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## **Getting Started with Tableau**

Lab#8 Replacing a Data Source

## **Description:**

BISP is committed to provide BEST learning material to the beginners and advance learners. In the same series, we have prepared a complete end-to end Hands-on Beginner's Guide for Tableau. The document focuses on replacing data source runtime. Join our professional training program and learn from experts.

History:

Version	Description Change	Author
0.1	Initial Draft	Surbhi S
0.1	Review#1	Amit Sha

Sahu arma **Publish Date** 21st Aug 2013 29th Aug 2013

## **Replacing a Data Source**

Replacing the data source used in a Tableau workbook allows you to point your workbook to a new data source and re-compute all your results using the new data. This method, however, works only if the new data source shares the same format as the original data source. If the format of the new data source is different than the current data source, you may see changes to custom sets, groups, and calculated fields that depend on the fields in the original data source.

For the clarification we can take a example. Here we the data model in which the SalesTax till year 2000 is charged different and after year 2000 the sales tax Increased. We are going to prepare the common report for both the data because almost we have to do the same calculations so, what will be the sense of making same report twice . For this type of purposes tableau gives the facility to replace a data source.

Excel Workbook Connection x Step 1: Select an Excel workbook: C:\Users\ABC\Desktop\Product of 2012.xlsx Browse... Step 2: Select the worksheet (table) to analyze: Single Table Multiple Tables Custom SQL Product Till2000 Dimensions III 🔎 ' Abc Description IntroductionDate Step 3: Does the data include field names in the first row? Abc ProductName Yes, the first row has field names in it. # ProductNumber No, automatically generate names for the fields. Abc Measure Names Step 4: Give the connection a name for use in Tableau: Product Till2000 (Product of 2012.xlsx) Cancel OK Step 2)Now all the fields will get imported in the worksheet.

Step 1)Import the excel sheet product\_Till2000 from the excel data source.

Measures

- # Margin
- # ProductionCost
- # SalesTax

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Rows	ProductName	MDY(IntroductionDat.	E	
ep 4)Now ill be calc dividually	we have to calcula sulated by including	te the selling price of th g sales tax charged on o	e product which each product	Add to Sheet         Show Quick Filter         Copy         Paste         Duplicate         Rename         Hide         Create Folder         Create Group         Create Bins         Create Parameter         Convert to Discrete         Convert to Dimension         Change Data Type         Geographic Role         Default Properties         Replace References
Calculated Fie Name: Sellin Formula: (sum ([Pr	eld [SellingPrice] ngPrice roductionCost]) + ( (s	um([ProductionCost])*s	um([SalesTax]))/100))	
sum(produ rice and an	actioncost)+(sum(sa n separate field as :	alestax)*sum(production named Selling price.	ncost))/100) this will o	calculate the selling

Step 6)In o	rder to add this calculated field in
the sheet,	add right click on the SellingPrice
and choose	e the option add to sheet.

Stop 7)This will	add the cale	vilation of call	in convice in	the cheet
Step / Juns will	add the cal	culation of sem	ingprice m	the sheet.

The same procedure will done with the production cost. Click right on the productioncost and choose the option add to sheet.

Add to Sheet Show Quick Filter

Cut Copy Paste

Edit... Duplicate Rename... Hide

Delete

Group by

Create Folder (use Group by Folder)

Create Calculated Field... Create Parameter...

Convert to Discrete Geographic Role

**Default Properties** 

Describe...

Replace References...

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# SellingPrice

Add to Sheet		#	Margin ProductionCost
Show Quick Filter	_	# #	SalesTax
Cut		=#	SellingPrice
Сору			
Paste			
Edit			
Duplicate			
Rename			

Step 8)Now the table will be created which including the Productname, introductiondate, Production cost and sellingprice. Till year 2000 the company charging the sale tax on product

Selling price Included With Tax(Till Year 2000) Title ProductName Year of Introdu.. ProductionCost SellingPrice with SalesT.. Bear Edge 1990 \$23.53 \$24.00 Bear Survival Edge 1995 \$45.00 \$46.80 Blue Steel Max Putter 1998 \$81.80 \$85.07 Ξ Blue Steel Putter 1998 \$60.00 \$61.20 Calamine Relief 1990 \$3.00 \$3.12 Canyon Mule Carryall 1992 \$41.18 \$42.83 Canyon Mule Climber .. \$65.63 1992 \$62.50 Canyon Mule Cooler 1990 \$24.00 \$24.72 Canyon Mule Extreme .. 1992 \$238.88 \$246.05 Canyon Mule Journey .. 1990 \$213.33 \$217.60 Canyon Mule Weekend.. 1990 \$169.99 \$166.66 Compact Relief Kit 1990 \$16.43 \$16.92 Course Pro Gloves 1998 \$5.00 \$5.10 Course Pro Golf and T.. 1999 \$6.00 \$6.18 Course Pro Golf Bag 1998 \$80.00 \$84.00 **Course Pro Putter** 1998 \$35.00 \$36.05 Course Pro Umbrella 1999 \$6.00 \$6.24 Deluxe Family Relief Kit 1992 \$25.00 \$25.50 Double Edge 1990 \$11.43 \$11.89 Edge Extreme 1995 \$80.00 \$84.00 EverGlow Butane 1992 \$40.63 \$41.85 EverGlow Double 1992 \$28.75 \$29.61 EverGlow Kerosene 1992 \$20.00 \$20.80 EvorGlow Lamp 1000 ¢47.07 ¢40.22

results this chart. From year 2000 company decrease the sales tax on the products. Here is the sheet displaying the selling price ,production cost and introduction year.

Step 9 )Now we require the data which having entry after the year 2000 which is in the data source MS SQL Server. Select the database Server test1 and select the table Product\_from2000 then click ok.

	Microsoft SQL Server Connection
	Step 1: Select or enter a server name:
	WIN-83NOT2NFP8S    Refresh
	Step 2: Enter information to log on to the server:
	<ul> <li>Use Windows Authentication (preferred)</li> </ul>
	O Use a specific username and password:
	Username: sa
	Password:
	Read uncommitted data
	Step 3: Establish the connection:
	Connect
	Step 4: Select a database on the server:
	test1
	Step 5: Define the connection:
	Single Table ○ Multiple Tables ○ Custom SQL ○ Procedures
	Product from2000\$
	Step 6: Give the connection a name for use in Tableau:
	Product_from2000\$ (test1)
	OK Cancel
ton 10) New change the entire connect	1
tep 10) Now choose the option connect	live.



Step 12) In the option, current sheet on which we had made the report of sales tax will be replaced with the report containing the data from the year 2000. This will only replace the data all the design will be similar. Then press ok.

Step 13)Now see the chart the sellingprice and year of introduction varied. This sheet is displaying the selling price with the increasing salesprice. Edit Relationships... Replace Data Source...

Replace Data Sou	rce 🔀
The data source	will be replaced in all worksheets and dashboards.
Current:	Product_Till2000 (Product of 2012.xlsx)
Replacement:	Product_from2000\$ (test 1)
	OK Cancel

Title Selling	price Included Wi	th Tax(From Year 2000	))
ProductName	Year of Introdu	ProductionCost	SellingPrice with SalesT
Bear Edge	2001	\$23.53	\$24.47
Bear Survival Edge	2003	\$45.00	\$47.70
Blue Steel Max Putter	2004	\$81.80	\$86.71
Blue Steel Putter	2004	\$60.00	\$62.40
Calamine Relief	2001	\$3.00	\$3.18
Canyon Mule Carryall	2002	\$41.18	\$43.65
Canyon Mule Climber	2002	\$62.50	\$66.88
Canyon Mule Cooler	2001	\$24.00	\$25.20
Canyon Mule Extreme	2002	\$238.88	\$250.82
Canyon Mule Journey	2001	\$213.33	\$221.86
Canyon Mule Weekend.	. 2001	\$166.66	\$173.33
Compact Relief Kit	2001	\$16.43	\$17.25
Course Pro Gloves	2004	\$5.00	\$5.20
Course Pro Golf and T	2004	\$6.00	\$6.30
Course Pro Golf Bag	2004	\$80.00	\$85.60
Course Pro Putter	2004	\$35.00	\$36.75
Course Pro Umbrella	2004	\$6.00	\$6.36
Deluxe Family Relief Kit	2002	\$25.00	\$26.00
Double Edge	2001	\$11.43	\$12.12
Edge Extreme	2003	\$80.00	\$85.60
EverGlow Butane	2002	\$40.63	\$42.66
E 01 B 11	0000	A00 75	AAA 4A

Step 14) If we want to see the change the variation on the selling price of the both data till year 2000 and from year 2000 you can draw a graph for both in a single sheet.

Step 15) For this firstly we have to create the Relation between the both data sources's Data.

Data	Worksheet Dashboard Analysis Map	Format
	Connect to Data	Ctrl+D
	Paste Data	Ctrl+V
	Refresh All Extracts	
	Edit Relationships	
	Replace Data Source	
	ConversionRate+ (GoSales1.accdb)	+
	ConversionRate+ (GoSales1.accdb) (copy 2)	•
✓	ConversionRate+ (GoSales1.accdb) (copy)	•

Step 16) This will explore a window which ask for primary and secondary data source. Here Product\_Till2000 will be our primary data source and Product\_from2000 will be our secondary datasource. The join will be created using the productname which is same in both tables.

	sx)		•
econdary data source:	Automatic      Custom     ProductName	ProductName	
	Add Edit	Remove	
ated here between the tw	n nlaces		
eated here between the tw		Abc Description Production Abc ProductNa # ProductNu Abc Measure No	nDate me mber ames

measure to column shelf.	Rows	Pro	ductName
Step 19) Then create a calculate field by rig	ht click on	-	
the sheet and choose the option create calcu	ulated field		
The sheet and choose the option create cale		·····	Add to Sheet
			Show Quick Filter
			Copy Paste
			Duplicate
			Rename
			Hide
			Create Folder
			Create Calculated Field
			Create Group
			Create Bins
			Create Parameter
			Convert to Discrete
			Convert to Dimension
			Change Data Type 🕨
			Geographic Role 🕨

officia: ([ProductionCost]+	(([Production(	Cost]*[S	alesTax])/100))		
The calculation is valid.					Clear
ields:	Parameters:	Crea <u>t</u> e	Functions:	Help	
		•	AII	<b>_</b>	Description
Enter Text to Search	Enter Text to Searc	ch	Enter Text to Search		
Abc Description			ABS	<u> </u>	Data type: String
IntroductionDate			ACOS		
# Iviargin =# Number of Pec			ASCII		
Abc Product from2			ΔΤΔΝ		
Product from2			ATAN2		
# Product from2			ATTR		
# Product_from2			AVG		
Abc Product_from2			CASE		
# Product_from2			CHAR		Describe
# Product from2 *			CONTAINS	Ψ.	
Changes to this calcul	ation might change the 1"	efollowing:			OK Cancel Apply

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(sum(productioncost)+(sum(salestax)\*sum(productioncost))/100) this will calculate the selling price and an separate field as named Selling price.then apply and then ok. Step 21) Do the same procedure with the field salestax of the product from 2000.



Step 22)The both calculated fields are created here.

=# ProductionCostFrom2000

# ProductionCostTill2000

Step 23) By pressing cntrl key select both and right click on the measure shelf and choose the option add to sheet.

	Add to Sheet
	Show Quick Filter
	Cut
	Сору
	Paste
	Edit
	Duplicate
-	Rename
	Hide
	Delete
•	Group by
	Create Folder (use Group by Folder)
	Create Calculated Field
	Create Parameter
	Convert to Discrete
	Geographic Role
	Default Properties
	Replace References
	Describe

Step 24)Now select bar chart from the show me toolbar.



Step 25)The below chats shows data taken from Excel and SQL Server, Selling price revised due to increase in Sales Tax.

ProductName		
Bear Edge	\$24.00	\$24.47
Bear Survival Edge	\$46.80	\$47.70
Blue Steel Max Putter	\$85.07	\$86.71
Blue Steel Putter	\$61.20	\$62.40
BugShield Extreme	\$2.60	\$2.65
Canyon Mule Carryall	\$42.83	\$43.65
Canyon Mule Climber	\$65.63	\$66.88
Canyon Mule Cooler	\$24.72	\$25.20
Canyon Mule Extreme	\$246.05	\$250.82
Canyon Mule Journey	\$217.60	\$221.86
Canyon Mule Weekend	\$169.99	\$173.33
Compact Relief Kit	\$16.92	\$17.25
Course Pro Gloves	\$5.10	\$5.20
Course Pro Golf and T	\$6.18	\$6.30
Course Pro Golf Bag	\$84.00	\$85.60
Course Pro Putter	\$36.05	\$36.75
Course Pro Umbrella	\$6.24	\$6.36
Deluxe Family Relief Kit	\$25.50	\$26.00
Double Edge	\$11.89	\$12.12
Edge Extreme	\$84.00	\$85.60
EverGlow Butane	\$41.85	\$42.66
	\$100.00 \$200.00 \$300.00 \$400.00 \$500.00 \$600.00 ProductionCostTill2000	\$100.00 \$200.00 \$300.00 \$400.00 \$500.00 \$600.00 ProductionCostFrom2000