Building the Header

1

4 5

10 AA 11 AAL 12 AAON 13 AAP 14 AAPL

2 Symbol 3 text label

The header of the render your data. includes a one line a terse description properly built Pros the second row.

Insert a new row above the top row of your table: The first row consists of four specific values:

n n	e header of the der your data. <i>I</i> Judes a one line	Prospect w this in the f	ill only read files w irst cell (case-sensi	ith tive)								
.e	rse description of the column below. In a B1: the row where the standard data begins											value, 9
e	second row. C1: A title for the data Anything you like but NO COMMAS											
						D)1: The ir Depth (nitial palette, (Chart <mark>(case-se</mark>	either Wall ensitive)	Street, Sunset, Or		
1	А	B	C L	D	F	F	G	Н	I.	J	K	
	prospectHeader	∠ 9	Today's Stocks	Wall Street	~							
	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL	
	text	text	float	float	float	integer	integer	float	text	text	text	
	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url	
	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none	
	_			absolute		sqrt						
	_			divide	multiply	multiply						
	1	1	1	15	100	0.00001	1	1	1		1	1
	A	Agilent Techr	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https:/	/www
	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https:/	/www
	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https:/	/www
	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAO	N https:/	/www
	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https:/	/www
ł	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technolog	More About AAPL	. https:/	/www

Row 3

This row tells Prospect more about your data. We will insert all of the main header rows and work on row 3.

> All columns in row three must be one of the values **text**, **float**, or **integer** (case-sensitive)

Insert six new rows after line 2:

Row three tells Prospect what kind of information appears in each column.

If the column contains letters or words, write **text** If it contains numbers with decimal points, write **float** If it contains numbers without decimal points, write **integer**

> This is a great time to go through your entire table and make sure that there are no *COMMAS* anywhere in the cells!

	A I	B	C	D	E	F	G	H		J	K
1	prospectHeader	9	Today's Stocks	Wall Street							
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text 🖌	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
6				absolute		sqrt					
7				divide	multiply	multiply					
8	1	. 1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Tech	r 127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
13	AAP	Advance Aut	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
14	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technology	More About AAPL	https://www.

Row 4

In row 3 we defined the type of information in each column. In row 4, we tell Prospect what to do with that information.

All columns in row four must be one of the values **label**, **description**, **gradient**, **initialGradient**, **subset**, **link**, or **url** (case-sensitive) Prospect uses the **label** column to identify each data entity with a label. Only one label column is allowed.

Label columns **description** when they contain further text information. This will not be used for sorting and will appear only in the information window when the data item is chosen.

Your numerical data should be labeled **gradient** in most cases. This tells Prospect to use this column to sort and depict the data.

You can specify that one of the gradients is active when the file is first loaded by Prospect. Use **initialGradient** only once in a file.

12

Market Cap	Volume	\$ Volume	Sector	Link Text	URL
integer	integer	float	text	text	text
initialGradient	gradient	gradient	subset	link	url
baseHeight	none	none	none	none	none
sqrt					
multiply					
0.00001	1	. 1	1		1 1
37863588903	1553552	198699301	Industrials	More About A	https://www.
7355341358	8221708	336103423	Industrials	More About AA	https://www.
8480489347	53206137	694340088	Consumer	More About AAL	https://www.
2933291603	119559	6597266	Industrials	More About AAO	N https://www.
10315087448	681003	117016350	Consumer	More About AAP	https://www.
2479066246600	113223 Th	his is a great time	e to go throu	ugh your	https://www.
	er	COMMAS and m	iake sure tha		
	Market Cap integer initialGradient baseHeight sqrt multiply 0.00001 37863588903 7355341358 8480489347 2933291603 10315087448 2479066246600	Market Cap Volume integer integer initialGradient gradient baseHeight none sqrt none multiply 0.00001 1 37863588903 1553522 7355341358 8221708 8480489347 53206137 2933291603 119559 10315087448 681997 2479066246600 113223 The second seco	Market Cap Volume \$ Volume integer integer float initialGradient gradient gradient baseHeight none none sqrt none none multiply 0.00001 1 1 37863588903 1553552 198699301 7355341358 8221708 336103423 8480489347 53206137 694340088 2933291603 119559 6597266 10315087448 681993 117016359 2479066246600 113223 This is a great time entire table and mono <i>COMMAS</i> anyw	Market CapVolume\$ Volume\$ VolumeSectorintegerintegerfloattextinitialGradientgradientgradientsubsetbaseHeightnonenonenonesqrtnonenonenone0.0000111137863588903155355219869930173553413588221708336103423848048934753206137694340088Consumer29332916031195596597266Industrials103150874486819931170163592479066246600113223This is a great time to go througentire table and make sure that no COMMAS anywhere in the	Market CapVolume\$ VolumeSectorLink TextintegerintegerfloattexttexttextinitialGradientgradientgradientsubsetlinkbaseHeightnonenonenonenonenonesqrtnonenonenonenonenonesqrt0.00001111378635889031553552198699301IndustrialsMore About A73553413588221708336103423IndustrialsMore About AA848048934753206137694340088ConsumerMore About AAL29332916031195596597266IndustrialsMore About AAOI10315087448681993117016359ConsumerMore About AAP2479066246600113223This is a great time to go through your entire table and make sure that there are no COMMAS anywhere in the cells!PL

Row 4 ... continued

Special designations in Row 4 let you define subsets, and provide for outward links for the data instances.

All columns in row four must be one of the values **label**, **description**, **gradient**, **initialGradient**, **subset**, **link**, or **url** (case-sensitive) One column can be named **subset** allowing the data to be sliced into smaller pieces. In the stocks example, these are the sector definitions used by S&P Dow Jones to define stocks. Don't use subsets that divide the data into more than 12 categories.

Use a **link** designation for the column that specifies the link text for each data instance. If the data in a **link** column is blank, Prospect will jump directly to the link when the object's beacon is picked.

In a **url** column, all items after the header must be valid urls including https:// prefix.

	А	В	С	D	E	F	G	н		J	K
1	prospectHeader	9	Today's Stocks	Wall Street				\mathbf{X}	\backslash		
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset 🏻	link	url
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
6				absolute		sqrt					
7				divide	multiply	multiply					
8	1	1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Tech	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
13	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
14											1

See more about links at the end of this document.

Row 5 – Building the Towers

You can use some of the data gradients to specify the heights and areas of the tower components as well as the color of the tower.

All columns in row five must be one of the values **none**, **baseArea**, **baseHeight**, **bodyArea**, **bodyHeight**, **crownArea**, **crownHeight**, or **colorCode** (case-sensitive). Do not use any of these more than once in the header. When you specify **none** for a column, it will not affect the size, shape, or color of the tower. Write none in all the cells of row 5 that are not actively used for drawing the tower.

In the stock market example, the daily net change of the stock determines the height of the crown (uppermost portion of the tower).

The % of change in the daily price of the stock determines the color of each tower.

The Market Capitalization of the stock determines the height of the tower base.

	А	В	С	/ D	E	F	G	Н		J	K
1	prospectHeader	9	Today's Stocks	Wall Street							
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	colorCode	baseHeight 🦉	none	none	none	none	none
6		-		absolute		sqrt					
7				divide	multiply	multiply					
8	1	1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Techr	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
13	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
14	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technology	More About AAPL	https://www.

Row 6 – Adjusting the numbers

Once you have chosen a gradient, you can perform some math transformations to make the numbers fit the suggested ranges.

All columns in row six must be one of the values **absolute**, **inverse**, **unity**, or **sqrt** (all casesensitive). These cells can also be left blank, which is equivalent to unity. We don't want the height of the crown to be negative, so we first transform the data with an **absolute** value function.

Leaving this cell blank will pass the value to the next row.

The square root (**sqrt**) function reduces wide variations in the gradient.

	Α	B	C	D	E	F /	G	Н	- I	J	K
1	prospectHeader	9	Today's Stocks	Wall Street							
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	: colorCode	baseHeight	none	none	none	none	none
6			[absolute	K	sqrt 🖉					
7				divide	multiply	multiply					
8	1	1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Tech	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
13		A	474.50	2.20	0.01225	10215007440	691002	117016250	Concurrent	Mara About AAD	https://www.
	AAP	Advance Auto	1/1.58	2.20	0.01555	10515067446	001995	11/010555	consumer	Nore About AAP	nups://www.

Row 7 – More Math functions

Continuing the math transformations.

All columns in row seven must be one of the values **multiply, divide, add,** or **subtract** (all case-sensitive). These cells can also be left blank, which is equivalent to unity.

Continuing to specify the function for determining the height of the crown of the tower, we take the absolute value and divide it by the factor below.

/ The color code variable is multiplied by the factor below.

After the square root function, we multiply theMarket Cap numbers by a very small factor in order to determine the height of the tower's base.

А	В	С	D	/ E	F	G	Н		J	K
prospectHeader	9	Today's Stocks	Wall Street	/						
Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
text	text	float	float	float	integer	integer	float	text	text	text
label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
			absolute		sqrt					
		[]	divide	multiply	multiply					
1	1	1	15	100	0.00001	1	1	1	1	1
A	Agilent Techr	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technology	More About AAPL	https://www.
	A prospectHeader Symbol text label none 1 A A AA AAL AAD AAP AAPL	ABprospectHeader9SymbolNametexttextlabeldescriptionnonenone11AAgilent TechnAAAlcoa CorportAALAmerican AirAAONAAON Inc. CoAAPAdvance AutoAAPLApple Inc. Co	ABCprospectHeader9 Today's StocksSymbolNameLast Saletexttextfloatlabeldescriptiongradientnonenonenone111AAgilent Techr127.9AAAlcoa Corpor40.88AALAmerican Air13.05AAONAAON Inc. Cc55.18AAPApple Inc. Co142.99	ABCDprospectHeader9 Today's StocksWall StreetSymbolNameLast SaleNet ChangetexttextfloatfloatlabeldescriptiongradientgradientnonenonenonecrownHeightabsoluteividei1115AAgilent Techr127.9AAAlcoa Corpor40.88AALAmerican Air13.05AAONAAON Inc. Cc55.18AAPAdvance Aut171.58AAPLApple Inc. Co142.99	ABCDEprospectHeader9 Today's StocksWall StreetSymbolNameLast SaleNet Change% ChangetexttextfloatfloatfloatlabeldescriptiongradientgradientgradientnonenonenonecrownHeight colorCode absoluteabsolute1115100AAgilent Techr127.92.210.01758AAAlcoa Corpor40.881.020.02559AALAmerican Air13.050.350.02756AAPLApple Inc. Co142.994.650.03361	ABCDEFprospectHeader9 Today's StocksWall StreetSymbolNameLast SaleNet Change% ChangeMarket CaptexttextfloatfloatfloatintegerlabeldescriptiongradientgradientgradientinitialGradientnonenonenonecrownHeightcolorCodebaseHeightabsolutesqrtdividemultiplymultiply11151000.00001AAgilent Techr127.92.210.0175837863588903AALAlcoa Corpor40.881.020.025597355341358AALAmerican Air13.050.350.027568480489347AAONAAON Inc. Cc55.181.450.026992933291603AAPLApple Inc. Co142.994.650.033612479066246600	ABCDEFGprospectHeader9Today's StocksWall StreetSymbolNameLast SaleNet Change% ChangeMarket CapVolumetexttextfloatfloatfloatintegerintegerlabeldescriptiongradientgradientgradientinitialGradientgradientnonenonenonecrownHeightclorCodebaseHeightnone11151000.000011AAgilent Tech127.92.210.01758378635889031553552AAAlcoa Corpor40.881.020.0255973553413588221708AALAmerican Air13.050.350.02756848048934753206137AAONAAON Inc. Cc55.181.450.026992933291603119559AAPAdvance Aut171.582.260.0133510315087448681993AAPLApple Inc. Co142.994.650.036612479066246600113223975	ABCDEFGHprospectHeader9 Today's StocksWall StreetSymbolNameLast SaleNet ChangeMarket CapVolume\$ VolumetexttextfloatfloatfloatintegerintegerfloatlabeldescriptiongradientgradientgradientgradientinitialGradientgradientgradientnonenonerowcrownHeightcolorCodebaseHeightnonenonenone11151000.00001111AAgilent Techr127.92.210.01758378635889031553552198699301AAAlcoa Corpor40.881.020.0255973553413588221708336103423AALAmerican Air13.050.350.02756848048934753206137694340088AAONAAON Inc. Cc55.181.450.0269929332916031195596597266AAPLApple Inc. Co142.994.650.03361247906624660011322397516189896185	ABCDEFGHIprospectHeader9 Today's StocksWall StreetSymbolNameLast SaleNet ChangeMarket CapVolume\$ VolumeSectortextfloatfloatfloatfloatintegerintegerfloatgradientgradientgradientgradientgradientgradientgradientgradientgradientgradientgradientgradientgradientgradientgradientgradientnonen	ABCDEFGHIJprospectHeader9 Today's StocksWall StreetSymbolNameLast SaleNet Change% ChangeMarket CapVolume\$ VolumeSectorLink TexttextfloatfloatfloatfloatintegerintegerfloattexttexttextlabeldescriptiongradientgradientgradientgradientinitialGradientgradientgradientsubsetlinknonenonenonenonenonenonenonenonenonenonenonenone111151000.00001111111AAgilent Tech127.92.210.0175837863588903155352198699301IndustrialsMore About AAAAAlcoa Corpor40.881.020.025973553413588221708336103423IndustrialsMore About AAAALAmerican Ai13.050.035629332916031195596597266IndustrialsMore About AAONAAPAdvance Aut171.582.260.0133510315087448681993117016359ConsumerMore About AAPLAAPLApple Inc. Co142.994.650.03361247906624660011322397516189896185TechnologMore About AAPL

Row 8 - All the factors

Factors for Multiplication, Division, Addition and Subtraction.

All cells in row 8 must be filled with a number, either with or without a decimal point.

Here's the factor we divide by to get the final height of the tower crowns.

At the same time we multiply the % change by 100 to arrive at a range between 5 and negative 5. This range will provide all eleven colors in the palette.

The factor that produces the base height is 0.00001 (1/100,000).

Put 1 in each empty cell in row 8.

	A	B	C	D	E/	F /	G /	H			K
1	prospectHeader	9	Today's Stocks	Wall Street							
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initial Gradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
6				absolute	/	soft				$\langle \rangle$	\sim
7				divide	multiply	multiply	_	K v	\downarrow		
8	1	1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Tech	r 127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.

For best results, adjust your functions and factors (rows 6, 7, and 8) so the final numbers fit in the suggested range in the table to the right. The total height of towers (baseHeight + bodyHeight + crownHeight) should not exceed 20.

	baseArea	baseHeight	bodyArea	bodyHeight	crownArea	crownHeight	colorCode
Default	4	1	2.56	2	1	1	0
Lower Bound	4	1	2	2	0.4	1	-5
Upper Bound	8	6	6	6	4	6	5

What about the Data?

Ok, the header is fine. Are there restrictions on the data?

You should make sure that columns that are labeled "subset" have no more than 12 different values, no matter how many rows you include. Fill in empty cells in subset columns with a placeholder. Run through your data to make sure that integer columns are really integers, etc.

Use CONCATENATE in Excel to easily populate the link and url columns

This is a great time to go through your entire table and make sure that there are no *COMMAS* anywhere in the cells! I know I've mentioned this before, but it's critical. On Excel it's usually a simple search and replace.

		A	B	C	D		F	G	Н Н	replace.		
	1	prospectHeader	9	Today's Stocks	Wall Street				$\langle \rangle$			
	2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
	3	text	text	float	float	float	integer	integer	float	text	text	text
	4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
	5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
	6				absolute		sqrt	\searrow	\sim	\sim		
	7				divide	multiply	multiply		\sim		\mathbf{X}	
	8	1	1	1	15	100	0.00001	A	1	1	1	1
	9	A	Agilent Tech	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
1	0	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
1	1	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
1	2	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
1	3	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
1	4	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technology	More About AAPL	https://www.

Prospect can accommodate 2000 rows of data without noticeably slowing down on sorts and redraws. Beyond that, who knows?

Links

Prospect is a browser – for data – and, as you would expect, it allows you to link to other places on the internet. The default method for this is to place link text in a column which is labeled "link" and the corresponding URL (web address) in the column labeled "url".

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More About ABBV

More About ABC

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When that data entity is picked by the user, the information window at the top of the screen will display a text description of the data including a link to the URL in the table.



This default behavior requires the user to press on the link provided in order to continue to the external information.

You can skip and go directly to the link by leaving the "link" column blank for a particular item.

If you link to a valid Prospect CSV anywhere on the internet, and leave the "link" column blank in that row, Prospect will jump to that CSV and render the scene it represents. In this example, it would leave the current scene, open APPLE.csv, and recenter the view.



https://www.nasdaq.com/market-activity/stocks/ABBV

https://www.nasdag.com/market-activity/stocks/ABC

Make sure your CSV is valid by sending it to