Boosting Sales and Profit Margins for a Pharmacy Store

A Proposal report for the BDM Capstone Project

Submitted by

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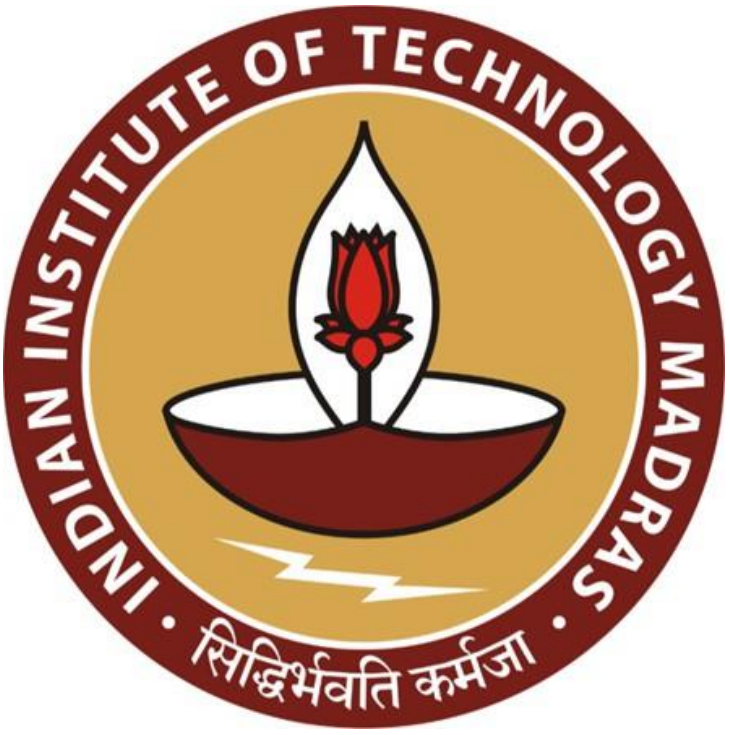

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Declaration Statement

I am working on a Project titled “Boosting Sales and Profit Margins for a Pharmacy Store”. I extend my appreciation to **Rudra Medical & General Stores**, for providing the necessary resources that enabled me to conduct my project.

I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered through primary sources and carefully analyzed to assure its reliability.

Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the information of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report. I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

I agree that all the recommendations are business-specific and limited to this project exclusively, and cannot be utilized for any other purpose with an IIT Madras tag. I understand that IIT Madras does not endorse this.

Signature of Candidate:

Name : Bingi Sai Mohith

Date : June 1, 2025

1. Executive Summary

This project is about 'Rudra Medical & General Stores' in Nagarkurnool, India, which is a retail pharmacy that aims to provide medicines with quality throughout the year. The business operates in the B2C market segment and it opened in 2021. The store is attached to Shanvi Children's hospital, and the building for the workspace is rented.

The business produces a profit but it faces some challenges which affect the operations of the business and its growth. Medicines sometimes expire before they are sold, which means a loss of minor financial value and wasted inventory. Different profit margins on products due to higher procurement cost, also slightly impacts on revenue.

By obtaining the purchase and sales transaction data for the dates of June 1 through to August 31, 2024, the project will analyse the purchase and sales transaction pattern, identify slow-moving stock, analyse seasonal sales holding, and analyse the differences in the margin of different products. The project will include exploratory data analysis, and margin calculations in Microsoft Excel. The project is intended to give meaningful insights to the business owner. The anticipated outcomes of this project are a list of medicines about to expire and a table of margin analysis of key products as a means to improve pricing strategy. This will allow the business owner to make informed decisions regarding the insights provided by this study.

2. Organization Background

The business I've chosen for this project is Rudra Medical & General Stores, a firm started by Mrs. Macharla Shruthi on 15th August 2021. The address of the store is H.No. 13-113/4/1, Snehapuri Colony, Nagarkurnool - 509209. Mrs. Shruthi, a B.Tech graduate and housewife, started the pharmacy with no retail experience. She was motivated by the lack of reliable and affordable medical care for families, especially children, in Nagarkurnool. She noticed that beyond government healthcare, there were few dependable options as the town grew.

The store operates on a B2C model, focusing on providing good quality medicines, increasing revenue and avoiding inventory wastage. Since opening, Rudra Medical & General Stores has achieved an annual turnover of Rs. 12-14 lakhs and earned around Rs. 3.6

lakhs in profit last year (F.Y. 2024 -25). The pharmacy store is backed by Shanvi Children's Hospital owned by the owner in a rented building. Dr. Rajesh Goud has been the key doctor of the hospital from its inception.

Currently, Mrs. Farzana manages the store as the pharmacist. Earlier, Mr. Shiva and Mr. Sunny Goud held this role. The store has a small team of three who work together to serve customers. As of now, Rudra Medical & General Stores does not offer online sales, with all transactions taking place in-store.

3. Problem Statement (Listed as Objectives)

3.1 Expiry and Inventory Reduction Analysis

The store struggles with medicines expiring before sale, causing annual losses of Rs. 50,000 to Rs. 75,000. This leads to wasted inventory and limits funds for restocking essential drugs.

3.2 Profit Margin Optimization Analysis:

The store's staff note that varying profit margins quietly reduce annual revenue by 5-8%, despite steady customer purchases, which is found to be quite significant for a retail shop earning a modest Rs. 30,000 monthly profit. High procurement costs for specialized medicines, often 20-30% pricier than alternatives, eat into earnings, making it harder to maintain consistent profits.

4. Background of the Problem

Rudra Medical & General Stores faces challenges that, while manageable, affect its operations and growth potential. The first issue is that medicines sometimes expire unsold, leading to annual losses of Rs. 50,000 to Rs. 75,000, which hurts a small pharmacy like this. This problem arises when certain medicines, often less common ones, don't sell quickly enough before their expiry dates. Internally, the store lacks a strong system to track slow-moving stock, so these items go unnoticed until it's too late, while externally, unpredictable customer demand—due to seasonal illnesses or shifting health trends—makes it hard to predict what will sell. The major cause is the absence of proactive inventory management, which results in wasted stock and less money to restock popular drugs.

The second challenge is varying profit margins, which quietly reduce annual revenue by 5-8%, as shared by the staff, despite steady sales for a shop earning Rs. 30,000 monthly profit. This happens because specialized medicines cost 20-30% more than alternatives, cutting into profits. Internally, limited supplier options force the store to buy at higher rates, while externally, competition from larger pharmacies like Apollo Pharmacy outlets offering discounts pressures pricing.

5. Problem Solving Approach

To solve the problem statements listed in the report, a detailed analysis of the sales and purchases data is essential.

Problem 1: Medicine Expiry and Wastage

5a. Methods Used with Justification

- **Quantitative Methods** :
  - Sales and Expiry Check : I'll look at sales data to see how often each medicine sells and compare that to expiry dates, flagging batches with less than 30 days left and low sales.
  - Turnover Rates : I'll figure out how fast stock moves by dividing sales by average stock, pointing out slow sellers.
  - Justification : These steps give a clear picture of what's not selling, so we can act, like offering discounts to clear stock.
- **Qualitative Methods** :
  - Chatting with Staff : I'll talk to the team to learn why some drugs don't sell as frequently as others.
  - Justification : These chats and observations add depth to the numbers, showing the real reasons behind expiry issues.

5b. Justification of Data Collection

- **Data Sources** :
  - Sales Data : Covers Bill No, Date, Medicine Name, Batch No, Expiry Date, Issued Quantity, Rate, Value, taken from billing records. The sales data comes from physical bills, as the store uses a specialized DBMS, so I'll carefully enter it into MS Excel sheets by hand to prepare it for analysis.
- **Variables of Interest** :
  - Medicine Name, Batch No, Expiry Date, Sales Date, Issued Quantity.
  - Justification : These details connect sales to expiry risks, helping us find medicines likely to go to waste.

5c. Analysis Tools with Justification

- **Microsoft Excel** :
  - Use : I'll sort data, calculate days to expiry, and use pivot tables to sum up sales by medicine. Bar charts will show slow movers.
  - Justification : Excel is easy to use for small datasets, with tools like pivot tables to make insights clear and proper.

Problem 2: Inconsistent Profit Margins

5a. Methods Used with Justification

- **Quantitative Methods** :
  - Margin Calculation : I'll work out margins (Margin = (Rate - Procurement Cost) / Rate) to find medicines with slim profits, like under 10%.
  - Cost vs. Revenue : I'll compare what we earn versus what we spend per medicine to see where costs hurt most.
  - Justification : These calculations depict exactly which medicines drag down profits, guiding better pricing or sourcing.
- **Qualitative Methods** :
  - Talk with owner : I'll ask the owner about high costs of particular drugs and identify key reasons behind this.
  - Justification : These conversations uncover why costs are high, making our data insights more actionable.

5b. Justification of Data Collection

- **Data Sources** :
  - Sales Data : Includes Medicine Name, Rate, Issued Quantity, Value, for calculating revenue.
  - Purchase Data : Gives procurement costs per medicine, key for margins.
- **Variables of Interest** :
  - Medicine Name, Rate, Procurement Cost, Issued Quantity, Revenue, Cost.
  - Justification : These fields help calculate margins and identify low-profit medicines accurately.

5c. Analysis Tools with Justification

- **Microsoft Excel** :
  - Use : I'll calculate margins, make tables to compare costs and revenue, and highlight low-margin items with color coding.
  - Justification : Excel's tools are perfect for margin analysis and clear reports.

6. Expected Timeline

6.1 Work Breakdown Structure

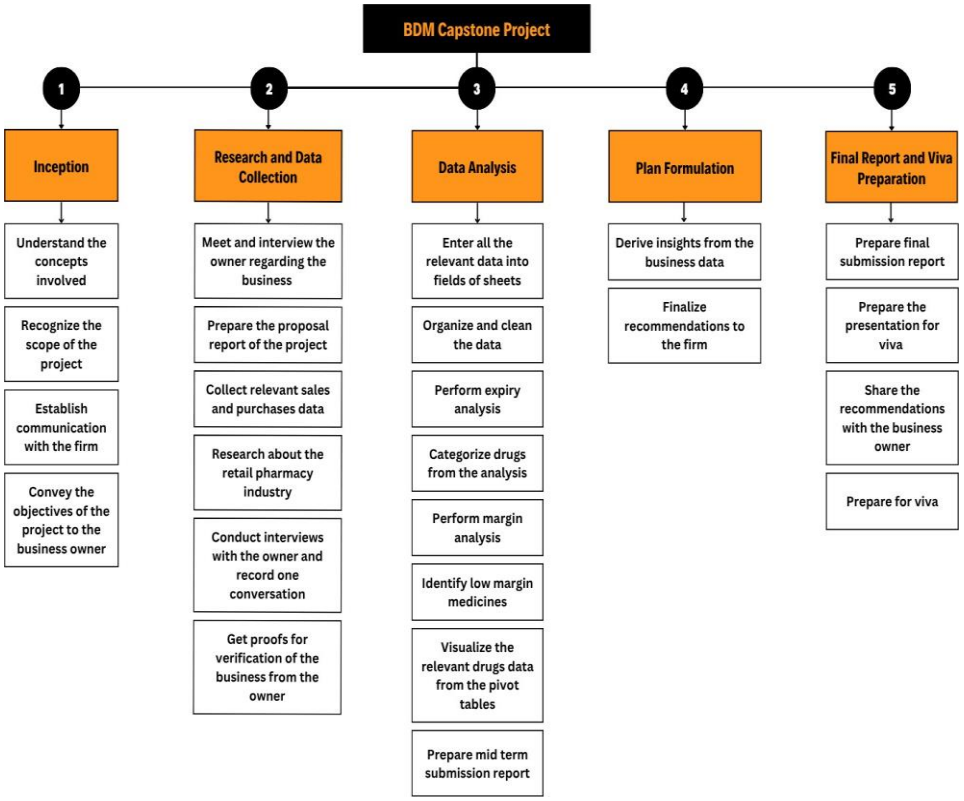

Figure 1 Work Breakdown Structure Flow Chart [WBS Flow Chart]

6.2 Gantt Chart

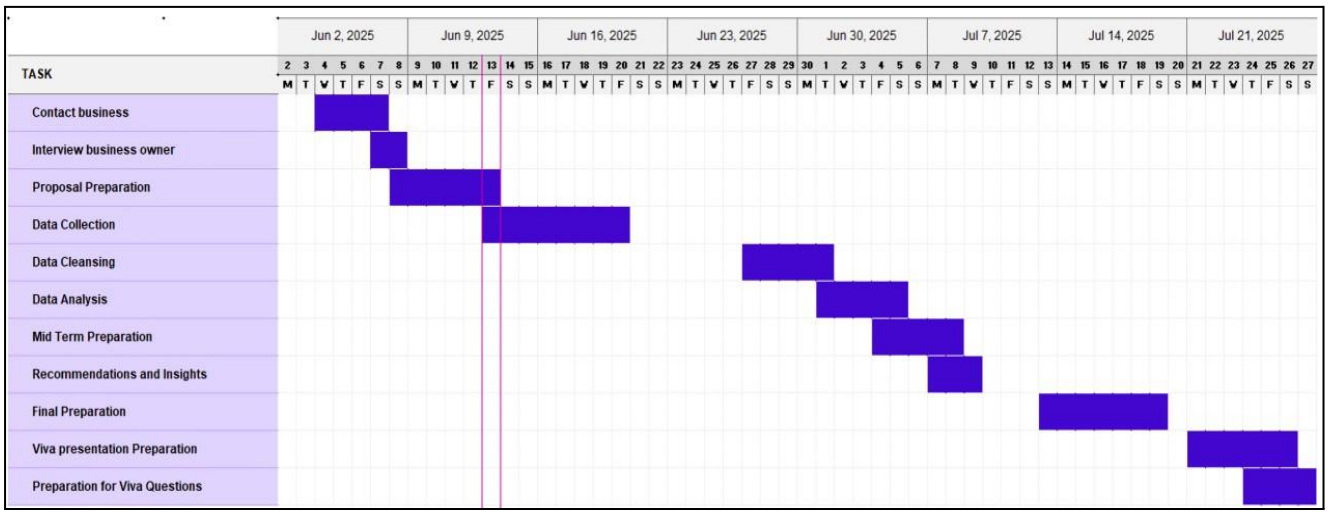

Figure 2 Gantt Chart [Proposed Timeline]

7. Expected Outcomes

This project on Rudra Medical & General Stores aims to tackle its challenges by collecting available data and analyzing the relevant data fields with tools like MS Excel. The goal is to solve the business's key issue which include medicines expiring unsold and inconsistent profit margins, through a thoughtful, data-driven approach, making operations smoother and more profitable for this firm. The expected outcomes of the BDM Capstone project are listed as follows:

1. **Reducing Expiry Losses**: A list of slow-selling medicines nearing expiry, such as those with less than 10 units sold, will help cut the Rs. 50,000–75,000 yearly loss.
2. **Improving Profits**: A table will highlight top-selling medicines with low margins (below 10%), offering a way to address the 5–8% revenue drop through better pricing or sourcing.
3. **Simplifying Inventory**: An Excel template which will flag slow movers early, making stock management easier and less stressful.