Visualizing disaggregated data with PivotCharts

DATA VISUALIZATION IN EXCEL



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datacamp

Aggregated vs. disaggregated data?

Disaggregated data (individual blocks)



ID	Color	Size
34243	Blue	small
5656	Red	large
5656	Red	large
23455	Purple	medium
23455	Purple	medium
6878	Black	small
6878	Black	small

Aggregated data (counted by color and size)



ID	Color	Size	Count
8654	Yellow	small	45
34245	Blue	large	123
454	Pink	small	44
3777	White	medium	654
87876	Orange	small	4441
798	Green	irregular	54

Aggregated vs. disaggregated data?

Aggregated data

Years	Q1	Q2	Q3	Q4
2016	$ 151,795	$ 151,085	$ 134,551	$ 109,313
2017	$ 169,851	$ 184,954	$ 137,584	$ 104,234

Region	Sales	Profit
Central	501,240	$ 39,706
East	678,781	$ 91,523
South	391,722	$ 46,749
West	725,458	$ 108,418

Sub-Category	Consumer	Corporate
Fasteners	1,681	783
Labels	6,709	4,102
Envelopes	7,771	5,943
Art	14,252	8,590

Sub-Category	Yearly 2018 Sales	Average Yearly Sales 2014-2019
Accessories	$ 29,476	$ 27,897
Appliances	$ 23,535	$ 17,922
Art	$ 5,433	$ 4,520
Binders	$ 43,561	$ 33,902
Bookcases	$ 18,315	$ 19,147
Chairs	$ 71,449	$ 54,742
Copiers	$ 50,880	$ 24,921

- Aggregated data = **summarized** data
- e.g., sales per region, profit per product

Disaggregated data

	A	B	C	K	L	M	N	O	P
1	Row ID	Order ID	Order Date	State	Postal Code	Region	Product ID	Category	Sub-Category
2	1	CA-2016-152156	11/08/2016	Kentucky	42420	South	FUR-BO-10001798	Furniture	Bookcases
3	2	CA-2016-152156	11/08/2016	Kentucky	42420	South	FUR-CH-10000454	Furniture	Chairs
4	3	CA-2016-138688	06/12/2016	California	90036	West	OFF-LA-10000240	Office Supplies	Labels
5	4	US-2015-108966	10/11/2015	Florida	33311	South	FUR-TA-10000577	Furniture	Tables
6	5	US-2015-108966	10/11/2015	Florida	33311	South	OFF-ST-10000760	Office Supplies	Storage
7	6	CA-2014-115812	06/09/2014	California	90032	West	FUR-FU-10001487	Furniture	Furnishings
8	7	CA-2014-115812	06/09/2014	California	90032	West	OFF-AR-10002833	Office Supplies	Art
9	8	CA-2014-115812	06/09/2014	California	90032	West	TEC-PH-10002275	Technology	Phones
10	9	CA-2014-115812	06/09/2014	California	90032	West	OFF-BI-10003910	Office Supplies	Binders
11	10	CA-2014-115812	06/09/2014	California	90032	West	OFF-AP-10002892	Office Supplies	Appliances
12	11	CA-2014-115812	06/09/2014	California	90032	West	FUR-TA-10001539	Furniture	Tables
13	12	CA-2014-115812	06/09/2014	California	90032	West	TEC-PH-10002033	Technology	Phones
14	13	CA-2017-114412	04/03/2018	North Carolina	28027	South	OFF-PA-10002365	Office Supplies	Paper
15	14	CA-2016-161389	12/05/2016	Washington	98103	West	OFF-BI-10003656	Office Supplies	Binders
16	15	US-2015-118983	11/10/2016	Texas	76106	Central	OFF-AP-10002311	Office Supplies	Appliances
17	16	US-2015-118983	11/10/2016	Texas	76106	Central	OFF-BI-10000756	Office Supplies	Binders
18	17	CA-2014-105893	11/11/2014	Wisconsin	53711	Central	OFF-ST-10004186	Office Supplies	Storage
19	18	CA-2014-167164	05/01/2015	Utah	84084	West	OFF-ST-10000107	Office Supplies	Storage
20	19	CA-2014-143336	08/03/2016	California	94109	West	OFF-AR-10003056	Office Supplies	Art
21	20	CA-2014-143336	08/03/2016	California	94109	West	TEC-PH-10001949	Technology	Phones
22	21	CA-2014-143336	08/03/2016	California	94109	West	OFF-BI-10002215	Office Supplies	Binders
23	22	CA-2016-137330	12/09/2016	Nebraska	68025	Central	OFF-AR-10000246	Office Supplies	Art

- Disaggregated data = **raw, unsummarized**
- Transactional data: one record = one event

From tables and charts to PivotTables and PivotCharts

Visualizing aggregated data

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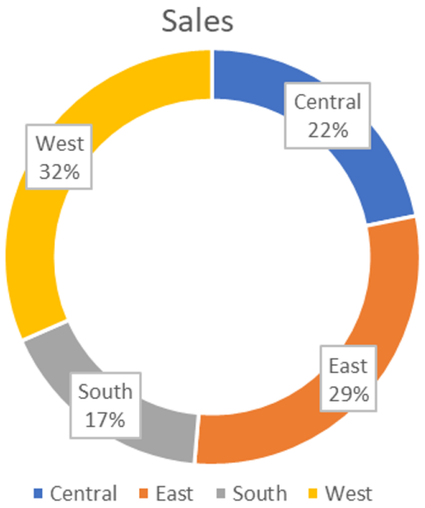

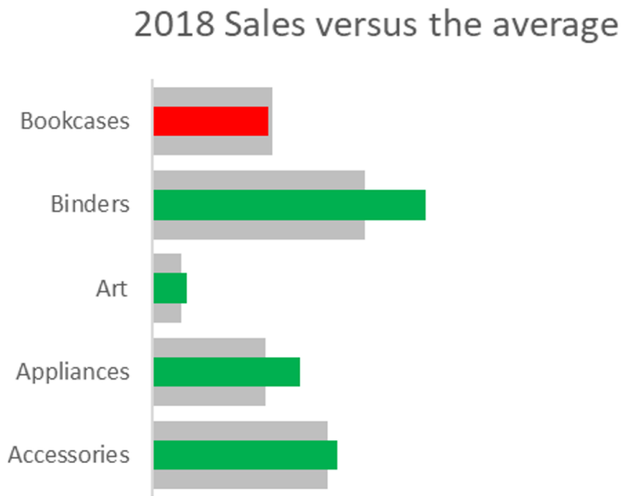

Visualizing disaggregated data

Sum of Sales	Column Labels	
	Furniture	Grand Total
Row Labels		
2014	$ 63,814	$ 63,814
2015	$ 120,204	$ 120,204
2016	$ 182,259	$ 182,259
2017	$ 193,820	$ 193,820
2018	$ 137,634	$ 137,634
2019	$ 44,270	$ 44,270
Grand Total	**$ 742,000**	**$ 742,000**



Exploring large datasets efficiently

One dataset = easy data exploration

Row ID	Order ID	Order Date	YM	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	Country	City
1	CA-2016-152156	11/08/2016	31/08/2016	11/11/2016	Second Class	CG-12520	Claire Gute	Consumer	United States	Henderson
2	CA-2016-152156	11/08/2016	31/08/2016	11/11/2016	Second Class	CG-12520	Claire Gute	Consumer	United States	Henderson
3	CA-2016-138688	06/12/2016	31/12/2016	06/04/2017	Second Class	DV-13045	Darrin Van Huff	Corporate	United States	Los Angeles
4	US-2015-108966	10/11/2015	30/11/2015	10/06/2016	Standard Class	SO-20335	Sean O'Donnell	Consumer	United States	Fort Lauderdale
5	US-2015-108966	10/11/2015	30/11/2015	10/06/2016	Standard Class	SO-20335	Sean O'Donnell	Consumer	United States	Fort Lauderdale
6	CA-2014-115812	06/09/2014	30/09/2014	06/02/2015	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles
7	CA-2014-115812	06/09/2014	30/09/2014	06/02/2015	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles
8	CA-2014-115812	06/09/2014	30/09/2014	06/02/2015	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles
9	CA-2014-115812	06/09/2014	30/09/2014	06/02/2015	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles

Sum of Sales	Column Labels				
Row Labels	Central	East	South	West	Grand Total
2014	$ 46,879	$ 42,214	$ 31,387	$ 58,427	$ 178,907
2015	$ 76,763	$ 131,976	$ 81,777	$ 82,463	$ 372,978
2016	$ 129,308	$ 159,962	$ 91,807	$ 185,701	$ 566,778
2017	$ 130,600	$ 160,597	$ 90,505	$ 219,332	$ 601,035
2018	$ 89,208	$ 149,921	$ 73,227	$ 142,534	$ 454,889
2019	$ 28,483	$ 34,111	$ 23,020	$ 37,000	$ 122,614
Grand Total	**$ 501,240**	**$ 678,781**	**$ 391,722**	**$ 725,458**	**$ 2,297,201**

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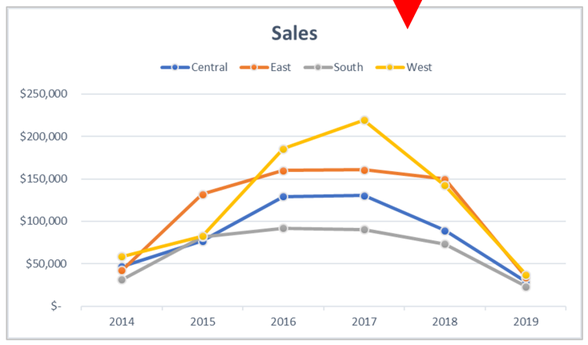

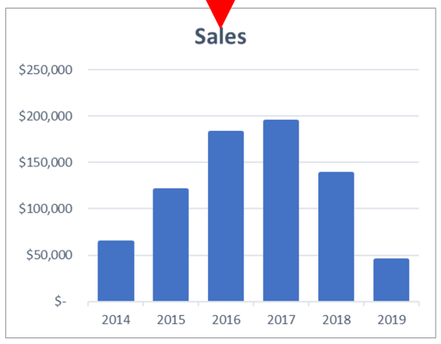

- No need for pre-aggregating data into individual tables
- Single underlying dataset
- Dynamic exploration and visualization
- Easy rearranging of row and column series
- Updates to the dataset result in updating all pivot tables and charts
- "Once source of truth"

Enabling interactivity and building (mini) dashboards

Timeline filter



	Sales
Furniture	$ 742,000
Office Supplies	$ 719,047
Technology	$ 836,154

Sales	Central	East	South	West
2014	$ 46,879	$ 42,214	$ 31,387	$ 58,427
2015	$ 76,763	$ 131,976	$ 81,777	$ 82,463
2016	$ 129,308	$ 159,962	$ 91,807	$ 185,701
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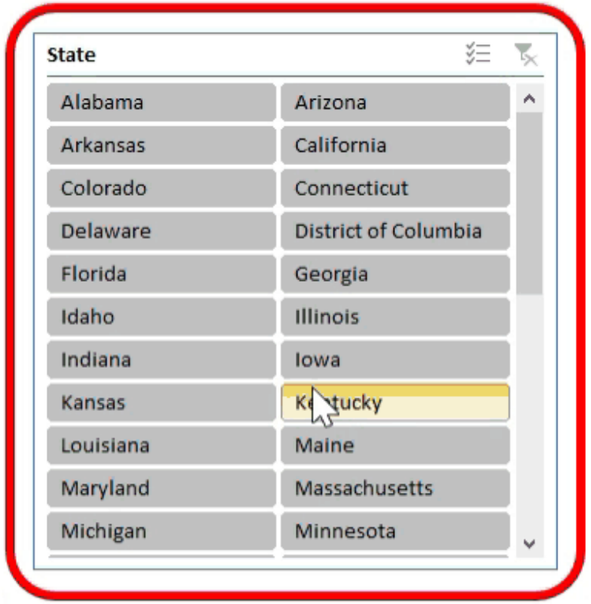
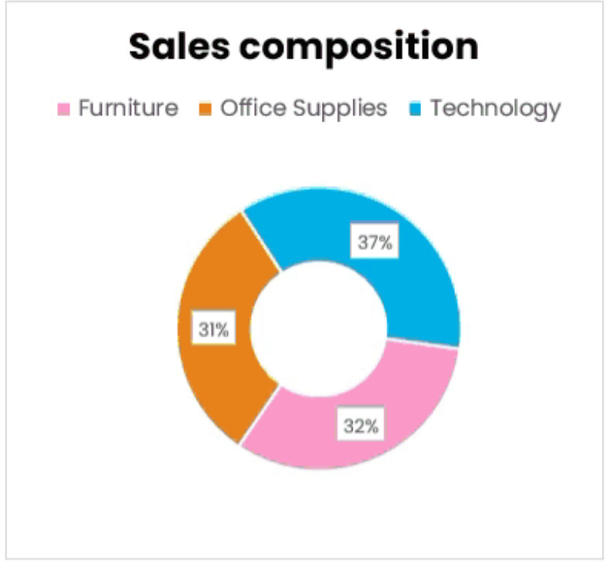
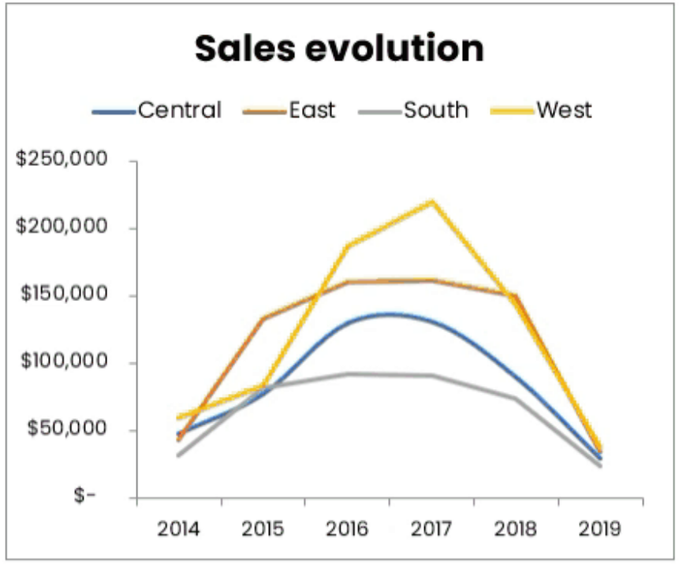


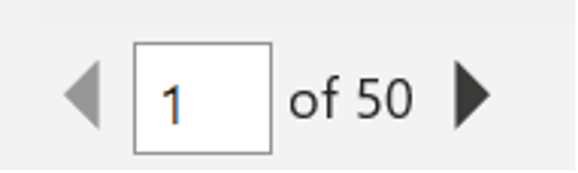
Slicer filter



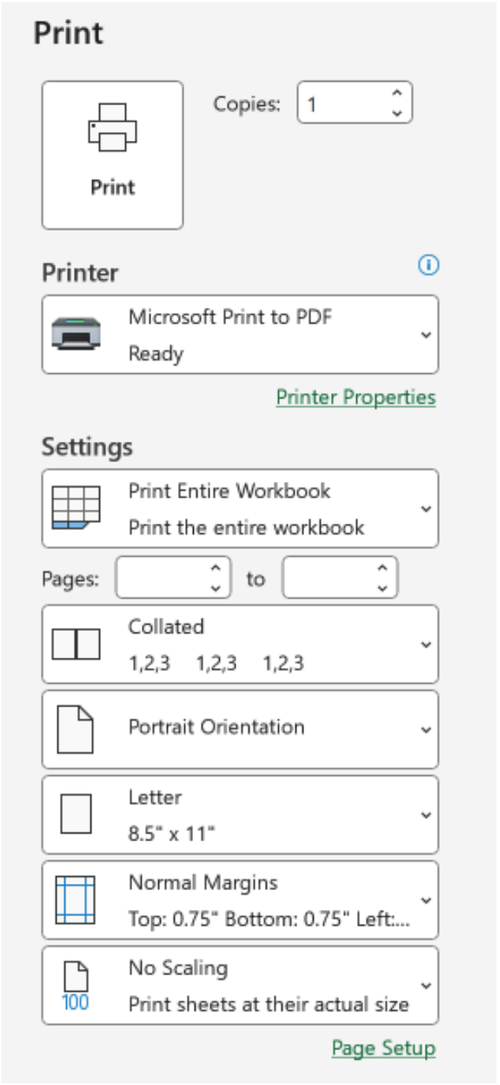


How to print in Excel?

- Useful for capturing insights for meetings or sharing information with senior staff
- Many settings to choose from:
  - Print areas
  - Page layouts
  - Scaling, margins, and orientation
- Always consider the environment before printing!







Let's practice!

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Pivot Charts in action

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Let's practice!

DATA VISUALIZATION IN EXCEL

Congratulations!

DATA VISUALIZATION IN EXCEL



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Your newly acquired data visualization in Excel skills

- Building basic charts in Excel
- Using Chart Elements (axis, legends, data labels)
- Building more advanced charts (Bullet, Waterfall, Scatter Plot)
- Best practices in data visualization
- Visualizing disaggregated data with PivotCharts
- Building mini-dashboards in Excel and sharing your work

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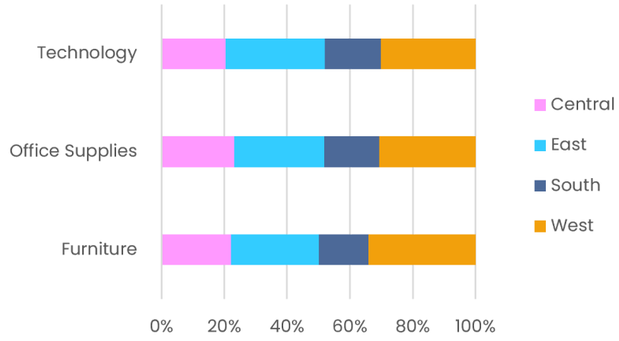
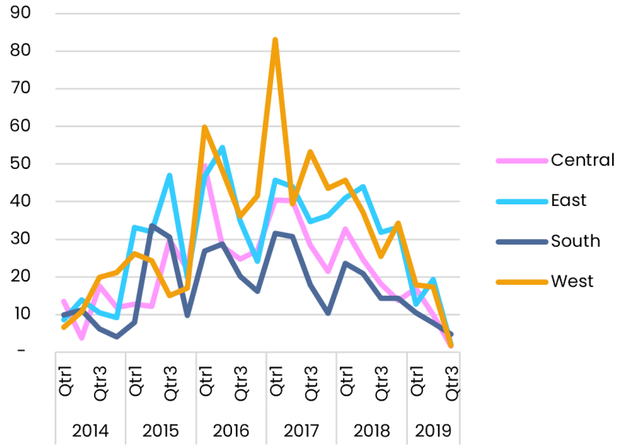
Bar stacked (100%)



Line – multi category



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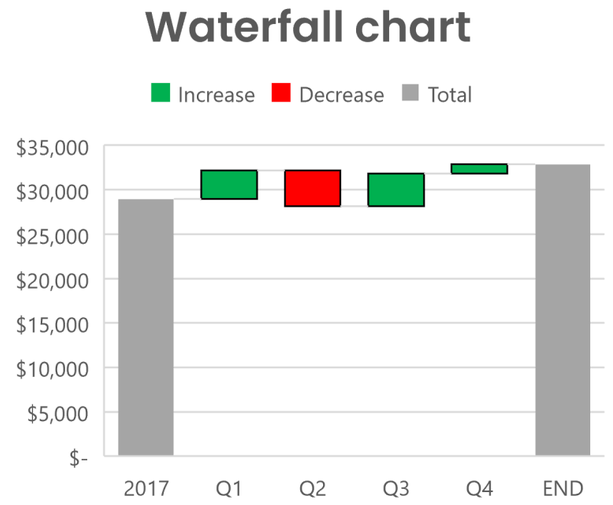

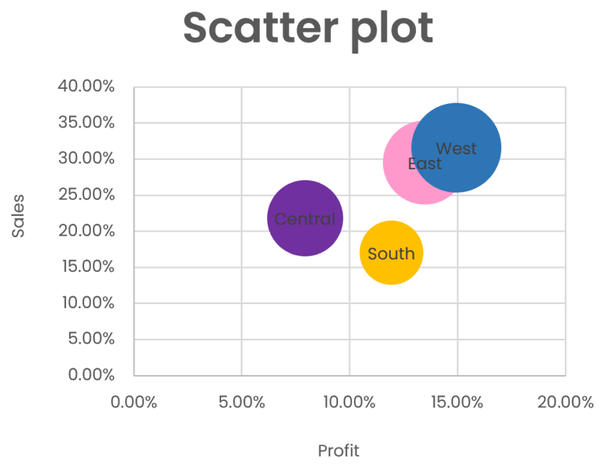

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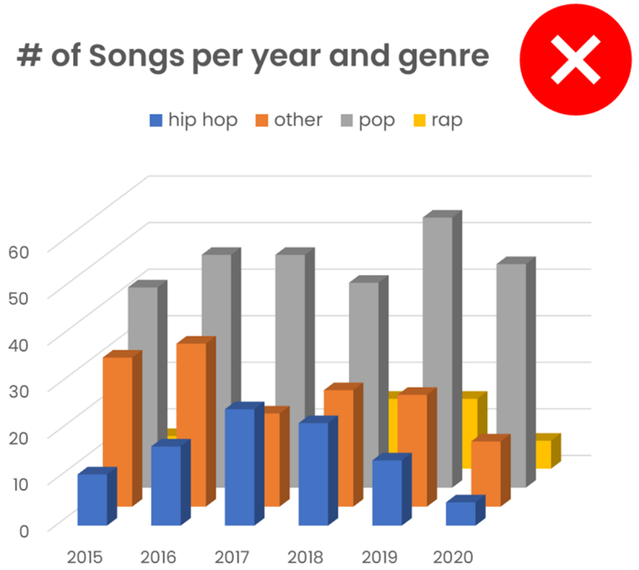

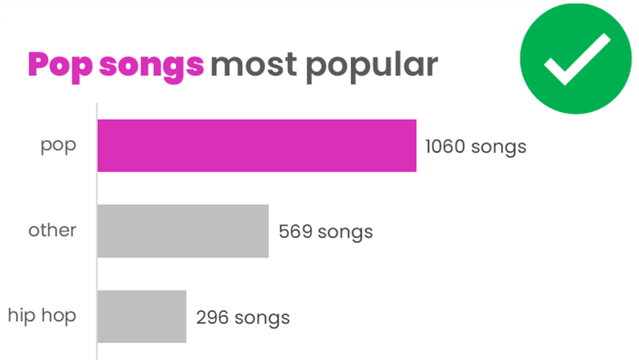

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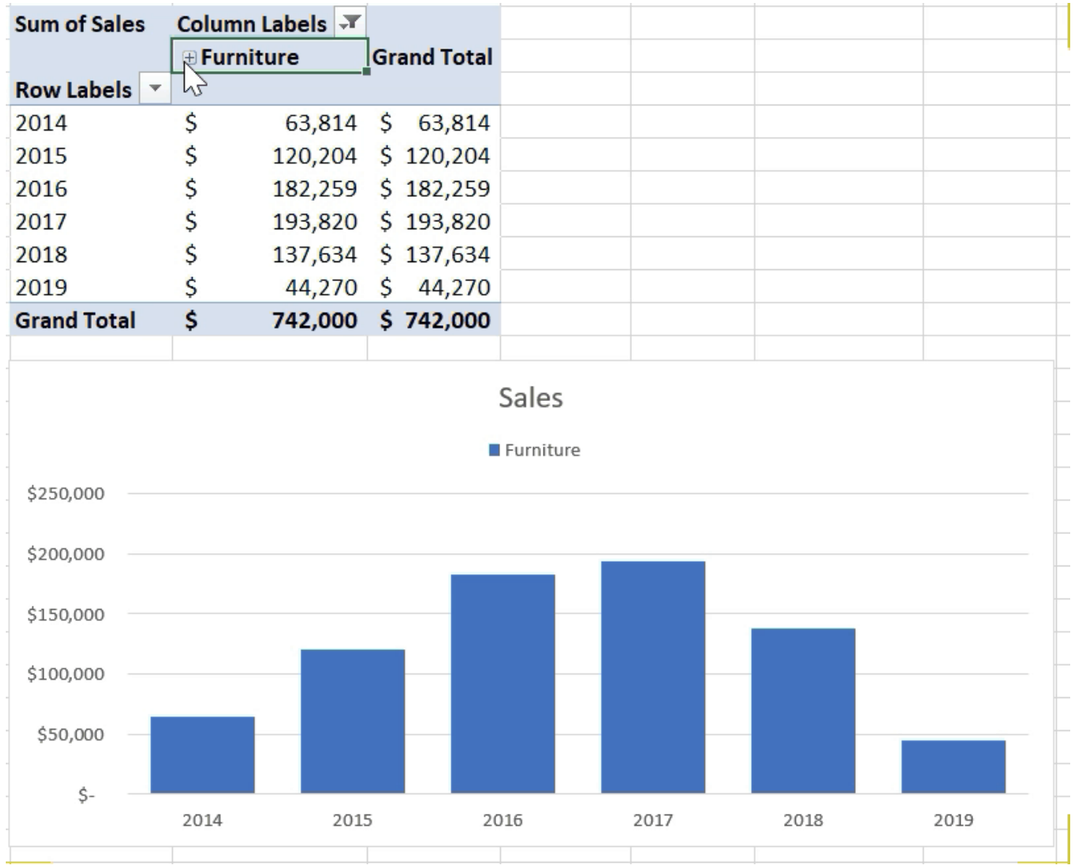

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Don't stop learning!

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