

Analyse a Dataset in Excel: Tables and Dynamic Ranges

Fondamenti di Business Analytic
Lesson 2 - Gambaro

Roadmap

- Tables in Excel
- Filter function
- Using Match and Index function to calculate dynamic frequencies:
 - Match + Index + Unique
 - Match + Index + Countif
- Using dynamic named ranges to build flexible charts

File Home Insert Page Layout Formulas Data Review View Automate Developer Add-ins Help Data Streamer Power Pivot

Clipboard Font Alignment Number Styles Cells Editing Analysis Sensitivity Add-ins Excel Labs

B2																		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
2		2014 Sales For Boomerang Inc.																
3		Boomerang Inc. sells boomerangs online through four different web sites.																
4						Revenue = Retail Price*Quantity*(1-Discout)						Retail Prices:			Analysis Web Site frequencies			
5		Date Time	Web Site	Product	Type	Quantity	Discount	Revenue		Size N		Product	Retail Price		Web Site	Frequencies	Percen	
6		9/8/15 10:13	amazon.com	Aspen	Wholesale	32	0.165	604.832		26514		Alpine	21.95		amazon.com	11430		
7		12/11/15 23:26	ebay.com	Yanaki	Wholesale	29	0.15	590.368				Aspen	21.95		ebay.com	5809		
8		12/19/15 18:10	amazon.com	Bellen	Retail	3	0.019	73.575				Carlota	19.95		coloradoboomerangs.co	6378		
9		8/23/15 12:55	ebay.com	Quad	Wholesale	36	0.15	1222.47				Crested Beaut	17.95		gel-boomerang.com	2897		
10		7/9/15 05:02	coloradoboomerangs.com	Crested Beaut	Wholesale	38	0.15	579.785				Majestic Beaut	26.95			26514		
11		6/30/15 16:40	ebay.com	Manu LD	Retail	4	0	1000				Sunshine	20			CORRECT	CORRE	
12		7/1/15 13:16	coloradoboomerangs.com	Bellen			0	100				Bellen	25					
13		8/2/15 04:06	gel-boomerang.com	Fire Aspen			0.375	127					21.95					
14		11/16/15 12:15	ebay.com	Sunspot			0.375						23.95					
15		12/9/14 19:48	coloradoboomerangs.com	Bower Aussie Rou			0						23.95					
16		12/8/15 08:23	amazon.com	Quad			0.594	201				Tri Fly	9.95					
17		12/13/14 16:30	ebay.com	Fun Fly			0.15	127.5				Fun Fly	5					
18		8/23/15 03:07	amazon.com	Aspen			0.072	162.957				Fire Aspen	22					
19		11/20/15 11:00	amazon.com	Carlota Doublers	Retail	4	0.019	294.3				Sunset	26					
20		8/26/15 11:05	amazon.com	Aspen	Retail	3	0.019	64.5989				Sunspot	14					
21		12/12/15 14:21	amazon.com	Aspen	Wholesale	91	0.356	1286.36				Carlota Doublers	75					
22		12/13/14 12:40	gel-boomerang.com	Fun Fly	Retail	2	0	10				GelFast	24					
23		12/12/14 16:35	amazon.com	Fun Fly	Wholesale	37	0.159	155.585				Frido Fast Catch	50					
24		7/28/15 15:17	coloradoboomerangs.com	Fun Fly	Retail	2	0	10				Manu MTA	120					
25		8/25/15 16:47	amazon.com	Aspen	Retail	6	0.072	122.218				Manu LD	250					
26		12/20/15 12:35	amazon.com	Fun Fly	Wholesale	35	0.16	147				Bower Aussie Round	43					
27		8/29/15 14:06	amazon.com	Manu MTA	Retail	1	0.019	117.72				Quad	39.95					
28		2/28/15 11:45	coloradoboomerangs.com	Bower Aussie Round	Retail	3	0	129										
29		7/13/15 05:30	amazon.com	Sunshine	Wholesale	34	0.169	565.08										
30		8/14/15 09:49	coloradoboomerangs.com	Fire Aspen	Retail	3	0	66										

Create Table ? X

Where is the data for your table?

☐ My table has headers

OK Cancel

To Create a Table:
Ctrl + T

B5																	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
1																	
2		2014 Sales For Boomerang Inc.															
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8		12/19/15 18:10	amazon.com	Bellen	Retail	3	0.019	73.575				Carlota	19.95	coloradoboomerangs.co	6378		
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11		6/30/15 16:40	ebay.com	Manu LD			0	1000				Sunshine	20		CORRECT	CORRE	
12		7/1/15 13:16	coloradoboomerangs.com	Bellen			0						25				
13		8/2/15 04:06	gel-boomerang.com	Fire Aspen			0.375	127					21.95				
14		11/16/15 12:15	ebay.com	Sunspot			0.375						23.95				
15		12/9/14 19:48	coloradoboomerangs.com	Bower Aussie Rou			0						23.95				
16		12/8/15 08:23	amazon.com	Quad			0.594	2011.24				Darnell Tri Fly	9.95				
17		12/13/14 16:30	ebay.com	Fun Fly	Wholesale	30	0.15	127.5				Fun Fly	5				
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19		11/20/15 11:00	amazon.com	Carlota Doublers	Retail	4	0.019	294.3				Sunset	26				
20		8/26/15 11:05	amazon.com	Aspen	Retail	3	0.019	64.5989				Sunspot	14				
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22		12/13/14 12:40	gel-boomerang.com	Fun Fly	Retail	2	0	10				GelFast	24				
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24		7/28/15 15:17	coloradoboomerangs.com	Fun Fly	Retail	2	0	10				Manu MTA	120				
25		8/25/15 16:47	amazon.com	Aspen	Retail	6	0.072	122.218				Manu LD	250				
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28		2/28/15 11:45	coloradoboomerangs.com	Bower Aussie Round	Retail	3	0	129									
29		7/13/15 05:30	amazon.com	Sunshine	Wholesale	34	0.169	565.08									

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OK Cancel

To Create a Table:
Ctrl + T

File Home Insert Page Layout Formulas Data Review View Automate Developer Add-ins Help Data Streamer Power Pivot Table Design

fx AutoSum Recently Used Financial Logical Text Date & Time Lookup & Reference Maths & Trig More Functions

Name Manager Define Name Use in Formula Create from Selection

Trace Precedents Trace Dependents Remove Arrows Show Formulas Error Checking Evaluate Formula Watch Window

Calculate Now Calculate Sheet

B5																			
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5		Date Time	Web Site	Product	TY								Retail Price		Web Site	Frequencies	P		
6		9/8/15 10:13	amazon.com	Aspen	W								21.95		amazon.com	11430			
7		12/11/15 23:26	ebay.com	Yanaki	W								21.95		ebay.com	5809			
8		12/19/15 18:10	amazon.com	Bellen	Re								19.95		coloradoboomerangs.co	6378			
9		8/23/15 12:55	ebay.com	Quad	W								17.95		gel-boomerang.com	2897			
10		7/9/15 05:02	coloradoboomerangs.com	Crested Beaut	W								26.95			26514			
11		6/30/15 16:40	ebay.com	Manu LD	Re								20			CORRECT	C		
12		7/1/15 13:16	coloradoboomerangs.com	Bellen	Re								25						
13		8/2/15 04:06	gel-boomerang.com	Fire Aspen	W								21.95						
14		11/16/15 12:15	ebay.com	Sunspot	W								23.95						
15		12/9/14 19:48	coloradoboomerangs.com	Bower Aussie Round	Re								23.95						
16		12/8/15 08:23	amazon.com	Quad	W								9.95						
17		12/13/14 16:30	ebay.com	Fun Fly	W								5						
18		8/23/15 03:07	amazon.com	Aspen	Re								22						
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20		8/26/15 11:05	amazon.com	Aspen	Re								14						
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22		12/13/14 12:40	gel-boomerang.com	Fun Fly	Re								24						
23		12/12/14 16:35	amazon.com	Fun Fly	W								50						
24		7/28/15 15:17	coloradoboomerangs.com	Fun Fly	Re								120						
25		8/25/15 16:47	amazon.com	Aspen	Re								250						
26		12/20/15 12:35	amazon.com	Fun Fly	W								43						
27		8/29/15 14:06	amazon.com	Manu MTA	Re								39.95						
28		2/28/15 11:45	coloradoboomerangs.com	Bower Aussie Round	Retail		3	0	129										
29		7/13/15 05:30	amazon.com	Sunshine	Wholesale		34	0.169	565.08										
30		8/14/15 09:49	coloradoboomerangs.com	Fire Aspen	Retail		3	0	66										

Name Manager

New... Edit... Delete Filter

Name	Value	Refers To	Scope	Comment
Table1	{=9/8/15 10:13,"amaz...	=Sales Data!\$B\$6:\$H...	Workbook	

Refers to:

Close

B5																		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
2		2014 Sales For Boomerang Inc.																
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4																		
5		Date Time	Web Site	Product	Type	Quantity	Discount	Revenue		Size N		Product	Retail Price		Web Site	Frequencies		
6		9/8/15 10:13	amazon.com	Aspen	Wholesale	33	0.165	604.83225		26514		Alpine	21.95		amazon.com	11430		
7		12/11/15 23:26	ebay.com	Yanaki	Wholesale	29	0.15	590.3675				Aspen	21.95		ebay.com	5809		
8		12/19/15 18:10	amazon.com	Bellen	Retail	3	0.019	73.575				Carlota	19.95		coloradoboomerangs.co	6378		
9		8/23/15 12:55	ebay.com	Quad	Wholesale	36	0.15	1222.47				Crested Beaut	17.95		gel-boomerang.com	2897		
10		7/9/15 05:02	coloradoboomerangs.com	Crested Beaut	Wholesale	38	0.15	579.785				Majestic Beaut	26.95			26514		
11		6/30/15 16:40	ebay.com	Manu LD	Retail	4	0	1000				Sunshine	20			CORRECT		
12		7/1/15 13:16	coloradoboomerangs.com	Bellen	Retail	4	0	100				Bellen	25					
13		8/2/15 04:06	gel-boomerang.com			93	0.375	1278.75				Eagle	21.95					
14		11/16/15 12:15	ebay.com			64	0.375	560				Yanaki	23.95					
15		12/9/14 19:48	coloradoboomerangs.co			3	0	129				Phoenix	23.95					
16		12/8/15 08:23	amazon.com			124	0.594	2011.2428				Darnell Tri Fly	9.95					
17		12/13/14 16:30	ebay.com			30	0.15	127.5				Fun Fly	5					
18		8/23/15 03:07	amazon.com			8	0.072	162.9568				Fire Aspen	22					
19		11/20/15 11:00	amazon.com			4	0.019	294.3				Sunset	26					
20		8/26/15 11:05	amazon.com			3	0.019	64.59885				Sunspot	14					
21		12/12/15 14:21	amazon.com			91	0.356	1286.3578				Carlota Doublers	75					
22		12/13/14 12:40	gel-boomerang.com			2	0	10				GelFast	24					
23		12/12/14 16:35	amazon.com			37	0.159	155.585				Frido Fast Catch	50					
24		7/28/15 15:17	coloradoboomerangs.co			2	0	10				Manu MTA	120					
25		8/25/15 16:47	amazon.com	Aspen	Retail	6	0.072	122.2176				Manu LD	250					
26		12/20/15 12:35	amazon.com	Fun Fly	Wholesale	35	0.16	147				Bower Aussie Round	43					
27		8/29/15 14:06	amazon.com	Manu MTA	Retail	1	0.019	117.72				Quad	39.95					
28		2/28/15 11:45	coloradoboomerangs.com	Bower Aussie Round	Retail	3	0	129										
29		7/13/15 05:30	amazon.com	Sunshine	Wholesale	34	0.169	565.08										
30		8/14/15 09:49	coloradoboomerangs.com	Fire Aspen	Retail	3	0	66										

Edit Name

Name: Tab_sales

Scope: Workbook

Comment:

Refers to: ='Sales Data'!\$B\$6:\$H\$26519

OK Cancel

File Home Insert Page Layout Formulas Data Review View Automate Developer Add-ins Help Data Streamer Power Pivot Table Design

fx Insert Function AutoSum Recently Used Financial Logical Text Date & Time Lookup & Reference Maths & Trig More Functions

Function Library

Name Manager Define Name Use in Formula Create from Selection

Defined Names

Trace Precedents Trace Dependents Remove Arrows Show Formulas Error Checking Evaluate Formula

Formula Auditing

Watch Window Calculation Options Calculate Now Calculate Sheet

Calculation

=VLOOKUP([@Product],\$L\$6:\$M\$27,2,FALSE)*[@Quantity]*(1-[@Discount])														
	B	C	D	E	F	G	H	I	J	K	L	M	N	O
3	Boomerang Inc. sells boomerangs online through four different web sites.				Revenue = Retail Price*Quantity*(1-Discount)				Retail Prices:				Analysis Web Site freq	
4														
5	Date Time	Web Site	Product	Type	Quantity	Discount	=VLOOKUP([@Product],\$L\$6:\$M\$27,2,FALSE)*[@Quantity]*(1-[@Discount])							Web Site
6	9/8/15 10:13	amazon.com	Aspen	Wholesale	33	0.165	590.3675				Aspen	21.95		amazon.com
7	12/11/15 23:26	ebay.com	Yanaki	Wholesale	29	0.15					Aspen	21.95		ebay.com
8	12/19/15 18:10	amazon.com	Bellen	Retail	3	0.019	73.575				Carlota	19.95		coloradoboomerangs.c
9	8/23/15 12:55	ebay.com	Quad	Wholesale	36	0.15	1222.47				Crested Beaut	17.95		gel-boomerang.com
10	7/9/15 05:02	coloradoboomerangs.com	Crested Beaut	Wholesale	38	0.15	579.785				Majestic Beaut	26.95		
11	6/30/15 16:40	ebay.com	Manu LD	Retail	4							20		
12	7/1/15 13:16	coloradoboomerangs.com	Bellen	Retail	4							25		
13	8/2/15 04:06	gel-boomerang.com	Fire Aspen	Wholesale	93	0.375	1278.75				Eagle	21.95		
14	11/16/15 12:15	ebay.com	Sunspot	Wholesale	64	0.375	560				Yanaki	23.95		
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29	7/13/15 05:30	amazon.com	Sunshine	Wholesale	34	0.169	565.08							

[@ColumnName] = row by row

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Formula Auditing

Watch Window Calculation Options Calculate Now Calculate Sheet

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H19 =VLOOKUP([@Product],\$L\$6:\$M\$27,2,FALSE)*[@Quantity]*(1-[@Discount])

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16	12/8/15 08:23	amazon.com			124	0.594	2011.2428				Darnell Tri Fly	9.95		
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19	11/20/15 11:00	amazon.com			4	0.019	294.3				Sunset	26		
20	8/26/15 11:05	amazon.com			3	0.019	64.59885				Sunspot	14		
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25	8/25/15 16:47	amazon.com	Aspen	Retail	6	0.072	122.2176				Manu LD	250		
26	12/20/15 12:35	amazon.com	Fun Fly	Wholesale	35	0.16	147				Bower Aussie Round	43		
27	8/29/15 14:06	amazon.com	Manu MTA	Retail	1	0.019	117.72				Quad	39.95		
28	2/28/15 11:45	coloradoboomerangs.com	Bower Aussie Round	Retail	3	0	129							
29	7/13/15 05:30	amazon.com	Sunshine	Wholesale	34	0.169	565.08							

New Name

Name: rng_prices

Scope: Workbook

Comment:

Refers to: ='Sales Data'!\$L\$6:\$M\$27

OK Cancel

 Calculate Now
 Calculate Sheet

Calculation

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
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[illegible]

6	9/8/15 10:13	amazon.com	Aspen	Wholesale	33	0.165	=VLOOKUP([@Product],rng_prices,2,FALSE)*[@Quantity]*(1-[@Discount])	amazon.com
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8	12/19/15 18:10	amazon.com	Bellen	Retail	3	0.019	73.575		Carlot	19.95	coloradoboomerangs.c
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0	7/9/15 05:02	coloradoboomerangs.com	Crested Beaut	Wholesale	38	0.15	579.785				Majestic Beaut	26.95		
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2	7/1/15 13:16	coloradoboomerangs.com	Bellen	Retail	4	0	100				Bellen	25
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4	11/16/15 12:15	ebay.com	Sunspot	Wholesale	64	0.375	560					Yanaki	23.95
---	----------------	----------	---------	-----------	----	-------	-----	--	--	--	--	--------	-------

6	12/8/15 08:23	amazon.com	Quad		124	0.594	2011.2428	Darnell Tri Fly	9.95
	12/12/14 16:28		5 Fl		33	0.345	187.5	5 Fl	5

0	8/23/15 05:07	amazon.com	Aspen	Retail	0	0.072	102.9368	Fire Aspen	22
0	11/20/15 11:00		Carleton Boulware	Retail	4	0.010	204.2	Summit	26

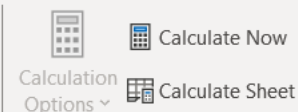
0/20/15 11:05	amazon.com	Aspen	Retail	5	0.019	04.55685	Sunspot	14
12/12/15 14:21	amazon.com	Aspen	Wholesale	01	0.255	1206.2578	Carleton Doublers	75

[illegible]

8/25/15 16:47	amazon.com	Aspen	Retail	6	0.072	122.2176	Manu ID	250
---------------	------------	-------	--------	---	-------	----------	---------	-----

[illegible][illegible]

 Accessibility: Investigate



Calculation

To select a specific column of a table:
TableName[ColumnName]

SUM		=TRANSPOSE(Tab_sales[#Headers])															
	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1																	
2																	
3	Revenue = Retail Price*Quantity*(1-Discount)					Retail Prices:							Analysis Web Site frequencies				
4																	
5	Discount	Revenue		Size N		Product	Retail Price						Web Site	Frequencies	Percentage Freq.		
6	0.165	604.83225		26514		Alpine	21.95		=TRANSPOSE(Tab_sales[#Headers])				amazon.com	11430	43%		
7	0.15	590.3675				Aspen	21.95		TRANSPOSE(array)				ebay.com	5809	22%		
8	0.019	73.575				Carlota	19.95		Product				coloradoboomerangs.co	6378	24%		
9	0.15	1222.47				Crested Beaut	17.95		Type				gel-boomerang.com	2897	11%		
10	0.15	579.785				Majestic Beaut	26.95		Quantity					26514	100%		
11	0	1000				Sunshine	20		Discount							CORRECT	CORRECT
12	0	100				Bellen	25		Revenue								
13	0.375	1278.75				Eagle	21.95										
14	0.375	560				Yanaki	23.95										
15	0	129				Phoenix	23.95										
16	0.594	2011.2428				Darnell Tri Fly	9.95										
17	0.15	127.5				Fun Fly	5										
18	0.072	162.9568				Fire Aspen	22										
19	0.019	294.3				Sunset	26										
20	0.019	64.59885				Sunspot	14										
21	0.356	1286.3578				Carlota Doublers	75										
22	0	10				GelFast	24										
23	0.159	155.585				Frido Fast Catch	50										
24	0	10				Manu MTA	120										
25	0.072	122.2176				Manu LD	250										
26	0.16	147				Bower Aussie Round	43										
27	0.019	117.72				Quad	39.95										

TableName[#Headers] = array of column names

File Home Insert Page Layout Formulas Data Review View Automate Developer Add-ins Help Data Streamer Power Pivot Table Design

fx Insert Function AutoSum Recently Used Financial Logical Text Date & Time Lookup & Reference Maths & Trig More Functions

Function Library

Name Manager Define Name Use in Formula Create from Selection Defined Names

Trace Precedents Trace Dependents Remove Arrows Formula Auditing

Show Formulas Error Checking Evaluate Formula

Watch Window

Calculation Options Calculate Now Calculate Sheet Calculation

	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
1																		
2																		
3		Revenue = Retail Price*Quantity*(1-Discount)																
4																		
5		Discount	Revenue		Size N													
6		0.165	604.83225		26514													
7		0.15	590.3675															
8		0.019	73.575															
9		0.15	1222.47															
10		0.15	579.785															
11		0	1000															
12		0	100															
13		0.375	1278.75															
14		0.375	560															
15		0	129															
16		0.594	2011.2428															
17		0.15	127.5															
18		0.072	162.9568															
19		0.019	294.3															
20		0.019	64.59885															
21		0.356	1286.3578															
22		0	10															
23		0.159	155.585															
24		0	10															
25		0.072	122.2176															
26		0.16	147															
27		0.019	117.72															

Phoenix23.95

Darnell Tri Fly9.95

Fun Fly5

Fire Aspen22

Sunset26

Sunspot14

Carlota Doublers75

GelFast24

Frido Fast Catch50

Manu MTA120

Manu LD250

Bower Aussie Round43

Quad39.95

Data	Type
Date Time	Date-Time
Web Site	Categorical
Product	Categorical
Type	Categorical
Quantity	Quant. Discr.
Discount	Quant. Cont.
Revenue	Quant. Cont.

Web Site	Frequencies	Percentage Freq.
amazon.com	11430	43%
ebay.com	5809	22%
coloradoboomerangs.co	6378	24%
gel-boomerang.com	2897	11%
	26514	100%
	CORRECT	CORRECT

Create the Table «Tab_datatype»

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	☒
--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-------------------------------------

Product

Type

=FILTER(range, condition)

Categorical	Column Index
Web Site	=MATCH(A3,Tab_sales[#Headers],0)
Product	
Type	

The function MATCH gives the position of the column «Web Site» in the table «Tab sales»

Lesson2 - Gambaro-BoomerangDataset

Search

Anna Maria Gambaro

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Get & Transform Data

Queries & Connections

Data Types

Sort & Filter

Data Tools

Forecast

Outline

Analysis

CommentsShare

A3

Web Site

Analysis Categorical Variables																			
Web Site	Frequencies	Percentage Freq.		Categorical	Column Index														
amazon.com	11430	43%		Web Site	2														
ebay.com	5809	22%		Product															
coloradoboomerangs.com	6378	24%		Type															
gel-boomerang.com	2897	11%																	
	26514	100%																	
	CORRECT	CORRECT																	

Create a drop down menu using «Data validation» and a dynamic list

Data Validation

SettingsInput MessageError Alert

Validation criteria

Allow:List

Data:between

Source:=\$E\$4#

Ignore blankIn-cell drop-down

Apply these changes to all other cells with the same settings

Clear AllOKCancel

Sales DataAnalysis categoricSheet1

EnterAccessibility: Investigate

Cerca

18°C Parzial. sereno

09:2205/10/2023

File Home Insert Page Layout Formulas Data Review View Automate Developer Add-ins Help Data Streamer Power Pivot

Get & Transform Data Queries & Connections Data Types Sort & Filter Data Tools Forecast Outline Analysis

A4	=UNIQUE(INDEX(Tab_sales,,F4))																	
1	Analysis Categorical Variables																	
2																		
3																		
4	=UNIQUE(INDEX(Tab_sales,,F4))		Percentage Freq.		Categorical	Column Index												
5	ebay.com	5809	22%		Web Site	2												
6	coloradoboomerangs.com	6378	24%		Product													
7	gel-boomerang.com	2897	11%		Type													
8		26514	100%															
9		CORRECT	CORRECT															
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		
25																		
26																		
27																		

The INDEX function returns the second column of the table «Tab_sales»

The INDEX function returns the second column of the table «Tab_sales»

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

A4# is a dynamic range: it is a column array starting from cell A4 with a flexible length.

File Home Insert Page Layout Formulas Data Review View Automate Developer Add-ins Help Data Streamer Power Pivot

Get & Transform Data: Get Data, From Text/CSV, From Web, From Table/Range, From Picture, Recent Sources, Existing Connections

Queries & Connections: Refresh, Properties, Edit Links

Data Types: Stocks, Currencies

Sort & Filter: Sort, Filter, Clear, Reapply, Advanced

Data Tools: Text to Columns, Data Tools

Forecast: What-If Analysis, Forecast Sheet

Outline: Group, Ungroup, Subtotal

Analysis: Solver, Data Analysis

C3			Percentage Freq.																	
1	Analysis Categorical Variables																			
2		=SUM(B4#)	=SUM(C4#)																	
3	Web Site	Frequencies	Percentage Freq.																	
4	amazon.com	11436	43%																	
5	ebay.com	5809	22%																	
6	coloradoboomerangs.com	6378	24%																	
7	gel-boomerang.com	2897	11%																	
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				

B4# and C4# are dynamic ranges

SUM	⌵	⋮	✕	✓	f_x	=B4#/\$B\$2
-----	---	---	---	---	-------	-------------

[illegible]

FileHomeInsertPage LayoutFormulasDataReviewViewAutomateDeveloperAdd-insHelpData StreamerPower PivotChart DesignFormat

CommentsShare

Add ChartQuick Layout

Chart Layouts

Change Colours

Chart Title

Chart Title

Chart Title

Chart Title

Chart Title

Chart Title

Chart Title

Chart Title

Chart Title

Chart Styles

Switch Row/Column

Select Data

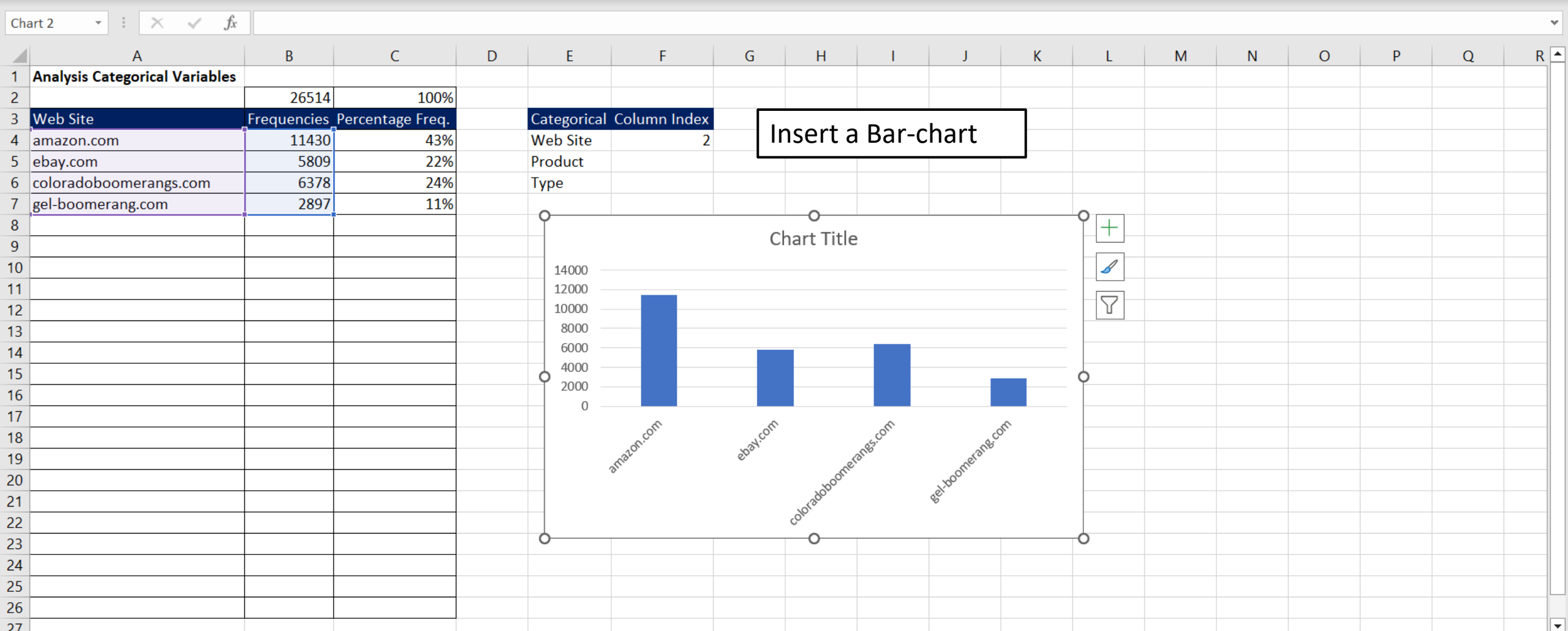
Data

Change Chart Type

Type

Move Chart

Location



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Analysis Categorical Variables																	
2		26514	100%															
3	Web Site	Frequencies	Percentage Freq.	Categorical	Column Index													
4	amazon.com	11430	43%	Web Site	2													
5	ebay.com	5809	22%	Product														
6	coloradoboomerangs.com	6378	24%	Type														
7	gel-boomerang.com	2897	11%															
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		
25																		
26																		
27																		

Create a dynamic named range for the frequencies

New Name

Name: drng_freqcat

Scope: Workbook

Comment:

Refers to: ='Analysis categorial'!\$B\$4#

OK Cancel

File Home Insert Page Layout Formulas Data Review View Automate Developer Add-ins Help Data Streamer Power Pivot

Insert Function AutoSum Recently Used Financial Logical Text Date & Time Lookup & Reference Maths & Trig More Functions

Function Library

Name Manager Define Name Use in Formula Create from Selection

Defined Names

Trace Precedents Trace Dependents Remove Arrows Show Formulas Error Checking Evaluate Formula

Formula Auditing

Watch Window

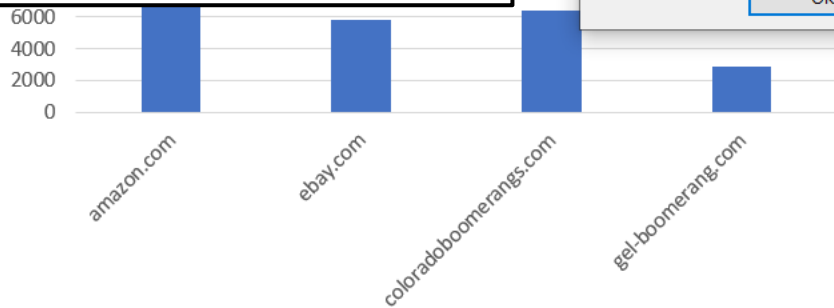
Calculation Options Calculate Now Calculate Sheet

Calculation

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Analysis Categorical Variables																	
2		26514	100%															
3	Web Site	Frequencies	Percentage Freq.	Categorical	Column Index													
4	amazon.com	11430	43%	Web Site	2													
5	ebay.com	5809	22%	Product														
6	coloradoboomerangs.com	6378	24%	Type														
7	gel-boomerang.com	2897	11%															
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		
25																		
26																		
27																		

Chart Title

Create a dynamic named range for the categories



New Name

Name: drng_cat

Scope: Workbook

Comment:

Refers to: ='Analysis categorial'!\$A\$4#

OK Cancel

Analysis Categorical Variables		
Web Site	Frequencies	Percentage Freq.
amazon.com	11430	43%
ebay.com	5809	22%
coloradoboomerangs.com	6378	24%
gel-boomerang.com	2897	11%

Categorical Column Index

Web Site 2

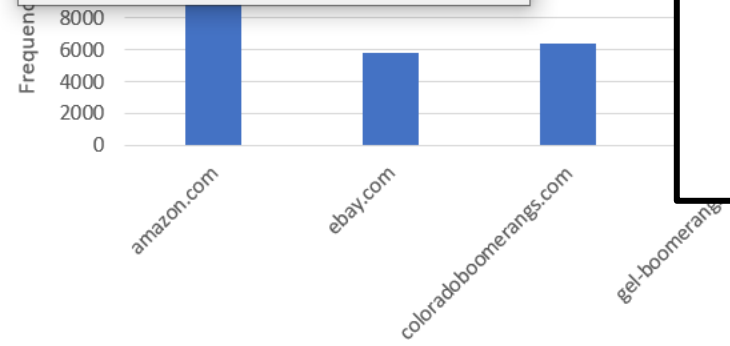
Product Type

Edit Series

Series name:
='Analysis categorical'!\$B\$3 = Frequencies

Series values:
='Lesson2-Gambaro-BoomerangData'!\$B\$3:\$B\$7 = 11430, 5809, 6...

OK Cancel



= 'Lesson2-Gambaro-BoomerangDataset.xlsx'!drng_freqcat
= 'Lesson2-Gambaro-BoomerangDataset.xlsx'!drng_cat

Click on the chart and open the «Select Data» tool.
Instead of the data range B4:B7, insert the complete name of the dynamic range.

File Home Insert Page Layout Formulas Data Review View Automate Developer Add-ins Help Data Streamer Power Pivot Chart Design Format

Function Library: Insert Function, AutoSum, Recently Used, Financial, Logical, Text, Date & Time, Lookup & Reference, Maths & Trig, More Functions

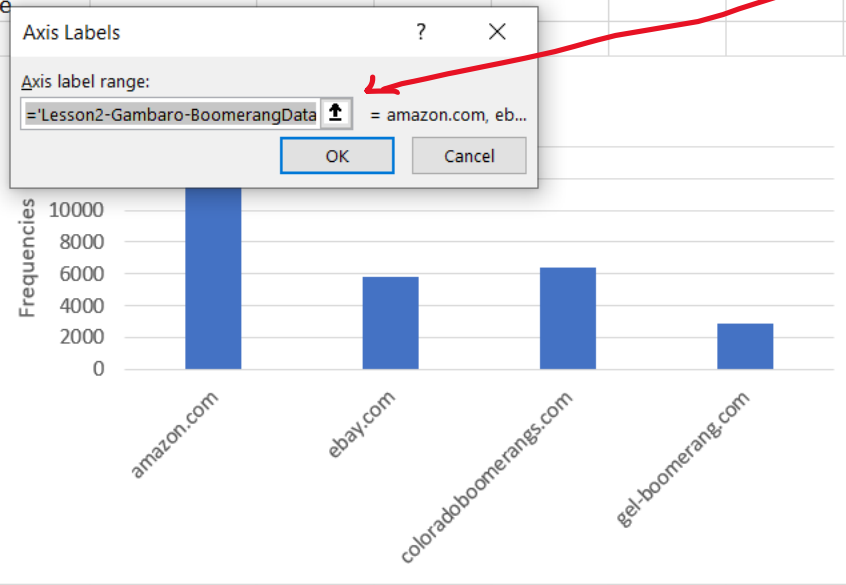
Defined Names: Name Manager, Define Name, Use in Formula, Create from Selection

Formula Auditing: Trace Precedents, Trace Dependents, Remove Arrows, Show Formulas, Error Checking, Evaluate Formula

Calculation: Watch Window, Calculate Now, Calculation Options, Calculate Sheet

Analysis Categorical Variables		
Web Site	Frequencies	Percentage Freq.
amazon.com	11430	43%
ebay.com	5809	22%
coloradoboomerangs.com	6378	24%
gel-boomerang.com	2897	11%

Categorical Column Index
Web Site 2
Product
Type



Axis Labels

Axis label range:

OK Cancel

=Lesson2-Gambaro-BoomerangDataset.xlsx!drng_freqcat
='Lesson2-Gambaro-BoomerangDataset.xlsx!drng_cat

File Home Insert Page Layout Formulas Data Review View Automate Developer Add-ins Help Data Streamer Power Pivot

fx ∑ Recently Used Financial Logical Text Date & Time Lookup & Reference Maths & Trig More Functions

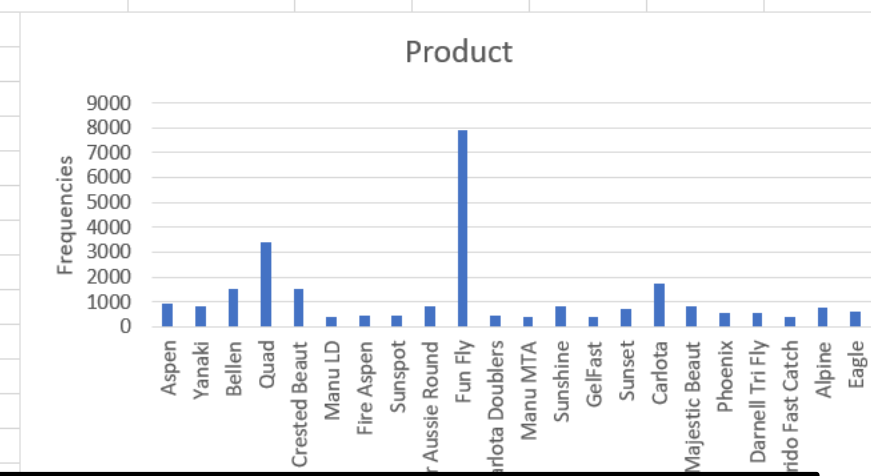
Function Library

Name Manager Define Name Use in Formula Create from Selection Defined Names

Trace Precedents Trace Dependents Remove Arrows Show Formulas Error Checking Evaluate Formula Watch Window Calculation Options Calculate Now Calculate Sheet

A3	Product
1	Analysis Categorical Variables
2	26514 100%
3	Product Frequencies Percentage Freq.
4	Aspen 916 3%
5	Yanaki 852 3%
6	Bellen 1539 6%
7	Quad 3403 13%
8	Crested Beut 1537 6%
9	Manu LD 423 2%
10	Fire Aspen 425 2%
11	Sunspot 431 2%
12	Bower Aussie Round 833 3%
13	Fun Fly 7891 30%
14	Carlota Doublers 433 2%
15	Manu MTA 402 2%
16	Sunshine 822 3%
17	Gelfast 419 2%
18	Sunset 723 3%
19	Carlota 1715 6%
20	Majestic Beut 817 3%
21	Phoenix 573
22	Darnell Tri Fly 578
23	Frido Fast Catch 404
24	Alpine 783
25	Eagle 595

Categorical	Column Index
Web Site	3
Product	
Type	



Now the frequencies analysis and the bar-chart are dynamic. If you change the data name from «Web Site» to «Product» in the drop down menu, everything changes automatically!

Exercise: build a flexible Pie Chart, defining a dynamic named range for the percentage frequencies.

Exercise: build a flexible Pie Chart, defining a dynamic named range for the percentage frequencies