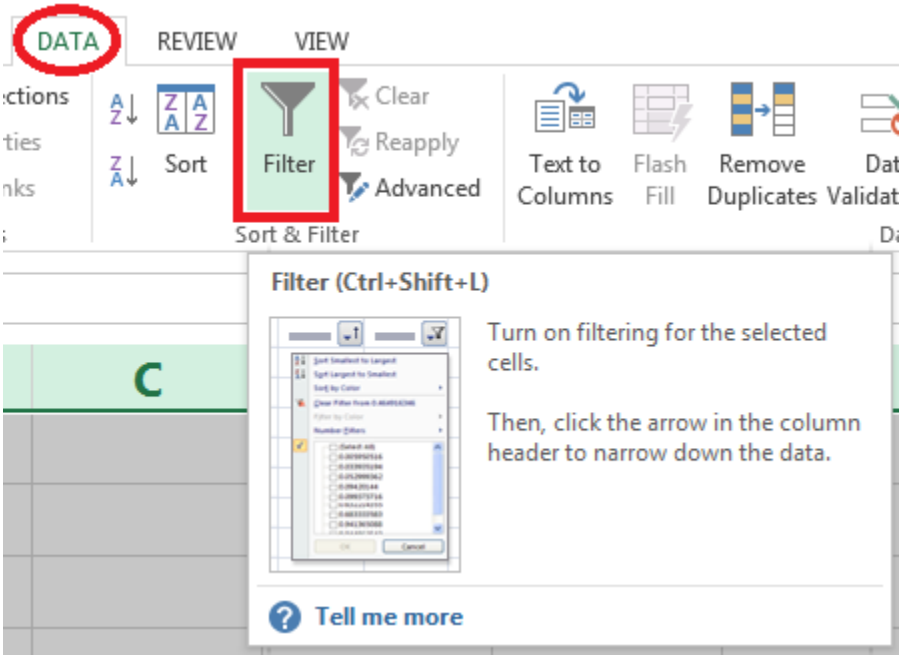
	A	B	C
1	**First**	**Last**	
2	David	Rojas	=A2&B2
3	Bill	Fergus	

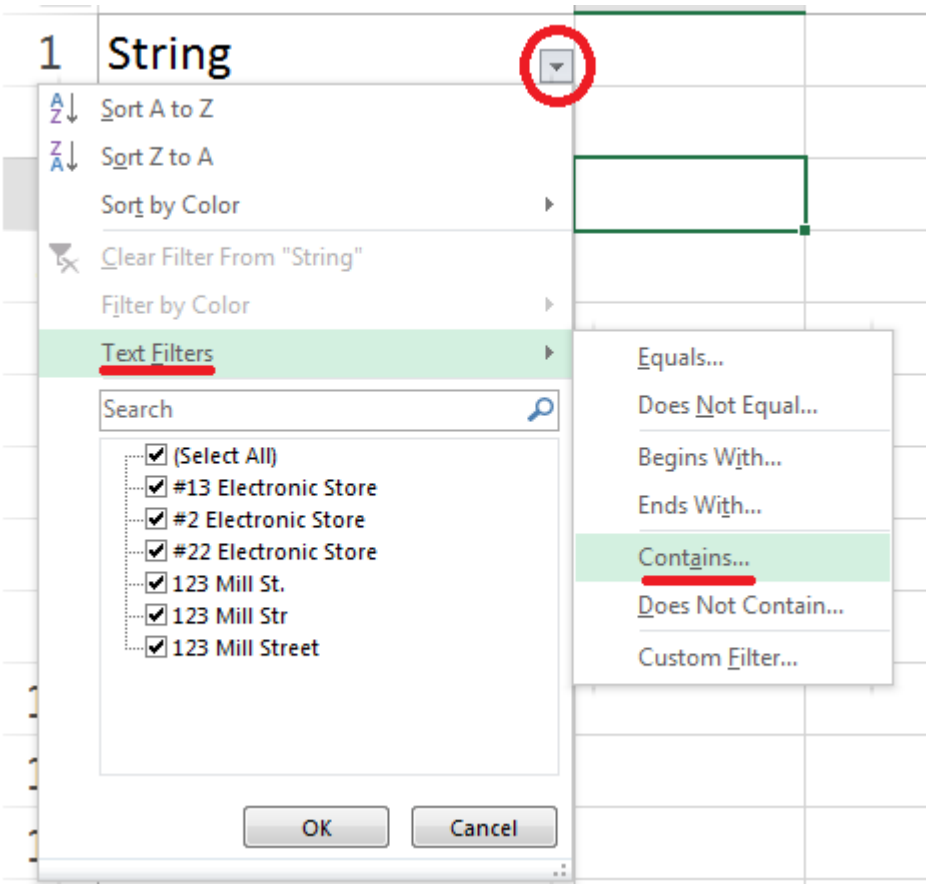
	A	B	C
1	**First**	**Last**	
2	David	Rojas	=A2&" "&B2
3	Bill	Fergus	

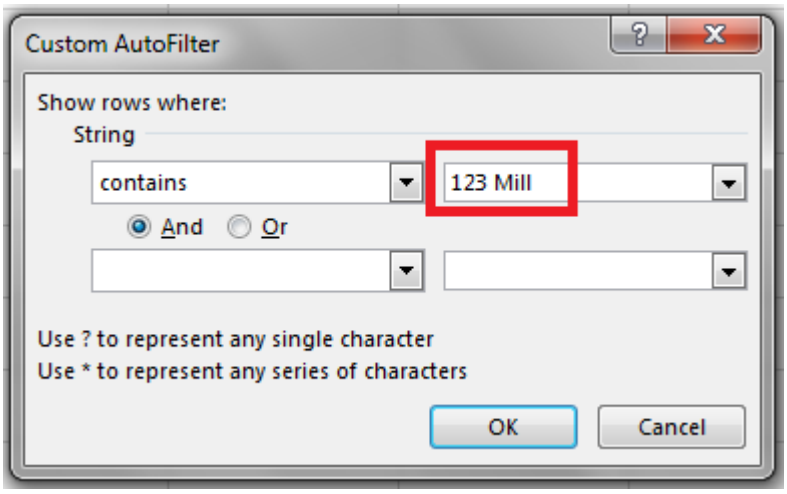
	A	B	C
1	**First**	**Last**	
2	David	Rojas	David Rojas
3	Bill	Fergus	

	A
1	String
2	123 Mill Street
3	123 Mill St.
4	123 Mill Str
5	#2 Electronic Store
6	#22 Electronic Store
7	#13 Electronic Store






1
String
Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "String"
Filter by Color
Text Filters
Search
(Select All)
#13 Electronic Store
#2 Electronic Store
#22 Electronic Store
123 Mill St.
123 Mill Str
123 Mill Street
OK
Cancel
Equals...
Does Not Equal...
Begins With...
Ends With...
Contains...
Does Not Contain...
Custom Filter...

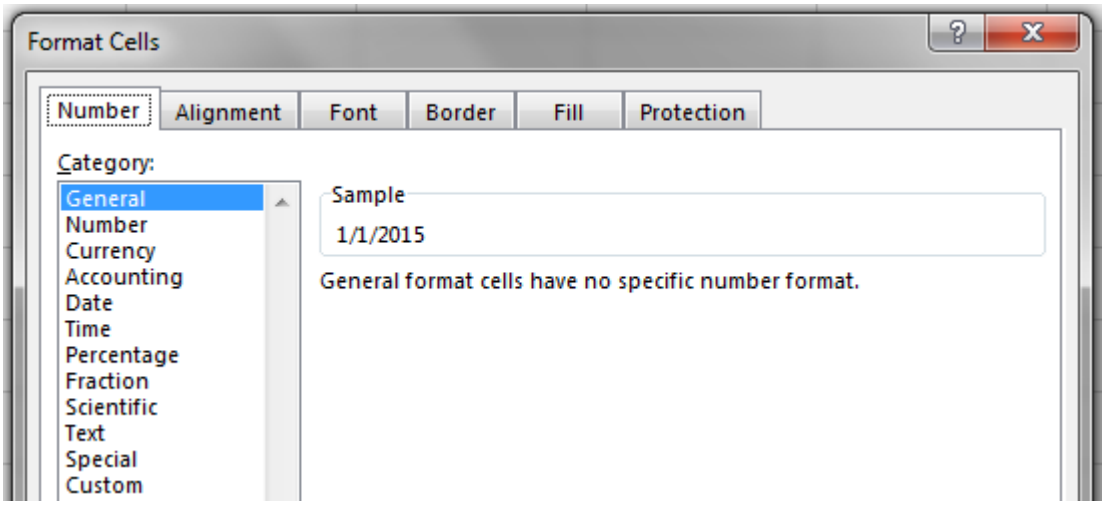

Custom AutoFilter
Show rows where:
String
contains
123 Mill
And
Or
Use ? to represent any single character
Use * to represent any series of characters
OK
Cancel

	A
1	String
2	123 Mill Street
3	123 Mill St.
4	123 Mill Str
8	

	A
1	String
2	123 Mill Street
3	123 Mill Street
4	123 Mill Street
8	

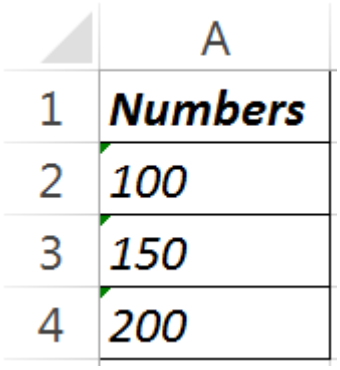
	A
1	String
2	123 Mill Street
3	123 Mill Street
4	123 Mill Street
5	#2 Electronic Store
6	#22 Electronic Store
7	#13 Electronic Store

	A
1	**Dates**
2	1/1/2015
3	2/1/2015
4	3/1/2015

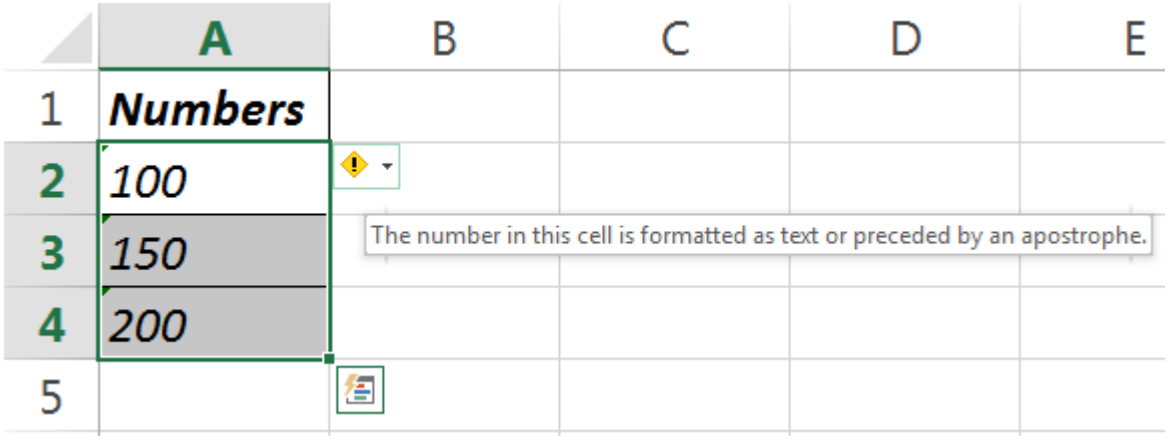


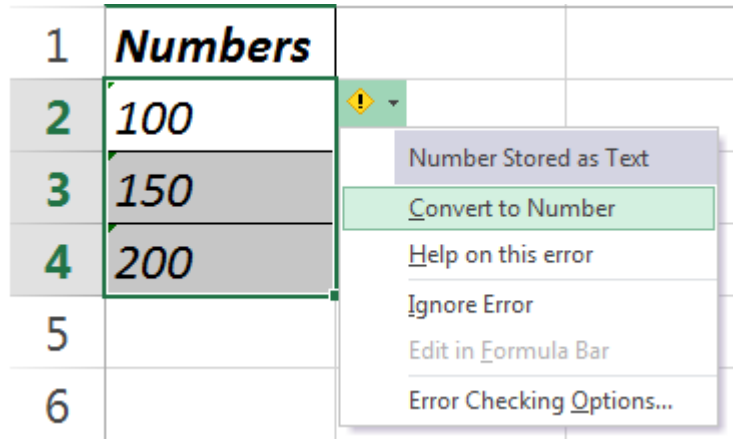
D2 | =YEAR(A2)

	A	B	C	D
1	**Dates**	**Day**	**Month**	**Year**
2	1/1/2015	1	1	2015
3	2/1/2015			
4	3/1/2015			

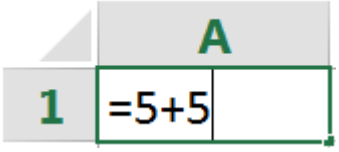


	A
1	**Numbers**
2	100
3	150
4	200





Chapter 4:



	A
1	#NAME?

	A
1	hello world

	A	B	C	D
1	**String1**	**String2**	**Number**	**Combined**
2	I am	years old.	20	

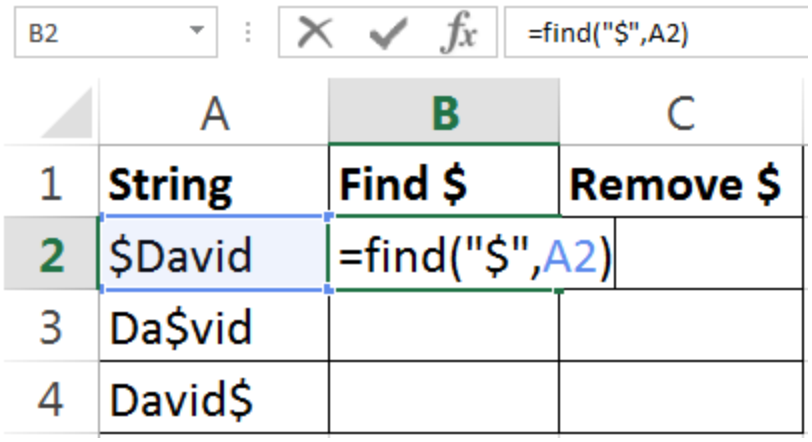
A2 =A2

	A	B	C	D
1	**String1**	**String2**	**Number**	**Combined**
2	I am	years old.	20	=A2

	A	B	C	D
1	**String1**	**String2**	**Number**	**Combined**
2	I am	years old.	20	=A2&C2&B2

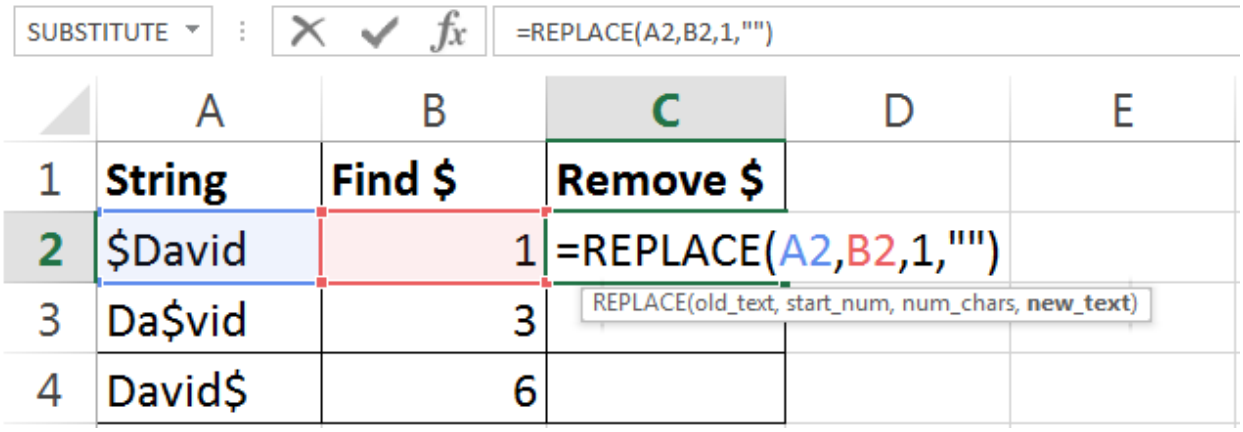
	A	B	C	D
1	**String1**	**String2**	**Number**	**Combined**
2	I am	years old.	20	=A2&" "&C2&" "&B2

	A	B	C
1	**String**	**Find $**	**Remove $**
2	$David		
3	Da$vid		
4	David$		



	A	B	C
1	**String**	**Find $**	**Remove $**
2	$David	1	
3	Da$vid		

	A	B	C
1	**String**	**Find $**	**Remove $**
2	$David	1	
3	Da$vid	3	
4	David$	6	
5			



	A	B	C
1	**String**	**Find $**	**Remove $**
2	$David	1	David
3	Da$vid	3	David
4	David$	6	David
5			

	A	B	C	D
1	**Fruit**	**Inventory**	**Buy**	**How Many?**
2	Apples	200		
3	Grapes	50		
4	Pears	150		
5	Bananas	175		

SUBSTITUTE | =IF(B2<200,"yes","no")

	A	B	C	D
1	**Fruit**	**Inventory**	**Buy**	**How Many?**
2	Apples	200	=IF(B2<200,"yes","no")	
3	Grapes	50		
4	Pears	150		
5	Bananas	175		

IF(logical_test, [value_if_true], **[value_if_false]**)

	A	B	C	D
1	**Fruit**	**Inventory**	**Buy**	**How Many?**
2	Apples	200	no	
3	Grapes	50	yes	
4	Pears	150	yes	
5	Bananas	175	yes	
6				

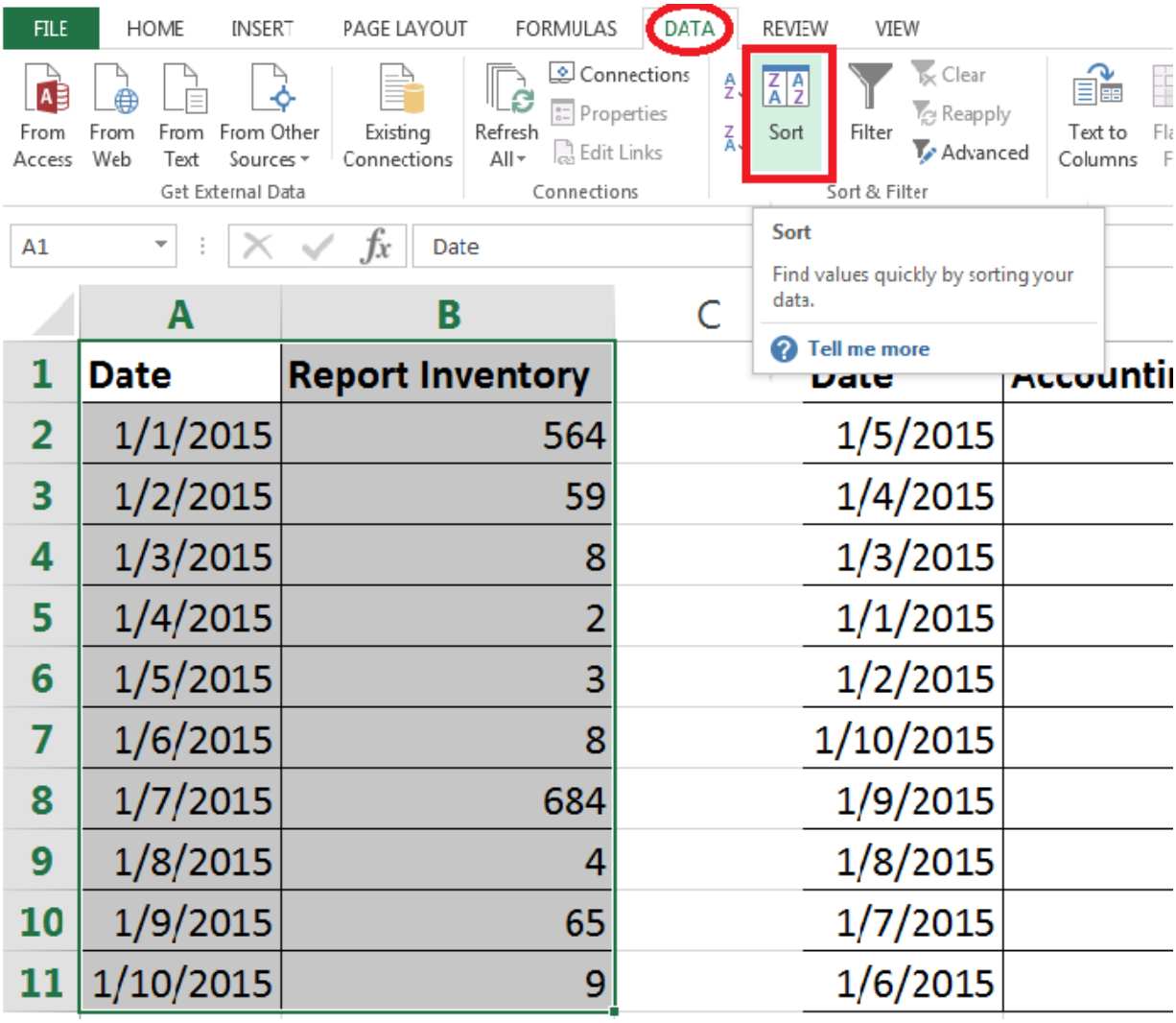
SUBSTITUTE ⋮ ✕ ✓ *fx* =IF(C2="yes",200-B2,0)

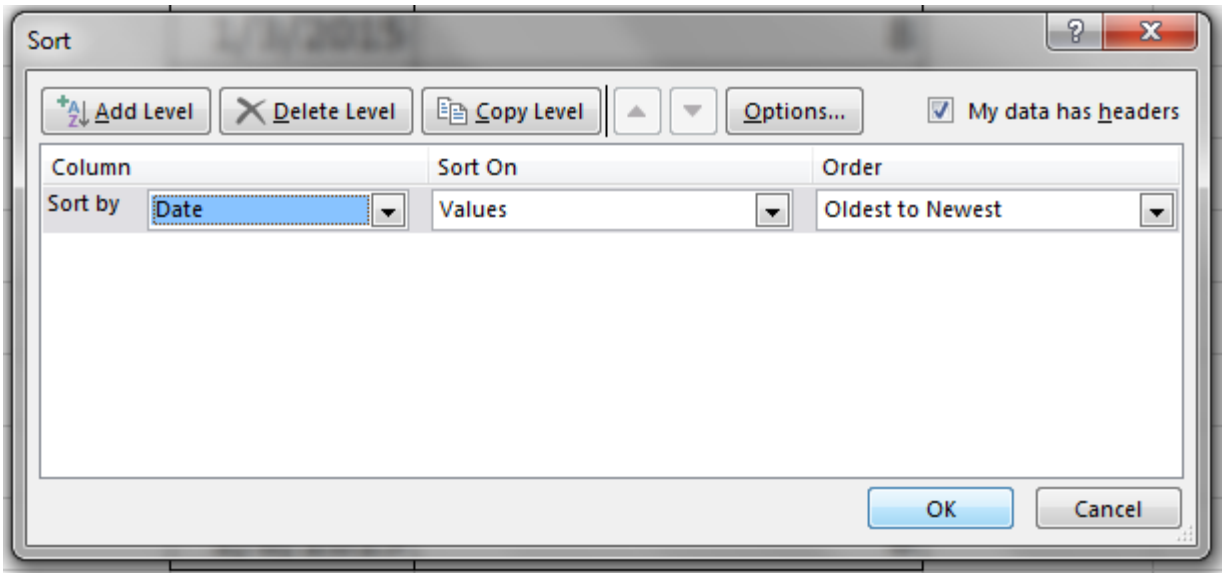
	A	B	C	D	E
1	**Fruit**	**Inventory**	**Buy**	**How Many?**	
2	Apples	200	no	=IF(C2="yes",200-B2,0)	
3	Grapes	50	yes		
4	Pears	150	yes		
5	Bananas	175	yes		

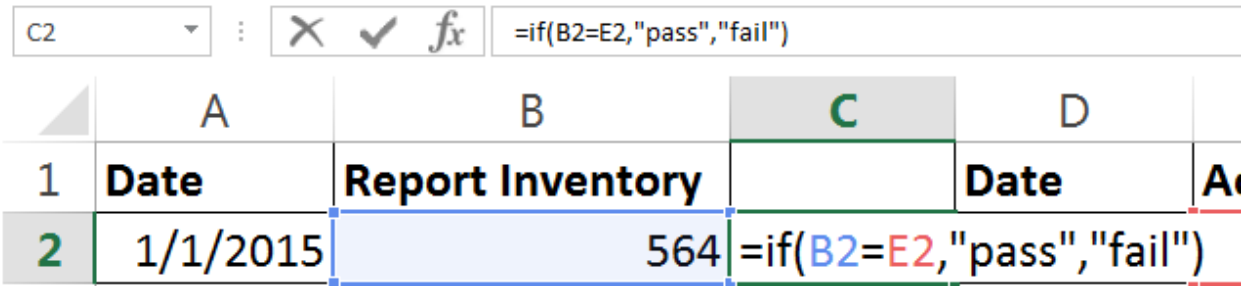
IF(logical_test, [value_if_true], **[value_if_false]**)

	A	B	C	D
1	**Fruit**	**Inventory**	**Buy**	**How Many?**
2	Apples	200	no	0
3	Grapes	50	yes	150
4	Pears	150	yes	50
5	Bananas	175	yes	25

	A	B	C	D	E
1	**Date**	**Report Inventory**		**Date**	**Accounting Inventory**
2	1/1/2015	564		1/5/2015	2
3	1/2/2015	59		1/4/2015	3
4	1/3/2015	8		1/3/2015	8
5	1/4/2015	2		1/1/2015	564
6	1/5/2015	3		1/2/2015	59
7	1/6/2015	8		1/10/2015	6
8	1/7/2015	684		1/9/2015	65
9	1/8/2015	4		1/8/2015	4
10	1/9/2015	65		1/7/2015	684
11	1/10/2015	9		1/6/2015	8



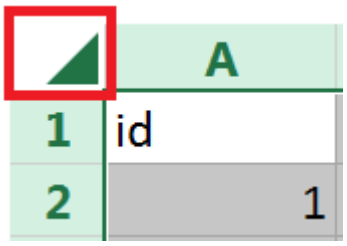


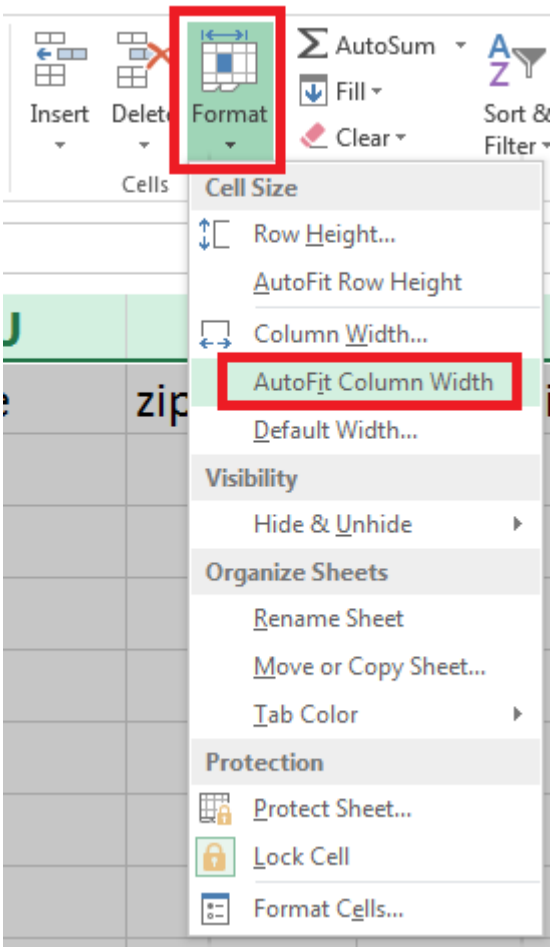


	A	B	C	D	E
1	**Date**	**Report Inventory**		**Date**	**Accounting Inventory**
2	1/1/2015	564	pass	1/1/2015	564
3	1/2/2015	59	pass	1/2/2015	59
4	1/3/2015	8	pass	1/3/2015	8
5	1/4/2015	2	fail	1/4/2015	3
6	1/5/2015	3	fail	1/5/2015	2
7	1/6/2015	8	pass	1/6/2015	8
8	1/7/2015	684	pass	1/7/2015	684
9	1/8/2015	4	pass	1/8/2015	4
10	1/9/2015	65	pass	1/9/2015	65
11	1/10/2015	9	fail	1/10/2015	6

Chapter 5:

F	G	H	I
email	phonenur	address	city
HernanDR	1.23E+09	123 NW 1t	Miami
hernandrc	2.35E+09	456 NW 2t	Miami
mstuff@s	3.46E+09	789 SW 3r	San Franci
mstuff@s	3.46E+09	567 SW 4t	San Franci





F	G	H
email	phonenumber	address
HernanDRojas@gmail.com	1234567890	123 NW 1th RD
hernandrojas@gmail.com	2345678901	456 NW 2th RD
mstuff@someplace.com	3456789012	789 SW 3rd Dr
mstuff@someplace.com	3456789012	567 SW 4th Dr

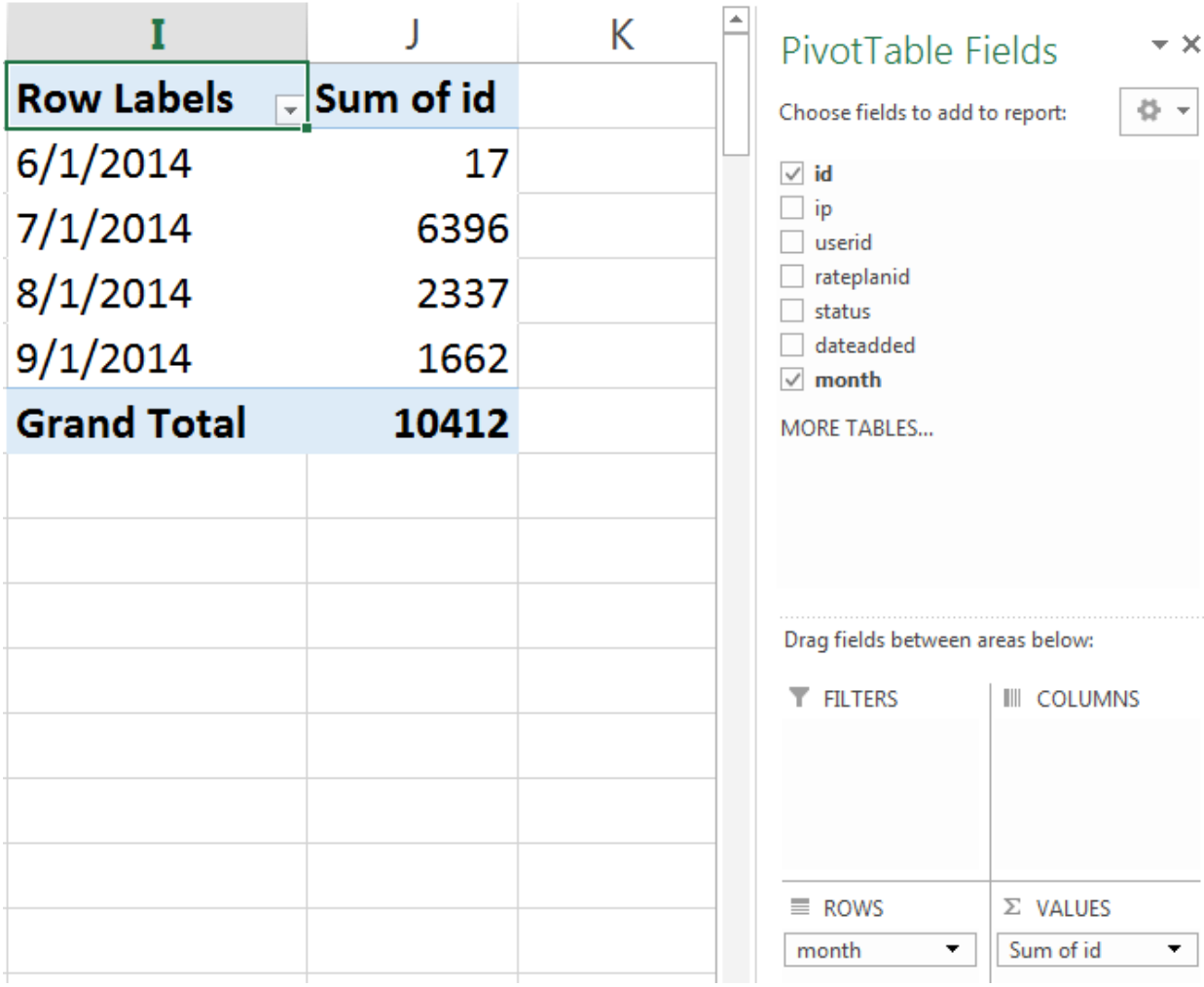
A	B	C	D	E	F	G	H	I	J
id	name	price	limit	default	lockedin	signupexp	effbegindate	effenddate	dateadded
1	default	1		1		1/1/2099	1/1/2014	1/1/2099	3/27/2014
2	free	0				1/1/2099	1/1/2014	1/1/2099	3/28/2014

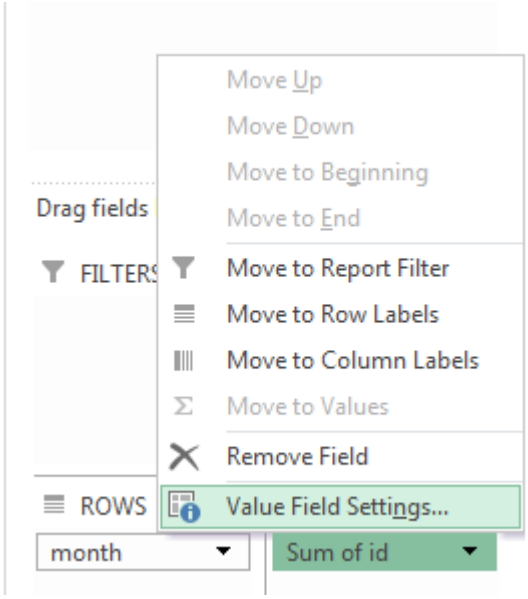
id	ip	userid	rateplanid	status	dateadded
8	10.185.0.100	50		FALSE	6/6/2014
9	10.185.157.183	1	1	TRUE	6/6/2014
10	10.42.121.33	3	1	TRUE	7/9/2014
11	10.123.47.121	3	1	FALSE	7/10/2014
12	10.228.25.238	3	1	FALSE	7/10/2014

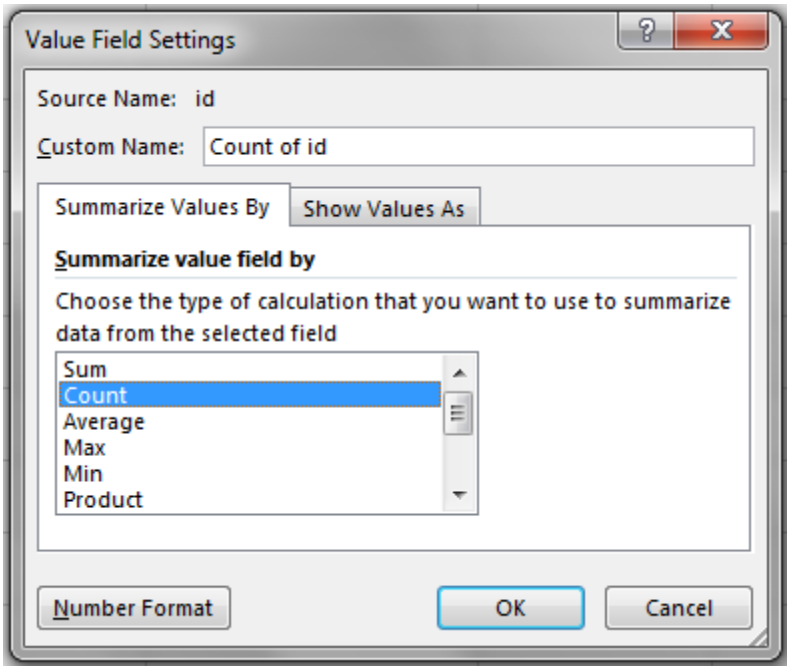
F	G
dateadded	month
6/6/2014	6/1/2014
6/6/2014	
7/9/2014	

F	G
dateadded	month
6/6/2014	6/1/2014
6/6/2014	6/1/2014
7/9/2014	
7/10/2014	

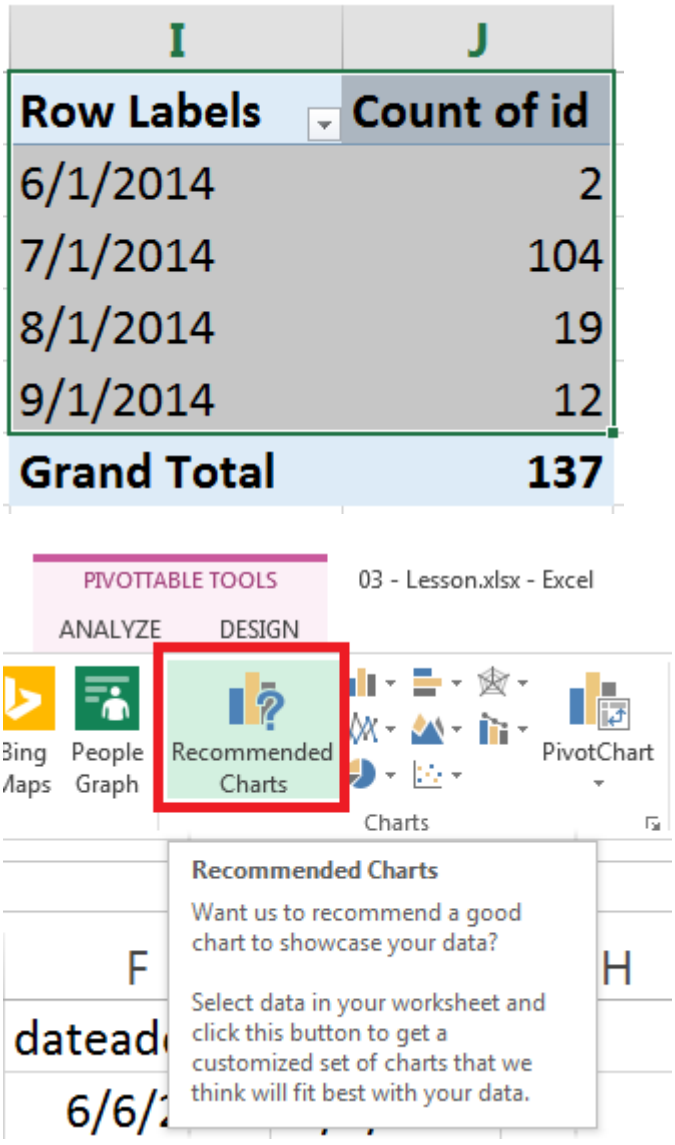
F	G
dateadded	month
6/6/2014	6/1/2014
6/6/2014	6/1/2014
7/9/2014	7/1/2014
7/10/2014	7/1/2014
7/10/2014	7/1/2014
7/10/2014	7/1/2014
7/10/2014	7/1/2014

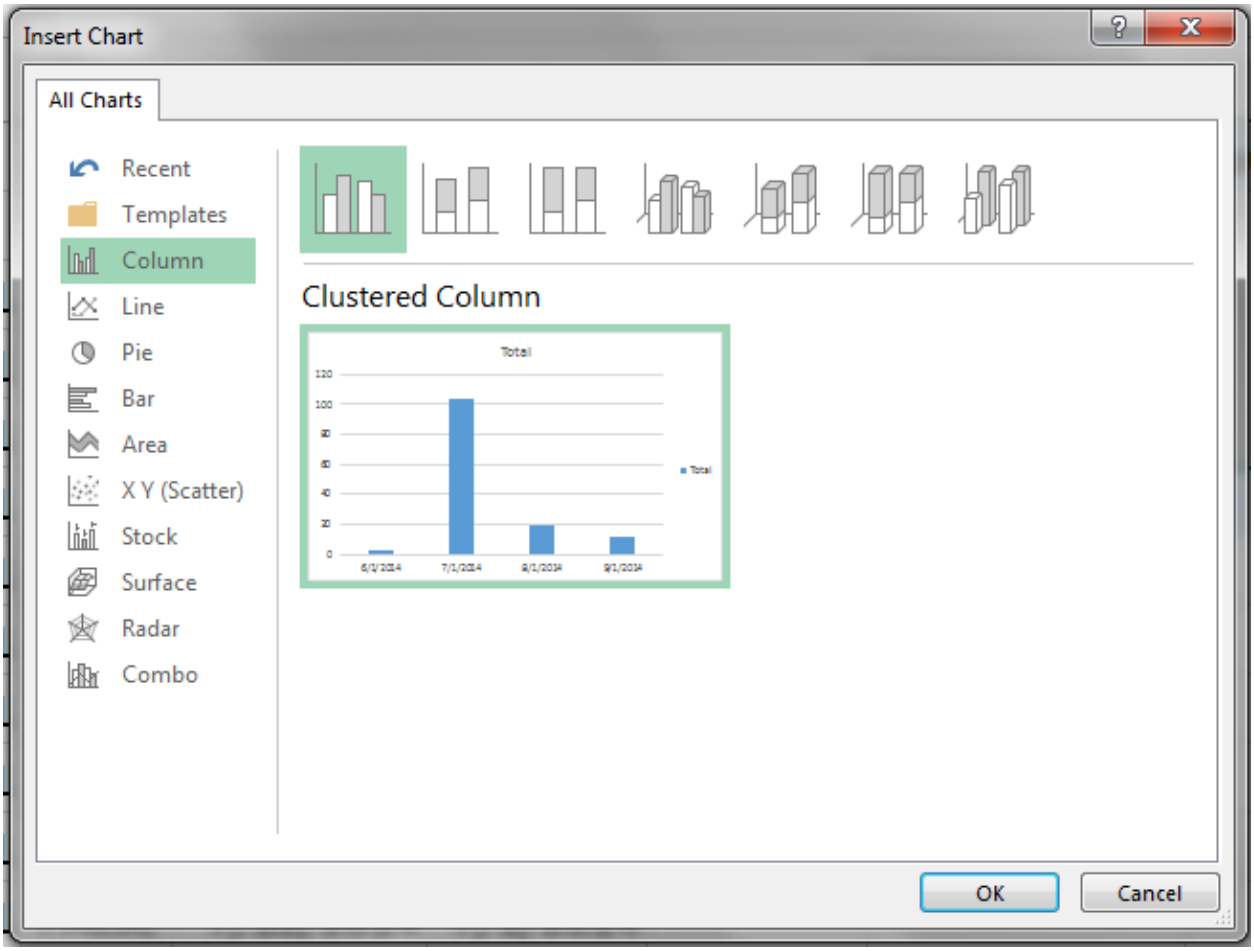

I
J
K
Row Labels
Sum of id
6/1/2014
17
7/1/2014
6396
8/1/2014
2337
9/1/2014
1662
Grand Total
10412
PivotTable Fields
Choose fields to add to report:
id
ip
userid
rateplanid
status
dateadded
month
MORE TABLES...
Drag fields between areas below:
FILTERS
COLUMNS
ROWS
VALUES
month
Sum of id

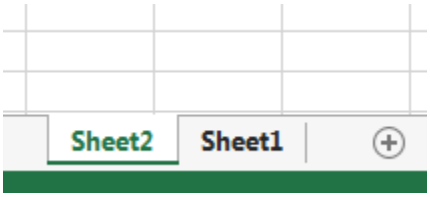

Move Up
Move Down
Move to Beginning
Move to End
Move to Report Filter
Move to Row Labels
Move to Column Labels
Move to Values
Remove Field
Value Field Settings...
Drag fields
FILTERS
ROWS
month
Sum of id

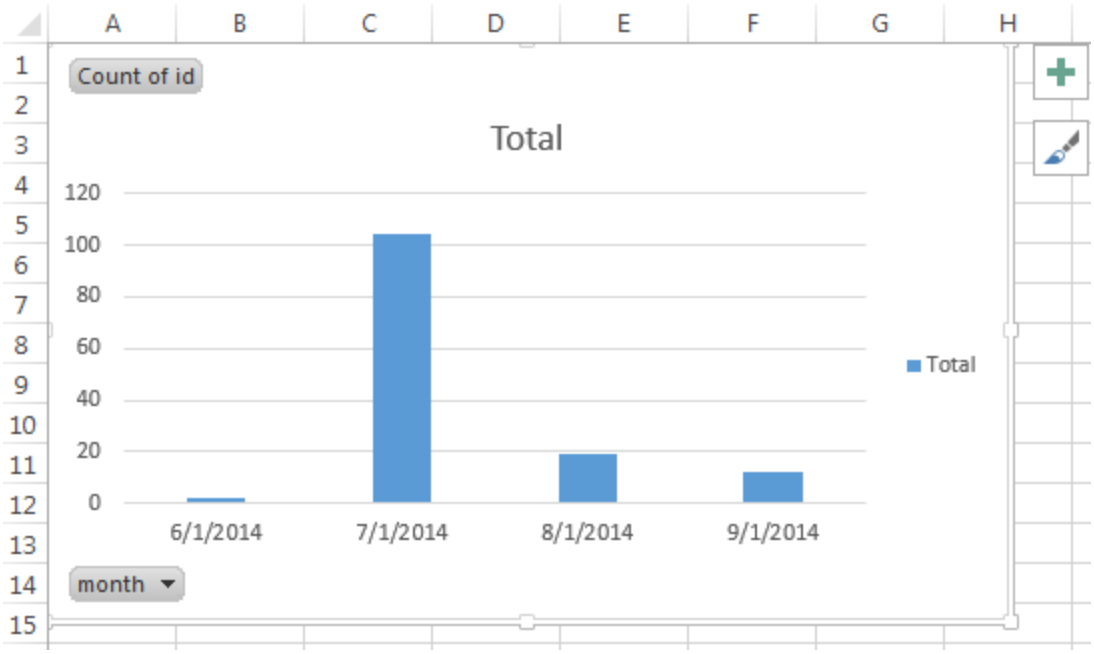


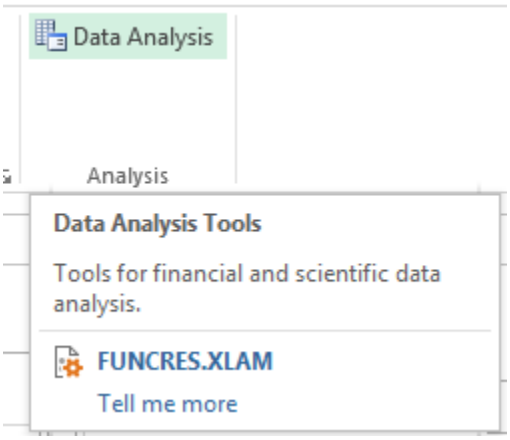
I	J
Row Labels	**Count of id**
6/1/2014	2
7/1/2014	104
8/1/2014	19
9/1/2014	12
Grand Total	**137**

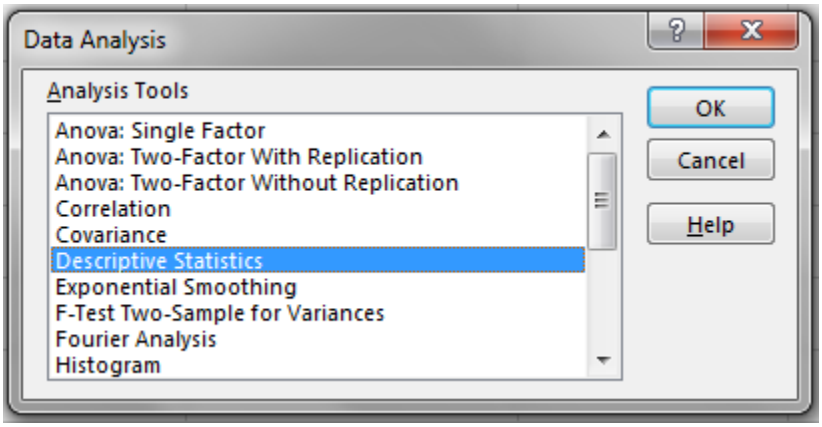

I
J
Row Labels
Count of id
6/1/2014
2
7/1/2014
104
8/1/2014
19
9/1/2014
12
Grand Total
137
PIVOTTABLE TOOLS
03 - Lesson.xlsx - Excel
ANALYZE
DESIGN
Bing Maps
People Graph
Recommended Charts
PivotChart
Charts
Recommended Charts
Want us to recommend a good chart to showcase your data?
Select data in your worksheet and click this button to get a customized set of charts that we think will fit best with your data.
F
H
datead
6/6/

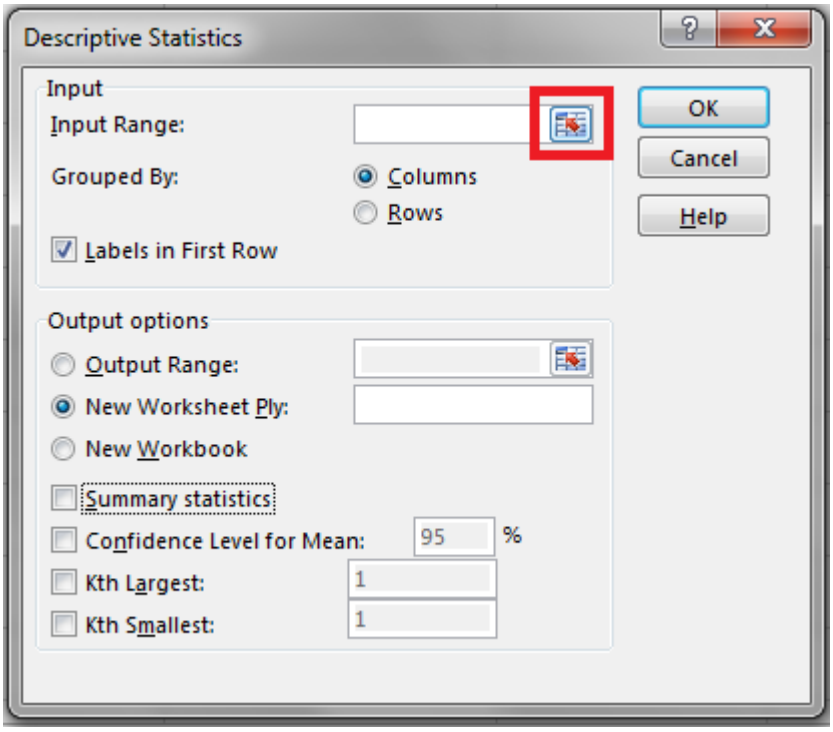

Insert Chart
All Charts
Recent
Templates
Column
Line
Pie
Bar
Area
X Y (Scatter)
Stock
Surface
Radar
Combo
Clustered Column
Total
OK
Cancel

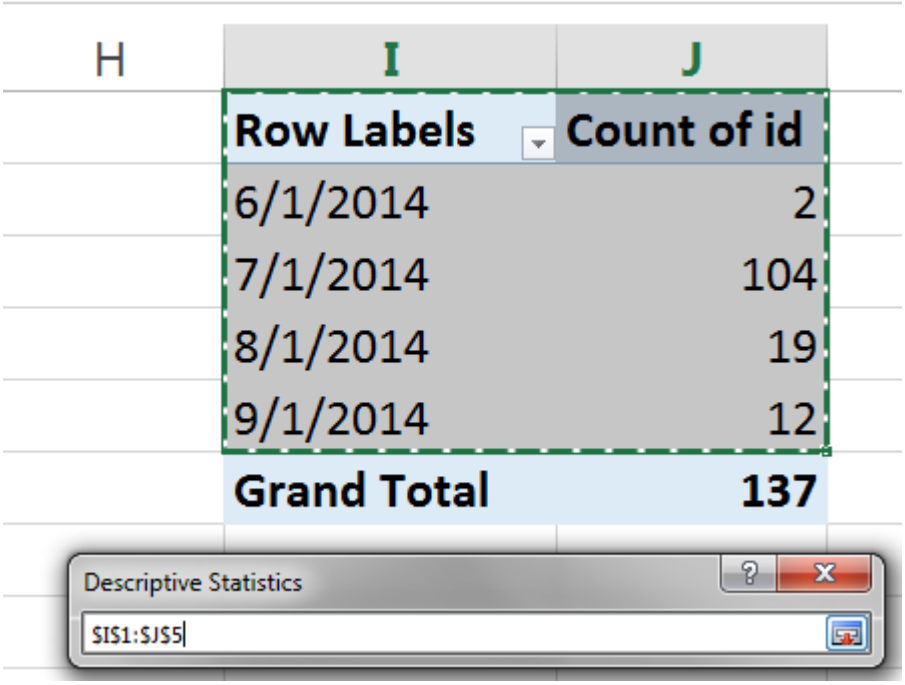

Sheet2
Sheet1


Count of id
Total
120
100
80
60
40
20
0
6/1/2014
7/1/2014
8/1/2014
9/1/2014
Total
month

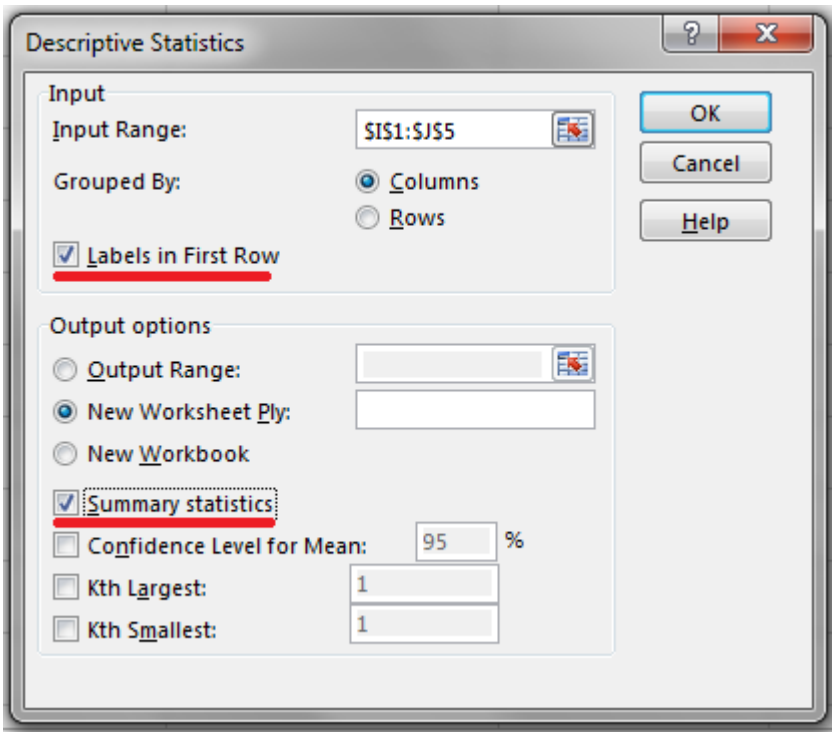

Data Analysis
Analysis
Data Analysis Tools
Tools for financial and scientific data analysis.
FUNCRES.XLAM
Tell me more

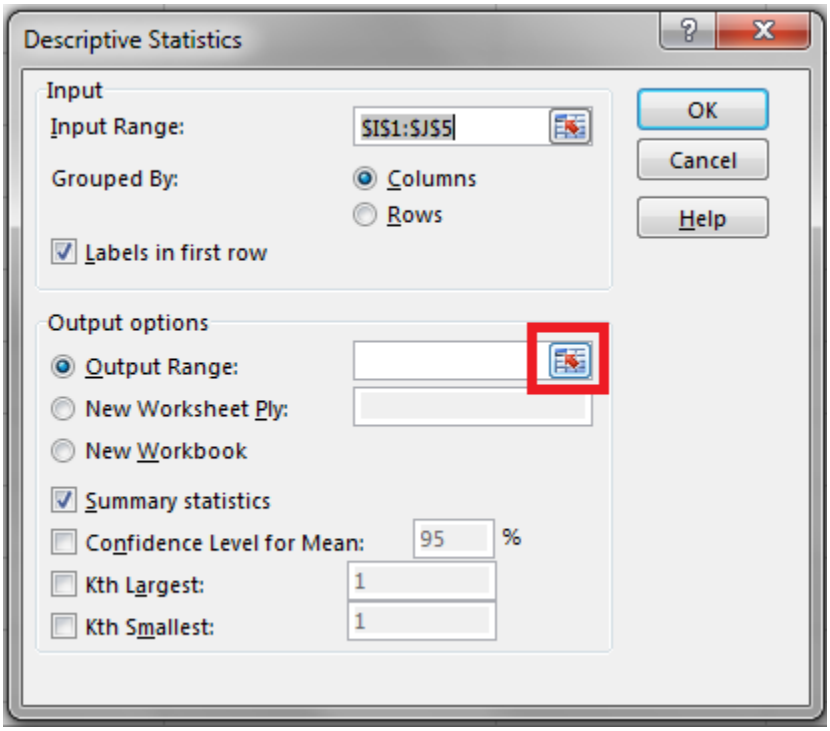

Data Analysis
Analysis Tools
Anova: Single Factor
Anova: Two-Factor With Replication
Anova: Two-Factor Without Replication
Correlation
Covariance
Descriptive Statistics
Exponential Smoothing
F-Test Two-Sample for Variances
Fourier Analysis
Histogram
OK
Cancel
Help



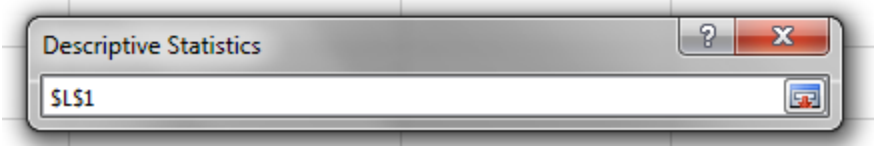


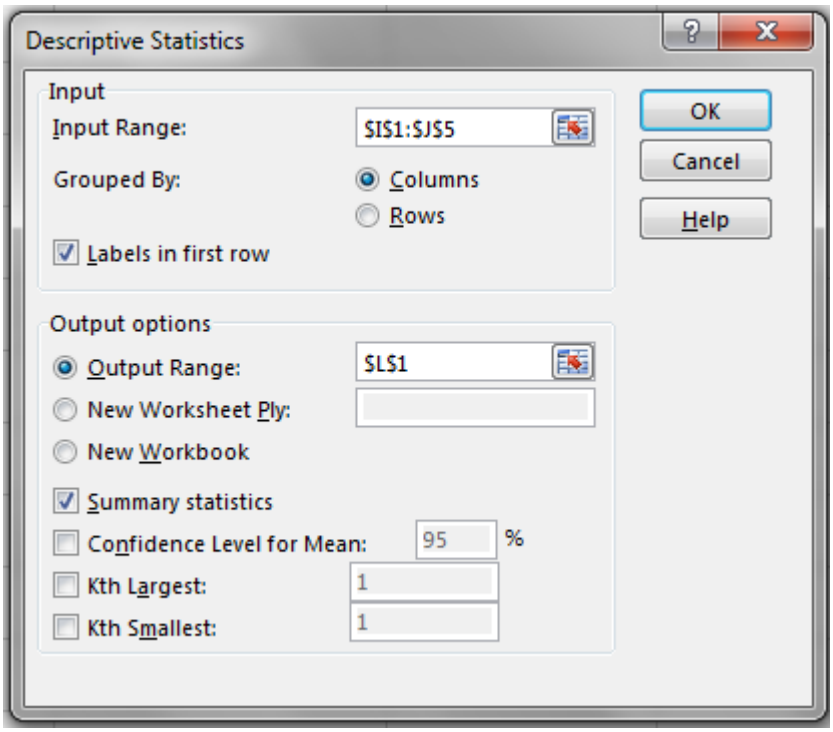
H	I	J
	Row Labels	Count of id
	6/1/2014	2
	7/1/2014	104
	8/1/2014	19
	9/1/2014	12
	Grand Total	137


Descriptive Statistics
Input
Input Range:
$I$1:$J$5
Grouped By:
Columns
Rows
Labels in First Row
Output options
Output Range:
New Worksheet Ply:
New Workbook
Summary statistics
Confidence Level for Mean:
95
%
Kth Largest:
1
Kth Smallest:
1
OK
Cancel
Help

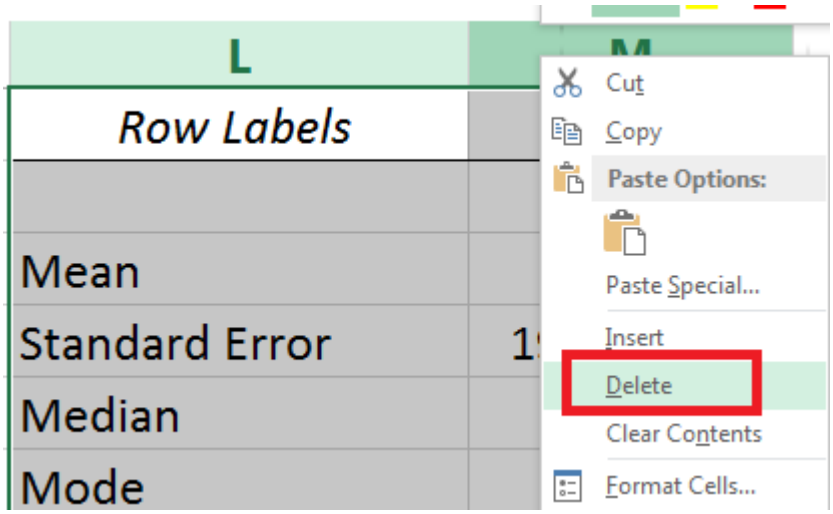

Descriptive Statistics
Input
Input Range:
$I$1:$J$5
Grouped By:
Columns
Rows
Labels in first row
Output options
Output Range:
New Worksheet Ply:
New Workbook
Summary statistics
Confidence Level for Mean:
95
%
Kth Largest:
1
Kth Smallest:
1
OK
Cancel
Help

	I	J	K	L
	Row Labels	**Count of id**		
	6/1/2014	2		
	7/1/2014	104		
	8/1/2014	19		
	9/1/2014	12		
	Grand Total	**137**		

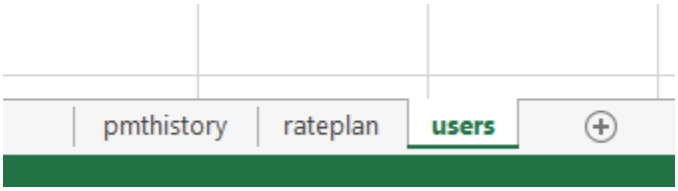


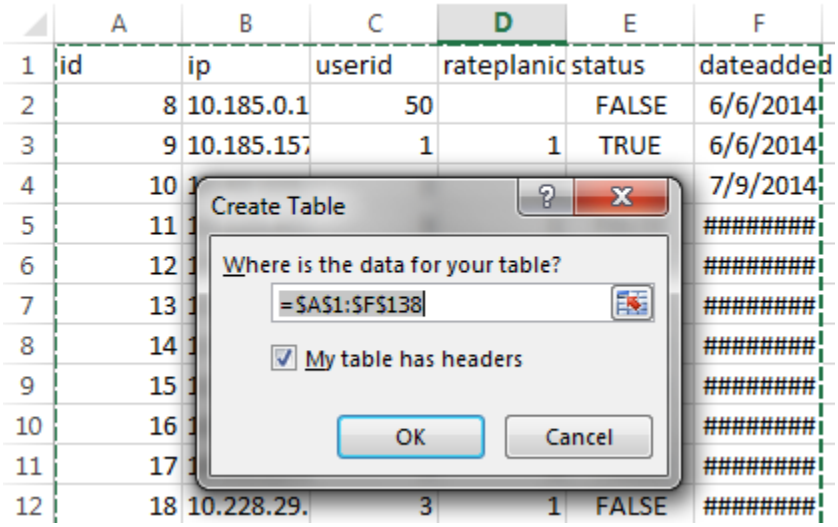


L	M	N	O
Row Labels		*Count of id*	
Mean	41836.75	Mean	34.25
Standard Error	19.81739556	Standard Error	23.51019282
Median	41836.5	Median	15.5
Mode	#N/A	Mode	#N/A
Standard Deviation	39.63479111	Standard Deviation	47.02038565
Sample Variance	1570.916667	Sample Variance	2210.916667
Kurtosis	-1.245906083	Kurtosis	3.581937939
Skewness	0.030126261	Skewness	1.867638487
Range	92	Range	102
Minimum	41791	Minimum	2
Maximum	41883	Maximum	104
Sum	167347	Sum	137
Count	4	Count	4

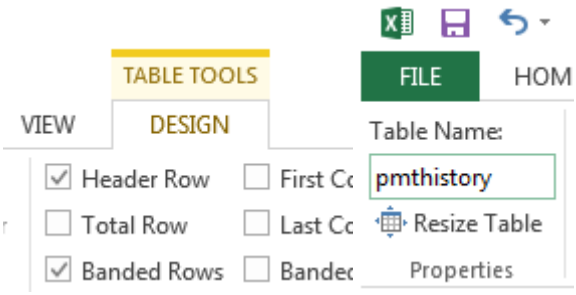


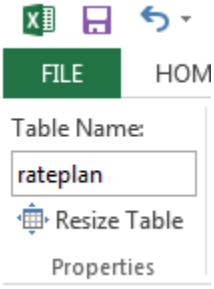
Chapter 6:



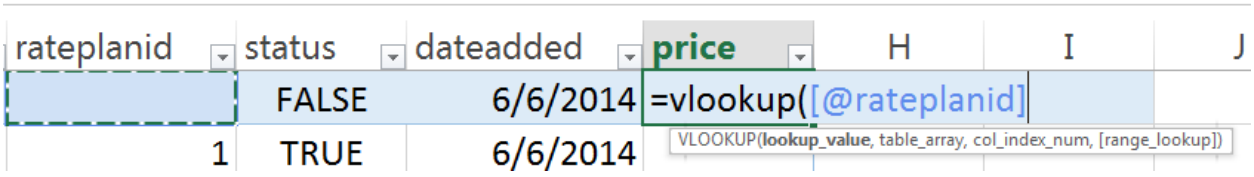


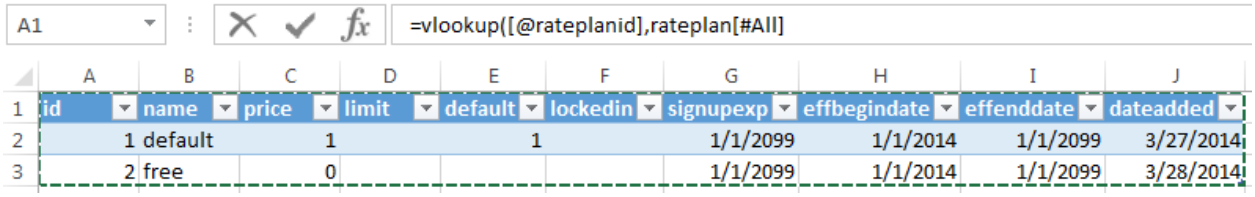
	A	B	C	D	E	F
1	id	ip	userid	rateplanic	status	dateadded
2	8	10.185.0.1	50		FALSE	6/6/2014
3	9	10.185.157	1	1	TRUE	6/6/2014
4	10	1				7/9/2014
5	11	1				########
6	12	1				########
7	13	1				########
8	14	1				########
9	15	1				########
10	16	1				########
11	17	1				########
12	18	10.228.29.	3	1	FALSE	########

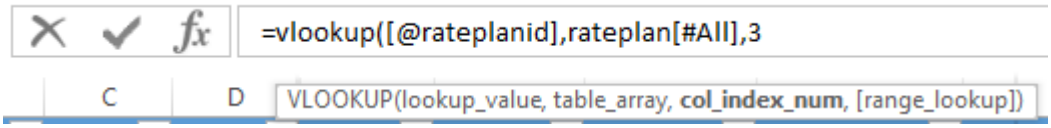


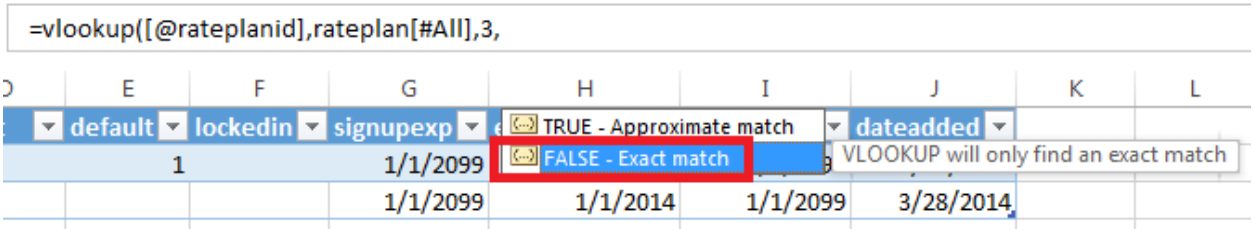


dateadded	price
6/6/2014	
6/6/2014	



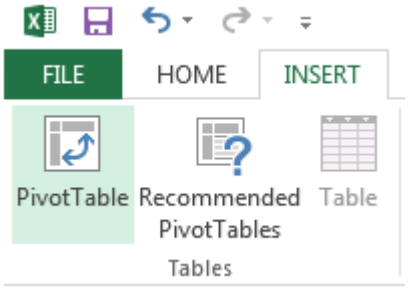


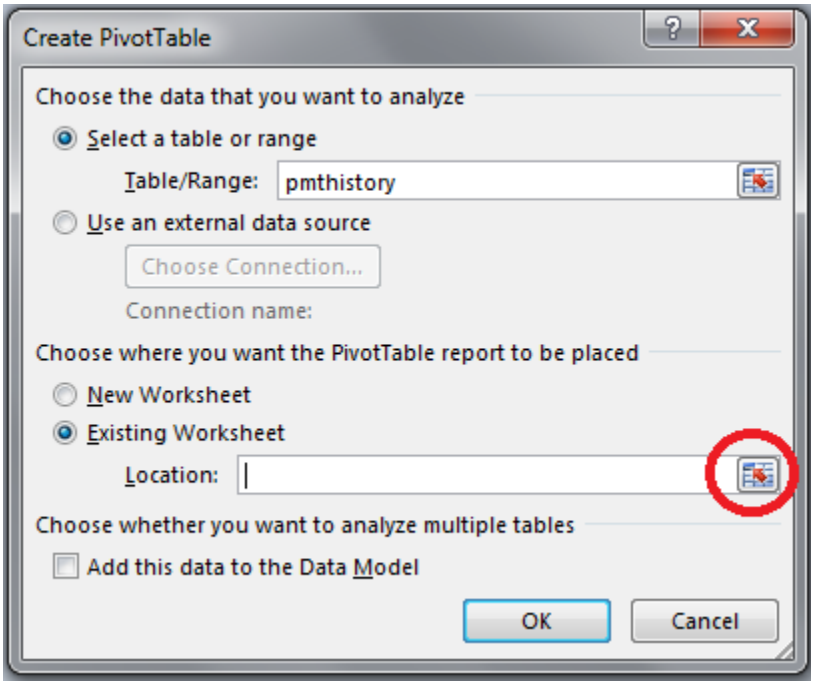


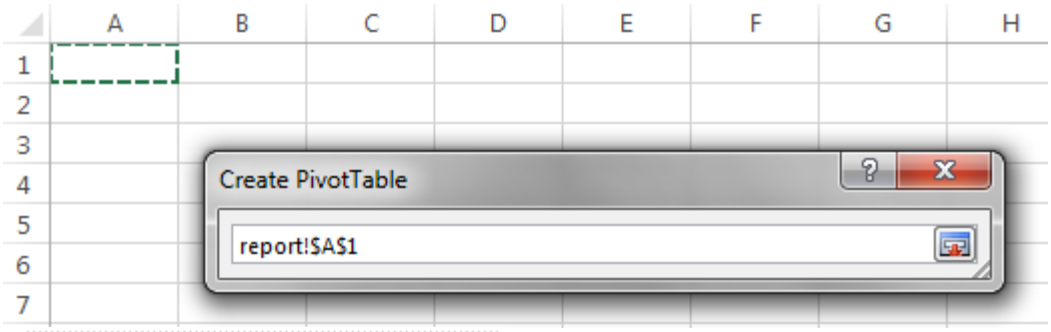


=VLOOKUP([@rateplanid],rateplan[#All],3,FALSE)

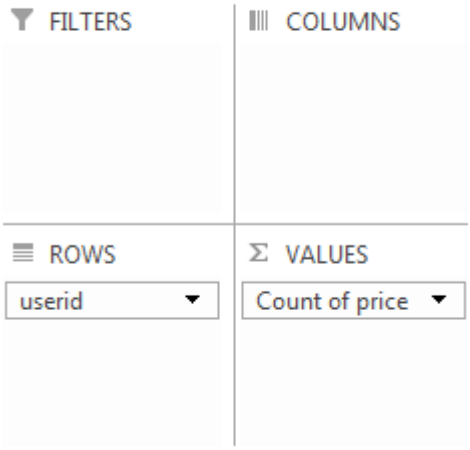
	C	D	E	F	G
	userid	rateplanid	status	dateadded	price
0.1	50		FALSE	6/6/2014	#N/A
15	1	1	TRUE	6/6/2014	1
21.	3	1	TRUE	7/9/2014	1
47.	3	1	FALSE	7/10/2014	1
25.	3	1	FALSE	7/10/2014	1
19	3	1	FALSE	7/10/2014	1
19	3	1	FALSE	7/10/2014	1
2.1	3	1	FALSE	7/10/2014	1

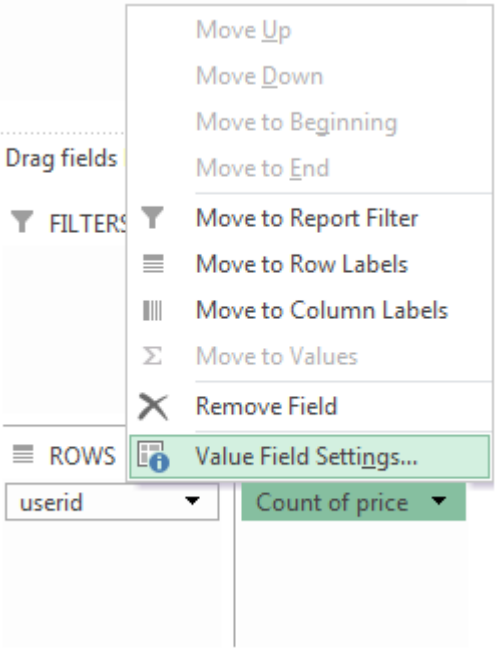

FILE
HOME
INSERT
PivotTable
Recommended PivotTables
Table
Tables

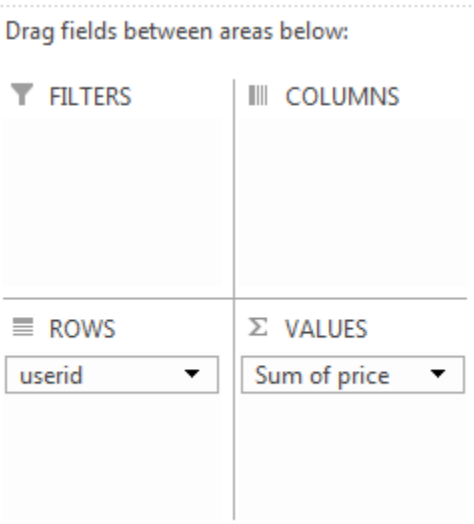

Create PivotTable
Choose the data that you want to analyze
Select a table or range
Table/Range:
pmthistory
Use an external data source
Choose Connection...
Connection name:
Choose where you want the PivotTable report to be placed
New Worksheet
Existing Worksheet
Location:
Choose whether you want to analyze multiple tables
Add this data to the Data Model
OK
Cancel



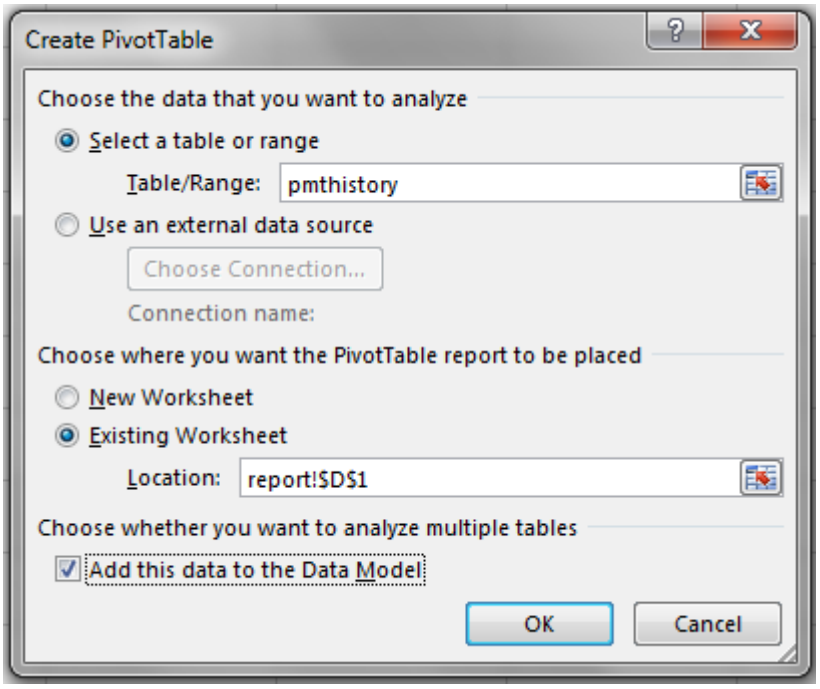
Drag fields between areas below:

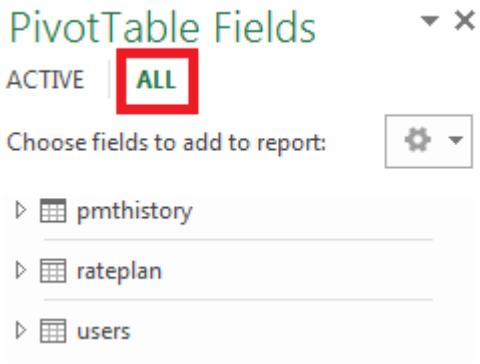




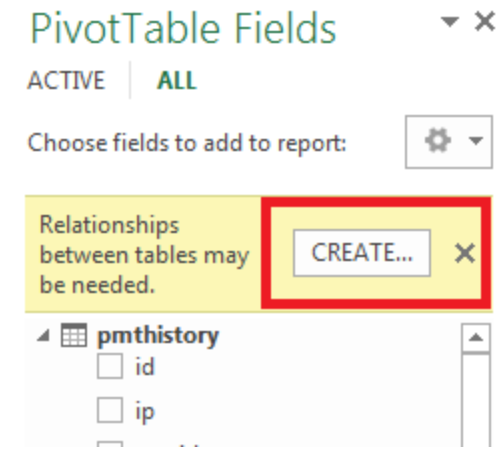


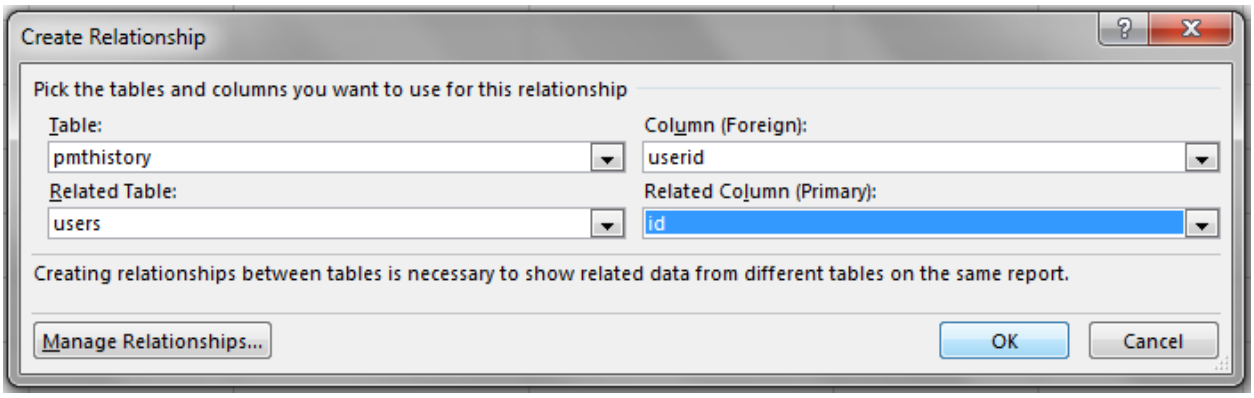
	A	B
1	**Row Labels**	**Sum of price**
2	1	9
3	2	12
4	3	92
5	50	#N/A
6	99	#N/A
7	**Grand Total**	**#N/A**





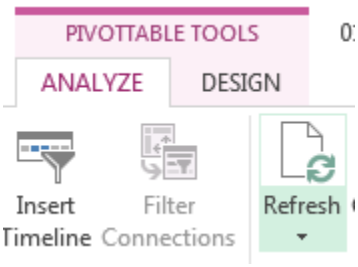
D	E
Row Labels	**Count of price**
property1	137
property2	137
property3	137
property4	137
Grand Total	**137**





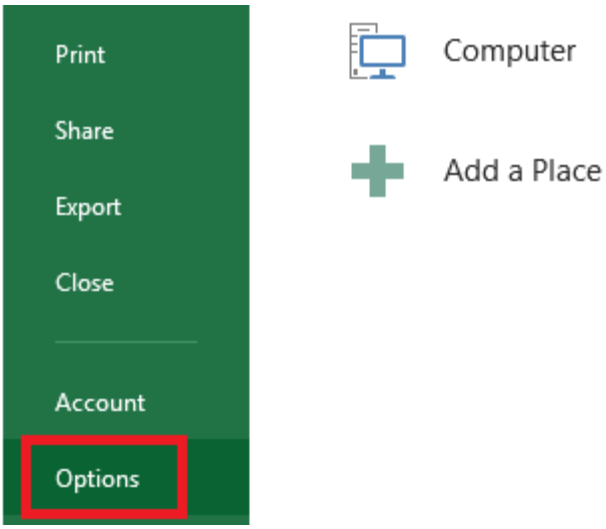
D	E
Row Labels	**Count of price**
property1	9
property2	92
property3	12
(blank)	24
Grand Total	**137**

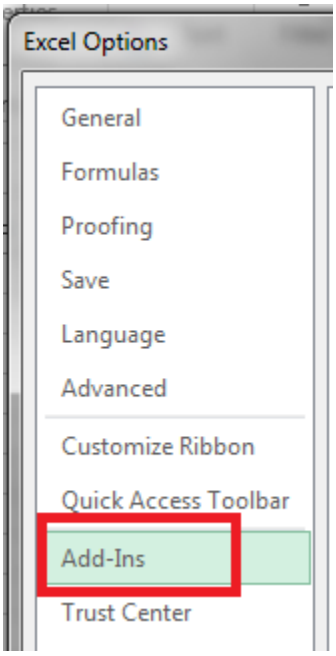
7/12/2014	1
7/13/2014	1
7/20/2014	0
7/20/2014	0
7/20/2014	0



D	E	
Row Labels	**Sum of price**	
property1	$	9.00
property2	$	92.00
property3	$	12.00
(blank)	$	-
Grand Total	**$**	**113.00**

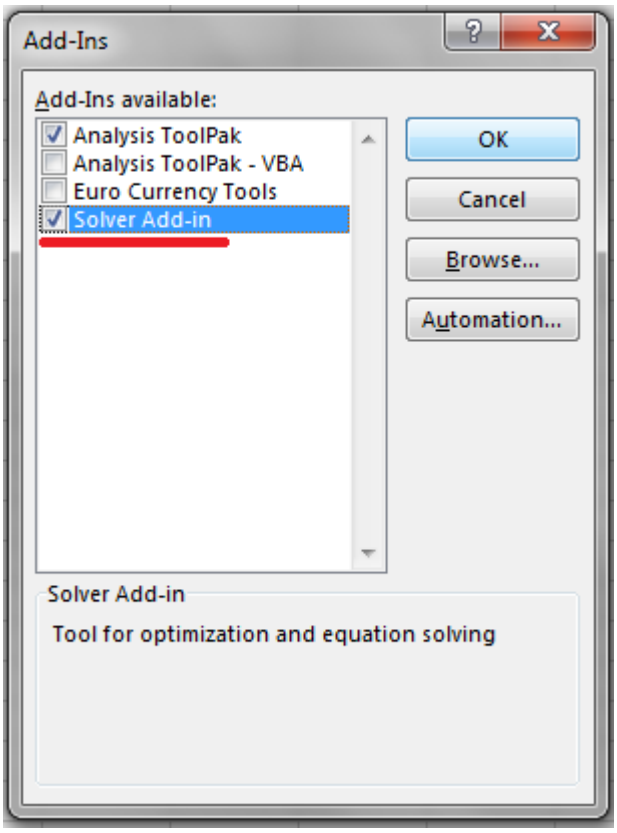
Chapter 7:

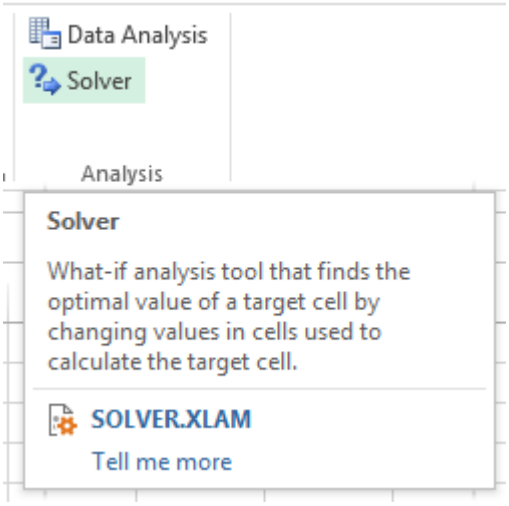


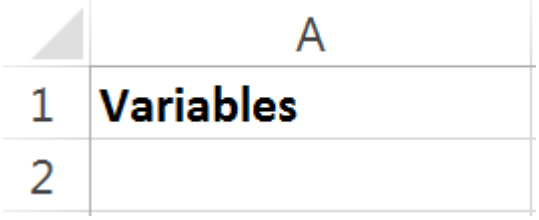


Inactive Application Add-ins
Analysis ToolPak - VBA
Date (XML)
Euro Currency Tools
Microsoft Actions Pane 3
Microsoft Power Map for Excel
Solver Add-in

Manage: Excel Add-ins Go...


Add-Ins
Add-Ins available:
Analysis ToolPak
Analysis ToolPak - VBA
Euro Currency Tools
Solver Add-in
OK
Cancel
Browse...
Automation...
Solver Add-in
Tool for optimization and equation solving


Data Analysis
Solver
Analysis
Solver
What-if analysis tool that finds the optimal value of a target cell by changing values in cells used to calculate the target cell.
SOLVER.XLAM
Tell me more


A
1
Variables
2

	A	B
1	**Variables**	
2	Wooden Bat (x)	
3	Metal Bat (y)	

5	**Constraints**
6	=B2+B3

5	**Constraints**		
6	0	<=	

5	**Constraints**		
6	0	<=	50

5	**Constraints**		
6	0	<=	50
7	=B2+B3		

5	**Constraints**		
6	0	<=	50
7	0	>=	

5	**Constraints**		
6	0	<=	50
7	0	>=	25

5	**Constraints**		
6	0	<=	50
7	0	>=	25
8	=10*B2+20*B3		

5	**Constraints**		
6	0	<=	50
7	0	>=	25
8	0	<=	1000

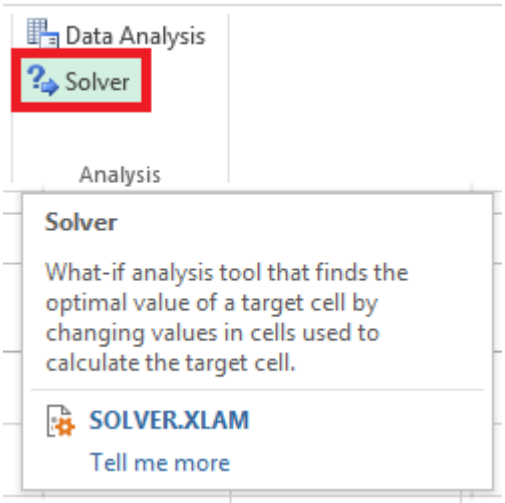
5	**Constraints**		
6	0	<=	50
7	0	>=	25
8	0	<=	1000
9	=B2+2*B3		

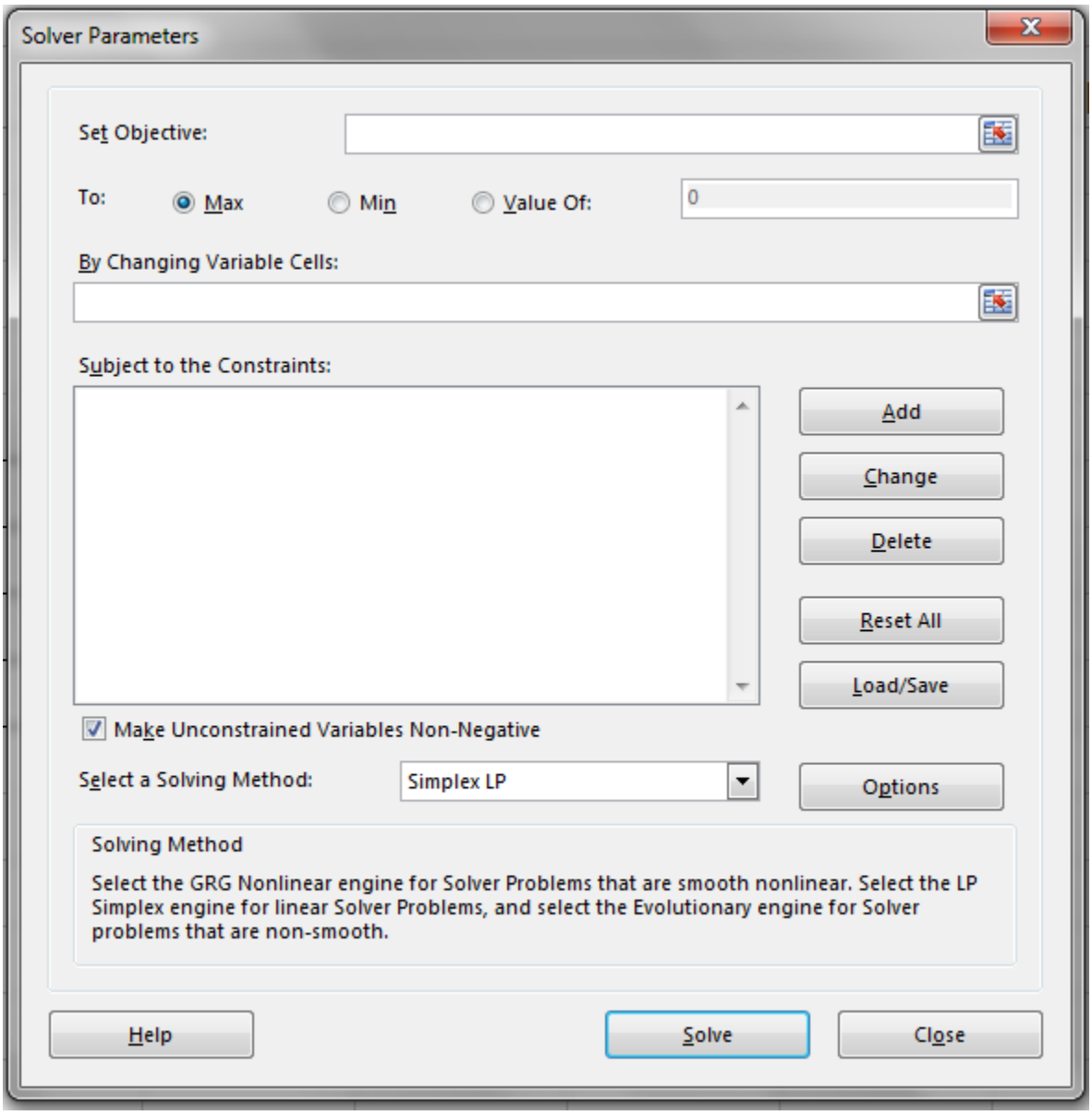
5	**Constraints**		
6	0	<=	50
7	0	>=	25
8	0	<=	1000
9	0	<=	48

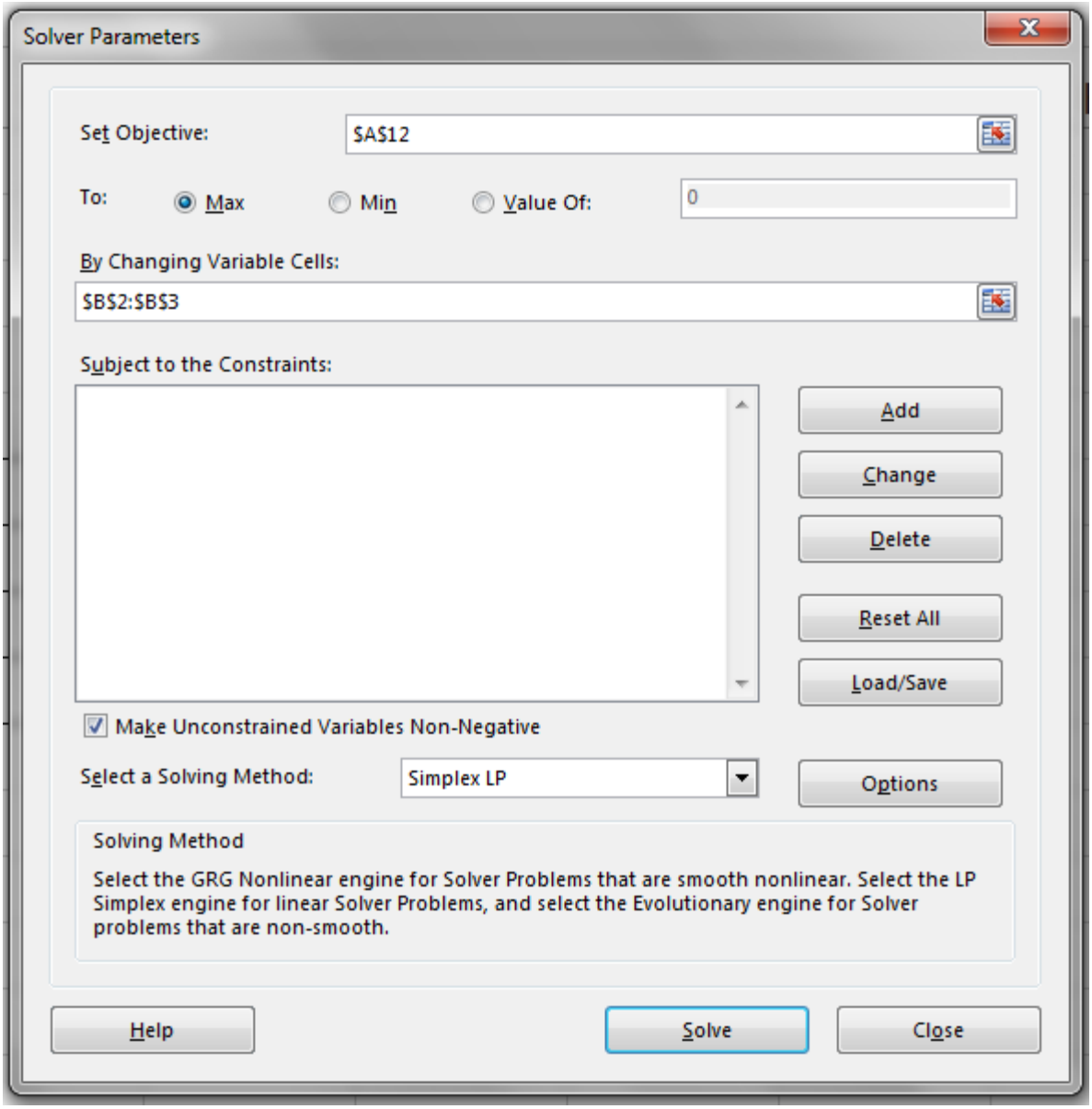
11	**Objective**
12	

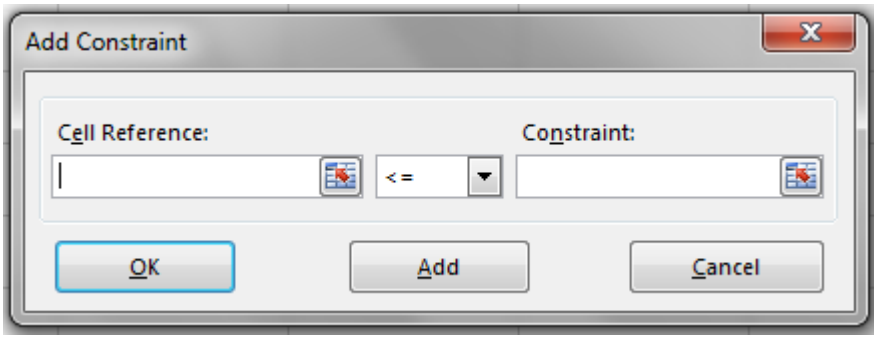
11	**Objective**
12	=15*B2+40*B3

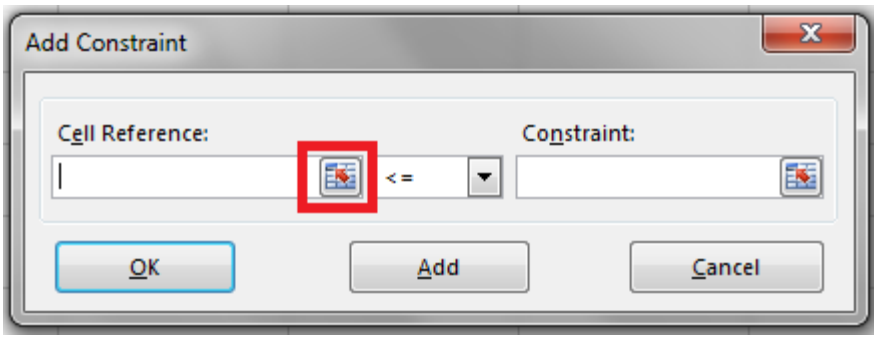
	A	B	C
1	**Variables**		
2	Wooden Bat (x)		
3	Metal Bat (y)		
4			
5	**Constraints**		
6	0	<=	50
7	0	>=	25
8	0	<=	1000
9	0	<=	48
10			
11	**Objective**		
12	0		



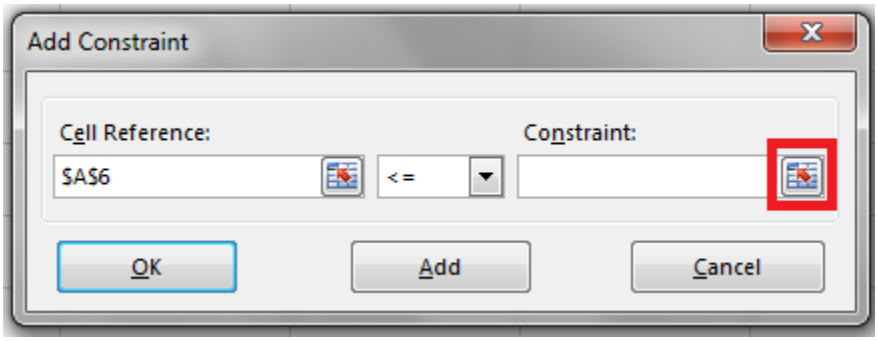

Solver Parameters
Set Objective:
To:
Max
Min
Value Of:
0
By Changing Variable Cells:
Subject to the Constraints:
Add
Change
Delete
Reset All
Load/Save
Make Unconstrained Variables Non-Negative
Select a Solving Method:
Simplex LP
Options
Solving Method
Select the GRG Nonlinear engine for Solver Problems that are smooth nonlinear. Select the LP Simplex engine for linear Solver Problems, and select the Evolutionary engine for Solver problems that are non-smooth.
Help
Solve
Close

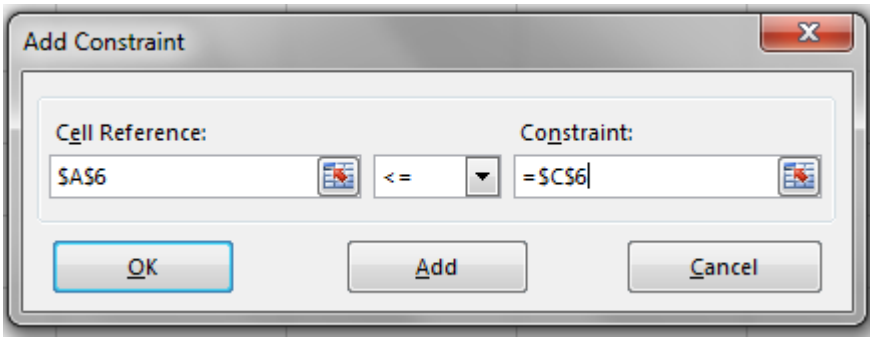

Solver Parameters
Set Objective:
$A$12
To:
Max
Min
Value Of:
0
By Changing Variable Cells:
$B$2:$B$3
Subject to the Constraints:
Add
Change
Delete
Reset All
Load/Save
Make Unconstrained Variables Non-Negative
Select a Solving Method:
Simplex LP
Options
Solving Method
Select the GRG Nonlinear engine for Solver Problems that are smooth nonlinear. Select the LP Simplex engine for linear Solver Problems, and select the Evolutionary engine for Solver problems that are non-smooth.
Help
Solve
Close

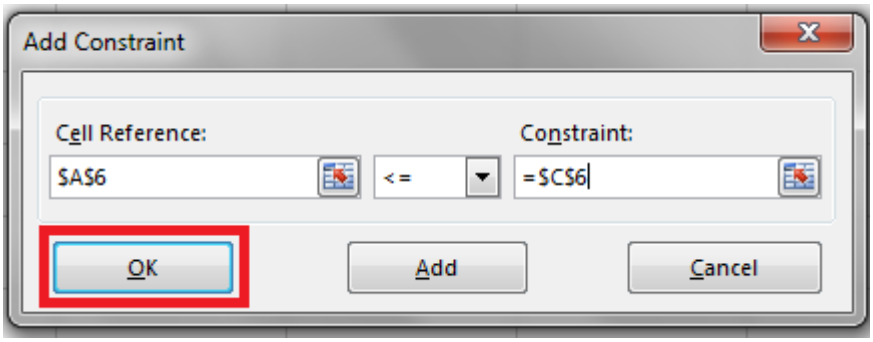

Add Constraint
Cell Reference:
<=
Constraint:
OK
Add
Cancel

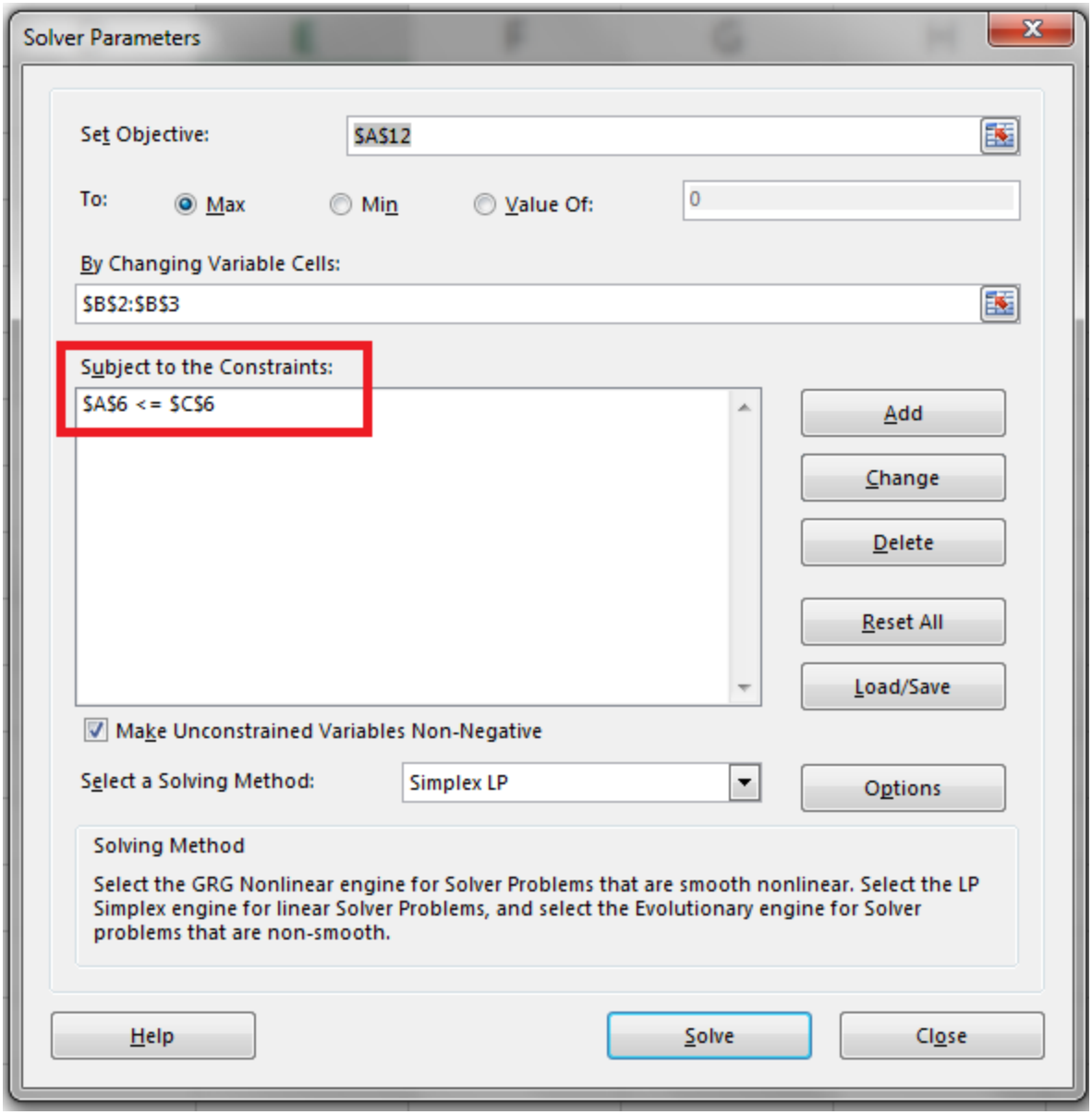

Add Constraint
Cell Reference:
<=
Constraint:
OK
Add
Cancel


Add Constraint
$A$6

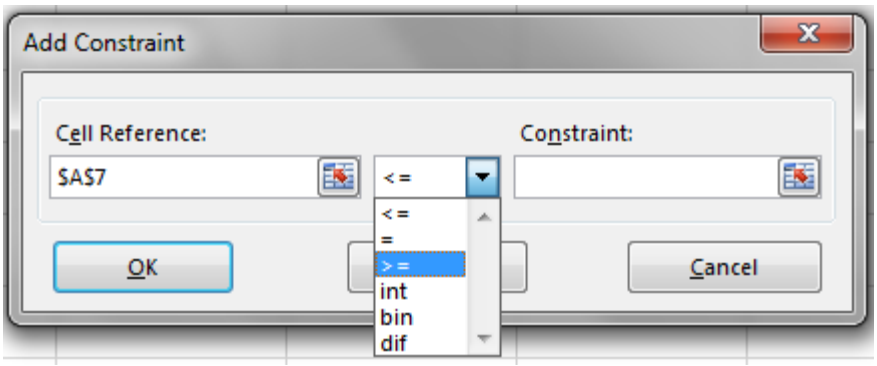

Add Constraint
Cell Reference:
$A$6
<=
Constraint:
OK
Add
Cancel

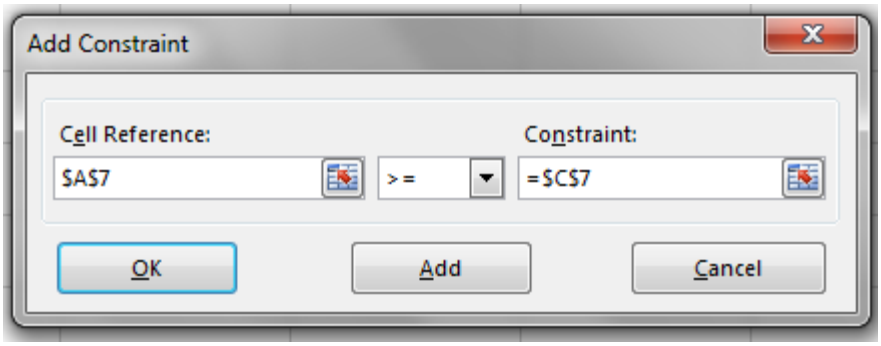

Add Constraint
Cell Reference:
$A$6
<=
Constraint:
=$C$6
OK
Add
Cancel

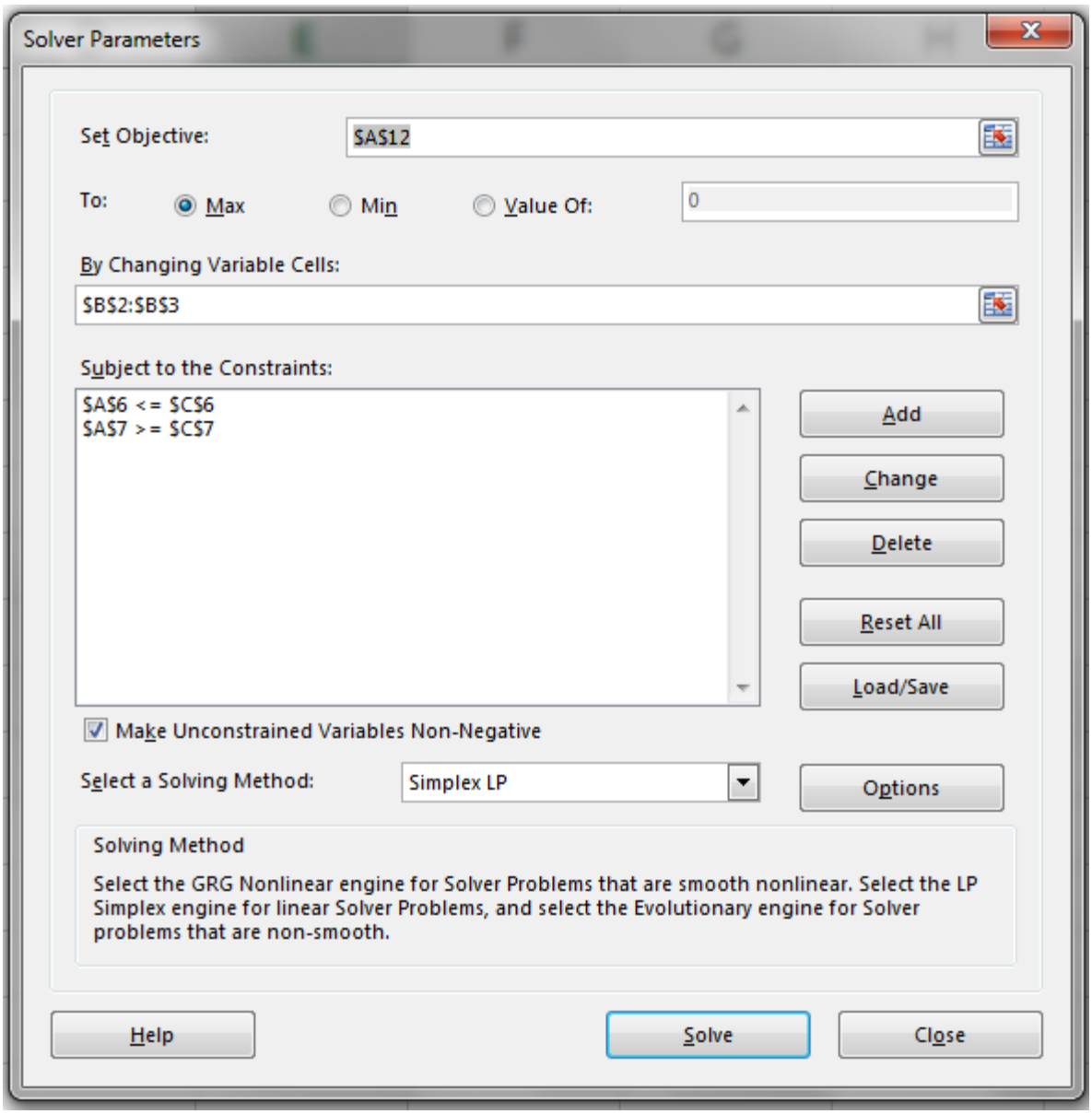

Add Constraint
Cell Reference:
$A$6
<=
Constraint:
=$C$6
OK
Add
Cancel

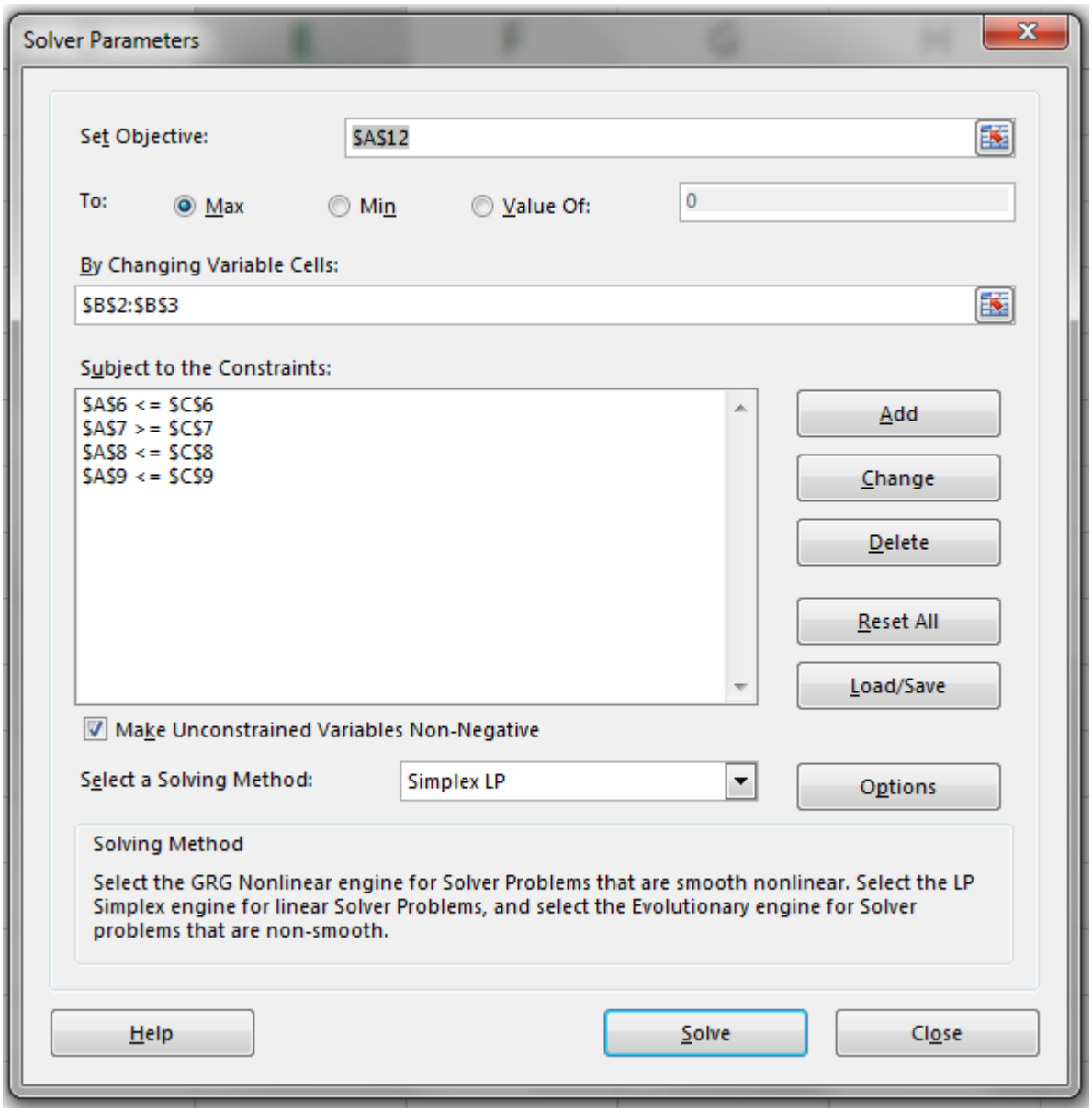

Solver Parameters
Set Objective:
$A$12
To:
Max
Min
Value Of:
0
By Changing Variable Cells:
$B$2:$B$3
Subject to the Constraints:
$A$6 <= $C$6
Add
Change
Delete
Reset All
Load/Save
Make Unconstrained Variables Non-Negative
Select a Solving Method:
Simplex LP
Options
Solving Method
Select the GRG Nonlinear engine for Solver Problems that are smooth nonlinear. Select the LP Simplex engine for linear Solver Problems, and select the Evolutionary engine for Solver problems that are non-smooth.
Help
Solve
Close

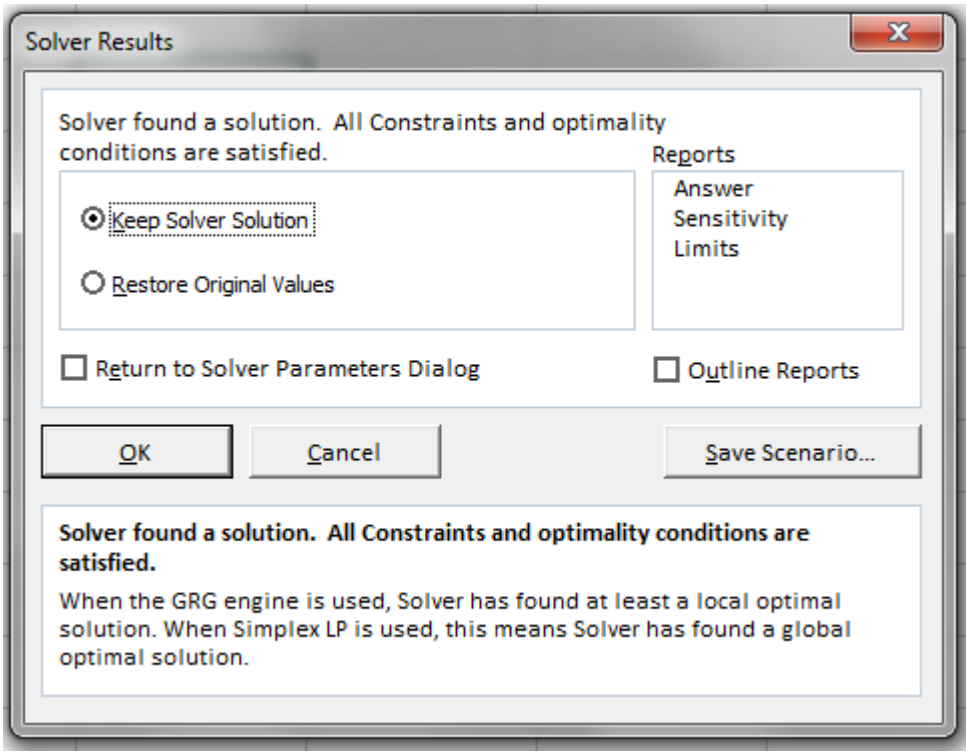

Add Constraint
$A$7


Add Constraint
Cell Reference:
$A$7
<=
Constraint:
<=
=
>=
int
bin
dif
OK
Cancel


Add Constraint
Cell Reference:
$A$7
>=
Constraint:
=$C$7
OK
Add
Cancel


Solver Parameters
Set Objective:
$A$12
To:
Max
Min
Value Of:
0
By Changing Variable Cells:
$B$2:$B$3
Subject to the Constraints:
$A$6 <= $C$6
$A$7 >= $C$7
Add
Change
Delete
Reset All
Load/Save
Make Unconstrained Variables Non-Negative
Select a Solving Method:
Simplex LP
Options
Solving Method
Select the GRG Nonlinear engine for Solver Problems that are smooth nonlinear. Select the LP Simplex engine for linear Solver Problems, and select the Evolutionary engine for Solver problems that are non-smooth.
Help
Solve
Close

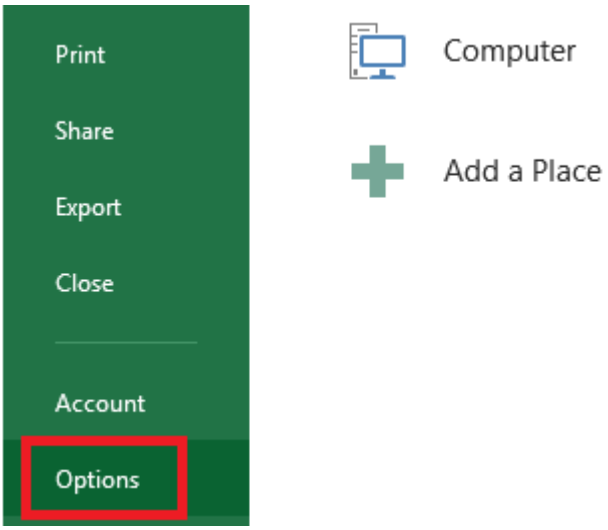

Solver Parameters
Set Objective:
$A$12
To:
Max
Min
Value Of:
0
By Changing Variable Cells:
$B$2:$B$3
Subject to the Constraints:
$A$6 <= $C$6
$A$7 >= $C$7
$A$8 <= $C$8
$A$9 <= $C$9
Add
Change
Delete
Reset All
Load/Save
Make Unconstrained Variables Non-Negative
Select a Solving Method:
Simplex LP
Options
Solving Method
Select the GRG Nonlinear engine for Solver Problems that are smooth nonlinear. Select the LP Simplex engine for linear Solver Problems, and select the Evolutionary engine for Solver problems that are non-smooth.
Help
Solve
Close

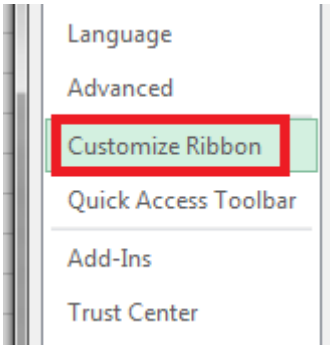


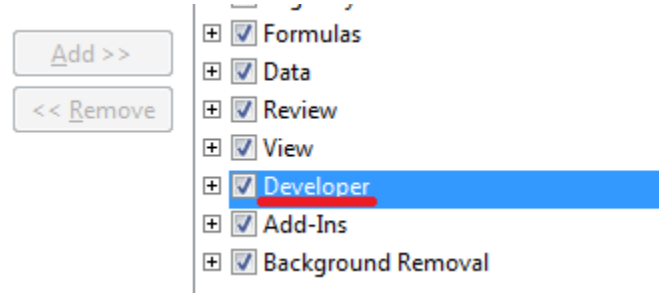
Variables	
Wooden Bat (x)	2
Metal Bat (y)	23

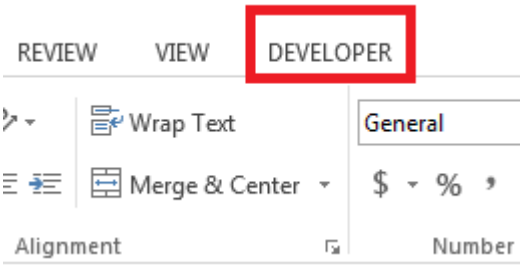
	A	B	C
1	**Variables**		
2	Wooden Bat (x)	2	
3	Metal Bat (y)	23	
4			
5	**Constraints**		
6	25	<=	50
7	25	>=	25
8	480	<=	1000
9	48	<=	48
10			
11	**Objective**		
12	950		

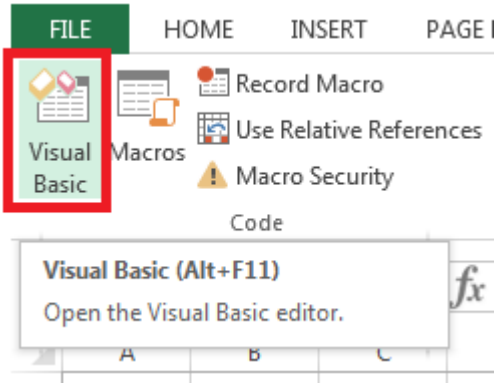
Chapter 8:

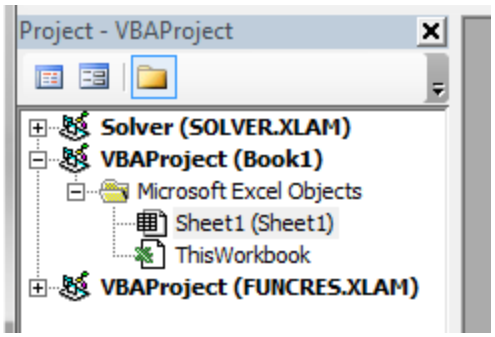


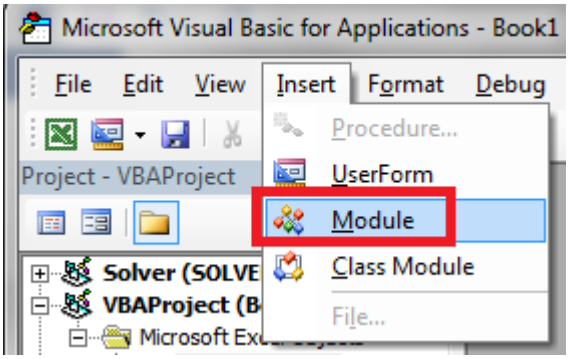

Language
Advanced
Customize Ribbon
Quick Access Toolbar
Add-Ins
Trust Center

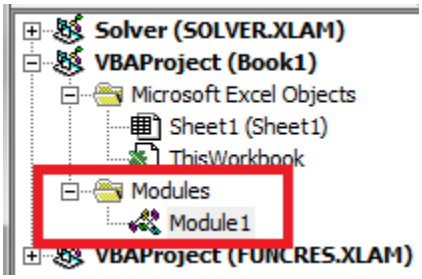

Add >>
<< Remove
Formulas
Data
Review
View
Developer
Add-Ins
Background Removal

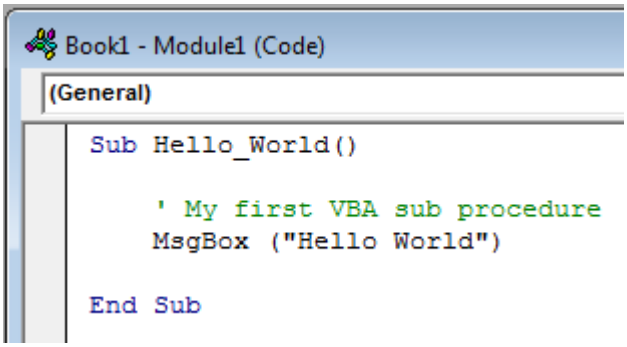

REVIEW
VIEW
DEVELOPER
Wrap Text
General
Merge & Center
$ % ,
Alignment
Number

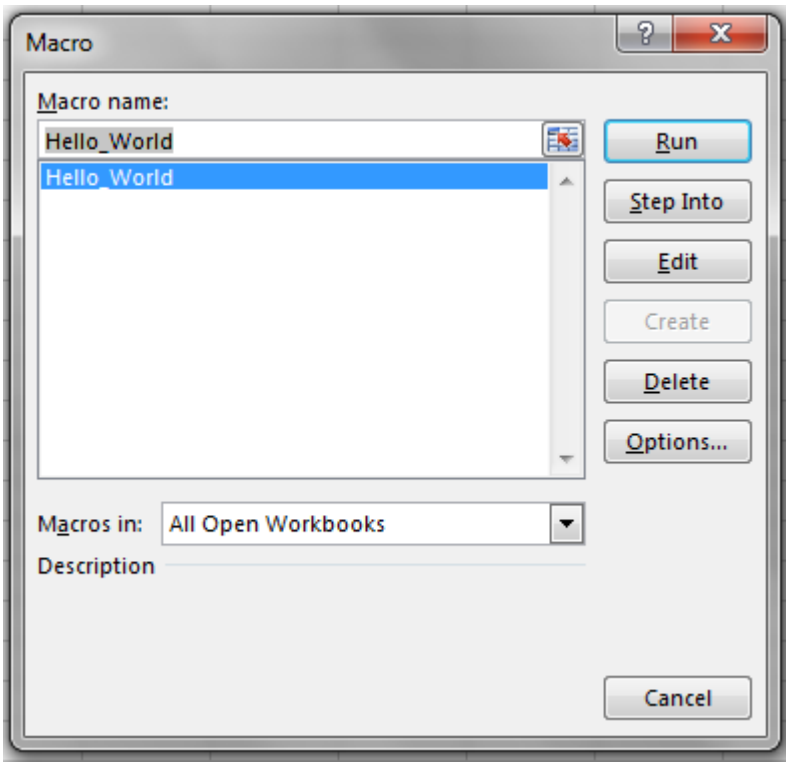

FILE
HOME
INSERT
PAGE
Visual Basic
Macros
Record Macro
Use Relative References
Macro Security
Code
Visual Basic (Alt+F11)
Open the Visual Basic editor.
fx
A
B
C


Project - VBAProject
Solver (SOLVER.XLAM)
VBAProject (Book1)
Microsoft Excel Objects
Sheet1 (Sheet1)
ThisWorkbook
VBAProject (FUNCRES.XLAM)

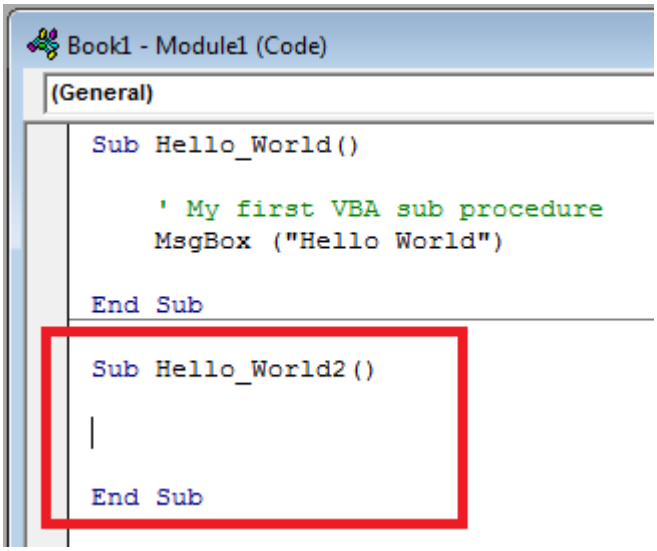

Microsoft Visual Basic for Applications - Book1
File
Edit
View
Insert
Format
Debug
Procedure...
UserForm
Module
Class Module
File...
Project - VBAProject


Solver (SOLVER.XLAM)
VBAProject (Book1)
Microsoft Excel Objects
Sheet1 (Sheet1)
ThisWorkbook
Modules
Module1
VBAProject (FUNCRES.XLAM)


Book1 - Module1 (Code)
(General)
Sub Hello_World()
' My first VBA sub procedure
MsgBox ("Hello World")
End Sub


Macro
Macro name:
Hello_World
Hello_World
Run
Step Into
Edit
Create
Delete
Options...
Macros in:
All Open Workbooks
Description
Cancel

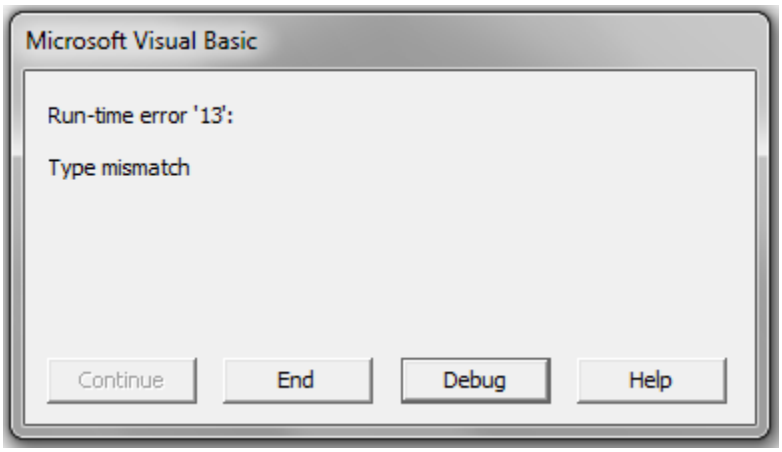

Microsoft Excel
Hello World
OK


Book1 - Module1 (Code)
(General)
Sub Hello_World()
' My first VBA sub procedure
MsgBox ("Hello World")
End Sub
Sub Hello_World2()
End Sub

```
Sub Hello_World2()

    ' Declare Variables
    Dim Year As Integer
    Dim Text As String

End Sub
```

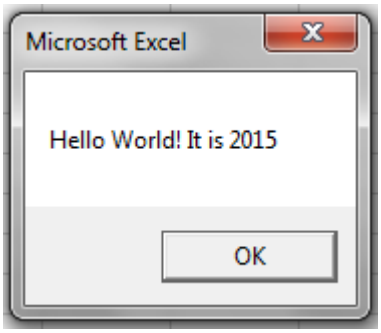
```
Sub Hello_World2()

    ' Declare Variables
    Dim Year As Integer
    Dim Text As String

    ' Set Variables
    Year = 2015
    Text = "Hello World! It is"

End Sub
```

```
Sub Hello_World2()

    ' Declare Variables
    Dim Year As Integer
    Dim Text As String

    ' Set Variables
    Year = 2015
    Text = "Hello World! It is"

    ' Print Message
    MsgBox (Text + Year)

End Sub
```



```
Sub Hello_World2()

    ' Declare Variables
    Dim Year As Integer
    Dim Text As String

    ' Set Variables
    Year = 2015
    Text = "Hello World! It is"

    ' Print Message
    MsgBox (Text + Year)

End Sub
```

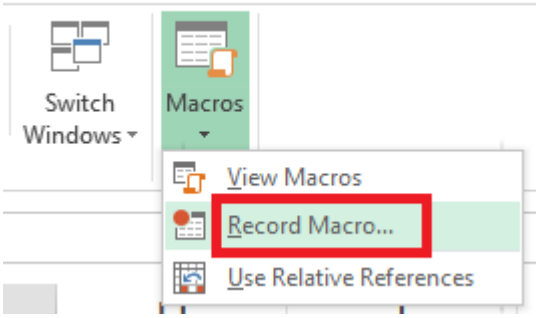

```
Sub Hello_World2()

    ' Declare Variables
    Dim Year As Integer
    Dim Text As String

    ' Set Variables
    Year = 2015
    Text = "Hello World! It is"

    ' Print Message
    MsgBox (Text + Str(Year))

End Sub
```

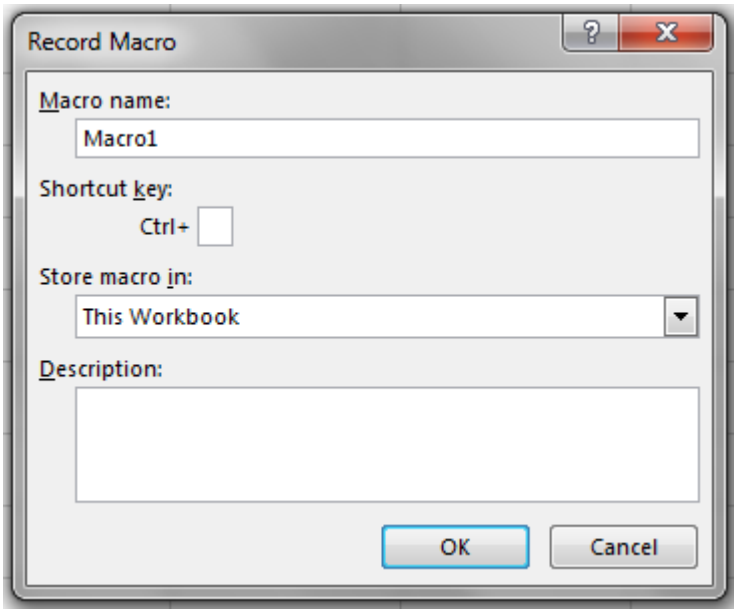


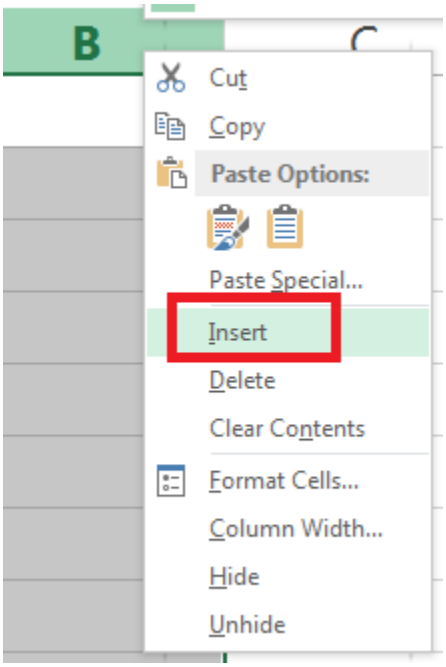
```
Sub Question()

    ' Declare Variables
    Dim num As Integer

    ' Ask user a question
    num = InputBox("How many apples do you want to buy?", "Checkout")

    ' Make sure user does not pick a value grater than 20
    ' Make sure user does not pick a negative
    If num < 0 Or num > 20 Then

        ' Print Message
        MsgBox ("Please select a postive number or a value less than 21.")

    Else

        ' Print Message
        MsgBox ("You want to buy" + Str(num) + " apples.")

    End If

End Sub
```

```
Sub Loopy()

    ' Declare Variables
    Dim num As Integer
    Dim counter As Integer

    ' Initialize variables
    counter = 0

    ' Ask user a question
    num = InputBox("How many times to loop?", "Loopy")

    ' Loop while the value of counter is less than num
    Do While counter < num

        ' Print Message
        MsgBox ("Looping...")

        ' Increment counter
        counter = counter + 1

    Loop

End Sub
```

	A
1	**Name**
2	david Rojas
3	Bill Fergus
4	Mary blue
5	BOB BOBBY
6	MikE HoPe

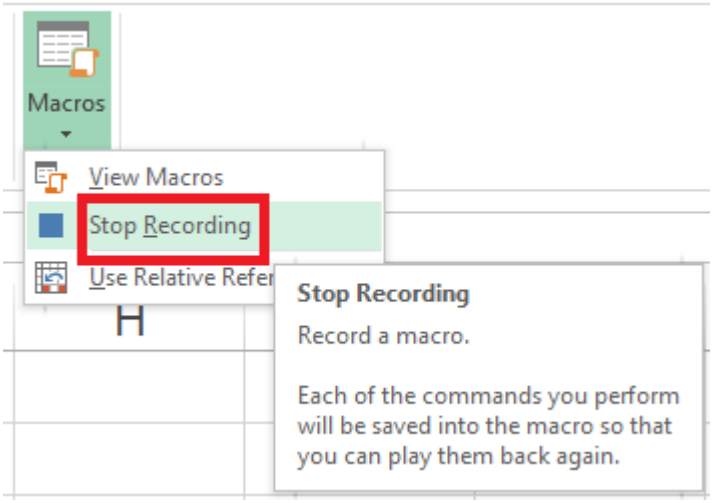


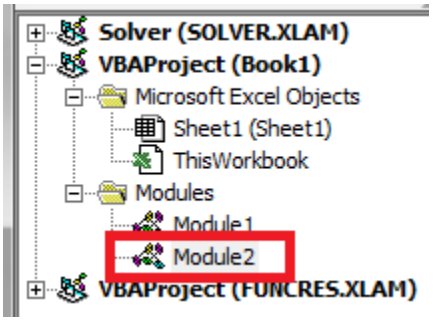




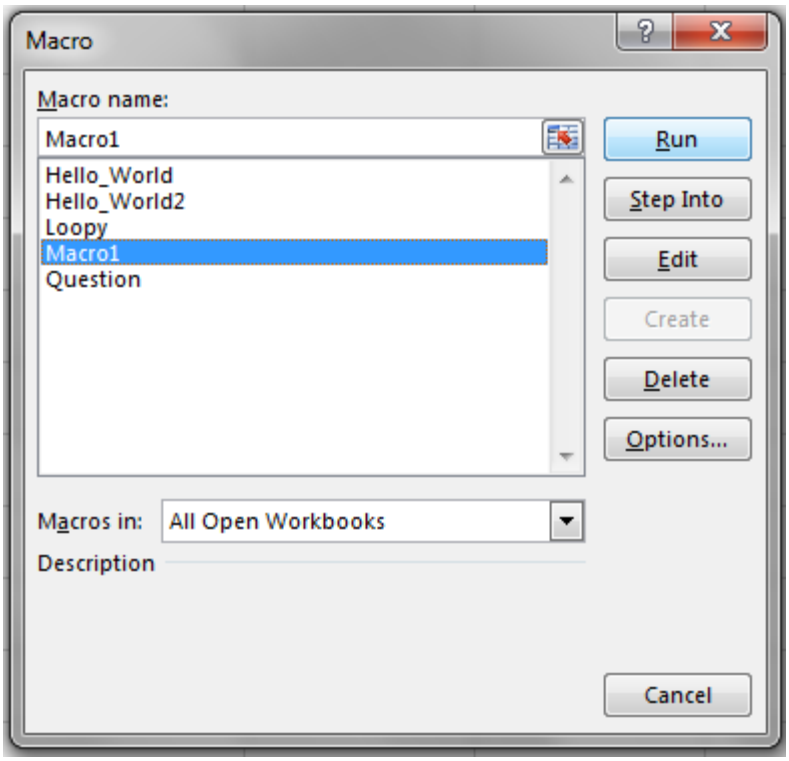
	A	B
1	**Name**	**Fixed**
2	david Rojas	=proper(A2
3	Bill Fergus	
4	Mary blue	
5	BOB BOBBY	
6	MikE HoPe	

PROPER(**text**)

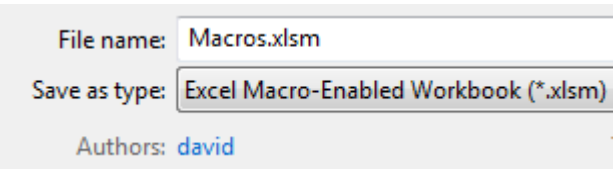





```
Sub Macro1()
'
' Macro1 Macro
'

'
    Columns("B:B").Select
    Selection.Insert Shift:=xlToRight, CopyOrigin:=xlFormatFromLeftOrAbove
    Range("B1").Select
    ActiveCell.FormulaR1C1 = "Fixed"
    Range("B2").Select
    ActiveCell.FormulaR1C1 = "=PROPER(RC[-1])"
    Range("B3").Select
End Sub
```

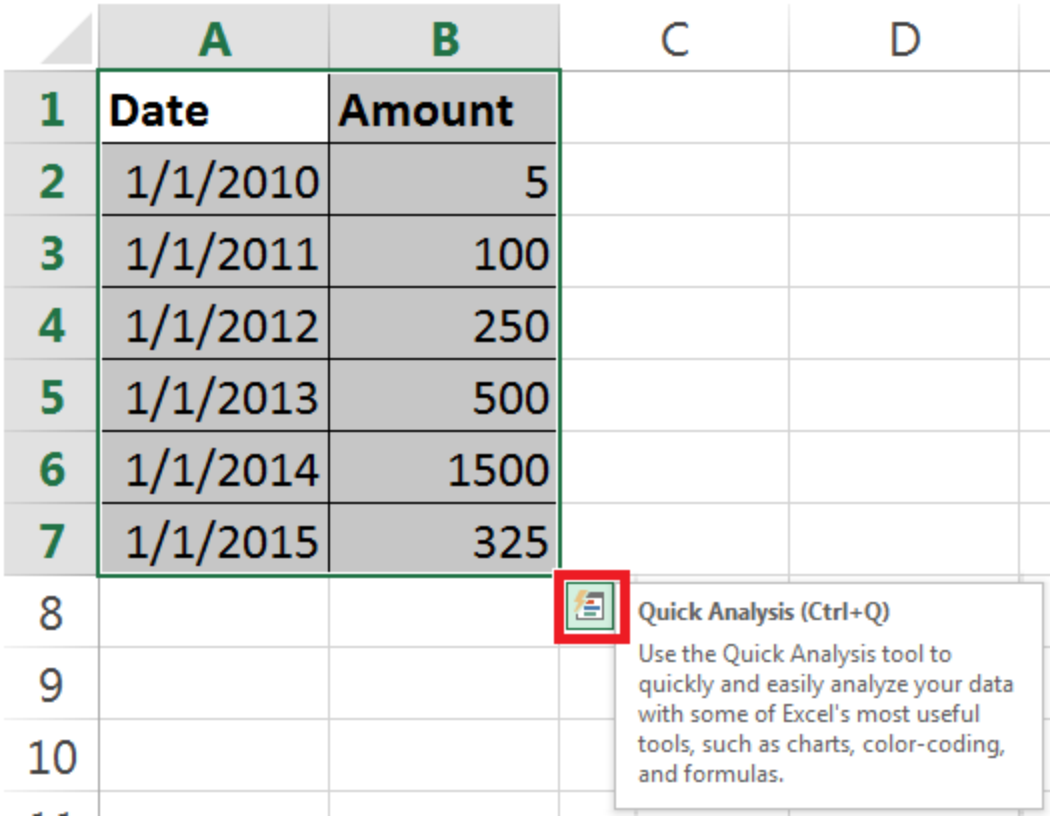

Macro
Macro name:
Macro1
Hello_World
Hello_World2
Loopy
Macro1
Question
Run
Step Into
Edit
Create
Delete
Options...
Macros in:
All Open Workbooks
Description
Cancel

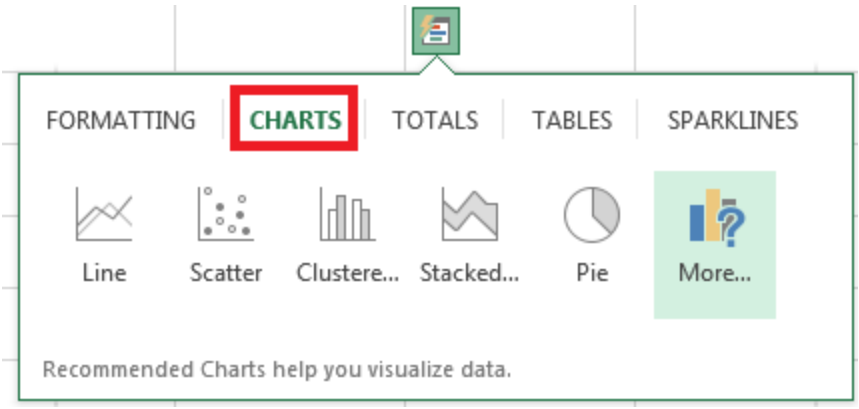
```
Sub Proper()

    ' Highlight Column B
    Columns("B:B").Select

    ' Insert a column in between Columns A and B
    Selection.Insert Shift:=xlToRight, CopyOrigin:=xlFormatFromLeftOrAbove

    ' Select cell B1
    Range("B1").Select

    ' Label the column
    ActiveCell.FormulaR1C1 = "Fixed"

    ' Select cell A2
    Range("A2").Select

    ' Variable to keep track of active cell
    FirstItem = ActiveCell.Text

    ' Variable that controls cell offset
    Offsetcount = 1

    ' Loop until we run out of cells to clean
    Do While ActiveCell.Text <> ""

        ' Add the proper formula to the cell one column to the right
        ActiveCell.Offset(0, Offsetcount).FormulaR1C1 = "=PROPER(RC[-1])"

        ' Select the next cell we want to clean
        FirstItem = ActiveCell.Offset(Offsetcount, 0).Select

   Loop

End Sub
```

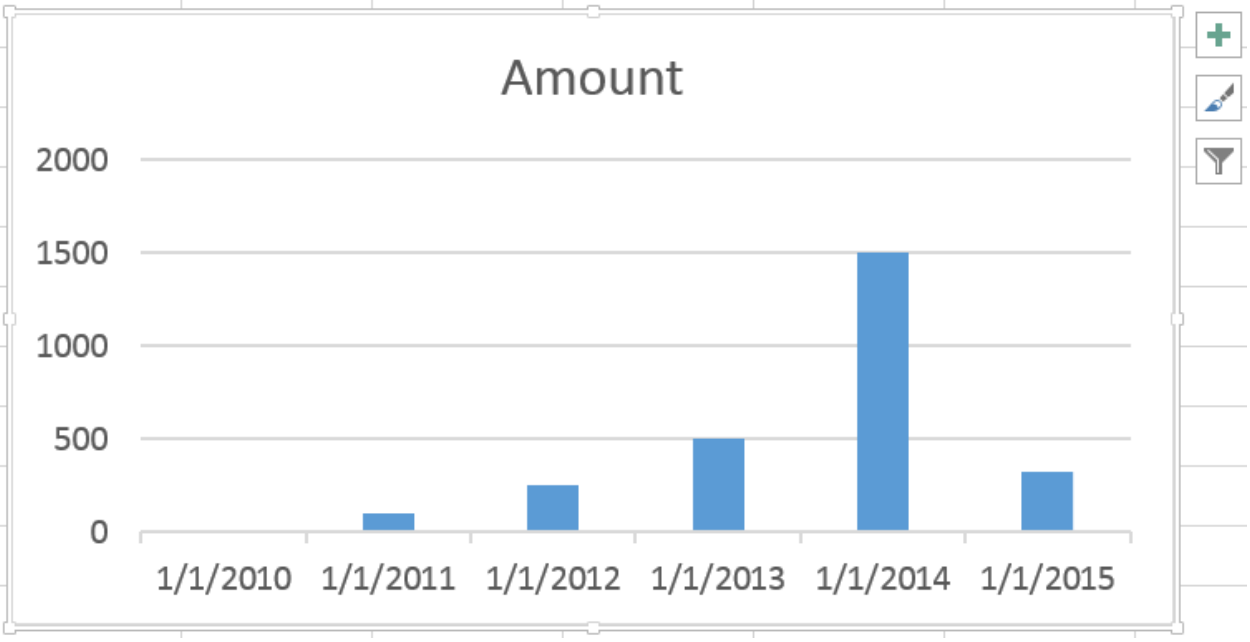


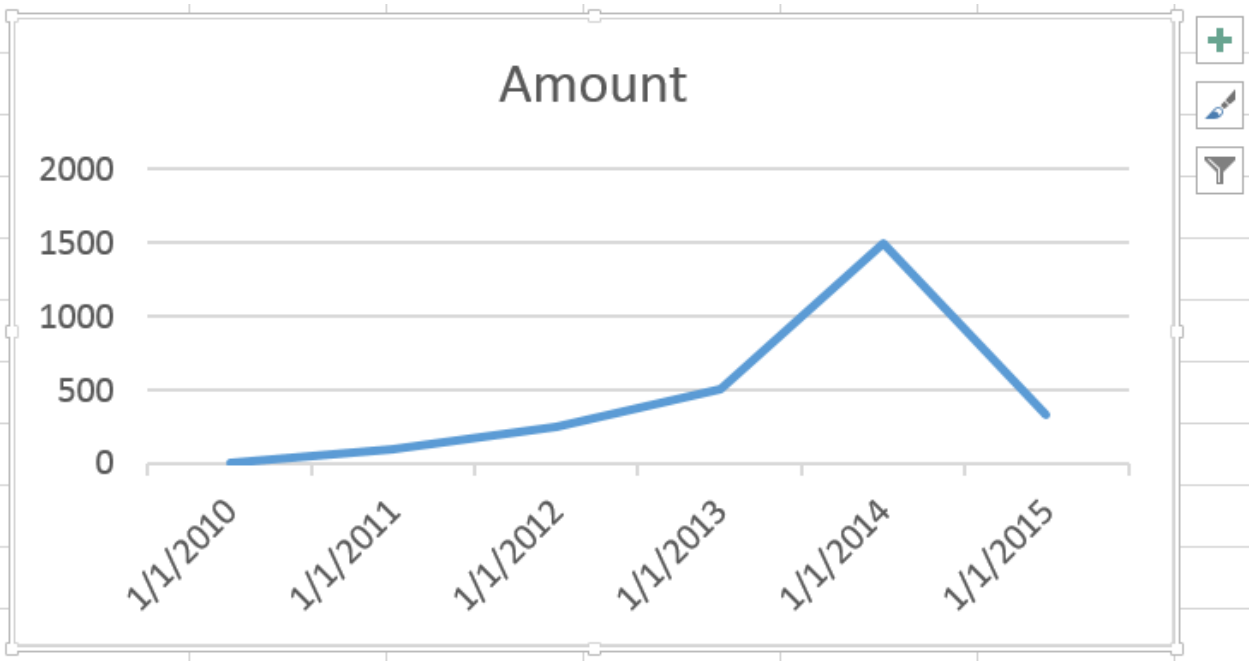
Chapter 9:

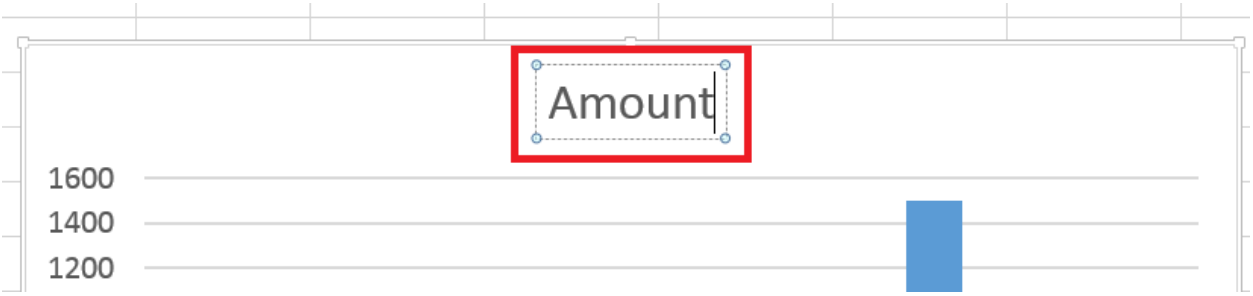
	A	B
1	**Date**	**Amount**
2	1/1/2010	5
3	1/1/2011	100
4	1/1/2012	250
5	1/1/2013	500
6	1/1/2014	1500
7	1/1/2015	325

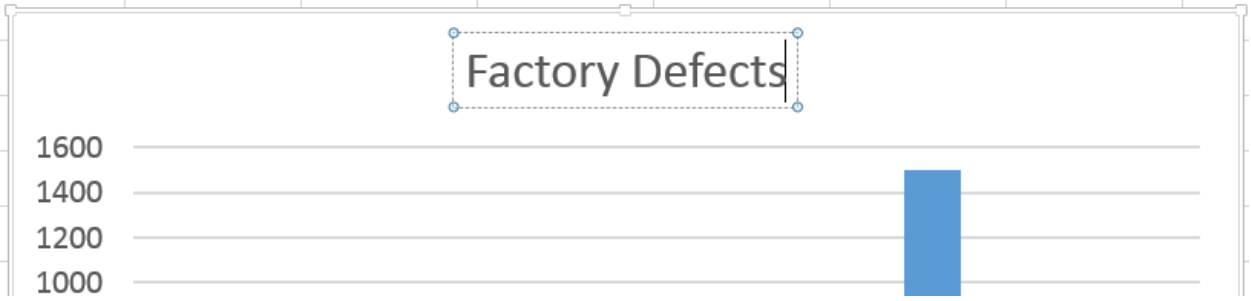


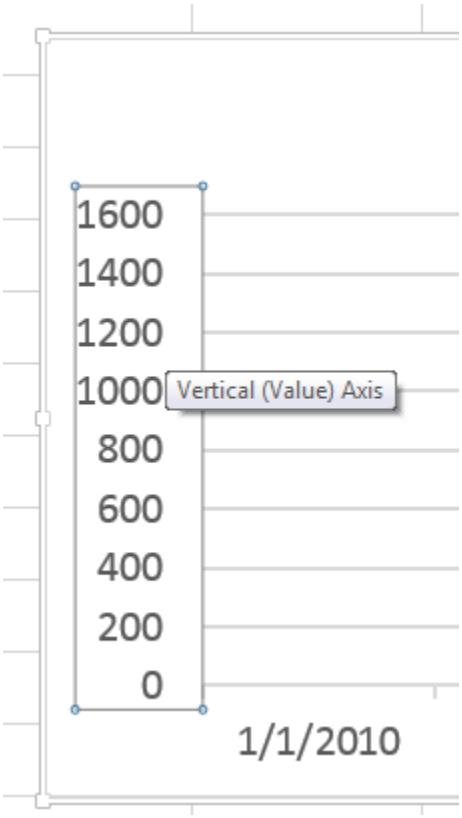

FORMATTING
CHARTS
TOTALS
TABLES
SPARKLINES
Line
Scatter
Clustere...
Stacked...
Pie
More...
Recommended Charts help you visualize data.

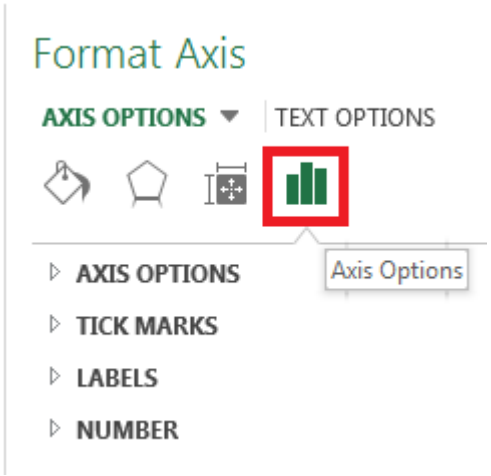

Amount
2000
1500
1000
500
0
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015

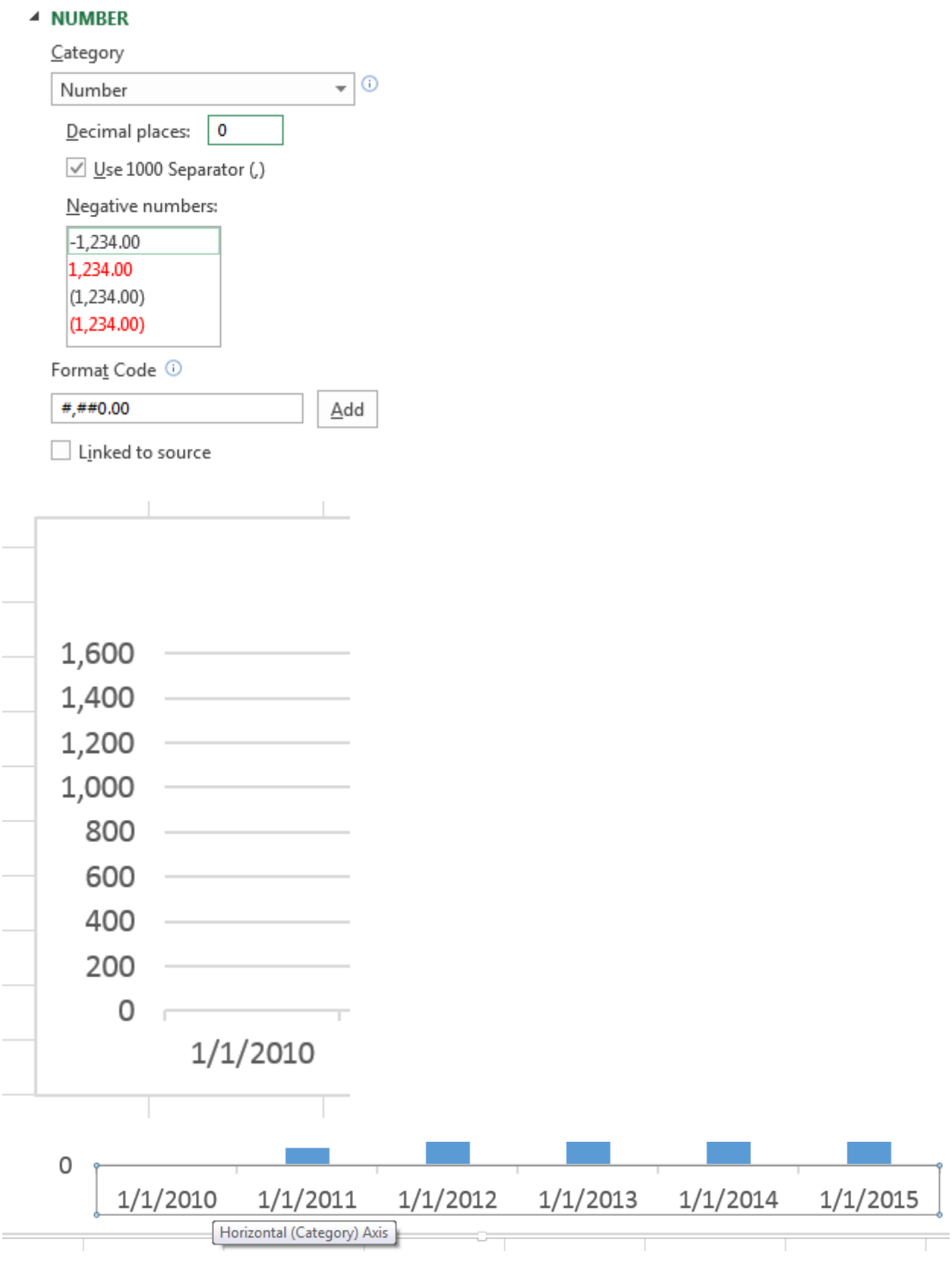

Amount
2000
1500
1000
500
0
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015


Amount
1600
1400
1200


Factory Defects
1600
1400
1200
1000


1600
1400
1200
1000
800
600
400
200
0
Vertical (Value) Axis
1/1/2010


Format Axis
AXIS OPTIONS
TEXT OPTIONS
Axis Options
AXIS OPTIONS
TICK MARKS
LABELS
NUMBER


NUMBER
Category
Number
Decimal places: 0
Use 1000 Separator (,)
Negative numbers:
-1,234.00
1,234.00
(1,234.00)
(1,234.00)
Format Code
#,##0.00
Add
Linked to source
1,600
1,400
1,200
1,000
800
600
400
200
0
1/1/2010
0
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
Horizontal (Category) Axis

NUMBER

Category

Custom

Type

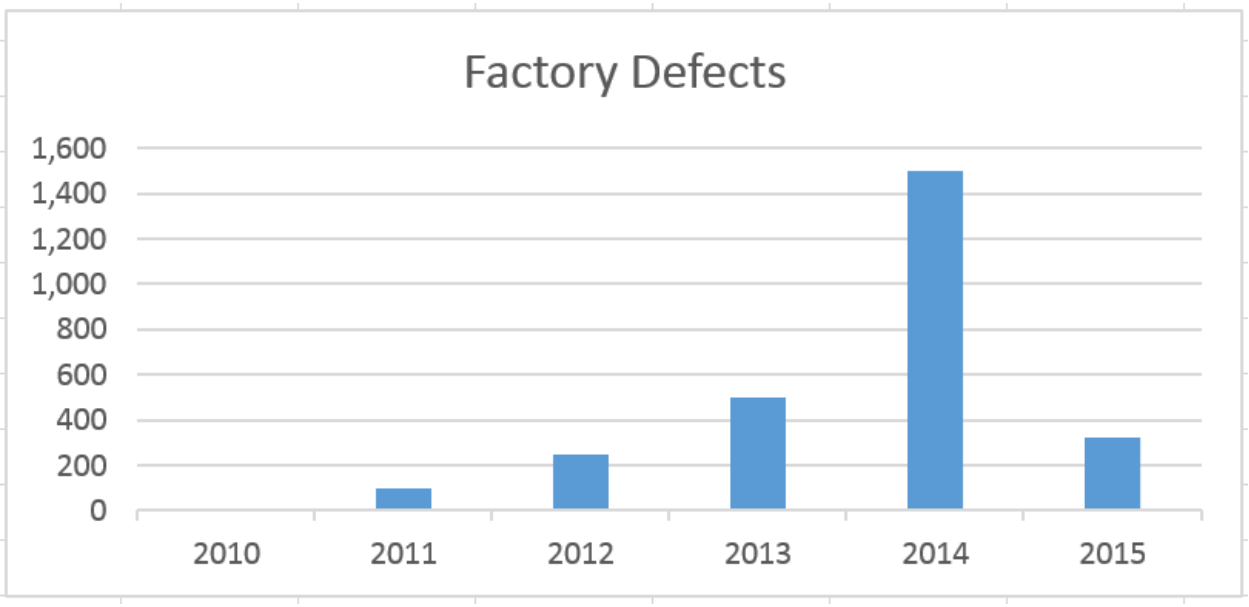
yyyy

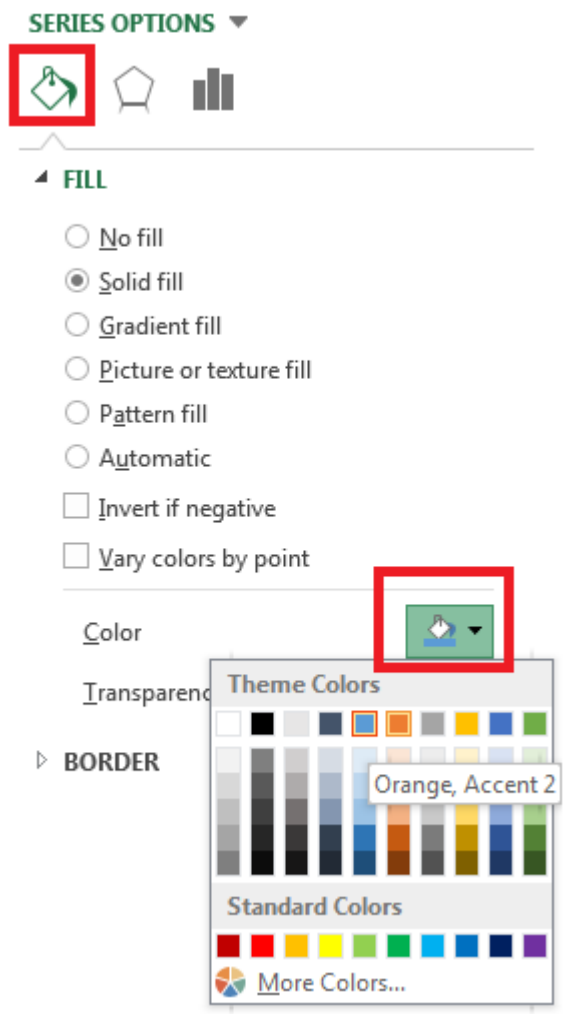
Format Code

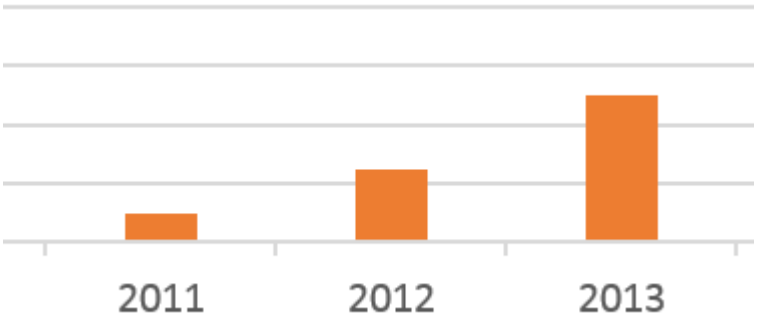
yyyy

Add

Linked to source




SERIES OPTIONS
FILL
No fill
Solid fill
Gradient fill
Picture or texture fill
Pattern fill
Automatic
Invert if negative
Vary colors by point
Color
Transparenc
BORDER
Theme Colors
Orange, Accent 2
Standard Colors
More Colors...


2011
2012
2013

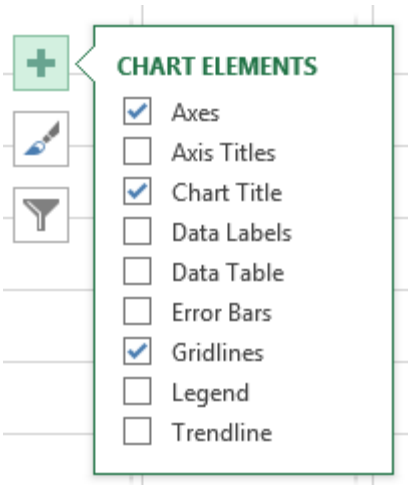
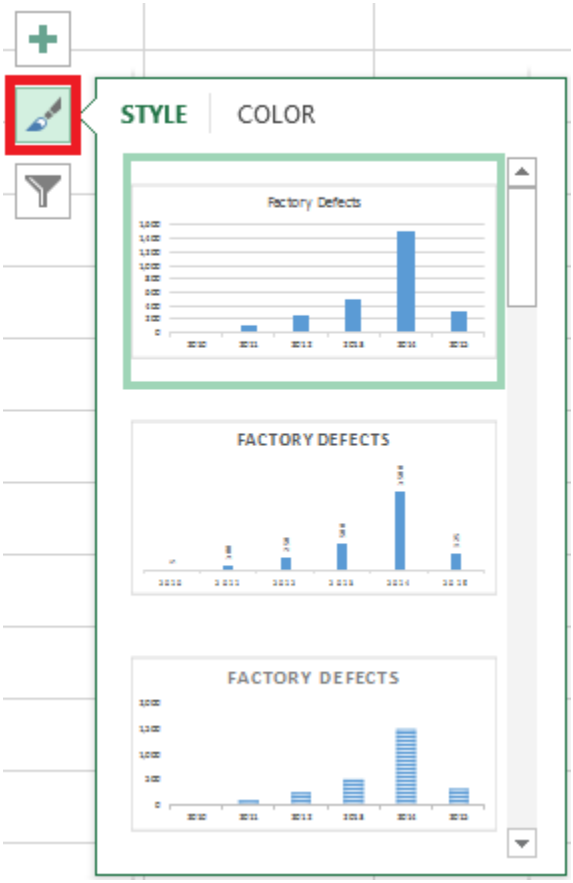
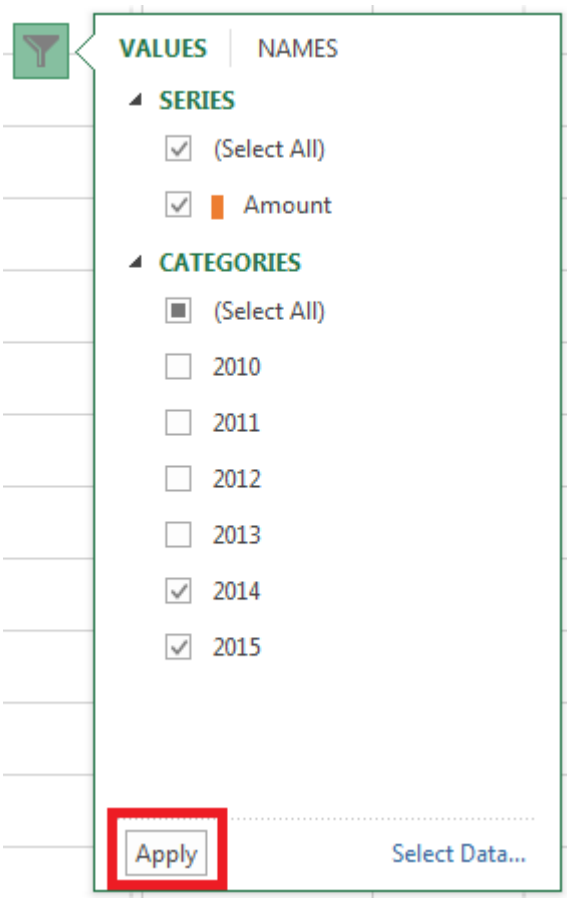
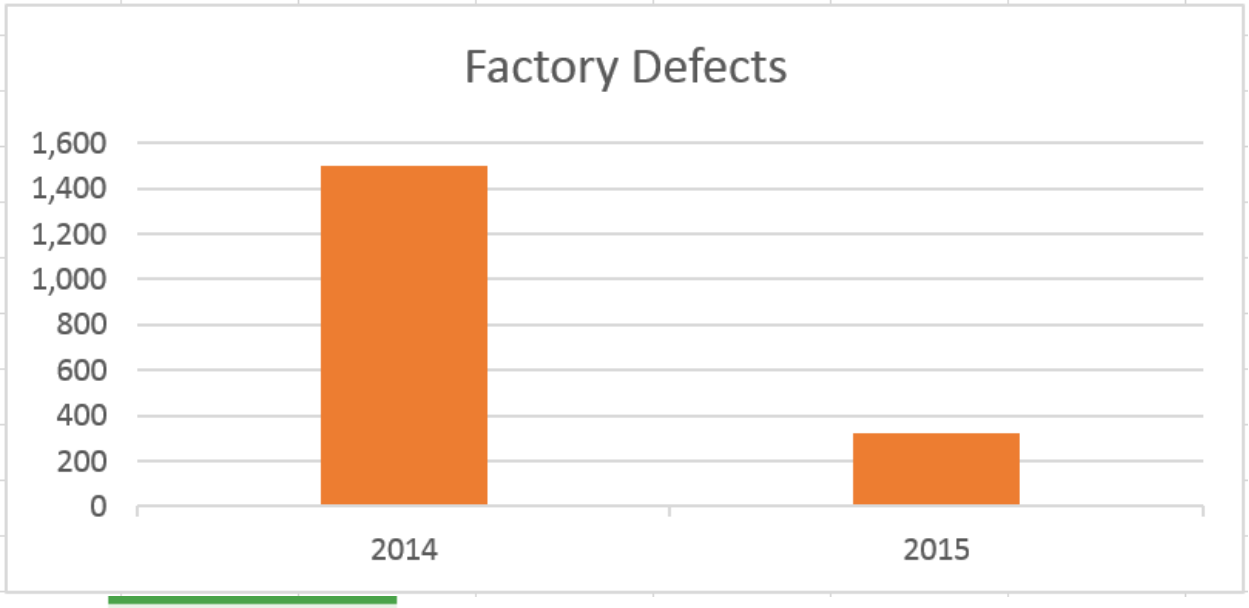


CHART ELEMENTS
Axes
Axis Titles
Chart Title
Data Labels
Data Table
Error Bars
Gridlines
Legend
Trendline


STYLE
COLOR
Factory Defects
FACTORY DEFECTS
FACTORY DEFECTS


VALUES
NAMES
SERIES
(Select All)
Amount
CATEGORIES
(Select All)
2010
2011
2012
2013
2014
2015
Apply
Select Data...


Factory Defects
1,600
1,400
1,200
1,000
800
600
400
200
0
2014
2015

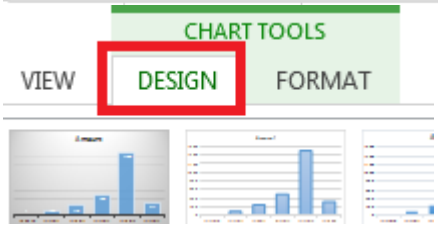
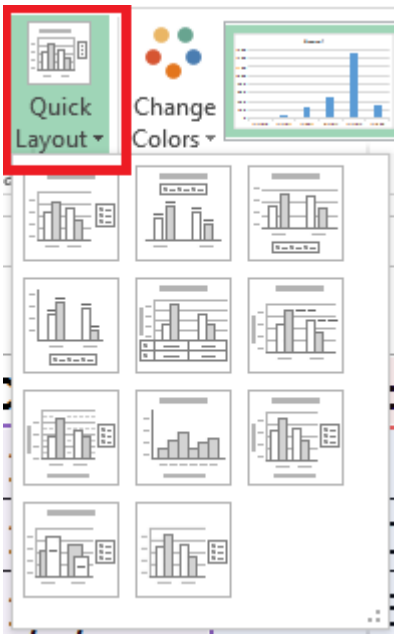
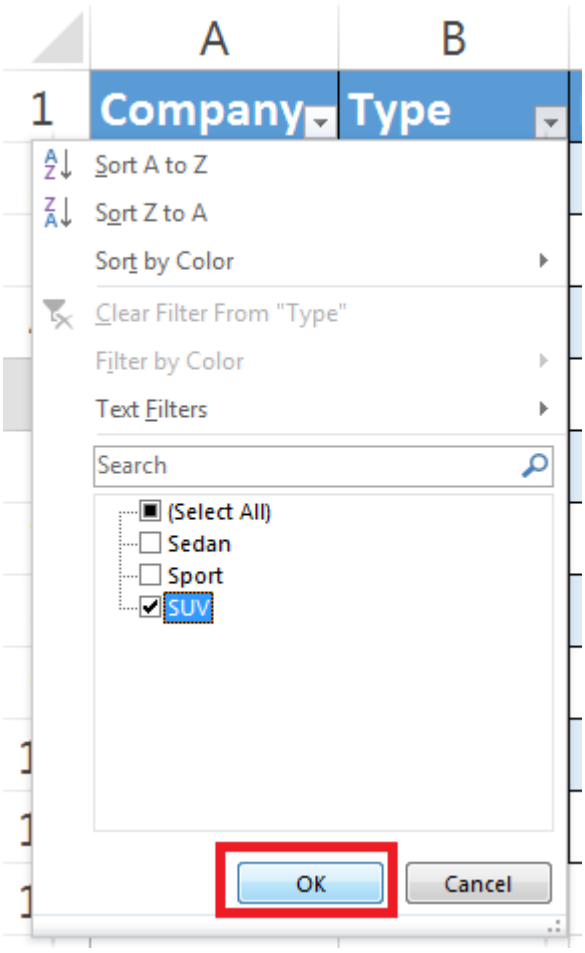


CHART TOOLS
VIEW
DESIGN
FORMAT

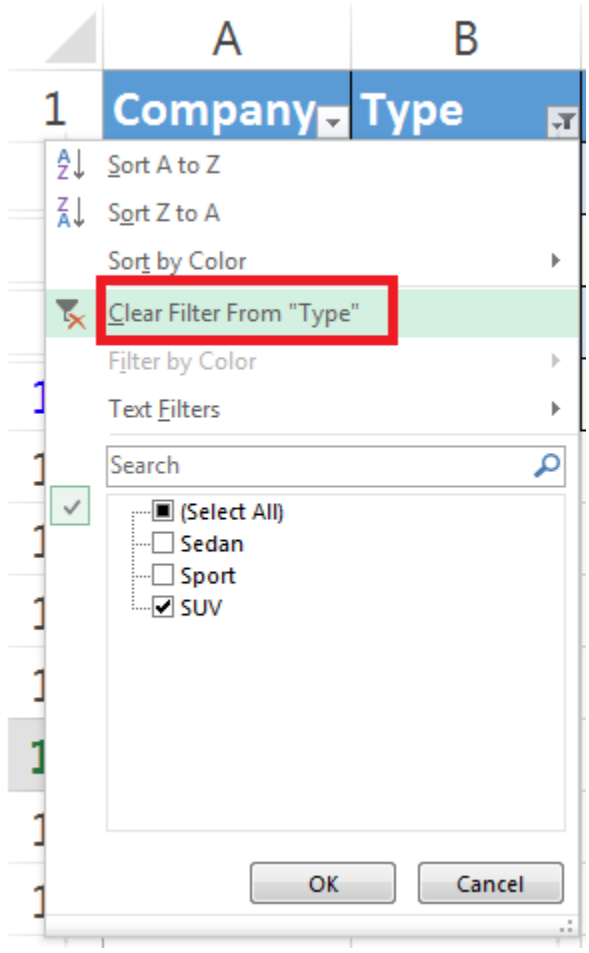

Quick Layout
Change Colors

Chapter 10:

	A	B	C	D	E
1	**Company**	**Type**	**MPG**	**Price**	**# of Passengers**
2	Toyota	SUV	30	$ 30,000	4
3	Honda	Sedan	32	$ 45,000	4
4	Lexus	Sport	21	$ 26,000	6
5	Hundai	SUV	21	$ 47,000	5
6	Porshe	Sedan	12	$ 30,000	6
7	Fiat	Sport	23	$ 40,000	8
8	Toyota	SUV	21	$ 36,000	4
9	Honda	Sedan	30	$ 15,000	3
10	Lexus	Sport	41	$ 67,000	6
11	Hundai	SUV	30	$ 40,000	4



	A	B	C	D	E
1	Company	Type	MPG	Price	# of Passengers
2	Toyota	SUV	30	$ 30,000	4
5	Hundai	SUV	21	$ 47,000	5
8	Toyota	SUV	21	$ 36,000	4
11	Hundai	SUV	30	$ 40,000	4


A
B
1
Company
Type
Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Type"
Filter by Color
Text Filters
Search
(Select All)
Sedan
Sport
SUV
OK
Cancel

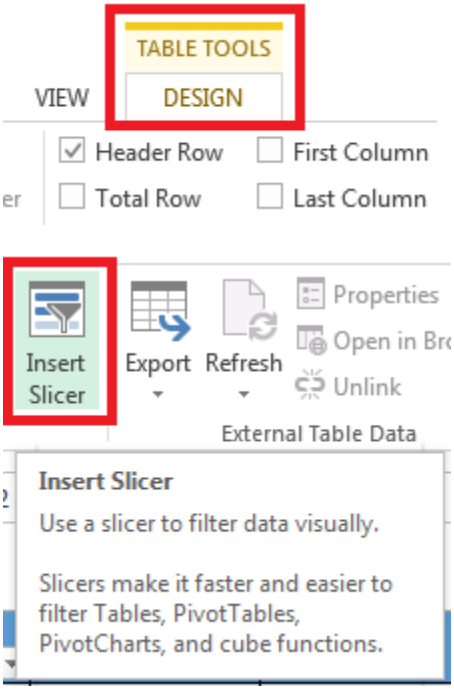
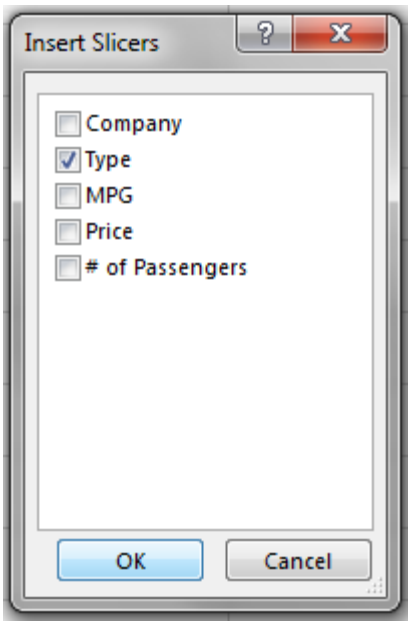
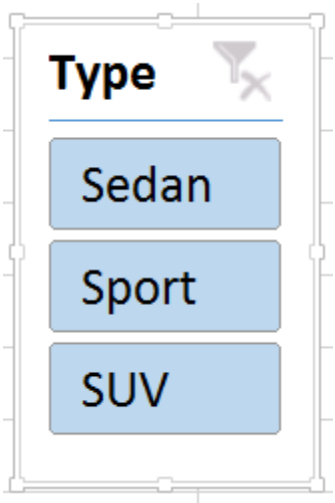
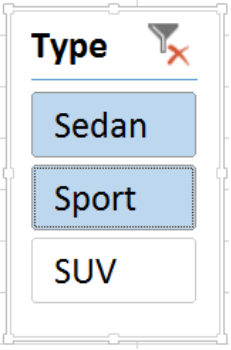


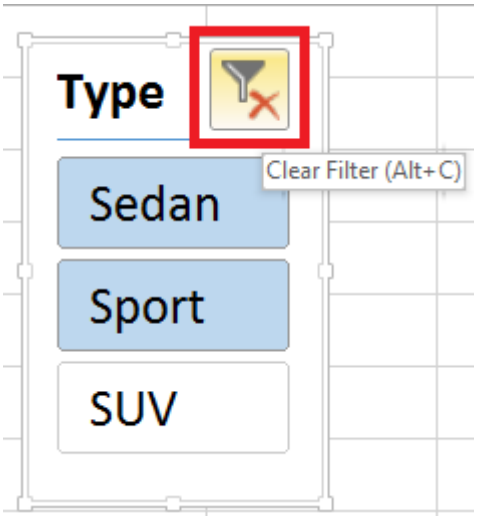
TABLE TOOLS
VIEW
DESIGN
Header Row
First Column
Total Row
Last Column
Insert Slicer
Export
Refresh
Properties
Unlink
External Table Data
Insert Slicer
Use a slicer to filter data visually.
Slicers make it faster and easier to filter Tables, PivotTables, PivotCharts, and cube functions.

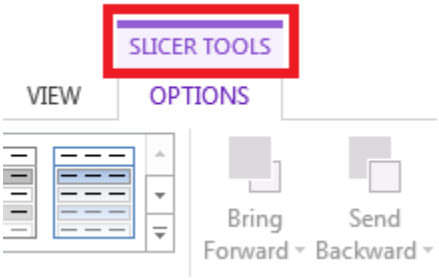


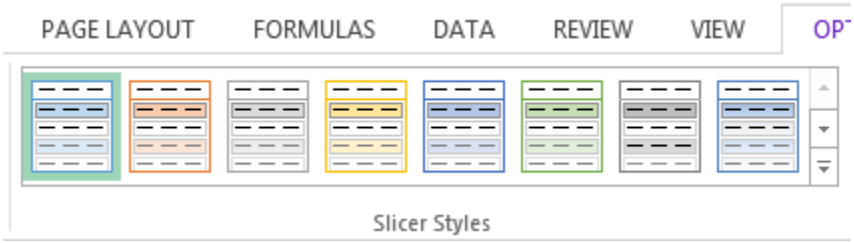


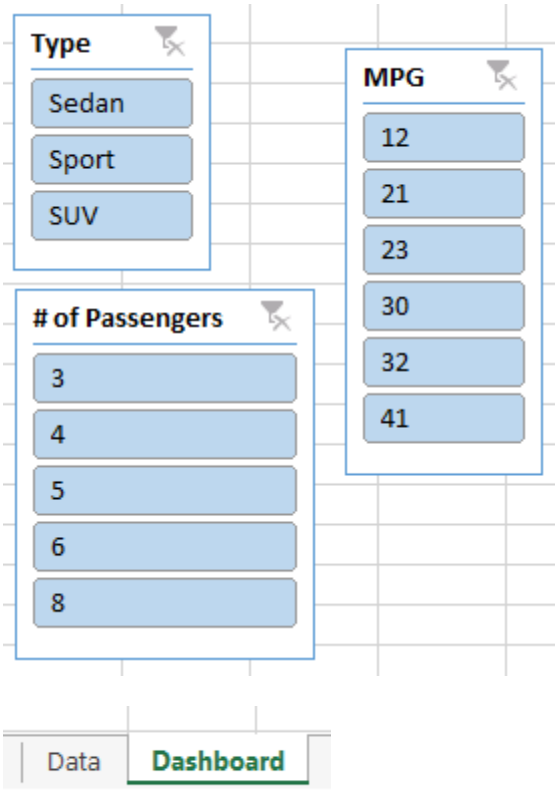
	A	B	C	D	E	F	G
1	Company	Type	MPG	Price	# of Passengers		
3	Honda	Sedan	32	$ 45,000	4		
4	Lexus	Sport	21	$ 26,000	6		
6	Porshe	Sedan	12	$ 30,000	6		
7	Fiat	Sport	23	$ 40,000	8		
9	Honda	Sedan	30	$ 15,000	3		
10	Lexus	Sport	41	$ 67,000	6		



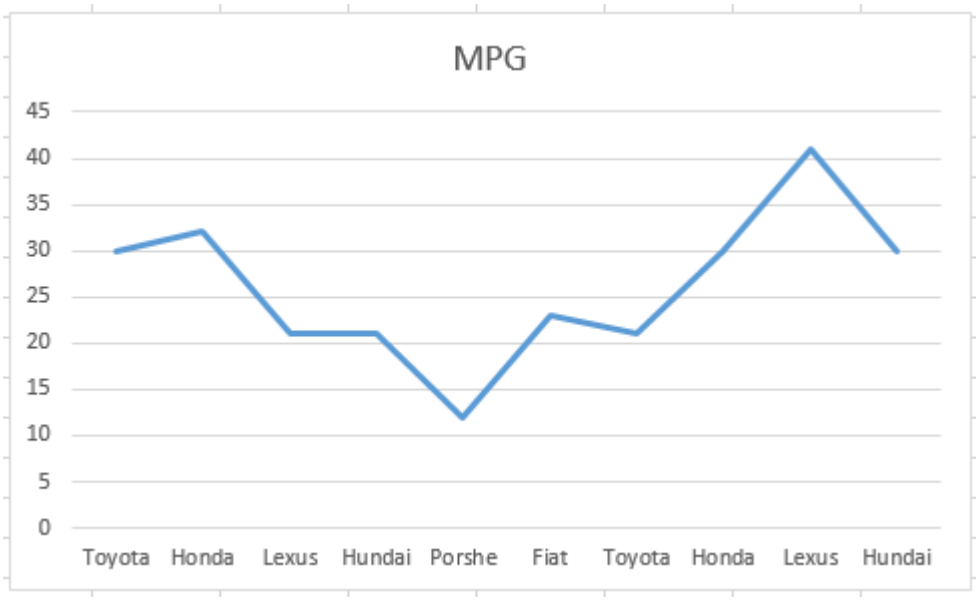

Type
Clear Filter (Alt+C)
Sedan
Sport
SUV

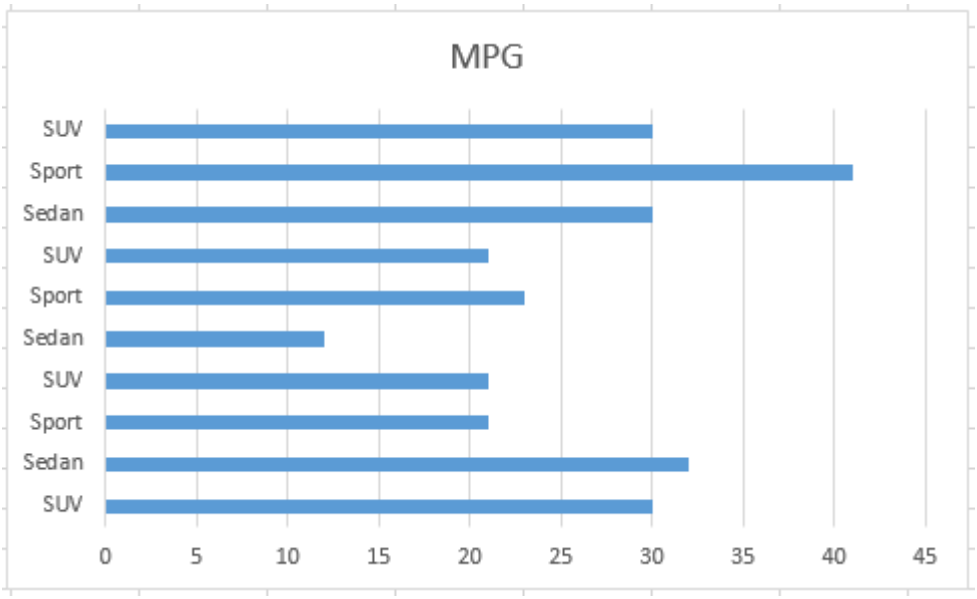

SLICER TOOLS
VIEW
OPTIONS
Bring Forward
Send Backward

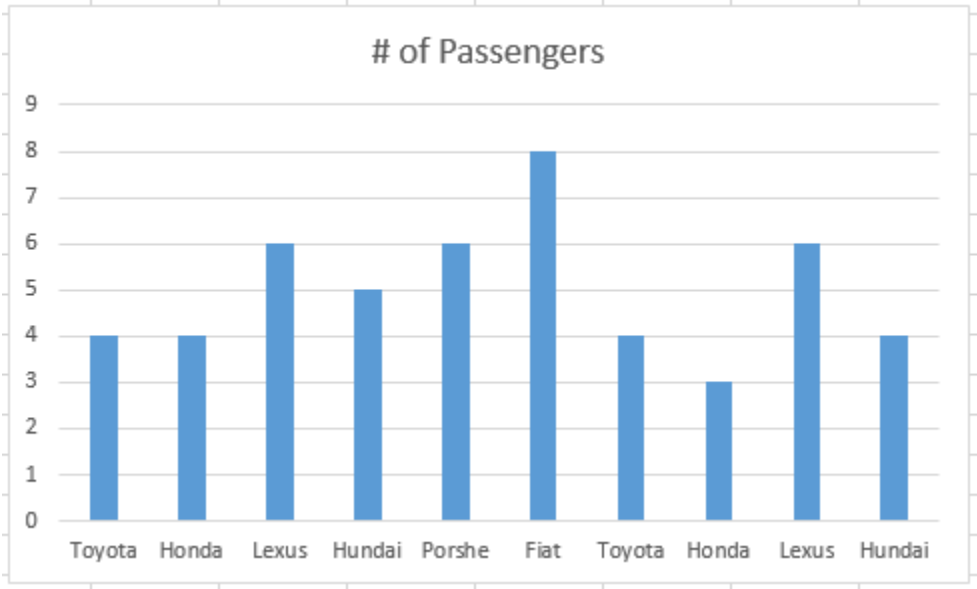

PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
Slicer Styles

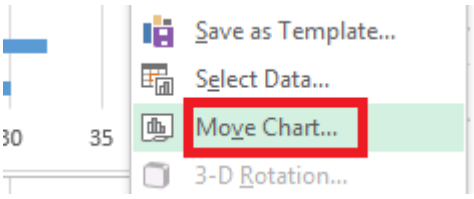


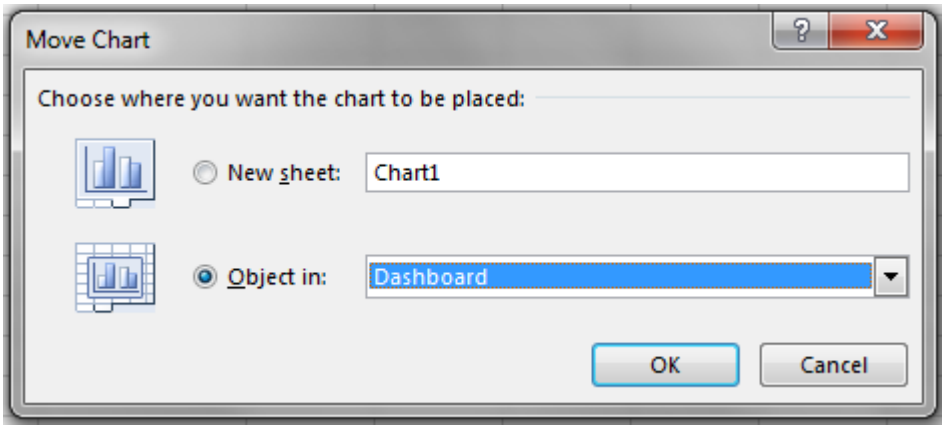
Data | **Dashboard**

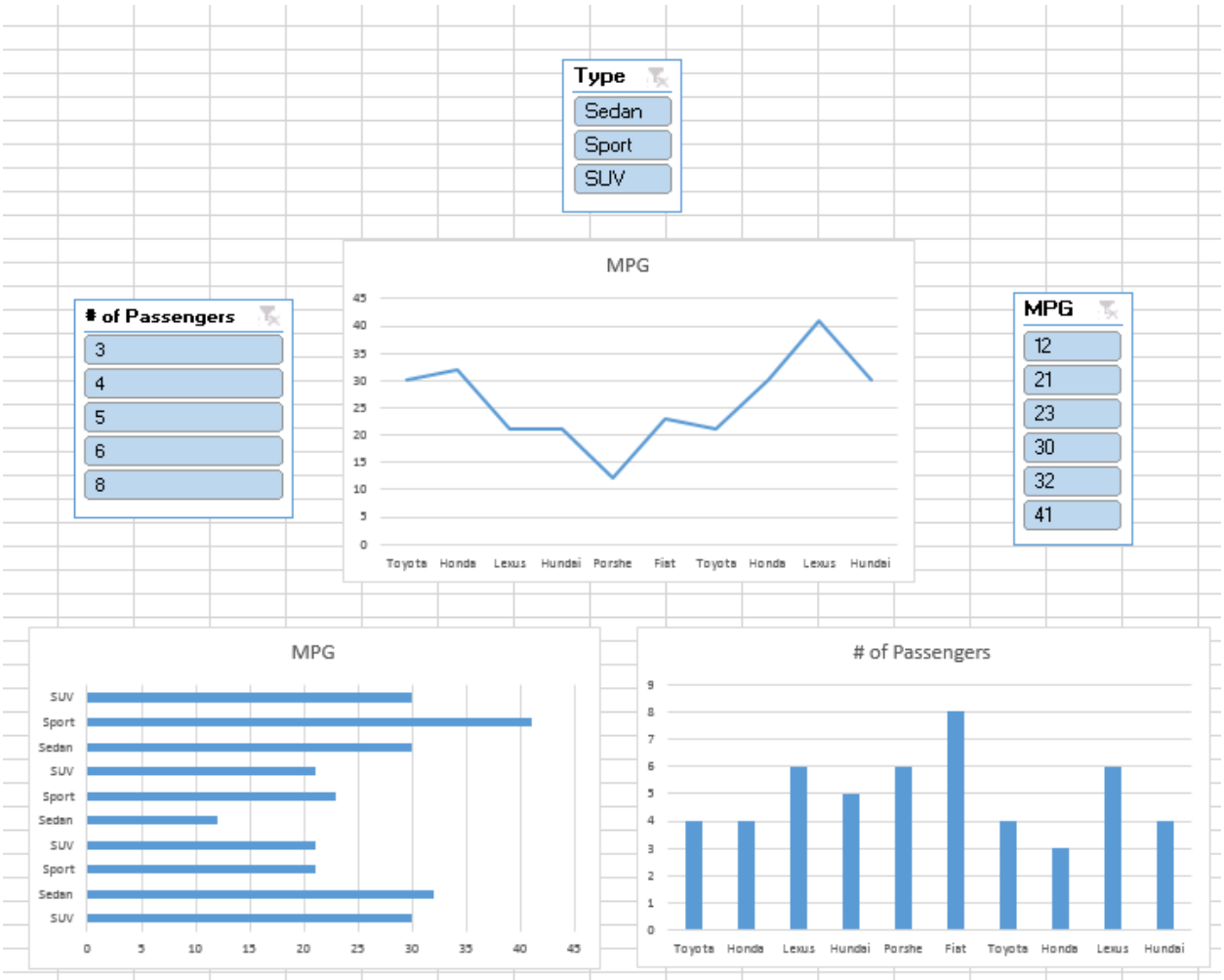


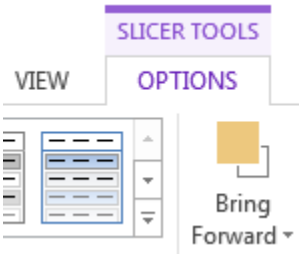

MPG
SUV
Sport
Sedan
SUV
Sport
Sedan
SUV
Sport
Sedan
SUV
0
5
10
15
20
25
30
35
40
45

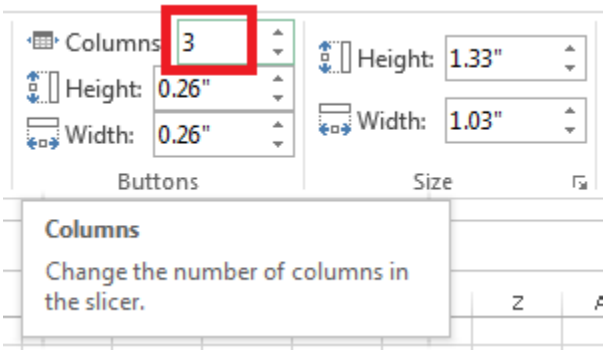

# of Passengers
9
8
7
6
5
4
3
2
1
0
Toyota
Honda
Lexus
Hundai
Porshe
Fiat
Toyota
Honda
Lexus
Hundai

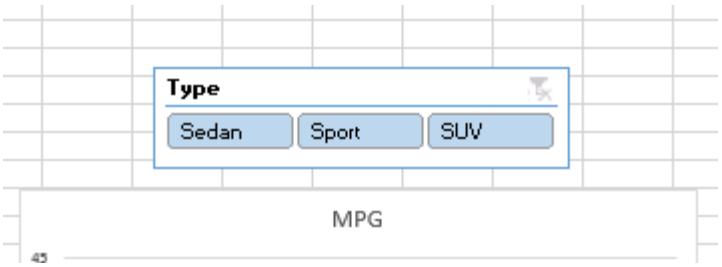

30
35
Save as Template...
Select Data...
Move Chart...
3-D Rotation...

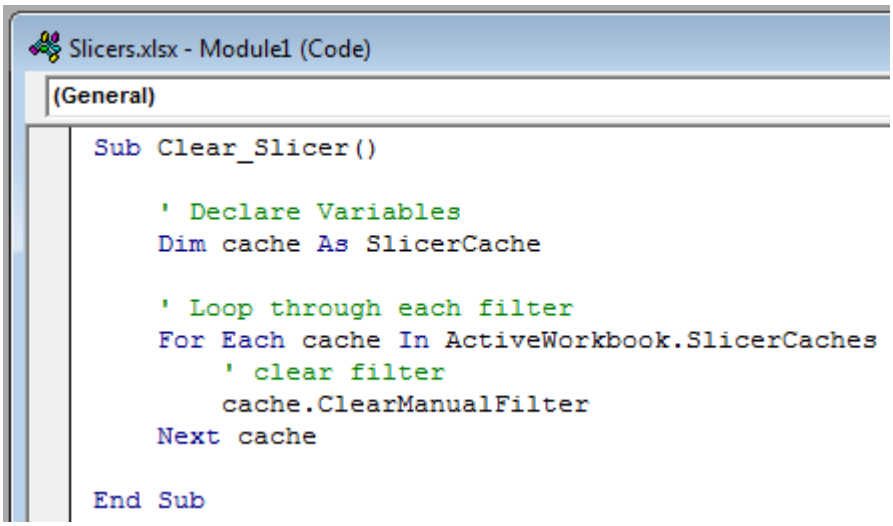

Move Chart
Choose where you want the chart to be placed:
New sheet:
Chart1
Object in:
Dashboard
OK
Cancel

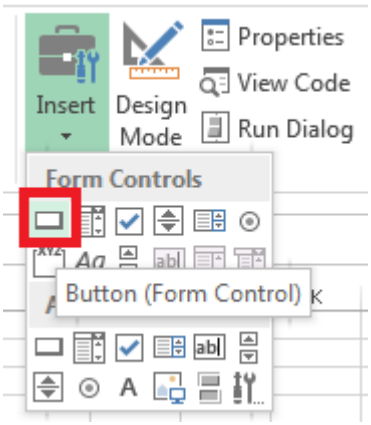

Type
Sedan
Sport
SUV
# of Passengers
3
4
5
6
8
MPG
45
40
35
30
25
20
15
10
5
0
Toyota Honda Lexus Hundai Porshe Fiat Toyota Honda Lexus Hundai
MPG
12
21
23
30
32
41
MPG
SUV
Sport
Sedan
SUV
Sport
Sedan
SUV
Sport
Sedan
SUV
0 5 10 15 20 25 30 35 40 45
# of Passengers
9
8
7
6
5
4
3
2
1
0
Toyota Honda Lexus Hundai Porshe Fiat Toyota Honda Lexus Hundai

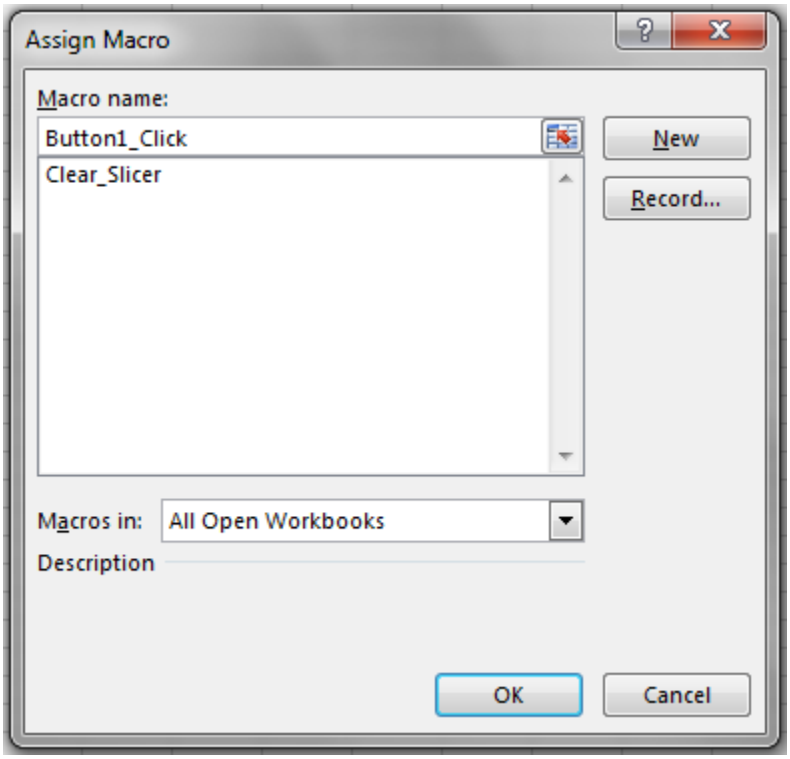

SLICER TOOLS
VIEW
OPTIONS
Bring
Forward

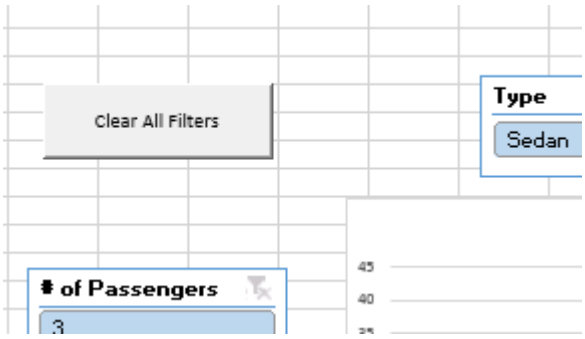

Columns: 3
Height: 0.26"
Width: 0.26"
Buttons
Height: 1.33"
Width: 1.03"
Size
Columns
Change the number of columns in the slicer.

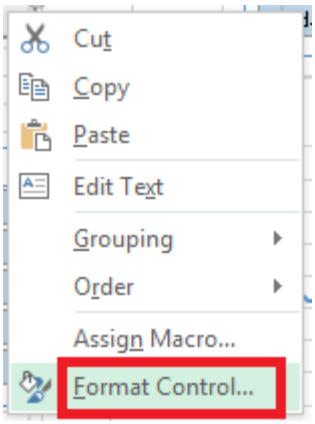

Type
Sedan
Sport
SUV
MPG
45


Slicers.xlsx - Module1 (Code)
(General)
Sub Clear_Slicer()
' Declare Variables
Dim cache As SlicerCache
' Loop through each filter
For Each cache In ActiveWorkbook.SlicerCaches
' clear filter
cache.ClearManualFilter
Next cache
End Sub

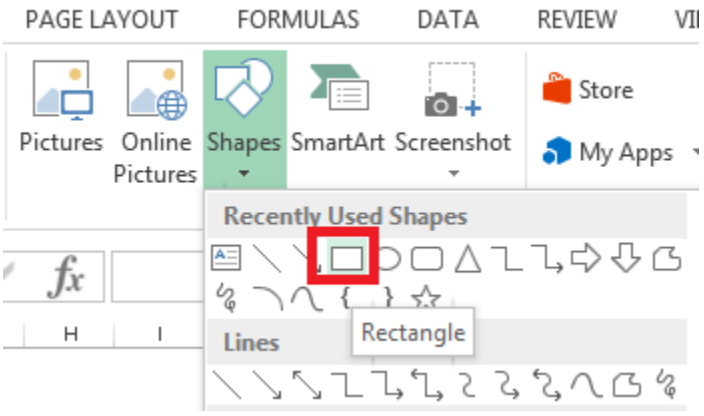

Insert
Design Mode
Properties
View Code
Run Dialog
Form Controls
Button (Form Control)

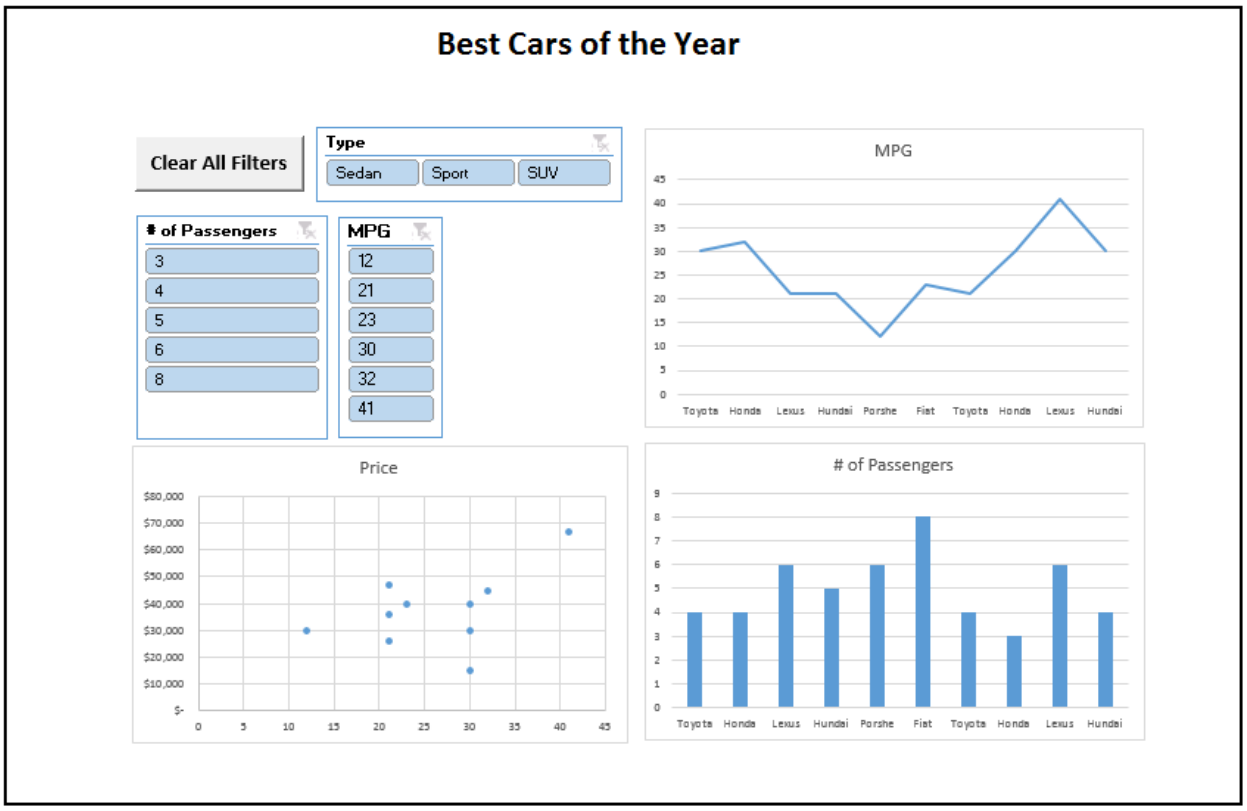

Assign Macro
Macro name:
Button1_Click
Clear_Slicer
New
Record...
Macros in:
All Open Workbooks
Description
OK
Cancel

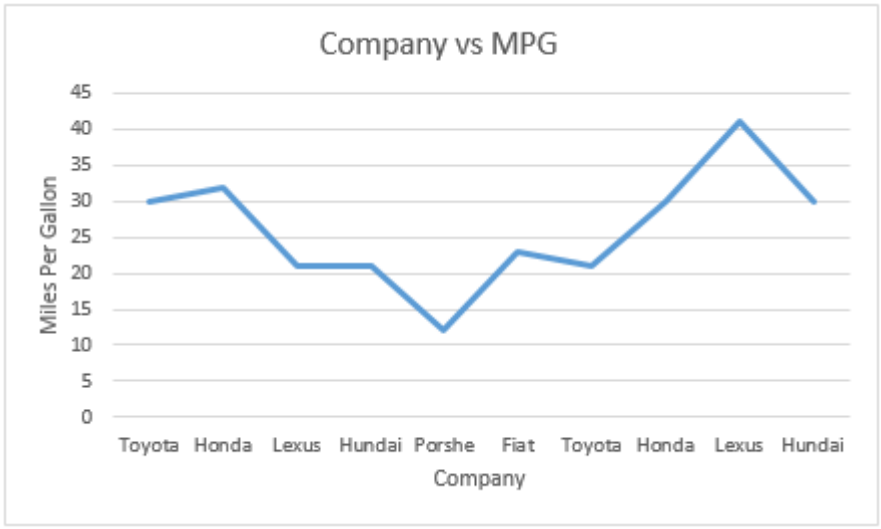

Clear All Filters
Type
Sedan
# of Passengers
3
45
40

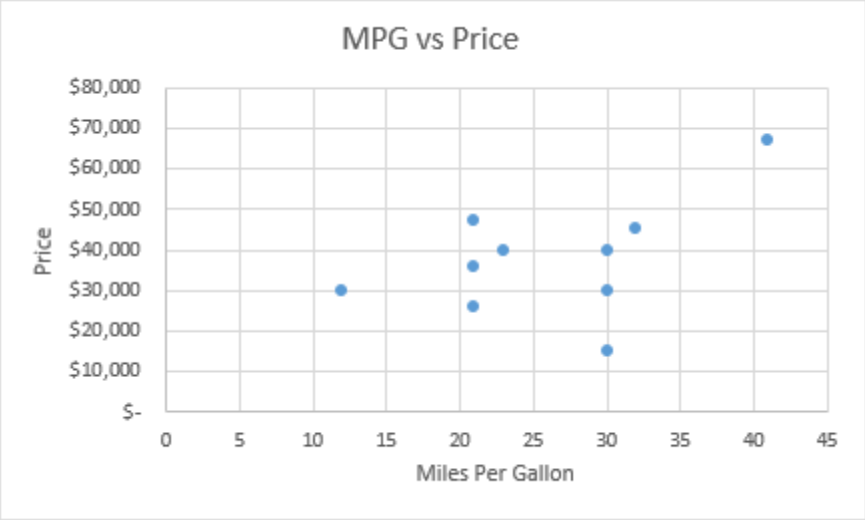

Cut
Copy
Paste
Edit Text
Grouping
Order
Assign Macro...
Format Control...

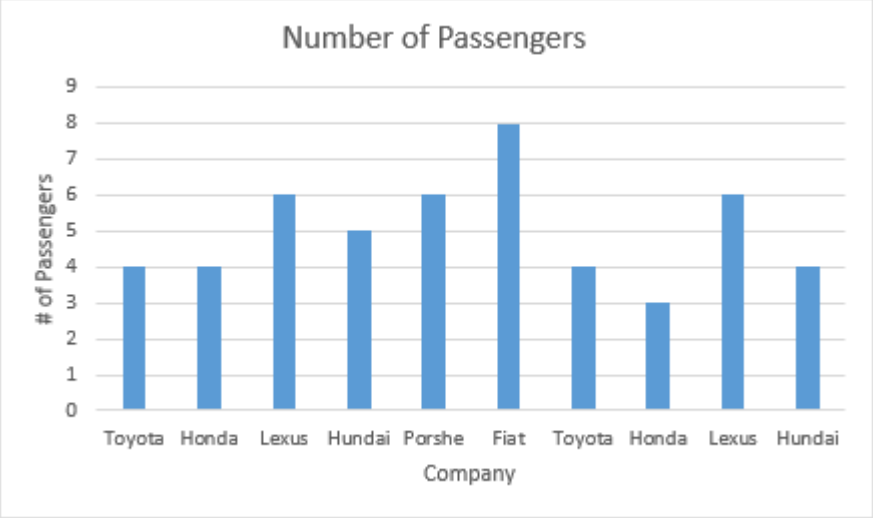

Price
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$-
0
5
10
15
20
25
30
35
40
45


PAGE LAYOUT
FORMULAS
DATA
REVIEW
Pictures
Online Pictures
Shapes
SmartArt
Screenshot
Store
My Apps
Recently Used Shapes
Rectangle
Lines
H
I


Best Cars of the Year
Clear All Filters
Type
Sedan
Sport
SUV
# of Passengers
3
4
5
6
8
MPG
12
21
23
30
32
41
MPG
45
40
35
30
25
20
15
10
5
0
Toyota Honda Lexus Hundai Porshe Fiat Toyota Honda Lexus Hundai
Price
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$-
0 5 10 15 20 25 30 35 40 45
# of Passengers
9
8
7
6
5
4
3
2
1
0
Toyota Honda Lexus Hundai Porshe Fiat Toyota Honda Lexus Hundai


Company vs MPG
Miles Per Gallon
45
40
35
30
25
20
15
10
5
0
Toyota Honda Lexus Hundai Porshe Fiat Toyota Honda Lexus Hundai
Company





Clear All Filters

Type

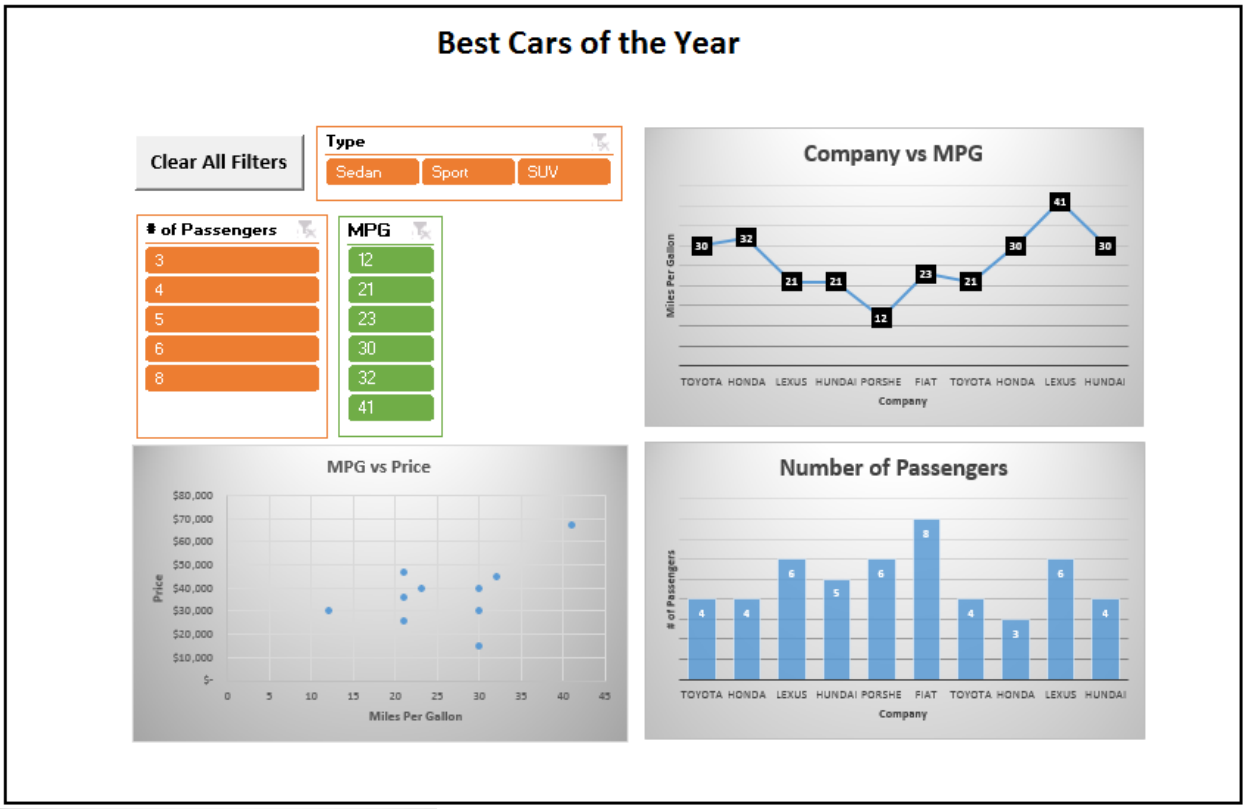
Sedan | Sport | SUV

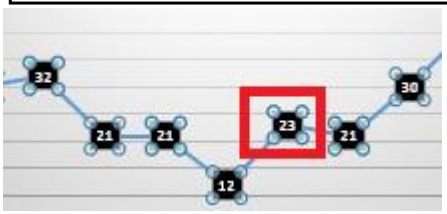
# of Passengers

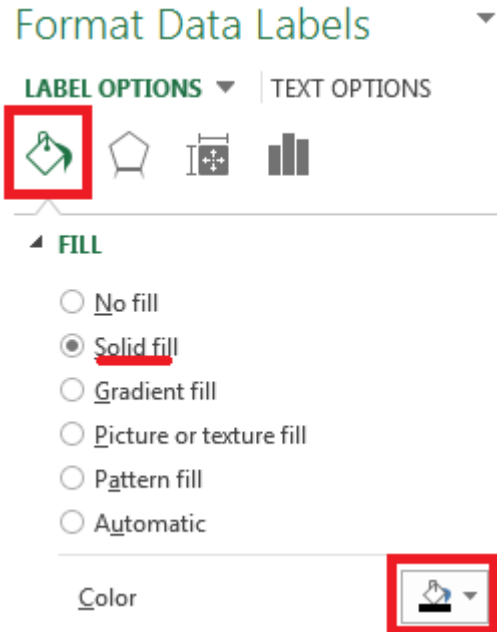
3
4
5
6
8

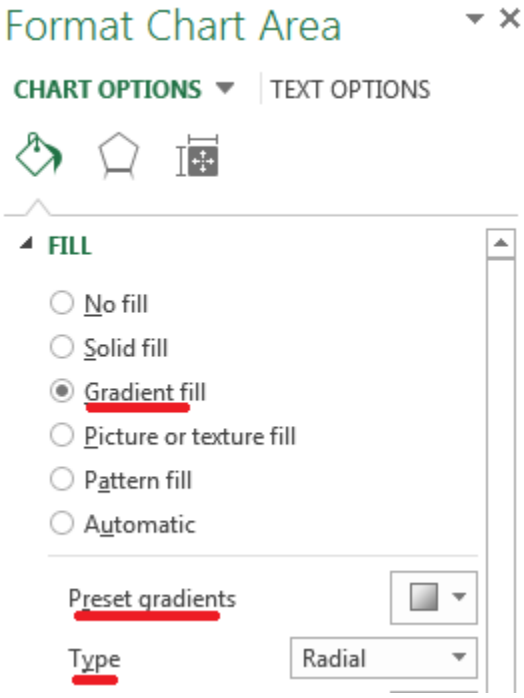
MPG

12
21
23
30
32
41


Best Cars of the Year
Clear All Filters
Type
Sedan
Sport
SUV
# of Passengers
3
4
5
6
8
MPG
12
21
23
30
32
41
Company vs MPG
Miles Per Gallon
30
32
21
21
12
23
21
30
41
30
TOYOTA HONDA LEXUS HUNDAI PORSHE FIAT TOYOTA HONDA LEXUS HUNDAI
Company
MPG vs Price
Price
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$-
0 5 10 15 20 25 30 35 40 45
Miles Per Gallon
Number of Passengers
# of Passengers
4
4
6
5
6
8
4
3
6
4
TOYOTA HONDA LEXUS HUNDAI PORSHE FIAT TOYOTA HONDA LEXUS HUNDAI
Company


32
21
21
23
12
21
30


Format Data Labels
LABEL OPTIONS
TEXT OPTIONS
FILL
No fill
Solid fill
Gradient fill
Picture or texture fill
Pattern fill
Automatic
Color


Format Chart Area
CHART OPTIONS
TEXT OPTIONS
FILL
No fill
Solid fill
Gradient fill
Picture or texture fill
Pattern fill
Automatic
Preset gradients
Type
Radial