



Business Data Management

A Proposal report for the BDM capstone project



TITLE: Precision Enhancement of Customer Care Workflow in Pharmaceutical Setting & Leveraging Data-Driven Strategies.

Preliminary information of the student:

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Declaration Statement

I am working on a Project titled “**Precision Enhancement of Customer Care Workflow in Pharmaceutical setting**”. I extend my appreciation to “**LAXMI MEDICAL AGENCIES**”, 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 from 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 principles 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 understand that all recommendations made in this project report are within the context of the academic project taken up towards course fulfillment in the BS Degree Program offered by IIT Madras. The institution does not endorse any of the claims or comments.

D. Umesh manikanta

Signature of Candidate: (**Digital Signature**)

Name: DHULIPALLA UMESH MANIKANTA

Date: 05-03-2024

Executive Summary:

- ***Brief on Organization:***

I opted to collect the data from a pharmacy named LAXMI GENERIC PHARMACY which is in Guntur, Andhra Pradesh. The Business was started in the year 2019. As time moved on, the business started expanding.

- ***Brief on Problems Faced by the Business:***

Some of the major issues the business facing are: They are unable to figure out how to manage the inventory. They encountered significant losses attributed to the expiration of medicines. Money Blockage is one of the main problems to the business. As the business had many branches, out of them some of them are performing well and some of them are not. In general, the main motive of every business is to improve their sales and net worth, so they want to expand their wings from B2C to B2B Business.

- ***Brief on Approaches and solutions:***

Analysing the data enables us to identify patterns and fluctuations in recent months, facilitating informed decisions on when to procure stock efficiently. By this, we can overcome the money blockage problem. Opening our franchises based on population living and the number of hospitals present in that area.

Organizational Background:

The business which I have approached for doing this Business Data Management is a Pharmacy named LAXMI GENERIC PHARMACY which is located at Guntur, Andhra Pradesh. The Owner of the Business is Mr. Balu. He had started the Business in the year 2019 with the capital of 10 Lakh Rupees.

In the year 2020 he opened his 2nd shop. He started hiring people to operate the shops. Likewise, the business started growing. Despite facing problems, ups and downs the business growth rate is good. Like many other businesses that encountered challenges during the pandemic, this business also confronted difficulties during that period. They started maintaining online data. At present 15 numbers are being employed in his shops and the net turnover of the company is approximately 1.5 Crores. They are trying to manage their problems of inventory, sales, etc. and they are trying to expand their business to B2B.

Problem Statements:

1. Enhancing the approach to inventory and expiration management and leveraging advanced technologies to increase profits.
2. Analyzing the factors contributing to the subpar performance of specific retail outlets (specific branches) in terms of both sales and inventory.
3. Identifying a suitable location for establishing a new franchise and ensuring the successful establishment and growth of the franchise.
4. Seeking to comprehend the root causes of anomalies within the data by leveraging historical data.

Background For Problems:

Following discussions with the owner, a notable observation emerged that the business, which was running well before COVID-19, encountered a substantial impact during and post-pandemic due to a pronounced increase in online services like home delivery, etc.

- Due to the pandemic, there are no proper sales. A huge amount of stock expired at that time, which was a huge loss for the Business.
- The accelerated shift to online services may have exposed gaps in the business's technological infrastructure, impacting its ability to seamlessly integrate digital solutions.
- Due increase in online services the difficulty raised in forecasting the demand for the medicines in the market.
- The Supply Chain of the Business was disturbed. Inconsistent supply chains could lead to stock-outs, affecting sales and customer satisfaction.
- Neglecting to adapt to evolving consumer preferences could lead to a diminishing market share and a decline in customer loyalty to the business.
- External factors like the transportation (Importing from other places) and the time gap between ordering the stock and receiving the stock might have affected the Business.
- Because of these factors, it took long time to attract customers within the market.

Problem Solving Approach:

1. For the first problem (On Inventory), the following might be the solution:
 - As the business has been maintaining data in terms of sales, purchase, current stock, bills, and noting the supplier company and individual expiration dates for each medicine, etc.
 - With the help of the data provided by the business, we can extract great insights like:
 - i. By finding and analyzing the trends of sales we can figure the abnormalities or Outliers in the sales.
 - ii. From which company's products are getting sold at fast rate.
 - iii. We can find Sales demand patterns across various months.
 - By employing these methodologies and discoveries, the management of inventory is effectively optimized.
2. For the Second problem (Branch Analysis), the following might be the solution:
 - By utilizing the data furnished by the business enables us to extract valuable insights, such as:
 - i. Analyze customer demographics from the data to identify well-performing and underperforming branches.
 - ii. We can analyze the branches week-wise / month-wise and trying to find out which external factors are contributing to these kinds of behaviors?
 - iii. Evaluating how well employees are doing in each branch helps figure out how each branch is performing.
3. For the Third problem (Opening New Branches):
 - To recommend an ideal location for the new branch in the desired city or town, we consider factors such as the local population demographics, population density, and the number of hospitals in the area, checking how many pharmacies are already there in that area, Address of the customers etc.
 - Looking into the overall business environment in the area and how other medical shops are running in that area we can get some insights.
 - Checking some other external factors like connectivity to that area, digital connectivity, security, etc.

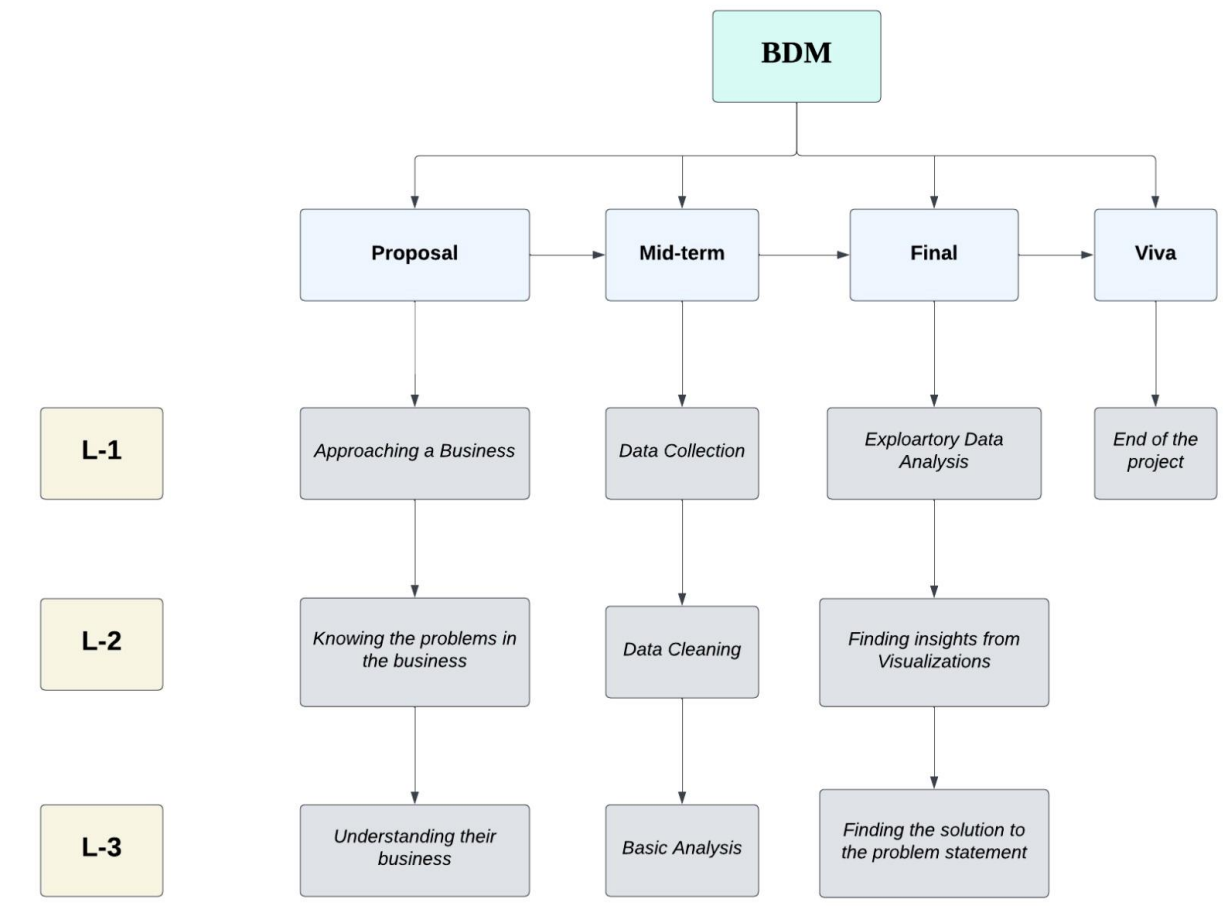
4. For the Fourth problem (Root causes for abnormalities):

- It is difficult to find root cause for each up and down in the business, as the sales are not same on each day. But we can try to find for some abnormalities.
- When there is an abnormality, we can try to find whether this abnormality is due to internal problem or External.
- By conducting market research and competitive analysis during abnormal periods we try to figure out the reason behind the abnormalities.

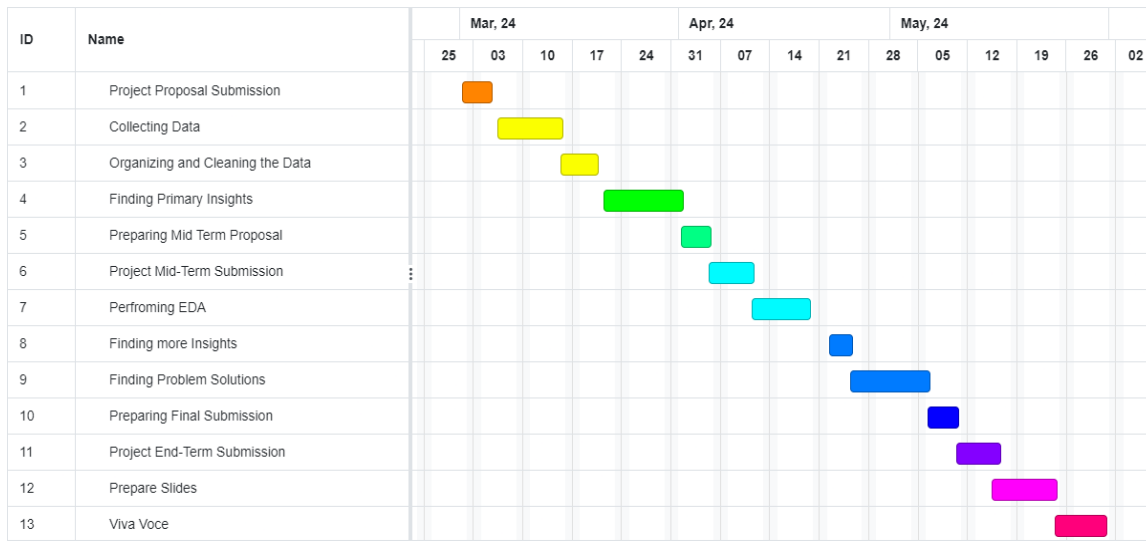
Tools that are going used for solving the problems mainly are Excel and Python.

Expected TimeLine:

i. Work Breakdown Structure for the for the project:



ii. Gantt Chart For the Expected Timeline:



Expected Outcomes:

- A primary expected result involves the enhancement of inventory management, thereby fostering an increase in both sales performance and the overall financial value of the company.
- Trying to reduce losses from expired medicines, and increased profitability, with the help well organized data.
- A good understanding on customer demographics and branch performance that aims to successful strategies for thriving branches while offering insights into factors causing underperformance.
- By considering factors like population demographics, hospital density, and the local business environment, the recommended locations for new branches have a high probability rate of getting succeed.
- Trying to find the abnormalities, reducing stockouts and enhanced inventory management by analysing the data and trying to find internal and external factors that are contributing to these abnormalities and working on them will make good changes in the business.