

SUPER MARKET SALES DATA ANALYSIS

Our project focused on analyzing supermarket sales data using Excel.

We used various Excel functions and tools to extract specific information, perform calculations, and organize data effectively.

Excel proved to be an invaluable tool for tasks ranging from data sorting to sales trend forecasting.

This project highlighted the importance of data analysis skills in today's data-driven world.

By analyzing supermarket sales data, we aim to uncover valuable insights for informed decision-making in the retail industry.

AAKASH SHARMA

1. Calculate the average "Unit Selling Price (RMB/kg)" for each category and display the results in a separate table.

Category Name	Average of Unit Selling Price (RMB/kg)
Aquatic Tuberous Vegetables	9.69
Cabbage	9.14
Capsicum	10.58
Edible Mushroom	12.04
Flower/Leaf	6.32
Solanum	8.70

2. Create a pivot table that shows the total quantity sold for each Item in each month. Add a slicer for easy filtering by month.

Month

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Month	Total Quantity Sold
Jan	49870.60
Feb	41185.23
Mar	35179.54
Apr	31376.03
May	30843.97
Jun	29405.39
Jul	38132.52
Aug	51858.94
Sep	39411.45
Oct	45925.04
Nov	37653.41
Dec	40133.81

Year

2020

2021

2022

2023

3. Use Excel's conditional formatting to highlight cells with a "Loss Rate (%)" greater than 5%

Item Code	Item Name	Loss Rate (%)
102900005115168	Niushou Shengcai	4.39
102900005115199	Sichuan Red Cedar	10.46
102900005115250	Xixia Black Mushroom (1)	10.8
102900005115625	Local Xiaomao Cabbage	0.18
102900005115748	White Caitai	8.78
102900005115762	Amaranth	18.52
102900005115779	Yunnan Shengcai	15.25
102900005115786	Zhuyecai	13.62
102900005115793	Chinese Cabbage	7.59
102900005115816	Nanguajian	13.46
102900005115823	Shanghaiqing	14.43
102900005115854	Radish Leaves	5.35
102900005115861	Niushou Youcai	12.17
102900005115878	Garden Chrysanthemum	6.27
102900005115885	Caidian Quinoa Artemisia	0.47

Conditional Formatting Rules Manager

Show formatting rules for: This Table

New Rule... Edit Rule... Delete Rule

Rule (applied in order shown)	Format	Applies to	Stop If
Formula: =\$C2>5	AaBbCcYyZz	=\$A\$2:\$C\$252	<input type="checkbox"/>

OK Close

4. Calculate the total revenue for a specific item over the past six months. Create a line chart to visualize the revenue trend.



5. Use the SUMPRODUCT function to calculate the total revenue for a specific category.

=SUMPRODUCT((Sheet6!\$D4:\$D253=H4)*(Sheet8!\$C4:\$C253))				
G	H	I	J	K
	Category Name	Total Revenue		
	Aquatic Tuberous Vegetables	\$104.36		
	Cabbage	\$38.98		
	Capsicum	\$287.01		
	Edible Mushroom	\$433.56		
	Flower/Leaf	\$622.28		
	Solanum	\$66.37		

6. Calculate the profit margin for each item, considering the "Unit Selling Price" and "Wholesale Price (RMB/kg)." Display the results in a new column.

Item Name	Sum of Unit Selling Price (RMB/kg)	Sum of Wholesale Price (RMB/kg)	Profit Margin
7 Colour Pepper (1)	18303.5	6392.32	65%
7 Colour Pepper (2)	25430.9	3376.06	87%
7 Colour Pepper (Bag)	91	33.45	63%
Agaricus Bisporus (Bag)	79.8	17.02	79%
Agaricus Bisporus (Box)	22624.6	1350.03	94%
Aihao	112	13.26	88%
Amaranth	52229.4	2657.83	95%
Amaranth (Bag)	1168.3	87.94	92%
Apricot Bao Mushroom (1)	76613.1	4721.08	94%
Apricot Bao Mushroom (2)	59498.7	2262.13	96%
Apricot Bao Mushroom (250 G)	49	24.99	49%
Apricot Bao Mushroom (Bag)	7377.9	1684.82	77%
Artemisia Stelleriana	392.4	248.54	37%
Basil (Bag)	148.9	50.96	66%
Bell Pepper (1)	8515.2	2856.89	66%
Bell Pepper (2)	4615.3	859.88	81%
Bell Pepper (Bag)	16.5	7.56	54%
Big Broccoli	38	12.92	66%
Black Chicken Mushroom	3671.2	1004.58	73%
Black Chicken Fir Bacteria (Box)	69.3	46.45	33%

7. Use the COUNTIFS function to count the number of transactions where both "Sale or Return" is "Yes" and "Discount" is "No."

=COUNTIFS(Table3[Sale or Return],"sale",Table3[Discount (Yes/No)],"No")						
I	J	K	L	M	N	
		Total Count				
	Sale = Yes & Discount = No	830680				

8. Create a scatter plot to explore the relationship between "Loss Rate (%)" and "Unit Selling Price (RMB/kg)" for all items.



9. Calculate the total quantity sold for each item that had a discount applied. Compare it with items without discounts.

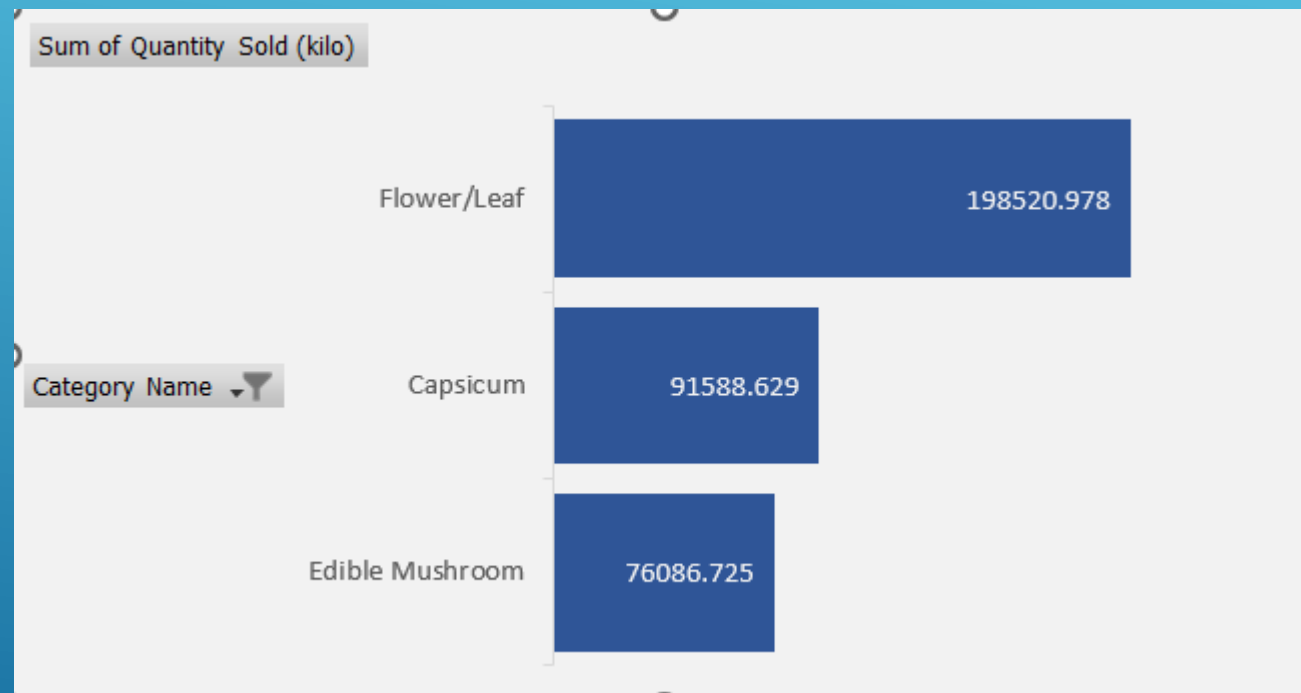
Sum of Quantity Sold (kilo)		Discount (Yes/No) ▼	
Item Name ▼	No	Yes	
7 Colour Pepper (1)	259.639	3.553	
7 Colour Pepper (2)	313.632	56.401	
7 Colour Pepper (Bag)	17	1	
Agaricus Bisporus (Bag)	8	2	
Agaricus Bisporus (Box)	3385	844	
Aihao	10.512		
Amaranth	5047.603	52.458	
Amaranth (Bag)	302	124	
Apricot Bao Mushroom (1)	2367.83	37.147	
Apricot Bao Mushroom (2)	910.676	393.876	
Apricot Bao Mushroom (250 G)	10		
Apricot Bao Mushroom (Bag)	1412	33	
Artemisia Stelleriana	1.509	0.715	
Basil (Bag)	35	5	
Bell Pepper (1)	208.569	3.474	
Bell Pepper (2)	73.174	3.422	
Bell Pepper (Bag)	5	1	
Big Broccoli	1.246	6.234	
Black Chicken Mushroom	5.655	0.14	
Black Chicken Fir Bacteria (Box)	3	1	
Black Mushroom (Bag)	3		
Black Porcini	0.446	0.638	
Black Porcini (Box)	4		

10. Use the AVERAGEIF function to find the average "Loss Rate (%)" for items in a specific category.

=AVERAGEIF(Table1[Category Name],'Annex 4'!F3,Table7[Loss Rate (%)])

F	G	H	I	J
Category Name	Avg. (Loss Rate)			
Aquatic Tuberous Vegetables	9.44			
Cabbage	9.17			
Capsicum	8.00			
Edible Mushroom	8.30			
Flower/Leaf	11.16			
Solanum	6.75			

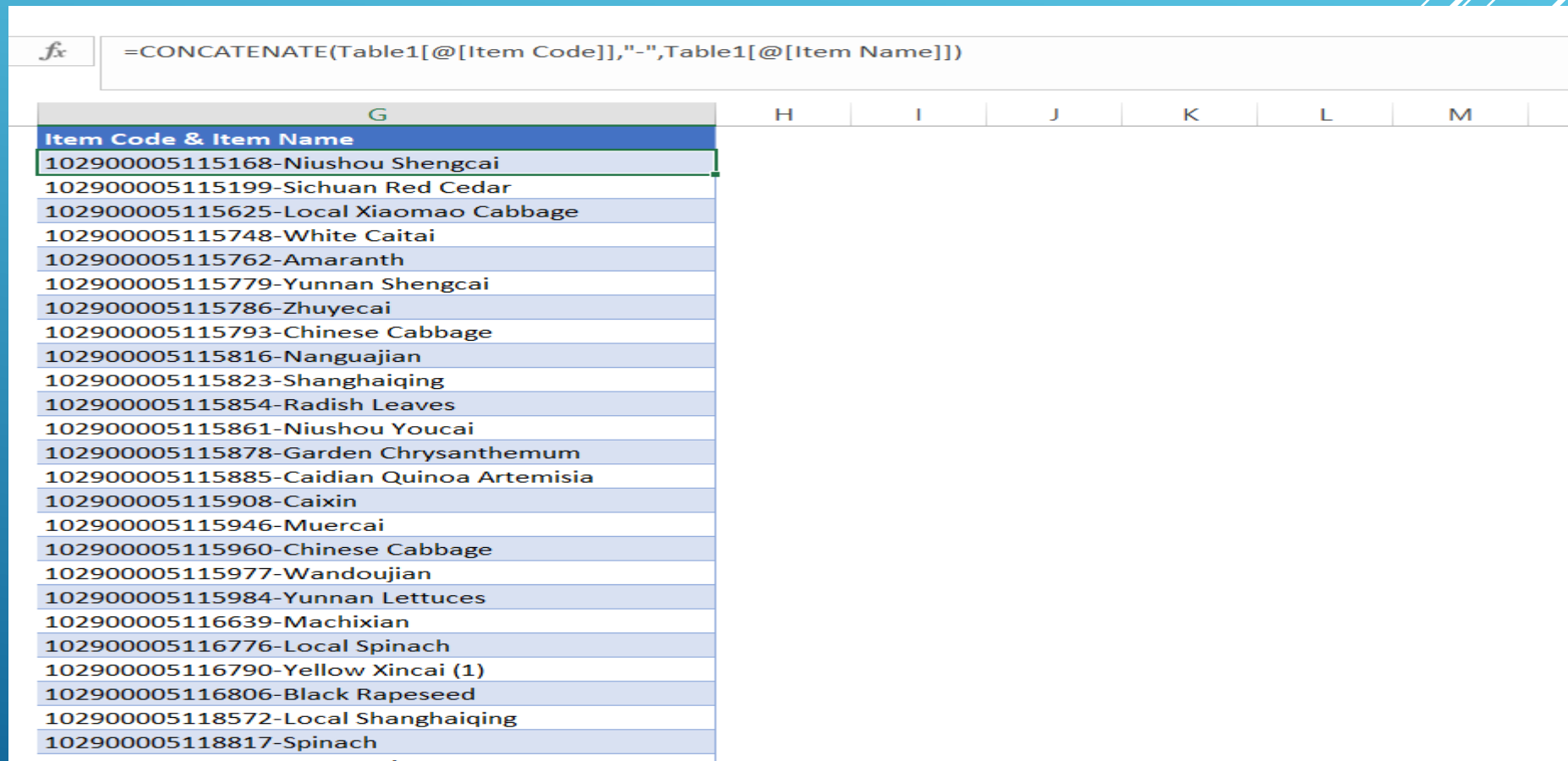
11. Create a bar chart to compare the total quantity sold for the top three categories.



12. Calculate the total revenue for items sold in 2022. Use the SUMIFS function to filter by date.

=SUMIFS(C:C, A:A, ">=01/01/2022", A:A, "<=12/31/2022")					
	E	F	G	H	I
Total revenue sold in 2022		114312			

13. Use the CONCATENATE function to combine "Item Code" and "Item Name" into a single cell.



Item Code & Item Name	H	I	J	K	L	M
102900005115168-Niushou Shengcai						
102900005115199-Sichuan Red Cedar						
102900005115625-Local Xiaomao Cabbage						
102900005115748-White Caitai						
102900005115762-Amaranth						
102900005115779-Yunnan Shengcai						
102900005115786-Zhuyecai						
102900005115793-Chinese Cabbage						
102900005115816-Nanguajian						
102900005115823-Shanghaiqing						
102900005115854-Radish Leaves						
102900005115861-Niushou Youcai						
102900005115878-Garden Chrysanthemum						
102900005115885-Caidian Quinoa Artemisia						
102900005115908-Caixin						
102900005115946-Muercai						
102900005115960-Chinese Cabbage						
102900005115977-Wandoujian						
102900005115984-Yunnan Lettuces						
102900005116639-Machixian						
102900005116776-Local Spinach						
102900005116790-Yellow Xincai (1)						
102900005116806-Black Rapeseed						
102900005118572-Local Shanghaiqing						
102900005118817-Spinach						
102900005118821-Wangcai						

14. Calculate the percentage of items with a "Loss Rate (%)" below 10% for a specific category.

=COUNTIFS(Table1[Category Name],'Annex 4'!F11,Table7[Loss Rate (%)],"<10%")/COUNTIFS(Table1[Category Name],'Annex 4'								
F	G	H	I	J	K	L	M	N
Category Name	Perc.with loss rate below 10%							
Aquatic Tuberous Vegetables	58%							
Cabbage	60%							
Capsicum	96%							
Edible Mushroom	82%							
Flower/Leaf	43%							
Solanum	90%							

15. Utilize Excel's What-If Analysis tools to analyze how a change in "Unit Selling Price" affects total revenue for a chosen item.

The screenshot shows an Excel spreadsheet with a table of data and a Data Table dialog box open. The table has the following data:

Item Code	Quantity	Unit Selling Price	Total Revenue
102900011008522	4685	44975.7	210722893
		Total Revenue	
	Unit Selling Price	210722893.2	
	50000	234263050	
	60000	281115660	
	70000	327968270	

The Data Table dialog box is open, showing the following settings:

- Row input cell: (empty)
- Column input cell: $\$P\3
- Buttons: OK, Cancel