

INTRODUCTION



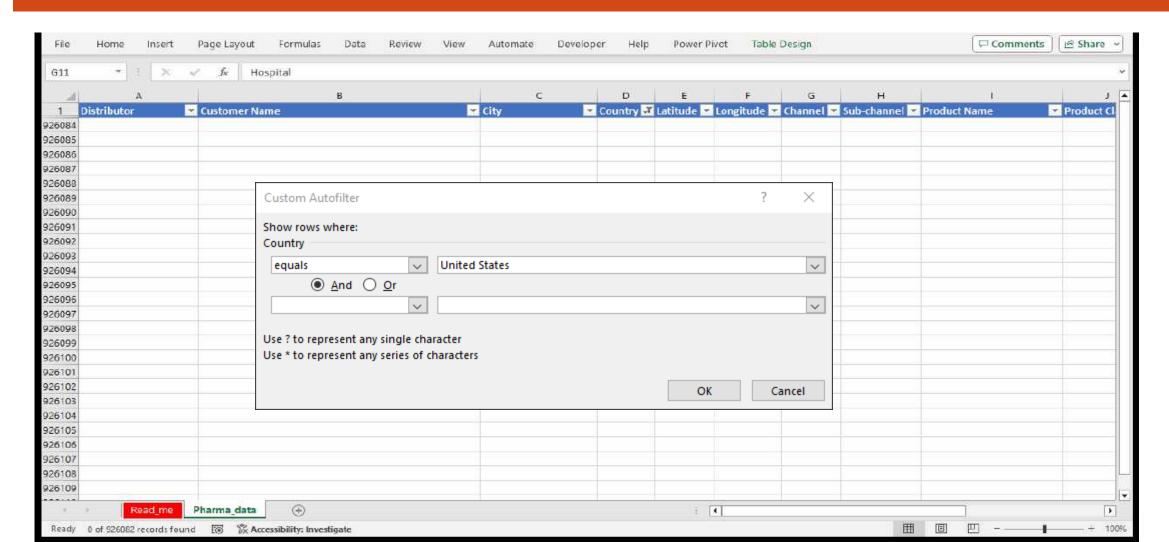
• The task is to answer questions using MS Excel and Power BI.

The data is about Pharmacy data details.

The dataset consists of one excel file (Pharma_data_analysis).

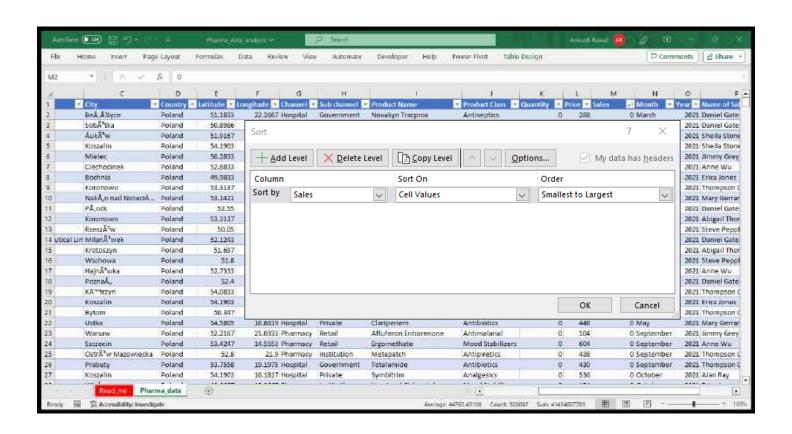


BASIC FILTERING: CAN YOU FILTER THE DATA TO SHOW ONLY THE RECORDS FOR A SPECIFIC COUNTRY, LET'S SAY "UNITED STATES"?



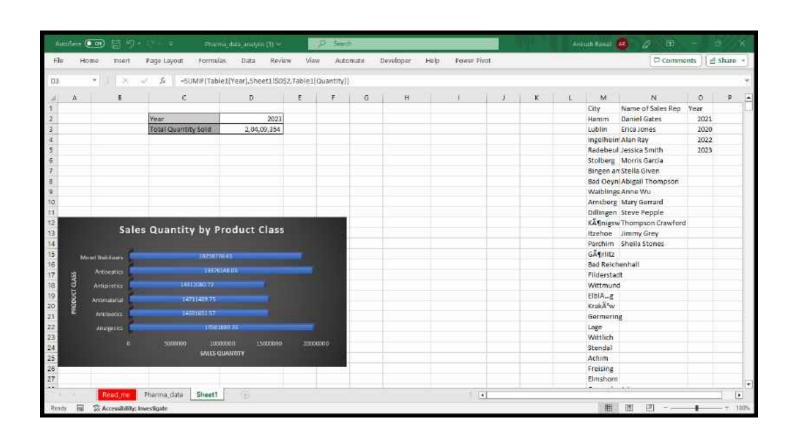


SORTING DATA: HOW WOULD YOU SORT THE DATA IN ASCENDING ORDER BASED ON THE "SALES" COLUMN?



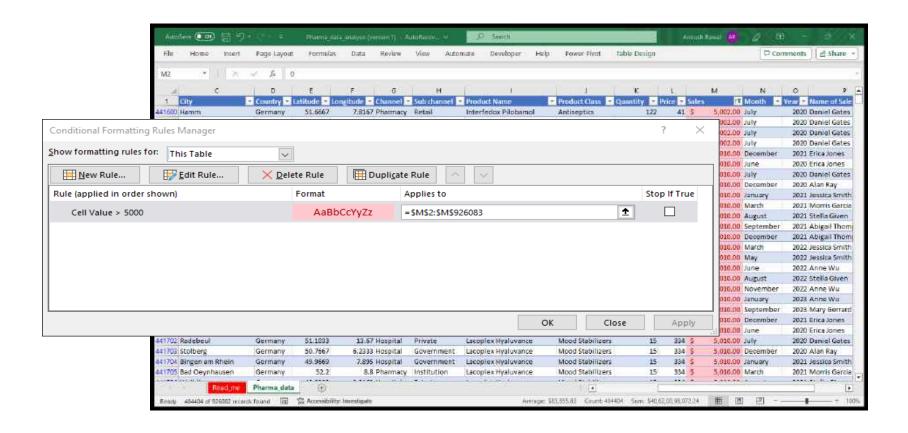


SUMMARIZING DATA: WHAT IS THE TOTAL QUANTITY OF ALL PRODUCTS SOLD IN THE YEAR 2023?





CONDITIONAL FORMATTING: APPLY CONDITIONAL FORMATTING TO HIGHLIGHT ALL SALES GREATER THAN \$5,000 IN THE "SALES" COLUMN.





SIMPLE PIVOT TABLE: CREATE A PIVOT TABLE TO SUMMARIZE TOTAL SALES BY "CHANNEL."

Row Labels 🔻	Sun	n of Sales
Hospital	\$	19,61,60,76,252
Pharmacy	\$	21,83,85,31,533
Grand Total	\$	41,45,46,07,785



BASIC CHART: GENERATE A BAR CHART TO VISUALIZE THE SALES QUANTITY BY "PRODUCT CLASS."



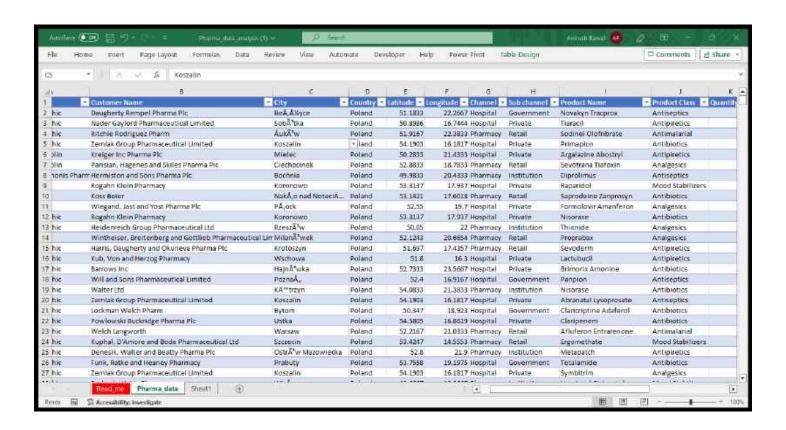


VLOOKUP FUNCTION: CAN YOU USE THE VLOOKUP FUNCTION TO FIND THE "MANAGER" FOR A SPECIFIC "SALES REP"?

~	✓ f _{sc} =VLOOKUP(D2,Pharma_data!P:Q,2,FALSE)												
	С	D	Е										
	Sales Representative	Alan Ray											
	Manager	James Goodwill											

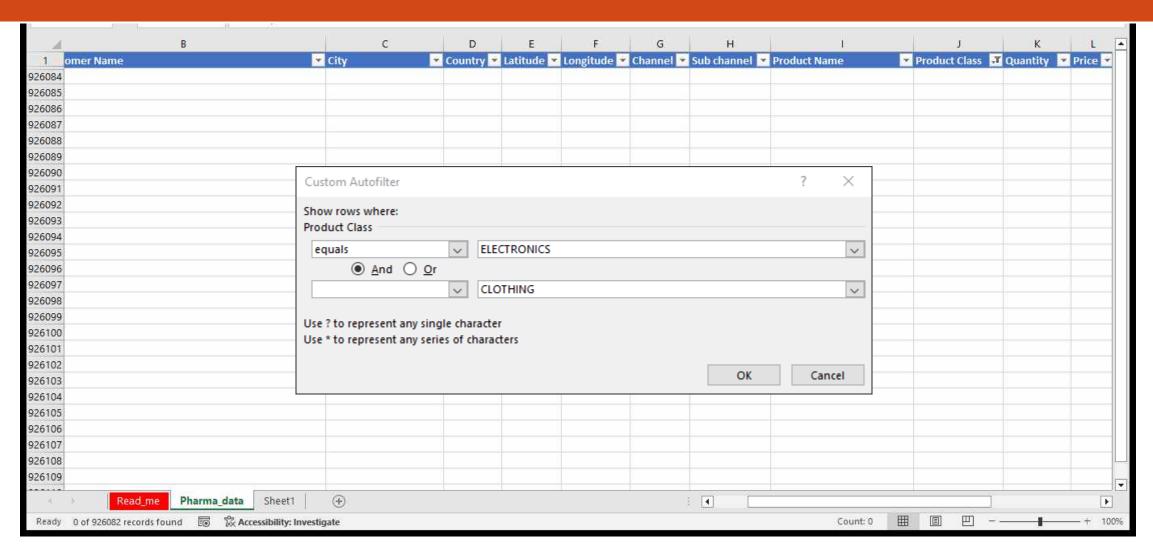


DATA VALIDATION: SET UP DATA VALIDATION TO ALLOW ONLY SPECIFIC CITIES FROM A PREDEFINED LIST IN THE "CITY" COLUMN.





ADVANCED FILTERING: APPLY A FILTER TO SHOW RECORDS WHERE "PRODUCT CLASS" IS EITHER "ELECTRONICS" OR "CLOTHING."





SORTING WITH MULTIPLE CRITERIA: HOW WOULD YOU SORT THE DATA FIRST BY "COUNTRY" IN ASCENDING ORDER, AND THEN BY "MONTH" IN DESCENDING ORDER?

1	С	D	E	F G	Н	1	J	K	L		M N	0
1	City	Country	Latitude	Longitude Channel	Sub channel	Product Name	Product Class	Quantity	Price	Sales	Month	Year Name of
2	Neuwied	Germany	50.4286	7.4614 Hospital	Government	Cricane Acamsumab	Antiseptics		1 2	2 \$	22.00 September	2020 Mary Ger
3	Homburg	Germany	49.3167	7.3333 Pharmacy	Retail	Cricane Acamsumab	Antiseptics		1 2	2 \$	22.00 September	2022 Jimmy Gr
4	Stralsund	Germany	54.3	13.0833 Pharmacy	Retail	Cricane Acamsumab	Antiseptics		1 2	2 \$	22.00 September	2023 Anne Wu
5	Neuwied	Germany	50.4286	7.4614 Hospital	Government	Cricane Acamsumab	Antiseptics		1 2	2 \$	22.00 September	2020 Mary Ger
6	Homburg	Germany	49.3167	7.3333 Pharmacy	Retail	Cricane Acamsumab	Antiseptics		1 2	2 \$	22.00 September	2022 Jimmy Gr
7	Stralsund	Germany	54.3	13.0833 Pharmacy	Retail	Cricane Acamsumab	Antiseptics		1 2	2 \$	22.00 September	2023 Anne Wu
8	Neuwied	Germany	50.4286	7.4614 Hospital	Government	Cricane Acamsumab	Antiseptics		1 2	2 \$	22.00 September	2020 Mary Ger
9	Homburg	Germany	49.3167	7.3333 Pharmacy	Retail	Cricane Acamsumab	Antiseptics		1 2	2 \$	22.00 September	2022 Jimmy Gr
10	Stralsund	Germany	54.3	13.0833 Pharmacy	Retail	Cricane Acamsumab	Antiseptics		1 2	2 \$	22.00 September	2023 Anne Wu
11	Neuwied	Germany	50.4286	7.4614 Hospital	Government	Cricane Acamsumab	Antiseptics		1 2	2 \$	22.00 September	2020 Mary Ger
12	Porta Westfalica	Germany	52.2167	8.9333 Hospital	Private	Pitodomide	Antimalarial		1 2	4 \$	24.00 September	2022 Thompso
13	Saarbrücken	Germany	49.2333	7 Pharmacy	Institution	Adrecetam Barazoxane	Antimalarial		1 2	4 \$	24.00 September	2022 Alan Ray
14	Bünde	Germany	52.2	8.6 Hospital	Private	Pitodomide	Antimalarial		1 2	4 \$	24.00 September	2023 Thompso
15	Porta Westfalica	Germany	52.2167	8.9333 Hospital	Private	Pitodomide	Antimalarial		1 2	4 \$	24.00 September	2022 Thompso
16	Saarbrücken	Germany	49.2333	7 Pharmacy	Institution	Adrecetam Barazoxane	Antimalarial		1 2	4 \$	24.00 September	2022 Alan Ray
17	Bünde	Germany	52.2	8.6 Hospital	Private	Pitodomide	Antimalarial		1 2	4 \$	24.00 September	2023 Thompso
18	Porta Westfalica	Germany	52.2167	8.9333 Hospital	Private	Pitodomide	Antimalarial		1 2	4 \$	24.00 September	2022 Thompso
19	Saarbrücken	Germany	49.2333	7 Pharmacy	Institution	Adrecetam Barazoxane	Antimalarial		1 2	4 \$	24.00 September	2022 Alan Ray
20	Bünde	Germany	52.2	8.6 Hospital	Private	Pitodomide	Antimalarial		1 2	4 \$	24.00 September	2023 Thompso
21	Bad Honnef am Rhein	Germany	50.645	7.2269 Pharmacy	Institution	Amphesirox	Antiseptics		1 2	5 \$	25.00 September	2021 Sheila St
22	Solingen	Germany	51.1667	7.0833 Hospital	Private	Amphesirox	Antiseptics		1 2	5 \$	25.00 September	2022 Jessica Si
23	Bad Honnef am Rhein	Germany	50.645	7.2269 Pharmacy	Institution	Amphesirox	Antiseptics		1 2	5 \$	25.00 September	2021 Sheila St
24	Solingen	Germany	51.1667	7.0833 Hospital	Private	Amphesirox	Antiseptics		1 2	5 \$	25.00 September	2022 Jessica S
25	Bad Honnef am Rhein	Germany	50.645	7.2269 Pharmacy	Institution	Amphesirox	Antiseptics		1 2	5 \$	25.00 September	2021 Sheila St
26	Solingen	Germany	51.1667	7.0833 Hospital	Private	Amphesirox	Antiseptics		1 2	5 \$	25.00 September	2022 Jessica Si
27	Nürtingen	Germany	48.6267	9.3353 Hospital	Government	Aldevac	Analgesics		1 2	5 \$	26.00 September	2021 Jimmy G
4	Read_me Pha	rma_data	Sheet1	(+)	-	-	: 1		-	•		

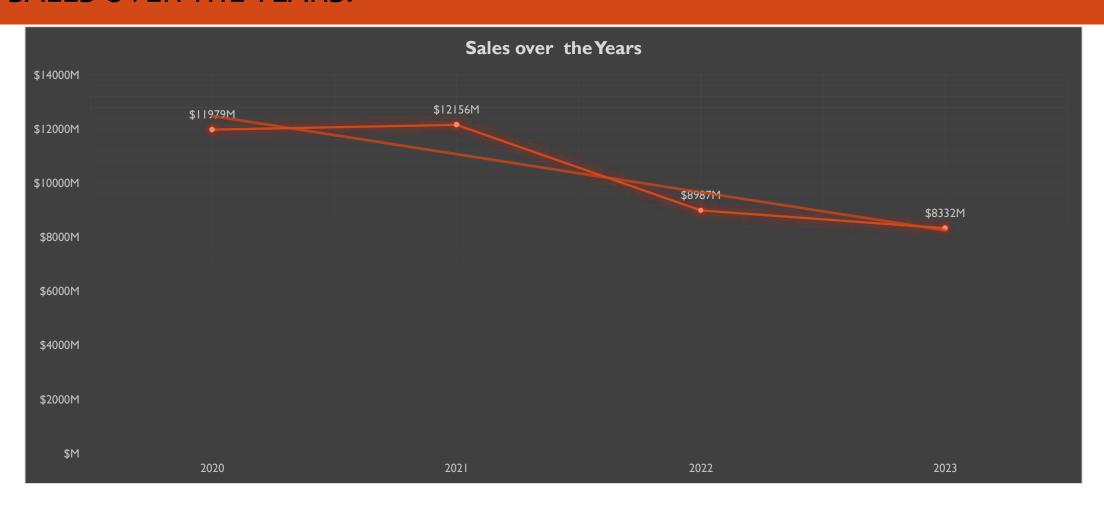


CALCULATED FIELDS IN PIVOT TABLE: ADD A CALCULATED FIELD IN THE PIVOT TABLE TO CALCULATE THE AVERAGE PRICE PER UNIT SOLD.

Row Labels	Sum of Quantity	Sum of Sales	Sum of Average Price Per Unit
Analgesics	19501889	\$ 8,29,36,58,478.85	425.27
Antibiotics	14691032	\$ 6,17,98,47,817.63	420.65
Antimalarial	14711410	\$ 5,17,25,59,635.73	351.60
Antipiretics	14312081	\$ 6,65,45,11,427.84	464.96
Antiseptics	19376148	\$ 7,90,51,71,133.05	407.98
Mood Stabilizers	18258770	\$ 7,24,88,59,291.91	397.01
Grand Total	100851330	\$ 41,45,46,07,785.00	411.05



ADVANCED CHARTING: CREATE A LINE CHART TO SHOW THE TREND OF TOTAL SALES OVER THE YEARS.



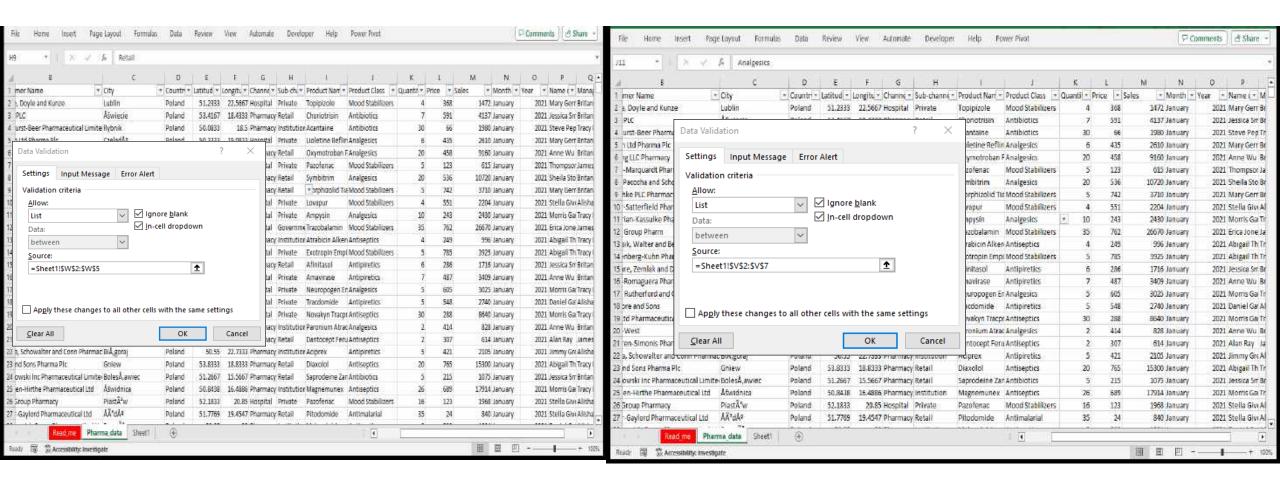


NESTED IF FUNCTION: USE A NESTED IF FUNCTION TO CATEGORIZE "SALES" INTO THREE CATEGORIES: LOW, MEDIUM, AND HIGH.

File	Home	Inse	rt Pag	e Layout	Formulas	Data	Review	View	Autom	ate De	/eloper	Help	Power Pivo	t					₽c	comments	☆ Share
S2																					
(A		В	С	D	Е	F	G	н	1	J	К	L	М		Ν	0	Р	Q	R	S	Т
	bi ▼ Cust	om 🔻 (City 🔻	Countr		Longitu 🔻			Produc *	Produc *		Price 🔻	Sales	-	Month		Name (Sales catego	-
_	ieb-(Zien			Poland	51.2333		Hospital			Mood Stal		368			January		1 Mary Gei			Low	
_		-	Åšwiecie	Poland	53.4167		Pharmacy			Antibiotic		591		_	January		1 Jessica S	-		Low	
	ieb-(Med			Poland	50.0833					Antibiotic		66		_	January		1 Steve Pe			Low	
			Czeladź		50.3333		Hospital			Analgesic				_	January		1 Mary Gei			Low	
Gottl	ieb-(Keel	ing LL	Olsztvn	Poland	53.78		Pharmacy			Analgesic					January		1 Anne Wu			Low	
	ieb-(Runt			Poland	54.0333			Private		Mood Stal		123			January		1 Thompso	-		Low	
Gottl	ieb-CBlick	, Pacc	InowrocÅ,	Poland	52.7958		Pharmacy		Symbitrin	r Analgesic	20				January		1 Sheila St			Low	
Gottl	ieb-(Leus	chke	CiechanÃ [‡]	Poland	52.8817	20.6106	Pharmacy	Retail	Morphizo	Mood Stal	5	742			January	202	1 Mary Gei	r Britanny	E Delta	Low	
Gottli	ieb-(Mille	er-Sat	Nidzica	Poland	53.3583	20.425	Hospital	Private	Lovapur	Mood Stal	4	551	. 2	2204	January	202	1 Stella Giv	/ Alisha Co	r Charlie	Low	
Gottl	ieb-C Bash	irian-	Kraków	Poland	50.0614	19.9372	Hospital	Private	Ampysin	Analgesic	10	243	2	2430	January	202	1 Morris G	Tracy Bar	nl Bravo	Low	
Gottl	ieb-(Wolf	ff Gro	Gubin	Poland	51.95	14.7333	Hospital	Governme	Trazobala	Mood Stal	35	762	26	670 J	January	202	1 Erica Jon	e James Go	Alfa	Medium	
Gottl	ieb-(Den	esik, \	Ostrów N	Poland	52.8	21.9	Pharmacy	Institution	Atrabicin	Antiseptio	4	249		996 J	January	202	1 Abigail T	h Tracy Bar	l Bravo	Low	
Gottl	ieb-(Breit	tenbe	Radom	Poland	51.4036	21.1567	Hospital	Private	Exotropin	Mood Stal	5	785	3	3925 J	January	202	1 Abigail T	h Tracy Bar	l Bravo	Low	
Gottl	ieb-(McC	lure, z	Gdańsk	Poland	54.3667	18.6333	Pharmacy	Retail	Afinitaso	Antipireti	6	286	1	1716 J	January	202	1 Jessica S	r Britanny	E Delta	Low	
Gottl	ieb-(Bloc	k-Ron	Tarnowski	Poland	50.45	18.8667	Hospital	Private	Amaviras	Antipireti	7	487	7 3	3409 J	January	202	1 Anne Wu	Britanny	E Delta	Low	
Gottl	ieb-C Hahr	n, Rut	Åaziska G	Poland	50.15	18.8333	Hospital	Private	Neuropog	Analgesic	5	605	3	3025 J	January	202	1 Morris G	Tracy Bar	l Bravo	Low	
Gottl	ieb-(D'An	nore a	WÄgrow	Poland	52.8	17.2	Hospital	Private	Tracdomi	Antipireti	5	548	3 2	2740 J	January	202	1 Daniel G	al Alisha Co	r Charlie	Low	
Gottl	ieb-C Koss	Ltd P	Lwówek.	Poland	51.1167	15.5833	Hospital	Private	Novakyn	Antiseptio	30	288	8	3640 J	January	202	1 Morris G	Tracy Bar	nl Bravo	Low	
Gottl	ieb-C Fade	el-We	ZÅ,otoryja	Poland	51.1264	15.9198	Pharmacy	Institution	Paronium	Analgesic	2	414	L	828 J	January	202	1 Anne Wu	Britanny	E Delta	Low	
Gottl	ieb-(Lind	gren-:	Biskupiec	Poland	53.8647	20.9569	Pharmacy	Retail	Dantocep	Antiseptio	2	307	,	614 J	January	202	1 Alan Ray	James Go	Alfa	Low	
Gottl	ieb-(Spin	ka, Sc	BiÅ,goraj	Poland	50.55	22.7333	Pharmacy	Institution	Aciprex	Antipireti	5	421	. 2	2105 J	January	202	1 Jimmy G	re Alisha Co	r Charlie	Low	
Gottl	ieb-(Will	and S	Gniew	Poland	53.8333	18.8333	Pharmacy	Retail	Diaxolol	Antiseptio	20	765	15	300 J	January	202	1 Abigail T	h Tracy Bar	l Bravo	Low	
Gottl	ieb-C Jaku	bows	BolesÅ,av	Poland	51.2667	15.5667	Pharmacy	Retail	Saprodeii	Antibiotic	5	215	1	L075 J	January	202	1 Jessica S	r Britanny	E Delta	Low	
Gottl	ieb-CScha	den-F	Åšwidnica	Poland	50.8438	16.4886	Pharmacy	Institution	Magnemu	Antiseptio	26	689	17	7914 J	January	202	1 Morris G	Tracy Bar	l Bravo	Low	
Gottl	ieb-C Mraz	g Grou	Piastów	Poland	52.1833	20.85	Hospital	Private	Pazofena	Mood Stal	16	123	1	L968 J	January	202	1 Stella Gi	Alisha Co	r Charlie	Low	
Gottl	ieb-C Nade	er-Ga		Poland	51.7769	19.4547	Pharmacy	Retail	Pitodomi	Antimalar	35	24	1	840 J	January	202	1 Stella Gi	Alisha Co	r Charlie	Low	
4		ead m	O Phor	na data	+						_		: 1							1-	



DATA VALIDATION WITH DROPDOWN LISTS: CREATE DROPDOWN LISTS FOR "PRODUCT CLASS" AND "SUB-CHANNEL" IN THE DATA ENTRY CELLS.



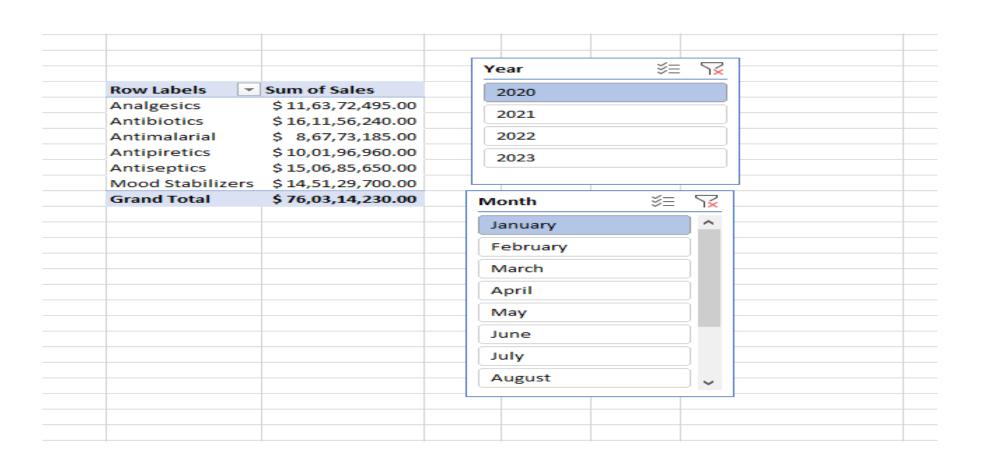


PIVOT CHART: TURN THE PIVOT TABLE CREATED EARLIER INTO A PIVOT CHART TO VISUALIZE SALES BY "DISTRIBUTOR."





PIVOT TABLE SLICERS: ADD SLICERS TO THE PIVOT TABLE TO ALLOW EASY FILTERING BY "MONTH" AND "YEAR."



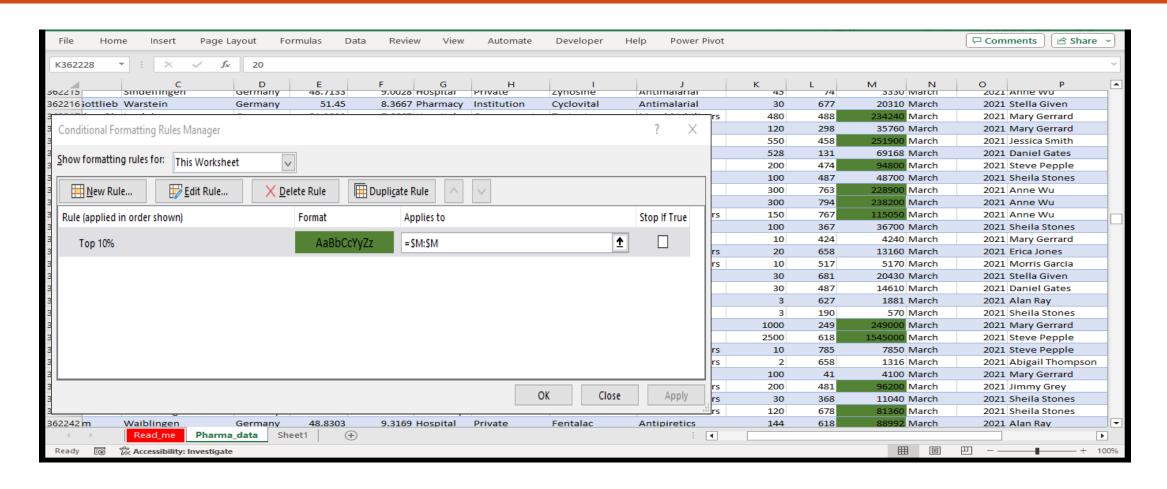


LOOKUP FUNCTIONS: USE INDEX AND MATCH FUNCTIONS TO FIND THE "SALES REP" FOR A SPECIFIC "CUSTOMER NAME."

ert	F	age Lay	out	Formul	as	Data	Review	View	Au	tomate	Developer
×	~	f _x	=INE	DEX(Tabl	le1,M	ATCH(Sh	eet1!\$D\$2,	Table1[Cu	ston	ner Name]	,0),16)
			С				D			E	F
		Custom) Pharmace				
		Sales Re	eprese	entative	Shei	la Stone	5				

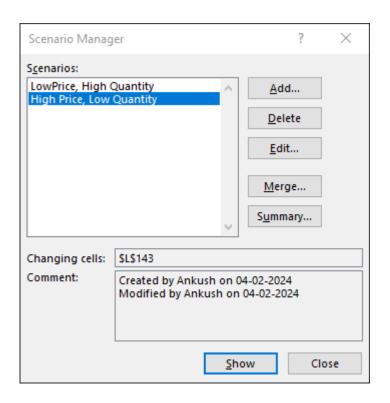


ADVANCED CONDITIONAL FORMATTING: APPLY A CUSTOM CONDITIONAL FORMAT TO HIGHLIGHT THE TOP 10% OF SALES VALUES WITH A DISTINCT COLOR.





SCENARIO MANAGER: USE THE SCENARIO MANAGER TO COMPARE DIFFERENT SCENARIOS FOR FUTURE SALES BY CHANGING VARIABLES LIKE "PRICE" AND "QUANTITY."



Scenario Summary			
	Current Values:	LowPrice, High Quantity	High Price, Low Quantity
Changing Cells:			
\$K\$142	10	10	10
\$L\$143	22	22	100
Result Cells:			
\$T\$150			

Notes: Current Values column represents values of changing cells at time Scenario Summary Report was created. Changing cells for each scenario are highlighted in gray.



PHARMACY REPORT

Total Customers

751

Total Quantity

101M

Total Sales

41bn

