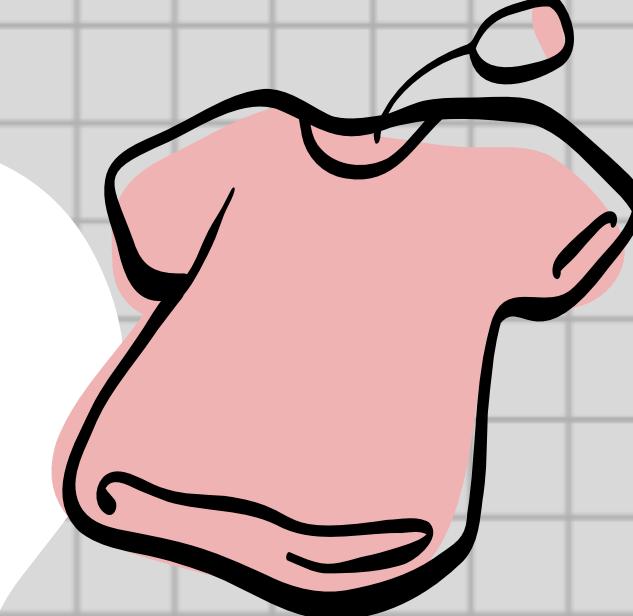
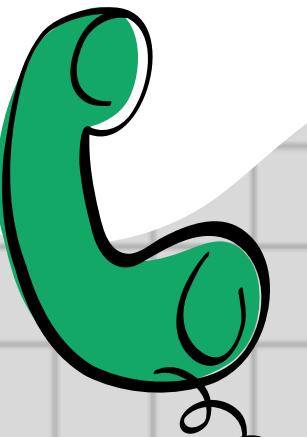
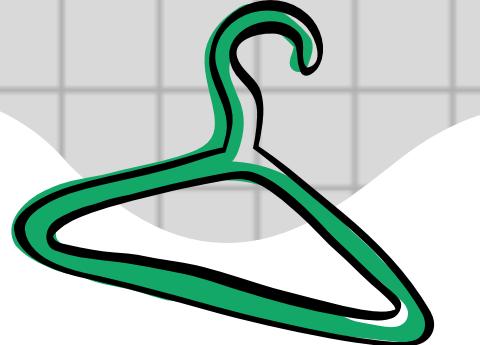
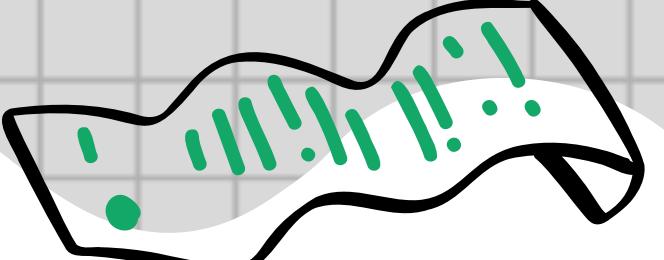
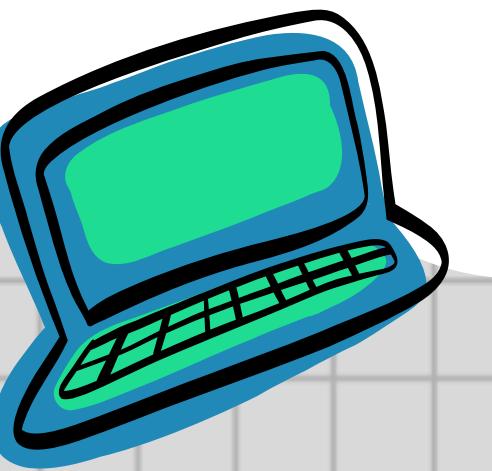
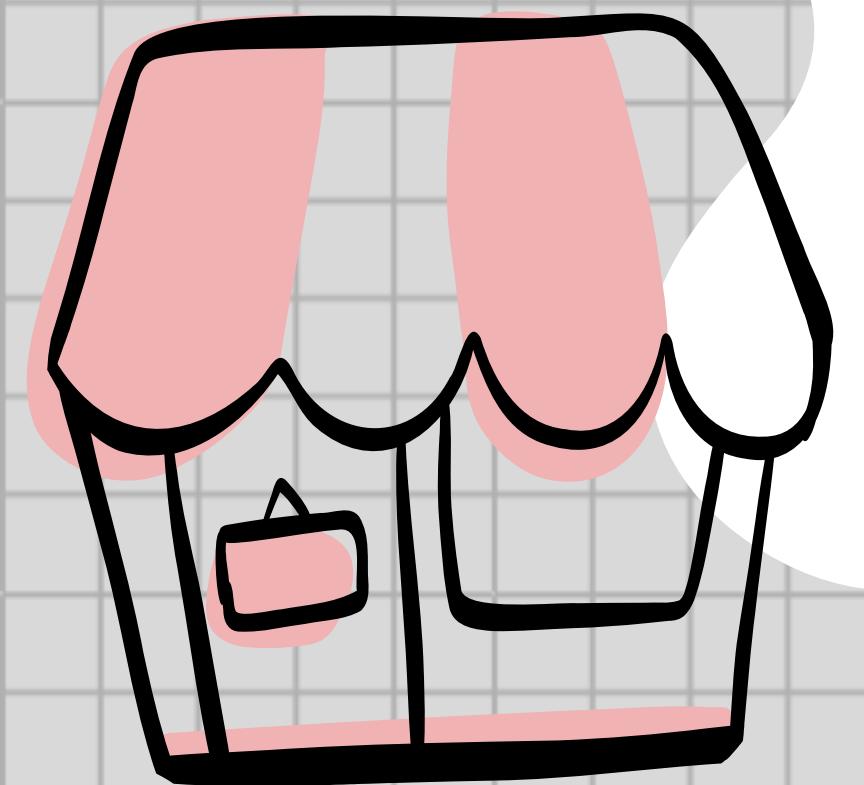


RETAIL ANALYTICS

SALES, PROFITABILITY & OPERATIONAL
PERFORMANCE ANALYSIS

Tool Used: Google Sheets , Google Colab

Techniques: Pivot Tables, Charts, Dashboard

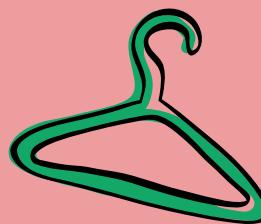


PROJECT DESCRIPTION

This project focuses on analyzing retail transaction data to understand sales performance, profitability, discount impact, channel efficiency, and operational behavior.

The aim is to convert raw transactional data into meaningful insights using Excel pivot tables and visual dashboards, helping businesses make better decisions related to pricing, promotions, logistics, and product mix.





Data Description

This dataset includes information related to sales, pricing, discounts, profitability, delivery performance, sales channels, and geographic location.

Key Fields Include:

- Transaction details: DateTime, TxnID, CustomerID
- Product details: ItemID, ItemName, Category, Quantity
- Pricing & profit: UnitPrice, Discount, Cost, TotalSales, ProfitPerUnit
- Operations: Channel, DeliveryDate, DeliveryTimeDays, Return
- Geography: State, Country

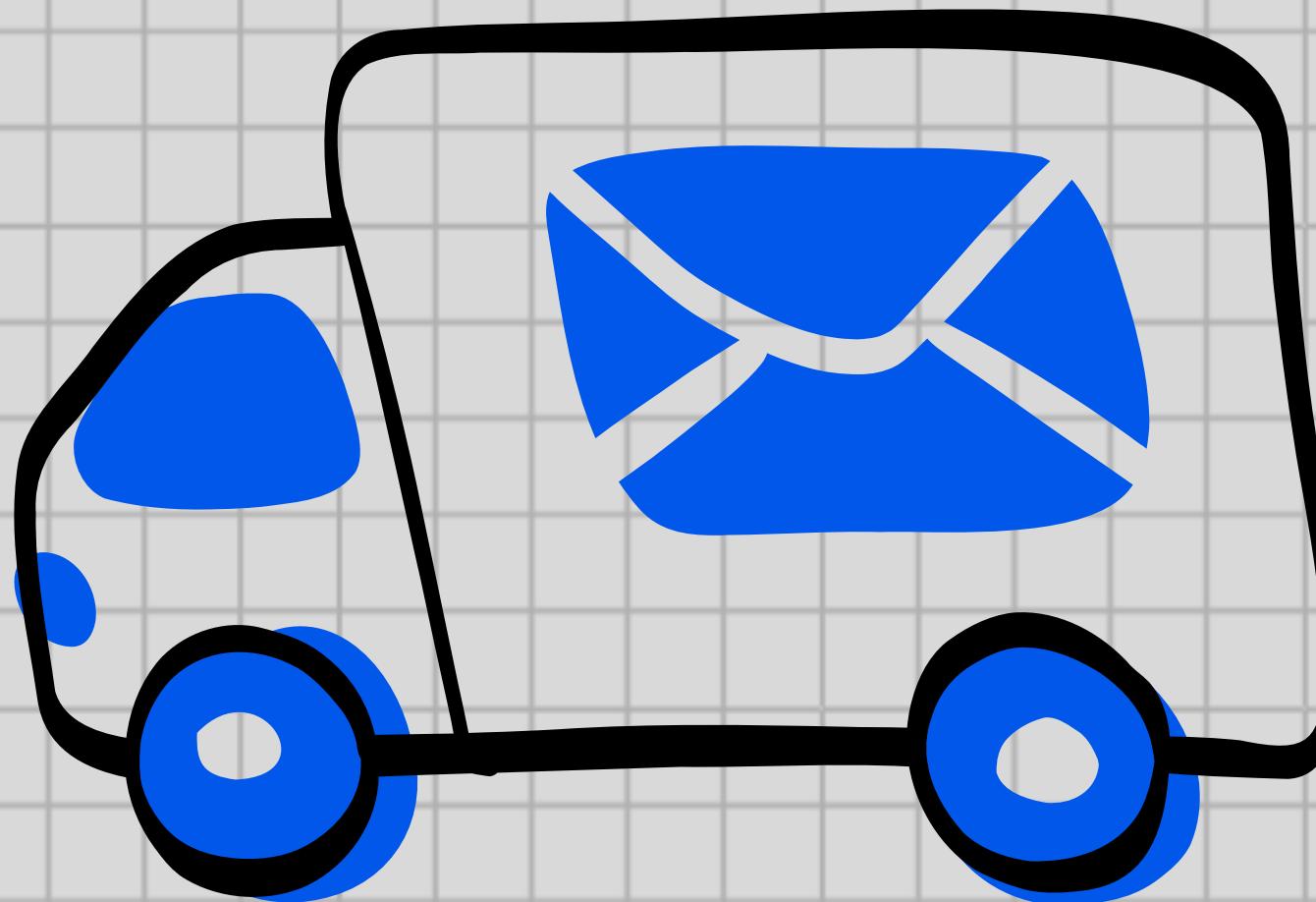
Data Type: Synthetic Data(Generated)

Usage: Sales analysis, profitability assessment, channel comparison, and operational performance evaluation using pivot tables and dashboards.



Key Performance Indicators

-RETAIL ANALYTICS



1. TOTAL SALES REVENUE – TOTAL REVENUE GENERATED FROM ALL TRANSACTIONS
2. TOTAL PROFIT – NET PROFIT EARNED AFTER COSTS AND DISCOUNTS
3. AVERAGE ORDER VALUE (AOV) – AVERAGE SALES VALUE PER TRANSACTION
4. PROFIT MARGIN (%) – PERCENTAGE OF REVENUE CONVERTED INTO PROFIT
5. RETURN RATE (%) – PERCENTAGE OF TRANSACTIONS RESULTING IN RETURNS
6. CATEGORY-WISE PROFIT PER UNIT – AVERAGE PROFIT GENERATED PER UNIT BY CATEGORY
7. REVENUE CONTRIBUTION BY CHANNEL – SHARE OF TOTAL REVENUE FROM EACH SALES CHANNEL
8. PROFIT PER TRANSACTION (CHANNEL-WISE) – AVERAGE PROFIT EARNED PER TRANSACTION BY CHANNEL
9. DISCOUNT IMPACT ON SALES VOLUME – RELATIONSHIP BETWEEN DISCOUNT LEVEL AND QUANTITY SOLD
10. HIGH-DISCOUNT PROFITABILITY – PROFITABILITY OF TRANSACTIONS WITH DISCOUNTS ABOVE 20%
11. INVENTORY TURNOVER INDICATOR – TOTAL UNITS SOLD BY PRODUCT CATEGORY
12. WEEKEND VS WEEKDAY PERFORMANCE – COMPARISON OF SALES AND PROFIT ACROSS DAY TYPES
13. MONTHLY SALES VS PROFIT TREND – IDENTIFICATION OF HIGH-SALES BUT LOW-MARGIN MONTHS
14. DELIVERY TIME EFFICIENCY – AVERAGE DELIVERY TIME BY SALES CHANNEL
15. REGIONAL REVENUE CONTRIBUTION – REVENUE DISTRIBUTION ACROSS STATES AND REGIONS

Process - Steps taken

GENERATED DATA

DATA CLEANING AND FORMATTING IN EXCEL

CREATION OF CALCULATED FIELDS SUCH AS PROFIT AND DISCOUNT BUCKETS

PIVOT TABLE CREATION FOR KPI ANALYSIS

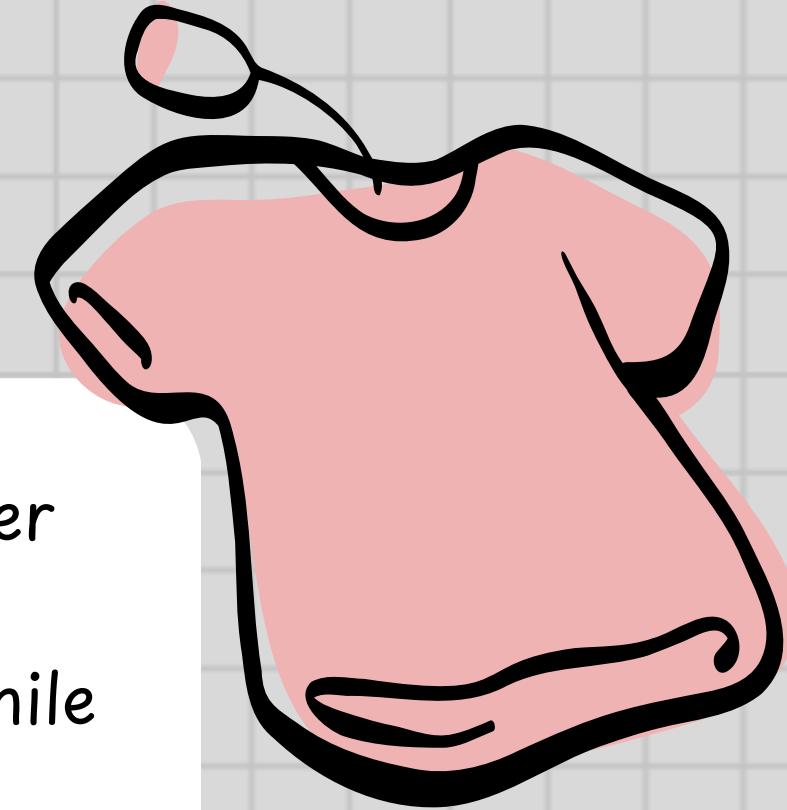
CHART GENERATION FOR TRENDS AND COMPARISONS

DASHBOARD CREATION WITH SLICERS FOR INTERACTIVITY

INTERPRETATION OF INSIGHTS FOR BUSINESS DECISIONS

KEY INSIGHTS

- Category Profitability: Beauty products show the highest profit per unit compared to daily essentials.
- Channel Performance: InStore contributes the highest revenue, while SelfCheckout shows strong efficiency.
- Discount Impact: Moderate discounts (5-15%) increase volume without major margin loss.
- Average Order Value: Premium items significantly improve AOV even at low quantities.
- Regional Performance: Southern states contribute the highest share of revenue.
- Operational Efficiency: Most transactions are fulfilled within one day through offline channels.
- Inventory Turnover: Bakery and Dairy products act as regular traffic drivers.
- Margin Stability: Certain products remain profitable even at higher discount levels.



DUPLICATE VALUES

KPMG-Final Data

File Edit View Insert Format Data Tools Extensions Help Accessibility

Final Data Raw Data

Conditional format rules

1 Cell is not empty

2 Custom formula is =COUNTIF(\$B\$1:\$B\$1000,B1)>1

+ Add another rule

DUPLICATE VALUES SEPARATED



A screenshot of a Google Sheets spreadsheet titled "KPMG Final Data". The spreadsheet contains a large dataset of transactional data with columns including Date/Time, TxnID, CustomerID, Channel, StoreID, ItemName, Category, Quantity, UnitPrice, Discount, Return, Cost, State, Country, TotalSales, ProfitPerUnit, DeliveryDate, and OrderID. A modal dialog box titled "Remove duplicates" is open in the center, showing statistics: 28 duplicate rows found and removed, and 100001 unique rows remain. The "OK" button is visible at the bottom right of the dialog. To the right of the main sheet, a sidebar titled "Conditional format rules" is visible, showing two rules applied to the data.

Date/Time	TxnID	CustomerID	Channel	StoreID	ItemName	Category	Quantity	UnitPrice	Discount	Return	Cost	State	Country	TotalSales	ProfitPerUnit	DeliveryDate	OrderID
2025-06-29 8:58	TX156202	C00207	InStore	FD1012	Roulette	Bakery	9	250.99	0%	0	81.99	Rajasthan	India	2145.88	169.03	2025/07/05	00100001
2025-11-09 7:03	TX156201	C00205	InStore	FD0900	Sliced Ham (8 oz) Meat	5	409.48	20%	0	163.32	Maharashtra	India	1521.8	249.16	19/11/25	00100002	
2025-06-26 10:0	TX142780	C00209	OnlineDelivery	FD0902	Mixed Berries & Produce	3	271.84	0%	0	108.59	Rajasthan	India	774.74	163.84	2025/05/25	00100003	
2025-01-06 14:2	TX142781	C011679	SelfCheckout	FD0900	Sliced Ham (8 oz) Meat	1	409.48	20%	0	167.9	Delhi	India	376.79	250.79	10/01/25	00100004	
2025-03-01 20:0	TX142782	C000599	OnlineDelivery	FD1013	Croissant	Bakery	4	159.51	20%	0	53.8	West Bengal	India	513.43	105.71	02/03/25	00100005
2025-01-15 11:5	TX000225	C00014	InStore	FD0900	Sliced Ham (8 oz) Meat	8	423.85	0%	0	169.82	Kerala	India	321.26	234.03	16/01/25	00100006	
2025-06-28 7:01	TX156203	C04738	SelfCheckout	FD0901	Apples (2 lb) Produce	6	284.56	0%	0	111.11	Gujarat	India	1260.32	173.46	20/06/25	00100007	
2025-04-22 10:0	TX156205	C02885	SelfCheckout	FD1011	Whole Wheat (5 lb) Bakery	10	352.17	0%	0	137.99	Kerala	India	2965.82	294.21	25/04/25	00100008	
2025-05-14 10:4	TX156206	C02347	SelfCheckout	FD0900	Granola Bars & Snacks	6	369.96	0%	0	164.32	Telangana	India	1852.31	225.64	19/05/25	00100009	
2025-09-04 10:1	TX156207	C03860	SelfCheckout	FD1011	Whole Wheat (5 lb) Bakery	2	306.59	0%	0	100.31	Delhi	India	582.49	206.24	08/09/25	00100010	
2025-04-18 11:0	TX156208	C02962	InStore	FD4000	Salmon Fillet (1 lb) Meat	7	847.93	0%	1	326.75	Gujarat	India	6638.73	911.18	24/04/25	00100011	
2025-11-15 10:5	TX156209	C03006	InStore	FD0900	Milk 1 Gallon	Dairy	4	347.48	20%	0	160.99	Tamil Nadu	India	1042.44	186.49	16/11/25	00100012
2025-11-24 10:0	TX156200	C03176	OnlineDelivery	FD0900	Granola Bars & Snacks	10	434.37	0%	0	171.4	West Bengal	India	3691.29	262.87	20/11/25	00100013	
2025-03-22 11:4	TX156201	C03291	OnlineDelivery	FD4000	Salmon Fillet (1 lb) Meat	2	849.19	0%	0	381.6	Delhi	India	1698.38	487.59	28/03/25	00100014	
2025-03-03 11:9	TX156202	C03643	InStore	FD1012	Baguette	Bakery	4	238.43	20%	0	81.85	Telangana	India	659.07	156.79	08/03/25	00100015
2025-05-04 10:4	TX156203	C03863	InStore	FD0900	Granola Bars & Snacks	10	471.91	0%	0	166.32	Kerala	India	4483.15	505.59	10/05/25	00100016	
2025-05-18 10:5	TX156204	C030729	InStore	FD0901	Bottled Water % Beverages	8	121.08	0%	0	32.47	Tamil Nadu	India	987.34	98.41	21/05/25	00100017	
2025-01-09 10:2	TX156205	C01309	SelfCheckout	FD0900	Lipstick Sample	Beauty	1	855.87	0%	0	328.97	Karnataka	India	770.37	827	10/01/25	00100018
2025-03-30 10:4	TX156206	C01513	InStore	FD0901	Greek Yogurt 1% Dairy	1	117.1	20%	0	53.43	Uttar Pradesh	India	83.47	54.71	04/03/25	00100019	
2025-04-30 10:2	TX156207	C00632	FD0900	Milk 1 Gallon	Dairy	10	372.47	0%	0	170.97	190.89	08/11/25	00100020				
2025-01-02 7:16	TX156208	C04812	OnlineDelivery	FD1011	Whole Wheat (5 lb) Bakery	10	247.96	0%	0	142.29	214.2	11/05/25	00100021				
2025-06-07 10:3	TX156209	C02798	InStore	FD1012	Baguette	Bakery	10	243.09	0%	0	89.16	234.08	15/06/25	00100022			
2025-06-14 10:2	TX156210	C04829	InStore	FD0900	Milk 1 Gallon	Dairy	10	372.47	0%	0	170.97	190.89	08/11/25	00100023			
2025-03-30 10:5	TX156211	C00670	SelfCheckout	FD4000	Salmon Fillet (1 lb) Meat	10	849.19	0%	0	381.6	Delhi	India	4027.21	378.27	05/04/25	00100024	
2025-03-04 10:3	TX156212	C00640	InStore	FD1011	Ground Beef (1 lb) Meat	10	372.47	0%	0	142.29	214.2	11/05/25	00100025				
2025-04-19 10:3	TX156213	C01654	InStore	FD1012	Croissant	Bakery	10	247.96	0%	0	89.16	214.2	11/05/25	00100026			
2025-06-05 10:4	TX156214	C04812	SelfCheckout	FD0901	Apples (2 lb) Produce	10	247.96	0%	0	142.29	214.2	11/05/25	00100027				
2025-06-05 10:5	TX156215	C01436	OnlineDelivery	FD0900	Sparkling Water Beverages	10	372.47	0%	0	170.97	190.89	08/11/25	00100028				
2025-04-04 10:1	TX156216	C03640	SelfCheckout	FD1011	Whole Wheat (5 lb) Bakery	10	247.96	0%	0	142.29	214.2	11/05/25	00100029				
2025-01-04 9:29	TX156217	C00075	InStore	FD0900	Granola Bars & Snacks	10	372.47	0%	0	170.97	190.89	08/11/25	00100030				
2025-05-27 10:5	TX156218	C03779	SelfCheckout	FD0901	Banana (1 lb) Produce	10	85.35	0%	0	26.22	Delhi	India	729.74	59.13	28/05/25	00100031	
2025-04-07 10:3	TX156219	C03798	InStore	FD1012	Baguette	Bakery	4	238.73	0%	0	86.54	Tamil Nadu	India	1089.87	200.19	12/05/25	00100032
2025-08-13 9:29	TX156220	C01200	InStore	FD0902	Sparkling Water Beverages	5	161.06	20%	0	58.43	Karnataka	India	644.24	102.63	18/08/25	00100033	
2025-06-20 10:5	TX156221	C04851	InStore	FD1011	Whole Wheat (5 lb) Bakery	6	298.16	0%	0	94.9	Rajasthan	India	1788.88	203.28	24/06/25	00100034	
2025-07-07 10:1	TX156222	C03270	InStore	FD0900	Sliced Ham (8 oz) Meat	1	399.49	0%	0	164.33	Karnataka	India	379.52	236.16	08/07/25	00100035	
2025-05-18 10:5	TX156223	C00763	InStore	FD0901	Chocolate Cookie Snacks	6	358.39	20%	0	138.74	Rajasthan	India	1672.76	218.69	25/05/25	00100036	
2025-04-04 10:1	TX156225	C04406	InStore	FD4002	Chicken Breast (1 lb) Meat	4	404.87	0%	0	175.1	Uttar Pradesh	India	1457.83	229.87	27/04/25	00100037	
2025-05-14 10:2	TX156226	C02460	SelfCheckout	FD0902	Potato Chips/Fat Snacks	9	493.89	0%	0	175.11	Tamil Nadu	India	4221.05	318.58	16/05/25	00100038	
2025-06-20 10:3	TX156227	C01162	InStore	FD0900	Milk 1 Gallon	Dairy	1	362.03	0%	0	164.27	Gujarat	India	343.93	197.79	21/06/25	00100039
2025-04-04 10:2	TX156228	C02848	OnlineDelivery	FD0900	Banana (1 lb) Produce	3	78.16	0%	0	24.58	Tamil Nadu	India	237.48	54.58	07/04/25	00100040	
2025-09-10 10:4	TX156229	C03634	InStore	FD0902	Sparkling Water Beverages	2	156.12	0%	0	49.54	Uttar Pradesh	India	296.63	106.58	13/09/25	00100041	
2025-03-19 8:23	TX156230	C03368</															

MISSING VALUES



KPMG Final Data		File		Edit		View		Insert		Format		Data		Tools		Extensions		Help		Accessibility	
Q1		Menu		T1		T2		T3		T4		T5		T6		T7		T8		T9	
#		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
1	#	Date/Time	TxnID	CustomerID	Channel	ItemID	Barcode	ProductName	Category	Quantity	UnitPrice	Discount	Return	Cost	State	Country	TotalSales	ProfitPerUnit	DeliveryDate	DeliveryTimeInDays	TotalMissingValue
2	1	2023-06-29 09:58	TX00023	C00207	Instore	FD102		Baguette	Bakery	5	250.50	0%	0	81.90	Rajasthan	India	2145.50	100.00	2023-07-05	6	37
3	2	2023-11-05 10:03	TX004401	C00325	Instore	FD000		Sliced Ham (8 oz)	Meat	5	400.40	20%	0	160.32	Maharashtra	India	1501.80	240.00	2023-11-05	6	37
4	3	2023-06-26 10:10	TX0042780	C00209	OnlineDelivery	FD002		Mixed Berries Box	Produce	3	271.80	0%	0	108.74	Rajasthan	India	774.74	163.84	2023-06-26	4	37
5	4	2023-01-08 10:12	TX0042781	C00179	SelfCheckout	FD000		Sliced Ham (8 oz)	Meat	1	418.60	10%	0	167.90	Delhi	India	379.79	250.79	2023-01-08	6	37
6	5	2023-03-01 10:08	TX0042782	C00099	OnlineDelivery	FD103		Croissant	Bakery	4	150.50	20%	0	50.80	West Bengal	India	610.40	105.71	2023-03-01	6	37
7	6	2023-01-15 11:15	TX00023	C00014	Instore	FD000		Sliced Ham (8 oz)	Meat	8	403.80	0%	0	168.82	Kerala	India	321.28	254.00	2023-01-15	6	37
8	7	2023-06-26 11:01	TX0042783	C00476	SelfCheckout	FD001		Apples (2 kg)	Produce	5	284.50	10%	0	111.10	Gujarat	India	1289.82	173.45	2023-06-26	6	37
9	8	2023-04-22 11:10	TX000755	C00266	SelfCheckout	FD101		Whole Wheat Bread	Bakery	10	312.17	0%	0	127.66	Kerala	India	2965.62	204.21	2023-04-22	6	37
10	9	2023-05-14 11:14	TX000756	C00347	SelfCheckout	FD000		Granola Bars 6-pack	Snacks	6	389.80	0%	0	164.32	Telangana	India	1862.31	201.64	2023-05-14	6	37
11	10	2023-09-04 10:51	TX000757	C00060	SelfCheckout	FD101		Whole Wheat Bread	Bakery	2	306.50	0%	0	100.31	Delhi	India	542.45	206.24	2023-09-04	6	37
12	11	2023-04-18 11:10	TX000758	C00263	Instore	FD000		Salmon Fillet (1 lb)	Meat	7	647.80	0%	1	336.75	Gujarat	India	5638.73	511.18	2023-04-18	6	37
13	12	2023-11-18 10:55	TX000759	C00208	Instore	FD000		Milk 1 Gallon	Dairy	4	347.40	20%	0	160.99	Tamil Nadu	India	1042.44	186.49	2023-11-18	6	37
14	13	2023-11-24 10:50	TX00000	C00178	OnlineDelivery	FD000		Granola Bars 6-pack	Snacks	10	434.27	10%	0	171.14	West Bengal	India	3691.29	282.87	2023-11-24	6	37
15	14	2023-03-22 11:14	TX00001	C00291	OnlineDelivery	FD000		Salmon Fillet (1 lb)	Meat	2	649.19	0%	0	304.16	Delhi	India	1698.38	487.99	2023-03-22	6	37
16	15	2023-03-03 11:15	TX00002	C00043	Instore	FD102		Baguette	Bakery	4	258.60	10%	0	81.85	Telangana	India	856.07	156.78	2023-03-03	6	37
17	16	2023-05-04 10:54	TX00003	C00052	Instore	FD000		Granola Bars 6-pack	Snacks	10	471.81	0%	0	166.32	Kerala	India	4483.15	305.59	2023-05-04	6	37
18	17	2023-10-18 10:15	TX00004	C00079	Instore	FD001		Bottled Water 1L	Beverages	8	101.00	10%	0	32.67	Tamil Nadu	India	687.34	68.41	2023-10-18	6	37
19	18	2023-01-09 10:12	TX00005	C01009	SelfCheckout	FD000		Lipstick Sample	Beauty	1	855.87	10%	0	328.87	Karnataka	India	770.37	527	2023-01-09	6	37
20	19	2023-10-30 10:14	TX00006	C01013	Instore	FD001		Greek Yogurt 160g	Dairy	1	117.1	20%	0	53.63	Uttar Pradesh	India	63.87	94.10	2023-10-30	6	37
21	20	2023-04-06 10:12	TX00007	C00082	OnlineDelivery	FD101		Milk 1 Gallon	Dairy	10	410.75	10%	0	164.05	Kerala	India	3096.75	246.7	2023-04-06	6	37
22	21	2023-11-10 10:11	TX00008	C00482	Instore	FD101		Whole Wheat Bread	Bakery	6	246.19	10%	0	105.54	West Bengal	India	1510.87	160.85	2023-11-10	6	37
23	22	2023-05-07 10:13	TX00009	C00298	Instore	FD102		Baguette	Bakery	2	299.45	0%	0	105.25	Delhi	India	1422.39	214.2	2023-05-07	6	37
24	23	2023-06-14 10:10	TX00010	C00429	Instore	FD000		Milk 1 Gallon	Dairy	8	381.17	10%	0	157.09	Kerala	India	2591.98	234.08	2023-06-14	6	37
25	24	2023-03-30 10:15	TX00011	C00070	SelfCheckout	FD000		Salmon Fillet (1 lb)	Meat	6	745.28	10%	0	307.14	Tamil Nadu	India	4227.21	378.27	2023-03-30	6	37
26	25	2023-08-04 10:13	TX00012	C00050	Instore	FD001		Ground Beef (1 lb)	Meat	7	511.82	20%	0	237	Karnataka	India	2966.19	274.82	2023-08-04	6	37
27	26	2023-04-19 10:13	TX00013	C00064	Instore	FD103		Croissant	Bakery	3	163.56	0%	0	48.50	Gujarat	India	666.15	114.81	2023-04-19	6	37
28	27	2023-06-05 10:14	TX00014	C00482	SelfCheckout	FD001		Apples (2 kg)	Produce	8	268.09	0%	0	118.27	Telangana	India	2174.28	167.82	2023-06-05	6	37
29	28	2023-09-30 10:11	TX00015	C01036	OnlineDelivery	FD002		Sparkling Water 500ml	Beverages	5	161.42	0%	0	63.27	Karnataka	India	766.74	108.15	2023-09-30	6	37
30	29	2023-04-24 10:11	TX00016	C00063	SelfCheckout	FD101		Whole Wheat Bread	Bakery	10	327.87	0%	0	105.43	Gujarat	India	3114.76	232.44	2023-04-24	6	37
31	30	2023-01-04 09:29	TX00017	C00079	Instore	FD000		Granola Bars 6-pack	Snacks	10	377.2	10%	0	172.87	Maharashtra	India	3348.8	199.33	2023-01-04	6	37
32	31	2023-05-27 10:15	TX00018	C00379	SelfCheckout	FD000		Banana (1 lb)	Produce	9	85.35	0%	0	26.22	Delhi	India	729.74	58.13	2023-05-27	6	37
33	32	2023-05-07 10:13	TX00019	C00296	Instore	FD102		Baguette	Bakery	4	266.73	0%	0	86.54	Tamil Nadu	India	1089.87	200.19	2023-05-07	6	37
34	33	2023-08-13 10:20	TX00020	C01000	Instore	FD002		Sparkling Water 500ml	Beverages	5	161.00	20%	0	65.43	Karnataka	India	644.24	102.83	2023-08-13	6	37
35	34	2023-06-29 10:15	TX00021	C00481	Instore	FD101		Whole Wheat Bread	Bakery	6	299.16	0%	0	94.9	Rajasthan	India	1788.96	203.26	2023-06-29	6	37
36	35	2023-07-07 10:11	TX00022	C00279	Instore	FD000		Sliced Ham (8 oz)	Meat	1	299.49	0%	0	104.33	Karnataka	India	379.82	235.16	2023-07-07	6	37
37	36	2023-10-18 10:15	TX00023	C00073	Instore	FD001		Chocolate Cookies 10-pack	Snacks	6	358.39	20%	0	138.78	Rajasthan	India	1812.78	219.85	2023-10-18	6	37
38	37	2023-04-24 10:11	TX00024	C04406	Instore	FD002		Chicken Breast (1 lb)	Meat	4	404.87	10%	0	175.10	Uttar Pradesh	India	1407.83	239.87	2023-04-24	6	37
39	40	2023-05-14 10:10	TX00025	C00446	SelfCheckout	FD102		Potato Chips Family Pack	Snacks	9	493.69	0%	0	175.10	Tamil Nadu	India	4221.05	318.58	2023-05-14	6	37
40	41	2023-06-26 10:13	TX00026	C01022	Instore	FD000		Milk 1 Gallon	Dairy	1	362.00	0%	0	104.27	Gujarat	India	343.83	107.78	2023-06-26	6	37
41	42	2023-04-04 10:12	TX00027	C00048	OnlineDelivery	FD000		Banana (1 lb)	Produce	3	79.16	0%	0	24.58	Tamil Nadu	India	237.48	54.58	2023-04-04	6	37
42	43	2023-09-10 10:14	TX00028	C00034	Instore	FD002		Sparkling Water 500ml	Beverages	2	166.12	0%	0	49.54	Uttar Pradesh	India	296.63	106.58	2023-09-10	6	37
43	44	2023-03-19 10:23	TX00029	C00098	Instore	FD001		Ground Beef (1 lb)	Meat	2	574.82	0%	0	233.81	Maharashtra	India	1510.24	343.81	2023-03-19	6	37
44	45	2023-02-16 10:15	TX00030	C004273	SelfCheckout	FD000		Lipstick Sample	Beauty	7	893.59	0%	0	350.88	Maharashtra	India	5942.37	642.81	2023-02-16	6	37
45	46	2023-06-16 10:15	TX00031	C000415	Instore	FD002		Mixed Berries Box	Produce	1	266.87	0%	0	104.3	Maharashtra	India	266.87	100.87	2023-06-16	6	37
46	47	2023-04-28 10:12	TX00032	C01027	Instore	FD000		Lipstick Sample	Beauty	8	762.87	10%	0	265.12	Karnataka	India	502.38	452.85	2023-04-28	6	37
47	48	2023-06-16 10:13	TX00033	C01002	SelfCheckout	FD000		Salmon Fillet (1 lb)	Meat	1	488.83	10%	0	125.73	Kerala	India	545.25	362.8	2023-06-16	6	37
48	49	2023-01-08 10:14	TX00034	C01008	Instore	FD002		Chicken Breast (1 lb)	Meat	1											



SKEWNESS AND AVERAGE

KPMG-Final Data

Date/Time	TxnID	CustomerID	Channel	ItemID	ItemName	Category	Quantity	UnitPrice	Discount	Return	Cost	State	Country	TotalSales	ProfitPerUnit	DeliveryDate	DeliveryTimeInDays	Total Missing?
2025-06-29 09:58:11	TX70002	C00207	Instore	FD102	Baguette	Bakery	5	250.00	0%	0	81.96	Rajasthan	India	2145.88	169.02	2025/07/05	1	
2025-11-09 10:03:21	TX70001	C00325	Instore	FD200	Sliced Ham (8 oz)	Meat	5	450.48	25%	0	163.32	Maharashtra	India	1531.8	245.18	2025/11/25	1	
2025-05-25 12:06:29	TX70000	C00209	OnlineDelivery	FD202	Mixed Berries (1kg)	Produce	3	271.84	0%	0	90.68	Rajasthan	India	776.74	243.84	2025/05/25	1	
2025-01-06 14:29:00	TX70001	C00179	SelfCheckout	FD500	Sliced Ham (8 oz)	Meat	1	418.66	0%	0	167.8	Delhi	India	376.79	250.79	2025/01/25	1	
2025-10-01 20:08:38	TX70002	C00059	OnlineDelivery	FD103	Croissant	Bakery	4	159.91	20%	0	53.8	West Bengal	India	610.43	155.71	2025/10/25	1	
2025-01-15 11:50:47	TX70003	C00418	Instore	FD600	Sliced Ham (8 oz)	Meat	8	423.86	0%	0	169.82	Kerala	India	3212.26	294.03	2025/01/25	1	
2025-06-28 17:01:42	TX70002	C00730	SelfCheckout	FD201	Apples (2 kg)	Produce	5	284.06	0%	0	111.11	Gujarat	India	1280.32	173.49	2025/06/25	1	
2025-04-22 16:05:15	TX70003	C00265	SelfCheckout	FD101	Whole Wheat Bread	Bakery	10	352.17	0%	0	117.98	Kerala	India	2995.82	204.21	2025/04/25	1	
2025-05-14 10:48:44	TX70002	C01247	SelfCheckout	FD700	Granola Bars 8-pack	Snacks	5	389.06	0%	0	164.32	Telangana	India	1602.31	225.64	2025/05/25	1	
2025-09-04 16:12:22	TX70007	C00660	SelfCheckout	FD101	Whole Wheat Bread	Bakery	2	306.55	0%	0	100.31	Delhi	India	602.45	206.24	2025/09/25	1	
2025-04-18 11:02:38	TX70008	C00240	Instore	FD400	Salmon Fillet (1 lb)	Meat	7	847.03	0%	1	336.79	Gujarat	India	5838.73	811.18	2025/04/25	1	
2025-11-15 10:51:46	TX70009	C00206	Instore	FD300	Milk 1 Gallon	Dairy	4	347.48	20%	0	160.99	Tamil Nadu	India	1042.44	186.49	2025/11/25	1	
2025-11-24 10:07:21	TX70000	C01176	OnlineDelivery	FD700	Granola Bars 8-pack	Snacks	10	434.27	0%	0	171.4	West Bengal	India	3691.29	263.87	2025/11/25	0	
2025-02-22 15:49:27	TX70001	C00251	OnlineDelivery	FD400	Salmon Fillet (1 lb)	Meat	2	849.19	0%	0	281.6	Delhi	India	1698.38	467.59	2025/02/25	0	
2025-03-03 19:53:38	TX70002	C00343	Instore	FD102	Baguette	Bakery	4	258.60	0%	0	81.89	Telangana	India	859.07	158.79	2025/03/25	1	
2025-05-04 19:47:36	TX70003	C00853	Instore	FD700	Granola Bars 8-pack	Snacks	10	471.91	0%	0	166.32	Kerala	India	4483.15	505.59	2025/05/25	1	
2025-10-18 19:51:33	TX70004	C00729	Instore	FD600	Bottled Water 1L	Beverages	8	191.08	0%	0	32.87	Tamil Nadu	India	687.34	48.41	2025/10/25	1	
2025-01-09 16:24:19	TX70005	C01009	SelfCheckout	FD600	Lipstick Sample	Beauty	1	855.97	0%	0	329.97	Karnataka	India	779.37	527	2025/01/25	1	
2025-10-30 15:45:49	TX70006	C01013	Instore	FD301	Greek Yogurt 160g	Dairy	1	117.1	20%	0	53.83	Uttar Pradesh	India	65.47	04/11/25	1		
2025-04-30 17:20:43	TX70007	C00832	Instore	FD300	Milk 1 Gallon	Dairy	10	410.75	0%	0	164.01	Kerala	India	3890.75	248.7	2025/04/25	1	
2025-11-02 17:16:27	TX70008	C00612	OnlineDelivery	FD101	Whole Wheat Bread	Bakery	6	296.19	0%	0	105.64	West Bengal	India	1519.57	190.85	2025/11/25	0	
2025-05-07 18:37:28	TX70009	C02780	Instore	FD102	Baguette	Bakery	2	299.45	0%	0	85.29	Delhi	India	1422.39	214.2	2025/05/25	1	
2025-04-14 12:06:29	TX70010	C00429	Instore	FD300	Milk 1 Gallon	Dairy	8	381.17	0%	0	157.09	Kerala	India	2991.96	224.08	2025/04/25	1	
2025-03-30 16:50:43	TX70011	C00070	SelfCheckout	FD400	Salmon Fillet (1 lb)	Meat	6	745.78	0%	0	287.91	Tamil Nadu	India	4027.21	378.27	2025/03/25	1	
2025-04-04 19:58:31	TX70012	C00460	Instore	FD401	Ground Beef (1 lb)	Meat	7	511.82	20%	0	197.5	Karnataka	India	2866.19	274.82	2025/04/25	1	
2025-04-19 19:33:19	TX70013	C01054	Instore	FD103	Croissant	Bakery	3	163.56	0%	0	48.99	Gujarat	India	466.15	154.61	2025/04/25	1	
2025-06-06 17:42:53	TX70014	C00612	SelfCheckout	FD201	Apples (2 kg)	Produce	8	286.09	0%	0	118.27	Telangana	India	2174.28	167.82	2025/06/25	1	
2025-06-30 15:12:14	TX70015	C01438	OnlineDelivery	FD600	Sparkling Water 500ml	Beverages	5	181.42	0%	0	53.27	Karnataka	India	768.74	108.15	2025/07/25	0	
2025-04-24 11:15:57	TX70016	C00863	SelfCheckout	FD101	Whole Wheat Bread	Bakery	10	327.87	0%	0	95.43	Gujarat	India	3116.76	232.44	2025/04/25	1	
2025-01-04 09:29:17	TX70017	C00079	Instore	FD700	Granola Bars 8-pack	Snacks	10	372.2	0%	0	172.87	Maharashtra	India	3249.8	199.33	2025/01/25	1	
2025-05-27 15:58:14	TX70018	C01779	SelfCheckout	FD200	Banana (1 lb)	Produce	9	85.35	0%	0	26.22	Delhi	India	729.74	59.13	2025/05/25	1	
2025-06-07 18:37:28	TX70019	C02790	Instore	FD102	Baguette	Bakery	4	286.73	0%	0	86.54	Tamil Nadu	India	1089.87	200.19	2025/06/25	1	
2025-06-13 0:20:00	TX70020	C01000	Instore	FD602	Sparkling Water 500ml	Beverages	5	181.06	20%	0	58.43	Karnataka	India	644.24	102.63	2025/06/25	1	
2025-06-20 16:54:50	TX70021	C00651	Instore	FD101	Whole Wheat Bread	Bakery	6	298.16	0%	0	94.9	Rajasthan	India	1788.96	203.28	2025/06/25	1	
2025-07-07 14:11:05	TX70022	C00279	Instore	FD600	Sliced Ham (8 oz)	Meat	1	399.49	0%	0	164.33	Karnataka	India	379.82	238.16	2025/07/25	1	
2025-10-18 16:55:49	TX70024	C00763	Instore	FD701	Chocolate Cookies 10-pack	Snacks	6	356.39	20%	0	136.74	Rajasthan	India	1612.76	219.66	2025/10/25	0	
2025-04-24 14:12:53	TX70025	C00408	Instore	FD402	Chicken Breast (1 lb)	Meat	4	404.87	0%	0	175.17	Uttar Pradesh	India	1457.53	229.87	2025/04/25	1	
2025-05-14 10:06:11	TX70026	C02460	SelfCheckout	FD702	Potato Chips Family Pack	Snacks	9	493.89	0%	0	175.11	Tamil Nadu	India	4221.95	318.58	2025/05/25	1	
2025-06-20 16:53:31	TX70027	C01923	Instore	FD600	Milk 1 Gallon	Dairy	1	362.03	0%	0	164.27	Gujarat	India	348.93	97.76	2025/06/25	1	
2025-04-04 15:26:45	TX70028	C02948	OnlineDelivery	FD200	Banana (1 lb)	Produce	3	79.16	0%	0	24.58	Tamil Nadu	India	237.68	54.58	2025/04/25	0	
2025-09-10 10:48:12	TX70029	C00804	Instore	FD602	Sparkling Water 500ml	Beverages	2	156.12	0%	0	49.54	Uttar Pradesh	India	296.83</td				

MISSING VALUES REPLACED



A screenshot of a Google Sheets document titled "Final Data" showing a large dataset of retail sales transactions. The table includes columns for Date/Time, Transaction ID (TxID), Customer ID (CustomerID), Channel, Item ID (ItemID), Item Name (ItemName), Category, Quantity, Unit Price (UnitPrice), Discount, Return, Cost, State, Country, Total Sales, Profit Margin (ProfitPerUnit), Delivery Date, and Delivery Time (DeliveryTime). The data spans from January 2025 to April 2025, covering various products like Baguettes, Sliced Ham, Mixed Berries, etc., across different states and countries. A blue selection bar highlights a specific row in the middle of the table.

Average/Mean/Mode	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Missing Value	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Date/Time	TxID	CustomerID	Channel	ItemID	ItemName	Category	Quantity	UnitPrice	Discount	Return	Cost	State	Country	TotalSales	ProfitPerUnit	DeliveryDate	DeliveryTime	Days							
2025-01-01 00:00:00	TX00001	C00001	Instore	I FD101	Baguette	Bakery	5	200.00	0%	0	81.00	Rajasthan	India	2100.00	10.00	2025-01-01	00:00:00	1							
2025-01-02 00:00:00	TX00002	C00002	Instore	I FD200	Sliced Ham (8 oz)	Meat	5	400.00	20%	0	160.00	Maharashtra	India	1000.00	20.00	2025-01-02	00:00:00	1							
2025-01-03 00:00:00	TX00003	C00003	OnlineDelivery	I FD300	Mixed Berries Box	Produce	5	250.00	0%	0	100.00	Rajasthan	India	750.00	10.00	2025-01-03	00:00:00	1							
2025-01-04 00:00:00	TX00004	C00004	SelfCheckout	I FD400	Sliced Ham (8 oz)	Meat	1	410.00	10%	0	167.00	Delhi	India	350.00	20.00	2025-01-04	00:00:00	1							
2025-01-05 00:00:00	TX00005	C00005	OnlineDelivery	I FD500	Cheesecake	Bakery	4	150.00	20%	0	60.00	West Bengal	India	600.00	10.00	2025-01-05	00:00:00	1							
2025-01-06 00:00:00	TX00006	C00006	Instore	I FD600	Sliced Ham (8 oz)	Meat	8	420.00	0%	0	168.00	Kerala	India	3300.00	20.00	2025-01-06	00:00:00	1							
2025-01-07 00:00:00	TX00007	C00007	SelfCheckout	I FD700	Apples (2 lbs)	Produce	5	280.00	10%	0	110.00	Gujarat	India	1300.00	20.00	2025-01-07	00:00:00	1							
2025-01-08 00:00:00	TX00008	C00008	OnlineDelivery	I FD800	Whole Wheat Bread	Bakery	10	310.00	0%	0	107.00	Kerala	India	2900.00	20.00	2025-01-08	00:00:00	1							
2025-01-09 00:00:00	TX00009	C00009	Instore	I FD900	Granola Bars 6-pack	Snacks	5	380.00	0%	0	154.00	Telangana	India	1800.00	20.00	2025-01-09	00:00:00	1							
2025-01-10 00:00:00	TX00010	C00010	SelfCheckout	I FD100	Whole Wheat Bread	Bakery	2	300.00	0%	0	100.00	Delhi	India	600.00	20.00	2025-01-10	00:00:00	1							
2025-01-11 00:00:00	TX00011	C00011	Instore	I FD110	Salmon Fillet (1 lb)	Meat	7	840.00	0%	1	330.00	Gujarat	India	5800.00	10.00	2025-01-11	00:00:00	1							
2025-01-12 00:00:00	TX00012	C00012	OnlineDelivery	I FD120	Milk 1 Gallon	Dairy	4	340.00	20%	0	136.00	Tamil Nadu	India	1040.00	10.00	2025-01-12	00:00:00	1							
2025-01-13 00:00:00	TX00013	C00013	Instore	I FD130	Granola Bars 6-pack	Snacks	10	430.00	10%	0	171.00	West Bengal	India	3600.00	20.00	2025-01-13	00:00:00	1							
2025-01-14 00:00:00	TX00014	C00014	SelfCheckout	I FD140	Salmon Fillet (1 lb)	Meat	2	840.00	0%	0	330.00	Delhi	India	1680.00	20.00	2025-01-14	00:00:00	1							
2025-01-15 00:00:00	TX00015	C00015	Instore	I FD150	Bottled Water 1L	Beverages	9	100.00	0%	0	32.00	Tamil Nadu	India	900.00	10.00	2025-01-15	00:00:00	1							
2025-01-16 00:00:00	TX00016	C00016	SelfCheckout	I FD160	Lipstick Sample	Beauty	1	650.00	10%	0	250.00	Karnataka	India	700.00	10.00	2025-01-16	00:00:00	1							
2025-01-17 00:00:00	TX00017	C00017	Instore	I FD170	Greek Yogurt 150g	Dairy	1	110.00	20%	0	44.00	Uttar Pradesh	India	1500.00	10.00	2025-01-17	00:00:00	1							
2025-01-18 00:00:00	TX00018	C00018	OnlineDelivery	I FD180	Milk 1 Gallon	Dairy	10	410.00	10%	0	164.00	Kerala	India	3600.00	20.00	2025-01-18	00:00:00	1							
2025-01-19 00:00:00	TX00019	C00019	Instore	I FD190	Whole Wheat Bread	Bakery	6	290.00	10%	0	109.00	West Bengal	India	1900.00	20.00	2025-01-19	00:00:00	1							
2025-01-20 00:00:00	TX00020	C00020	Instore	I FD200	Baguette	Bakery	5	250.00	10%	0	85.00	Delhi	India	1400.00	20.00	2025-01-20	00:00:00	1							
2025-01-21 00:00:00	TX00021	C00021	SelfCheckout	I FD210	Milk 1 Gallon	Dairy	8	360.00	10%	0	137.00	Kerala	India	2500.00	20.00	2025-01-21	00:00:00	1							
2025-01-22 00:00:00	TX00022	C00022	OnlineDelivery	I FD220	Ground Beef (1 lb)	Meat	6	740.00	10%	0	287.00	Tamil Nadu	India	4000.00	20.00	2025-01-22	00:00:00	1							
2025-01-23 00:00:00	TX00023	C00023	Instore	I FD230	Ground Beef (1 lb)	Meat	7	510.00	20%	0	197.00	Karnataka	India	2800.00	20.00	2025-01-23	00:00:00	1							
2025-01-24 00:00:00	TX00024	C00024	SelfCheckout	I FD240	Ground Beef (1 lb)	Meat	7	510.00	20%	0	197.00	Karnataka	India	2800.00	20.00	2025-01-24	00:00:00	1							
2025-01-25 00:00:00	TX00025	C00025	Instore	I FD250	Chocolate Cookies 10-pack	Snacks	8	350.00	10%	0	120.00	Delhi	India	2800.00	20.00	2025-01-25	00:00:00	1							
2025-01-26 00:00:00	TX00026	C00026	SelfCheckout	I FD260	Baguette	Bakery	4	260.00	0%	0	80.00	Tamil Nadu	India	1000.00	20.00	2025-01-26	00:00:00	1							
2025-01-27 00:00:00	TX00027	C00027	Instore	I FD270	Sparkling Water 500ml	Beverages	5	100.00	20%	0	33.00	Karnataka	India	600.00	10.00	2025-01-27	00:00:00	1							
2025-01-28 00:00:00	TX00028	C00028	SelfCheckout	I FD280	Whole Wheat Bread	Bakery	10	320.00	0%	0	128.00	Gujarat	India	3200.00	20.00	2025-01-28	00:00:00	1							
2025-01-29 00:00:00	TX00029	C00029	Instore	I FD290	Sliced Ham (8 oz)	Meat	1	390.00	10%	0	156.00	Karnataka	India	3900.00	20.00	2025-01-29	00:00:00								



DASHBOARD





CONCLUSION

This Retail Analytics project uses Excel dashboards and KPIs to analyze sales, profitability, discounts, channels, and operations. The analysis shows that high sales do not always mean high profit, and efficiency and margins are equally important. Offline channels perform better operationally, while moderate discounts help increase volume without major margin loss. Overall, the project highlights how KPI-based analysis supports better pricing, product, and operational decisions for sustainable growth.

**THANK
YOU**

