

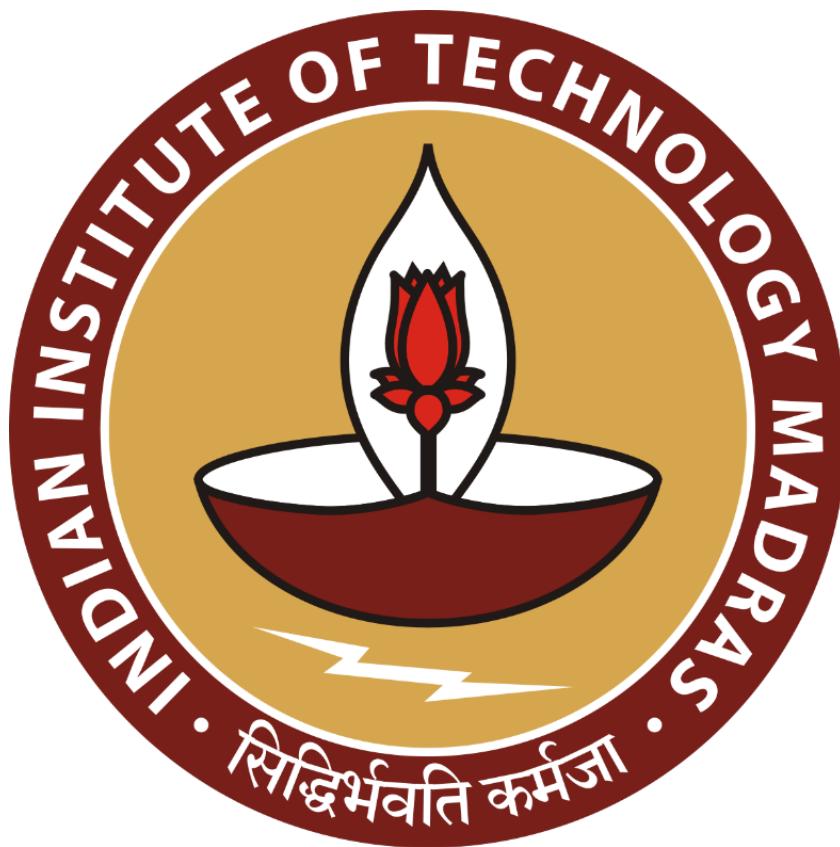
Smart Pharmacy Management : Leveraging Data For Efficiency & Growth

A Mid-Term Report For The BDM Capstone Project

Submitted By -

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1. Executive Summary

‘Janta Medical Store’ is a small, owner-operated pharmacy located in a semi-rural area of Muradnagar, Ghaziabad, Uttar Pradesh. Established over two decades ago by Mr. Vikram Singh, the pharmacy caters to local residents with both prescription and OTC medicines. With no digital systems in place, all operations including stock tracking, billing, and accounting are done manually. The owner does not currently use any software tools or formal business practices, resulting in missed opportunities for optimisation and competitive improvement. Hence the following issues are faced by owner :

- **Inefficient Stock Management Problem**
- **Account Management Problem**
- **Customer Management Problem**

The steps involve in the project data outcomes and results are as follows :

- **Owner Discussion**
- **Problems Identification**
- **Collecting Raw Data**
- **Preprocessing & Analysing The Data**
- **Visualisation & Results**

Using tools such as Excel, the dataset was cleaned, structured, and analyzed through descriptive statistics and **ABC analysis** to classify medicines by their revenue contribution, identifying top-selling products, understanding buying patterns.

Preliminary results reveal that a small fraction of medicines generates the majority of total revenue - highlighting inefficiencies in stock prioritisation. By understanding daily sales behaviour, pricing variation, and demand trends, the analysis provides the owner with practical insights to avoid stock-outs, minimise expirations, and plan purchases effectively.

Additionally, the results and findings are suggesting practical methods like Excel-based inventory tracking, demand estimation, and basic customer logging to streamline operations. The expected outcome is a clear, data-driven framework enabling **better decision-making, higher profitability, and improved customer retention**.

2. Proof of Originality



[Link of Images & Interaction Video : Click Here](#)

Note : The interaction video is 1 min & 13 sec long so because the owner is not comfortable on camera. The Aaditya Chandel sir was also agreed when I mailed him on Sat, Jun 7, 7:24 AM.

Image-1

Me & Pharmacy Owner at his Pharmacy 'Janta Medical Store'



Image - 2 & 3

Pharmacy Owner 'Mr. Vikram Singh' in His Pharmacy Store



3.1 Metadata

[**Link for all datasets in Excel File : Click Here**](#)

The Excel sheets used by me for raw data and data analysis are given below :

Excel Sheet Name	Description
Drug Categories & Uses - Drugs	It contains the categories of medicines with their short names and uses.
Medicines Price	It contains medicine name, generic name, category, quantity, units per pack, price and discounted price.
Daily Sales Data	It contains daily each medicine sales data and total medicines sold in 42 days.
Category-Wise Sales Data	It contains weekly medicines sales and revenue data and chart analysis.
Medicines Daily Revenue	It contains daily revenue of each medicine with minimum, maximum, average per day revenue and total revenue in 42 days with expected monthly revenue.
Weekly Revenue	It contains each medicine weekly revenue with maximum, minimum and average weekly revenue as well as expected monthly revenue.
ABC Analysis	It contains the ABC Analysis done on medicine revenue and the chart visualisation of top 20% medicines (Category - 'A').

3.1.1 Drug Categories & Uses Excel Sheet

Drugs Categories	Short Name	Uses
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- **Drugs Categories** : It contains the total 10 drugs (medicines) categories.
- **Short Name** : It contains the short name of the category.
- **Uses** : It contains the use of individual medicine category.

3.1.2 Medicines Price

Medicine Name	Generic Name	Medicine Category	Quantity (mg or ml)
Units Per Pack	Price (₹)	Discounted Price (10% Discount)	

- **Medicine Name** : It contains the total 111 medicines.
- **Generic Name** : It contains the generic name (or ingredients) of the each medicine.
- **Medicine Category** : It contains the category of each medicine.
- **Quantity (mg or ml)** : It contains the quantity of each medicine in 1 unit.
- **Units Per Pack** : It contains the total units of medicines in each pack.
- **Price (₹)** : It contains the price of one pack of the medicine.
- **Discounted Price (10% Discount)** : It contains the 10% discounted selling price by the owner from his profit margin.

3.1.3 Daily Sales Data

Medicine (Strips or Packs)	Medicine Category	5/15/2025 - 6/25/2025 (42 Columns)	Total Medicine Sale in 42 Days
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- **Medicine (Strips or Packs)** : It contains the total 111 medicines which could be strips or packs.
- **Medicine Category** : It contains the category of each medicine.
- **5/15/2025 - 6/25/2025 (42 Columns)** : They are 42 columns from 5/15/2025 - 6/25/2025 and each column contains each medicine total sale on that date.
- **Total Medicine Sale in 42 Days** : It contains the each medicine total sale in 42 days.

3.1.4 Category-Wise Sales Data

Medicine Category	Sale on 5/15/2025 - Sale on 6/25/2025 (42 - Columns)
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Medicine Category	Revenue on 5/15/2025 - Revenue on 6/25/2025 (42 - Columns)
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Medicine Category	Total Sale	% Contribution in Total Sale	Total Revenue	% Contribution in Total Revenue
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- **Medicine Category** : It contains the total 10 medicine categories.
- **Sale on 5/15/2025 - 6/25/2025 (42 - Columns)** : They are 42 columns from 5/15/2025 - 6/25/2025 and each column contains each medicine category total sale on that date.
- **Revenue on 5/15/2025 - 6/25/2025 (42 - Columns)** : They are 42 columns from 5/15/2025 - 6/25/2025 and each column contains each medicine category total revenue on that date.

- **Total Sale** : It contains the total sale of each medicine category in 42 days.
- **% Contribution in Total Sale** : It contains the percentage contribution of each medicine category in total sale.
- **Total Revenue** : It contains the total revenue of each medicine category in 42 days.
- **% Contribution in Total Revenue** : It contains the percentage contribution of each medicine category in total revenue.

3.1.5 Daily Revenue

Medicines	Revenue on 5/15/2025	Total Revenue in 42 Days
Maximum Per Day Revenue		
Minimum Per Day Revenue		
Average Per Day Revenue		
Estimated Monthly Revenue (Average Per Day Revenue x 31)		
Overall 42-Days Revenue		

- **Medicines** : It contains the total 111 medicines.
- **Revenue on 5/15/2025 - 6/25/2025 (42 - Columns)** : They are 42 columns from 5/15/2025 - 6/25/2025 and each column contains each medicine total revenue on that date.
- **Total Revenue** : It contains the total revenue of each medicine in 42 days.
- **Maximum Per Day Revenue** : It contains the maximum per day revenue in 42 days.
- **Minimum Per Day Revenue** : It contains the minimum per day revenue in 42 days.
- **Estimated Monthly Revenue** : It contains the average per day revenue in 42 days.
- **Overall 42-Days Revenue** : It contains the total revenue of in 42 days.

3.1.6 Weekly Medicine Revenue

Medicines	Week-n Total Sale (Here n = 1, 2, 3, 4, 5, 6)	Week-n Revenue (Here n = 1, 2, 3, 4, 5, 6)	Total Sale	Total Revenue
Maximum Weekly Revenue				
Minimum Weekly Revenue				
Average Weekly Revenue				
Overall 6 - Weeks Revenue				

- **Medicines** : It contains the total 111 medicines.
- **Week-n Total Sale (Here n = 1, 2, 3, 4, 5, 6)** : They are 6 columns Week-1, Week-2, Week-3, Week-4, Week-5 and Week-6 and each column contains each medicine total sale on that week.
- **Week-n Total Revenue (Here n = 1, 2, 3, 4, 5, 6)** : They are 6 columns Week-1, Week-2, Week-3, Week-4, Week-5 and Week-6 and each column contains each medicine total revenue on that week.
- **Maximum Weekly Revenue** : It contains the maximum weekly revenue in 6 weeks.
- **Minimum Weekly Revenue** : It contains the minimum weekly revenue in 6 weeks.
- **Average Weekly Revenue** : It contains the average weekly revenue in 6 weeks.
- **Overall 6-Weeks Revenue** : It contains the total revenue of in 6 weeks.

3.1.7 ABC Analysis

Medicines	Total Sale	Total Revenue	% Contribution To Total Revenue	Cummulative % of Total Revenue	ABC Category
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- **Medicines** : It contains the total 111 medicines.
- **Total Sale** : It contains the total sale of each medicine..
- **Total Revenue** : It contains the total revenue of each medicine.
- **% Contribution To Total Revenue** : It contains the % contribution of each medicine.
- **Cummulative % of Total Revenue** : It contains the cummulative % of the total revenue.
- **ABC Category** : It contains the category (A, B, C) on the basis of the ABC Analysis.

3.2 Descriptive Statistics

Sr. No.	Medicine	Unit Price (₹)	10% Discounted Price (₹)	Total Sale	Minimum Revenue	Maximum Revenue	Average Revenue	Total Revenue in 42 Days
1	Voveran	₹237.75	₹213.98	24	₹0.00	₹427.95	₹122.27	₹5,135.40
2	Diclogesic	₹57.00	₹51.30	8	₹0.00	₹102.60	₹9.77	₹410.40
3	Diclolomol	₹112.50	₹101.25	2	₹0.00	₹101.25	₹4.82	₹202.50
4	Zerodol-P Tablet	₹77.00	₹69.30	38	₹0.00	₹138.60	₹62.70	₹2,633.40
5	Hifenac	₹56.25	₹50.63	12	₹0.00	₹101.25	₹14.46	₹607.50
6	Zerodol	₹65.20	₹58.68	19	₹0.00	₹117.36	₹26.55	₹1,114.92
7	Acemiz	₹71.28	₹64.15	23	₹0.00	₹128.30	₹35.13	₹1,475.50
8	Zerodol CR	₹110.70	₹99.63	38	₹0.00	₹199.26	₹90.14	₹3,785.94
9	Dolokind	₹42.60	₹38.34	20	₹0.00	₹76.68	₹18.26	₹766.80
10	Topnac	₹25.00	₹22.50	19	₹0.00	₹22.50	₹10.18	₹427.50
11	Acenac	₹54.50	₹49.05	45	₹0.00	₹147.15	₹52.55	₹2,207.25
12	Acenac SR	₹98.50	₹88.65	15	₹0.00	₹88.65	₹31.66	₹1,329.75
13	Nilitis	₹834.90	₹751.41	14	₹0.00	₹1,502.82	₹250.47	₹10,519.74

Sr. No.	Medicine	Unit Price (₹)	10% Discounted Price (₹)	Total Sale	Minimum Revenue	Maximum Revenue	Average Revenue	Total Revenue in 42 Days
14	Nabuflam	₹120.62	₹108.56	34	₹0.00	₹217.12	₹87.88	₹3,690.97
15	Brufen	₹27.21	₹24.49	4	₹0.00	₹24.49	₹2.33	₹97.96
16	Ibugesic	₹86.37	₹77.73	32	₹0.00	₹155.47	₹59.23	₹2,487.46
17	Combiiflam	₹55.71	₹50.14	4	₹0.00	₹50.14	₹4.78	₹200.56
18	Naprosyn	₹143.00	₹128.70	1	₹0.00	₹128.70	₹3.06	₹128.70
19	Napra-D	₹129.00	₹116.10	6	₹0.00	₹116.10	₹16.59	₹696.60
20	Proxen	₹86.10	₹77.49	8	₹0.00	₹77.49	₹14.76	₹619.92
21	Ketoflam	₹312.25	₹281.03	41	₹0.00	₹562.05	₹274.33	₹11,522.03
22	Feburic-K	₹231.00	₹207.90	24	₹0.00	₹415.80	₹118.80	₹4,989.60
23	Ibugesic Plus	₹1.62	₹1.46	2	₹0.00	₹1.46	₹0.07	₹2.92
24	Dexorill SR	₹63.50	₹57.15	2	₹0.00	₹57.15	₹2.72	₹114.30
25	Disprin	₹8.60	₹7.74	45	₹0.00	₹23.22	₹8.29	₹348.30
26	Ecosprin 75	₹5.49	₹4.94	19	₹0.00	₹4.94	₹2.24	₹93.88
27	Ecosprin 325	₹10.51	₹9.46	13	₹0.00	₹9.46	₹2.93	₹122.97
28	Dologel	₹105.38	₹94.84	61	₹0.00	₹284.53	₹137.75	₹5,785.36
29	Orahelp	₹81.99	₹73.79	2	₹0.00	₹73.79	₹3.51	₹147.58
30	Zytee RB	₹103.84	₹93.46	25	₹0.00	₹186.91	₹55.63	₹2,336.40
31	Moov	₹75.00	₹67.50	22	₹0.00	₹135.00	₹35.36	₹1,485.00
32	Iodex	₹46.00	₹41.40	7	₹0.00	₹41.40	₹6.90	₹289.80
33	Bengay (Jar)	₹1,499.00	₹1,349.10	29	₹0.00	₹4,047.30	₹931.52	₹39,123.90
34	Saridon Tablet	₹50.00	₹45.00	138	₹45.00	₹225.00	₹147.86	₹6,210.00
35	Crocin	₹23.77	₹21.39	103	₹21.39	₹106.97	₹52.46	₹2,203.48
36	Calpol	₹24.04	₹21.64	14	₹0.00	₹21.64	₹7.21	₹302.90
37	Dolo 650	₹32.13	₹28.92	162	₹57.83	₹173.50	₹111.54	₹4,684.55
38	T-98	₹14.26	₹12.83	5	₹0.00	₹12.83	₹1.53	₹64.17
39	Metacin	₹14.49	₹13.04	3	₹0.00	₹13.04	₹0.93	₹39.12
40	P-650	₹21.42	₹19.28	54	₹0.00	₹57.83	₹24.79	₹1,041.01
41	Valium	₹107.00	₹96.30	52	₹0.00	₹288.90	₹119.23	₹5,007.60
42	Calmpose	₹15.56	₹14.00	11	₹0.00	₹28.01	₹3.67	₹154.04
43	Alprax	₹79.00	₹71.10	10	₹0.00	₹71.10	₹16.93	₹711.00
44	Xanax	₹20.40	₹18.36	38	₹0.00	₹36.72	₹16.61	₹697.68
45	Alzol	₹45.00	₹40.50	42	₹0.00	₹121.50	₹40.50	₹1,701.00
46	Rivotril	₹54.00	₹48.60	3	₹0.00	₹48.60	₹3.47	₹145.80
47	Clonex	₹11.82	₹10.64	24	₹0.00	₹21.28	₹6.08	₹255.31
48	Loraz	₹24.00	₹21.60	13	₹0.00	₹21.60	₹6.69	₹280.80
49	Lorvan	₹95.00	₹85.50	11	₹0.00	₹171.00	₹22.39	₹940.50
50	Buspar	₹56.52	₹50.87	25	₹0.00	₹101.74	₹30.28	₹1,271.70
51	Atarax	₹96.80	₹87.12	36	₹0.00	₹261.36	₹74.67	₹3,136.32
52	Frisium	₹90.00	₹81.00	46	₹0.00	₹162.00	₹88.71	₹3,726.00
53	Midaz (Injection)	₹29.20	₹26.28	8	₹0.00	₹52.56	₹5.01	₹210.24
54	Miben (Injection)	₹86.52	₹77.87	8	₹0.00	₹155.74	₹14.83	₹622.94
55	Mezolam	₹37.80	₹34.02	3	₹0.00	₹34.02	₹2.43	₹102.06
56	Alzolam	₹45.00	₹40.50	41	₹0.00	₹121.50	₹39.54	₹1,660.50
57	Nithium	₹11.70	₹10.53	36	₹0.00	₹21.06	₹9.03	₹379.08
58	Stilnoct	₹207.00	₹186.30	3	₹0.00	₹186.30	₹13.31	₹558.90
59	Zolfresh	₹136.00	₹122.40	3	₹0.00	₹122.40	₹8.74	₹367.20
60	Luminal	₹104.76	₹94.28	19	₹0.00	₹188.57	₹42.65	₹1,791.40
61	Atarax	₹96.80	₹87.12	45	₹0.00	₹261.36	₹93.34	₹3,920.40
62	Hyrax	₹36.00	₹32.40	1	₹0.00	₹32.40	₹0.77	₹32.40
63	Asthalin (Inhaler) - (100 MCG x 200 Metered Doses)	₹168.80	₹151.92	16	₹0.00	₹151.92	₹57.87	₹2,430.72
64	Ventorlin (Inhaler) - (100 MCG x 200 Metered Dose)	₹80.64	₹72.58	10	₹0.00	₹145.15	₹17.28	₹725.76
65	Levolin	₹36.89	₹33.20	22	₹0.00	₹66.40	₹17.39	₹730.42
66	Asthalin Respules	₹40.00	₹36.00	6	₹0.00	₹72.00	₹5.14	₹216.00
67	Ipravent (Inhaler) - (20 MCG x 200 Metered Doses)	₹151.20	₹136.08	5	₹0.00	₹136.08	₹16.20	₹680.40
68	Theo Asthalin Tablets	₹19.56	₹17.60	11	₹0.00	₹17.60	₹4.61	₹193.64
69	Montair-LC Tablets	₹381.64	₹343.48	37	₹0.00	₹1,030.43	₹302.59	₹12,708.61
70	Montair-FX Tablets	₹378.65	₹340.79	3	₹0.00	₹340.79	₹24.34	₹1,022.36
71	Deltacortil	₹9.04	₹8.14	2	₹0.00	₹8.14	₹0.39	₹16.27
72	Medrol	₹53.91	₹48.52	26	₹0.00	₹97.04	₹30.04	₹1,261.49

Sr. No.	Medicine	Unit Price (₹)	10% Discounted Price (₹)	Total Sale	Minimum Revenue	Maximum Revenue	Average Revenue	Total Revenue in 42 Days
73	Xolair	₹31,518.00	₹28,366.20	1	₹0.00	₹28,366.20	₹675.39	₹28,366.20
74	Arachitol Nano Bottle	₹74.71	₹67.24	11	₹0.00	₹67.24	₹17.61	₹739.63
75	Becosules	₹56.71	₹51.04	28	₹0.00	₹153.12	₹34.03	₹1,429.09
76	Shelcal 500	₹396.50	₹356.85	8	₹0.00	₹356.85	₹67.97	₹2,854.80
77	Ultra D3 (Drops)	₹45.70	₹41.13	10	₹0.00	₹82.26	₹9.79	₹411.30
78	Zincovit	₹107.67	₹96.90	14	₹0.00	₹193.81	₹32.30	₹1,356.64
79	Folimax Plus D3	₹90.00	₹81.00	41	₹0.00	₹243.00	₹79.07	₹3,321.00
80	Betadine Tube	₹131.46	₹118.31	156	₹236.63	₹591.57	₹439.45	₹18,456.98
81	Betadine Solution	₹102.90	₹92.61	52	₹0.00	₹277.83	₹114.66	₹4,815.72
82	Savlon	₹225.00	₹202.50	96	₹0.00	₹810.00	₹462.86	₹19,440.00
83	Dettol	₹159.38	₹143.44	79	₹0.00	₹573.77	₹269.81	₹11,331.92
84	Manforce King Dots Extra Dotted Ultra Thin Unflavored Condoms	₹150.00	₹135.00	5	₹0.00	₹135.00	₹16.07	₹675.00
85	Manforce Xotic 1500 Dots Chocolate Flavour Condoms	₹120.00	₹108.00	1	₹0.00	₹108.00	₹2.57	₹108.00
86	Manforce Xotic 1500 Dots Strawberry Flavour Condoms	₹99.00	₹89.10	25	₹0.00	₹178.20	₹53.04	₹2,227.50
87	Manforce Overtime Pineapple Flavoured Dotted, Contoured & Ribbed Condoms	₹120.00	₹108.00	24	₹0.00	₹216.00	₹61.71	₹2,592.00
88	Manforce Overtime Condom Combo (Orange + Pineapple)	₹260.00	₹234.00	26	₹0.00	₹468.00	₹144.86	₹6,084.00
89	Skore Skin Thin Ultra Fine Condoms	₹180.00	₹162.00	21	₹0.00	₹324.00	₹81.00	₹3,402.00
90	Skore Nothing Chocolate condoms	₹150.00	₹135.00	36	₹0.00	₹405.00	₹115.71	₹4,860.00
91	Skore Champion Combo 3 packs	₹540.00	₹486.00	3	₹0.00	₹486.00	₹34.71	₹1,458.00
92	Durex Extra Time Ultra Thin Condoms	₹420.00	₹378.00	9	₹0.00	₹378.00	₹81.00	₹3,402.00
93	Cobra Dotted Lubricated Condoms	₹1,200.00	₹1,080.00	10	₹0.00	₹2,160.00	₹257.14	₹10,800.00
94	Cobra Premium Condom Mango	₹30.00	₹27.00	8	₹0.00	₹54.00	₹5.14	₹216.00
95	Cobra Premium Thinnest Super Dotted 1500+ Dots Lubricated Banana Flavored	₹90.00	₹81.00	29	₹0.00	₹162.00	₹55.93	₹2,349.00
96	Moods Dotted Condoms	₹100.00	₹90.00	5	₹0.00	₹90.00	₹10.71	₹450.00
97	Moods Variety Pack	₹130.00	₹117.00	8	₹0.00	₹234.00	₹22.29	₹936.00
98	Moods Ultima Mutual Climax - Dotted Ribbed Climax Delay Condom	₹250.00	₹225.00	6	₹0.00	₹225.00	₹32.14	₹1,350.00
99	KamaSutra LongLast Condom for Men - Dotted	₹250.00	₹225.00	15	₹0.00	₹450.00	₹80.36	₹3,375.00
100	KamaSutra Superthin Strawberry Flavour Condoms	₹200.00	₹180.00	19	₹0.00	₹360.00	₹81.43	₹3,420.00
101	Himalayan Shilajit Capsules	₹375.00	₹337.50	4	₹0.00	₹337.50	₹32.14	₹1,350.00
102	Dabur Shilajit Gold Vitality Capsules	₹550.00	₹495.00	18	₹0.00	₹990.00	₹212.14	₹8,910.00
103	Rasayananam T-Charge	₹949.00	₹854.10	12	₹0.00	₹1,708.20	₹244.03	₹10,249.20
104	Pure Nutrition Testoboost	₹889.00	₹800.10	7	₹0.00	₹800.10	₹133.35	₹5,600.70
105	Pure Nutrition Menizin Musli & Kesar	₹2,811.50	₹2,530.35	18	₹0.00	₹5,060.70	₹1,084.44	₹45,546.30
106	Patanjali Swet Kushli Churna	₹475.00	₹427.50	10	₹0.00	₹855.00	₹101.79	₹4,275.00
107	Zandu Pure Shilajit Daily Energy Capsules	₹525.00	₹472.50	12	₹0.00	₹945.00	₹135.00	₹5,670.00
108	Zandu Vigorex Max Capsules	₹562.00	₹505.80	14	₹0.00	₹505.80	₹168.60	₹7,081.20
109	Zandu Ashwagandha Gold Plus	₹468.00	₹421.20	8	₹0.00	₹842.40	₹80.23	₹3,369.60
110	Patanjali Divya Youvnamrit Vati	₹393.75	₹354.38	12	₹0.00	₹708.75	₹101.25	₹4,252.50
111	Patanjali Ashvashila	₹93.00	₹83.70	8	₹0.00	₹167.40	₹15.94	₹669.60
Average		₹480.27	₹432.24	23.62	₹3.25	₹594.80		₹3642.40

The statistical summary for the pharmacy dataset was computed using Excel's built-in functions such as **AVERAGE**, **MAX**, **MIN** and **SUM**. These were applied across all medicines to generate descriptive statistics that summarize the price range, sales volume, and revenue behaviour for each item. The resulting measures helped identify both consistent and underperforming products within the 42-day observation period.

The descriptive metrics indicate that the dataset contains **111** unique medicines, with an average price of ₹480.27 and a discounted mean price of ₹432.24 after a 10% markdown. On average, each medicine recorded a total sale of 23.62 units, yielding an average 42-day revenue of ₹3,642.40.

From the ABC analysis, it was observed that roughly **20%** of medicines (Category A) accounted for nearly **75–80%** of the total revenue, while Category C items contributed less than **10%**. This confirms a classic Pareto pattern typical of retail inventories.

Using bar and pie-chart visualisations the data insights are:

- The most sold medicine-category is **AAD-PAD** which was sold **479** units and has **18.27%** share to total sale.
- The least sold medicine-category is **VMS** which was sold **112** units and has only **4.27%** share to total sale.
- The most revenue generating medicine-category is **SHP** which has total revenue of **₹1,44,678.60** and has **35.78%** share to total revenue.
- The least revenue generating medicine-category is **PD-HSD** which has total revenue of **₹9,645.12** and has **2.39%** share to total revenue.
- The most sold medicine is **Dolo-650** which was sold **162** units and has **6.08%** share to total medicines sale.
- The least sold medicine is **Manforce Xotic 1500 Dots Chocolate Flavour Condoms** which was sold **1** unit and has only **0.0003757%** share to total sale.
- The most revenue generating medicine is **Pure Nutrition Menizin Musli & Kesar** which has total revenue of **₹45546.3** and has **11.27%** share to total revenue.
- The least revenue generating medicine is **Ibugesic Plus** which has total revenue of **₹2.92** and has **0.00%** share to total revenue.
- The total revenue generated in 42-days (6-weeks) from all medicines is approximate **₹4,04,306.47**.
- The expected monthly revenue is approximate **₹2,98,416.68**.

These findings form the baseline for inventory prioritisation and demand forecasting in the final phase of the project.

4. Detail Explanation of Analysis Process / Method

4.1 Data Cleaning & Preparation

- Removed duplicates, aligned date formats, and checked for missing sales values.
- Verified unit consistency (mg/ml vs pack size).
- Calculated discounted price and 42-day total revenue per medicine.

4.2 Descriptive Statistics

- Computed minimum, maximum and average for sales and prices.
- Identified outliers indicating either seasonal demand or slow movers.

4.3 ABC Analysis for Inventory Control

- Ranked medicines by revenue share.
- **Category A:** Approximate 20% items have 70–80% of revenue.
- **Category B:** Next 30% items have 15–20% of revenue.
- **Category C:** remaining 50% have $\leq 10\%$ of revenue.

This guides the owner to prioritise Category A in procurement and expiry monitoring.

4.4 Visualization & Trend Identification

- Line charts for daily and weekly revenue fluctuations and seasonal patterns.
- Pareto chart for medicine category-wise sales and revenue.
- Pie charts showing category-wise sales and revenue proportion.
- Bar graph for top performers category-wise as well as top category-A individual medicines.

4.5 Justification of Methods

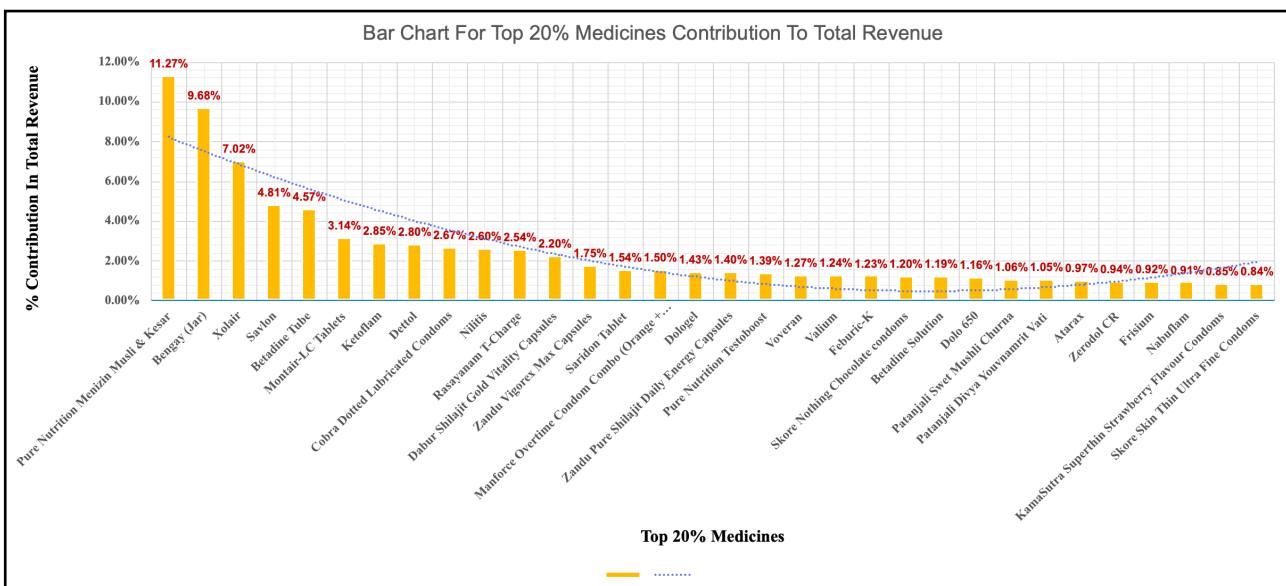
- ABC analysis and descriptive stats are ideal for small-scale business datasets.
- Easy to understand as well as implement.
- Require no complex software and offer clear actionable insights for a local pharmacy.

5. Results & Findings

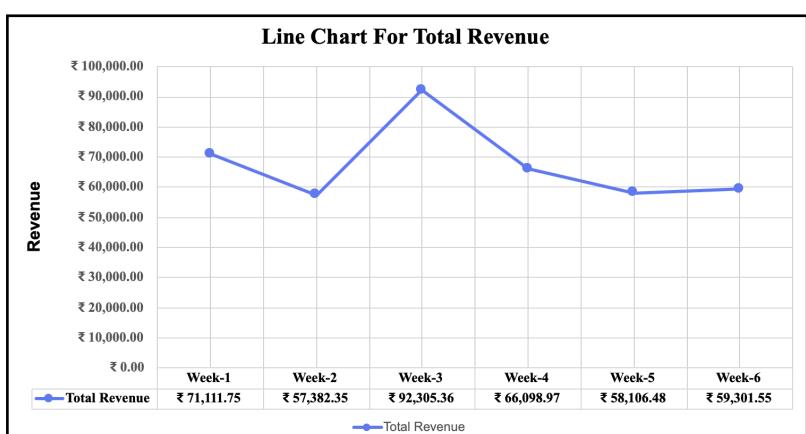
- **High Revenue Concentration :** According to the ABC Analysis, the top 32 products account for $\approx 80\%$ of total revenue.

Medicines	Total Sale	Total Revenue	% Contribution To Total Revenue	Cummulative % of Total Revenue
Pure Nutrition Menizin Musli & Kesar	18	₹45,546.30	11.27%	11.27%
Bengay (Jar)	29	₹39,123.90	9.68%	20.94%
Xolair	1	₹28,366.20	7.02%	27.96%
Savlon	96	₹19,440.00	4.81%	32.77%
Betadine Tube	156	₹18,456.98	4.57%	37.33%
Montair-LC Tablets	37	₹12,708.61	3.14%	40.47%
Ketoflam	41	₹11,522.03	2.85%	43.32%
Dettol	79	₹11,331.92	2.80%	46.13%
Cobra Dotted Lubricated Condoms	10	₹10,800.00	2.67%	48.80%

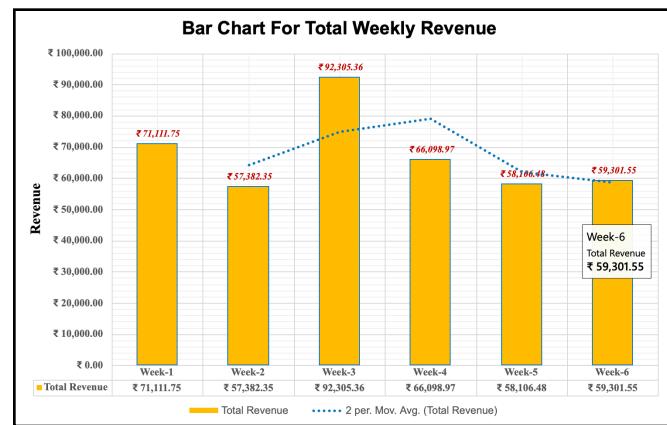
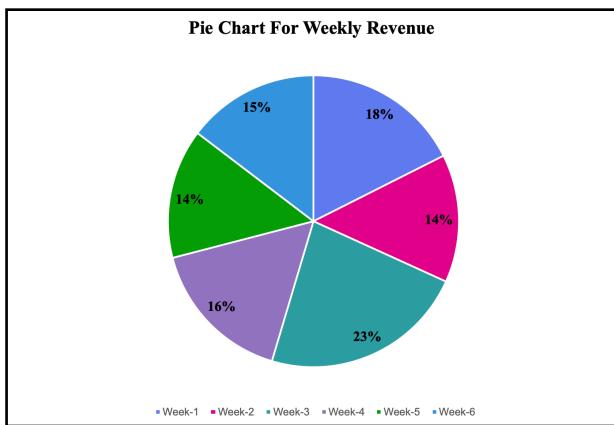
Medicines	Total Sale	Total Revenue	% Contribution To Total Revenue	Cummulative % of Total Revenue
Nilitis	14	₹10,519.74	2.60%	51.40%
Rasayanam T-Charge	12	₹10,249.20	2.54%	53.94%
Dabur Shilajit Gold Vitality Capsules	18	₹8,910.00	2.20%	56.14%
Zandu Vigorex Max Capsules	14	₹7,081.20	1.75%	57.89%
Saridon Tablet	138	₹6,210.00	1.54%	59.43%
Manforce Overtime Condom Combo (Orange + Pineapple)	26	₹6,084.00	1.50%	60.93%
Dologel	61	₹5,785.36	1.43%	62.36%
Zandu Pure Shilajit Daily Energy Capsules	12	₹5,670.00	1.40%	63.76%
Pure Nutrition Testoboost	7	₹5,600.70	1.39%	65.15%
Voveran	24	₹5,135.40	1.27%	66.42%
Valium	52	₹5,007.60	1.24%	67.66%
Feburic-K	24	₹4,989.60	1.23%	68.89%
Skore Nothing Chocolate condoms	36	₹4,860.00	1.20%	70.10%
Betadine Solution	52	₹4,815.72	1.19%	71.29%
Dolo 650	162	₹4,684.55	1.16%	72.44%
Patanjali Swet Mushli Churna	10	₹4,275.00	1.06%	73.50%
Patanjali Divya Youvnamrit Vati	12	₹4,252.50	1.05%	74.55%
Atarax	45	₹3,920.40	0.97%	75.52%
Zerodol CR	38	₹3,785.94	0.94%	76.46%
Frisium	46	₹3,726.00	0.92%	77.38%
Nabuflam	34	₹3,690.97	0.91%	78.29%
KamaSutra Superthin Strawberry Flavour Condoms	19	₹3,420.00	0.85%	79.14%
Skore Skin Thin Ultra Fine Condoms	21	₹3,402.00	0.84%	79.98%



- Fluctuations in Revenue :** The line chart is showing the fluctuations in revenue of each week, and it is showing that the week-3 revenue is at peak while week-2 has the lowest revenue.



- **Steady Demand :** *AAD-SAD, AAD-PAD, PD-AD, PD-HSD, AD* and *SHP* show consistent daily sales > 1 unit/day.
- **Slow Movers :** Total **38** slow-moving medicines (**34% of inventory**) recorded fewer than 10 units sales in 42 days, indicating significant overstock risk and capital tied up in non-performing assets.
- **Discount Impact :** **10%** price reduction increased affordability without hurting overall revenue.
- **Maximum Revenue Generating Week :** By the analysis and visualisation, the week-3 generates the maximum revenue of ₹**92,305.36** which is the **22.83%** of total revenue.



***** Finished *****