BEAUTIQUE DATA SYNC OPERATION AND INTEGRATION ON BEAUTY PARLOUR AND BOUTIQUE BUSINESS

A Mid-Term Report for the BDM Capstone Project

Submitted by

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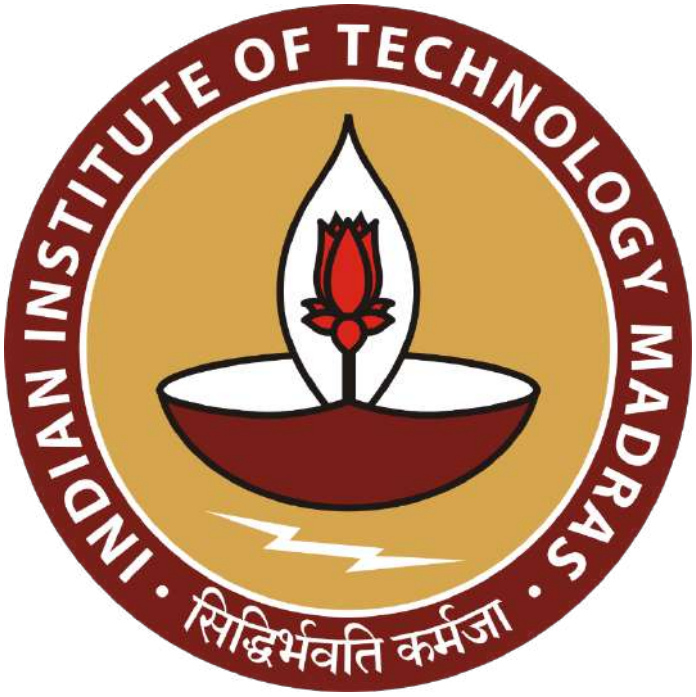

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1. Executive Summary

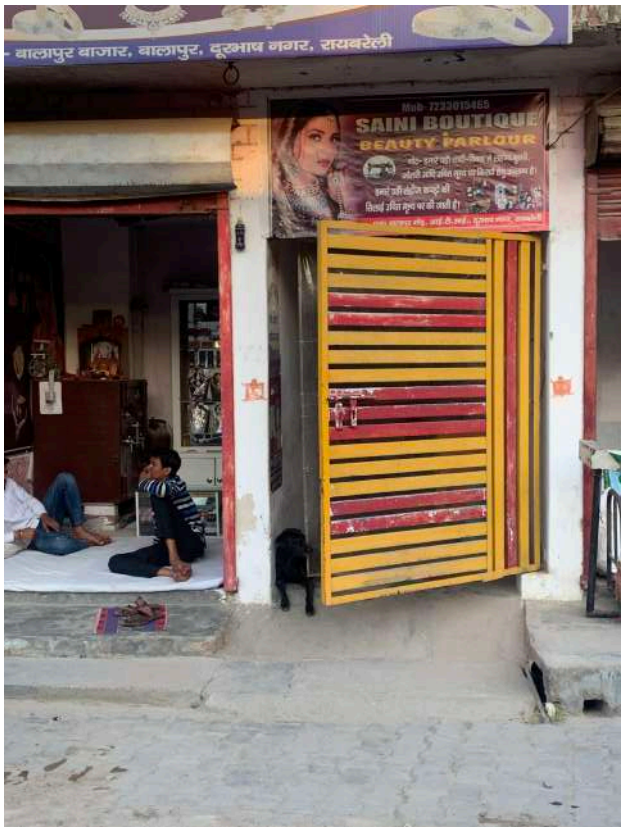
Saini Boutique And Beauty Parlour, Balapur, Raebareli, Uttar Pradesh, serves as the centre point for the Business Data Management Project at IIT Madras. Our project is about a Beauty parlour and Boutique shop, Our aim is to examine the operational and financial aspects of the business.

As stated earlier in the proposal, our business is a medium-sized parlour and boutique shop, that is currently encountering challenges in terms of profit and customer time management which is having an indirect impact on the shop's net profit and services, Our project seeks to address the pressing challenges faced by business through data-driven decision-making, strategic planning, and operational optimisation. We are dedicated to delivering actionable insights that drive tangible improvements in performance and contribute to the overall success and growth of the business. Our goal for the mid-term is to find which service type contributes more to the revenue and the most popular services by studying customers' demand, to examine the shop's revenue over three month, to analyse customer demands by the study of the frequency of different service categories and to identify the consistency of revenue and its fluctuations.

2. Proof of Originality

a. Photograph of the organisation

The business mostly opens from 10:00 am to 9:00 pm and these photographs fig.(2.a.a) and fig.(2.a.b) was taken at 5:30 pm in the evening.



fig(2.a.a)

fig(2.a.b)

b. Letter from the Organisation

The authorisation Letter to collect the data from the Saini Boutique and Beauty Parlour received on 23rd January 2025.

SAINI BOUTIQUE AND BEAUTY PARLOUR

Date: 23/01/2025

To whom it may concern

This is to certify that Mr Priyanshu Yadav has taken data from our organization

This letter confirms that we have complete No Objection upon him/her for using our data for his BDM capstone project

This NOC has been issued as per the request of Priyanshu Yadav and can be used by him/her for the specific purpose mentioned above. During his/her time with us, he/she has been sincere and diligent individual. We wish him/her good luck.

Sincerely.

Mrs. 

c. Link to the conversational video: BDM Project Conversational Video with the Owner

3. Metadata and Descriptive Statistics

A. DATA COLLECTION

When more customers are coming to take services, the data is written on a page as a rough entry due to the paucity of time. When I asked the owner for the data, she told me that she didn't do the data entry but after my request, she agreed to do the data entry into a rough diary after 9:00 pm when the shop closes. For this project, data is collected from the rough diary.

B. CONTENTS OF ORIGINAL DATA

The original data contains the following details:

1. Dates - from 25th January to 25th April 2025.

2. Parlour Services - Threading, Clean-up, Facial, Nail-polish, Side-makeup, Bridal-make-up, Upper-lips, Forehead, Hair-cutting, Foundation, Manicure, Nail-paint.

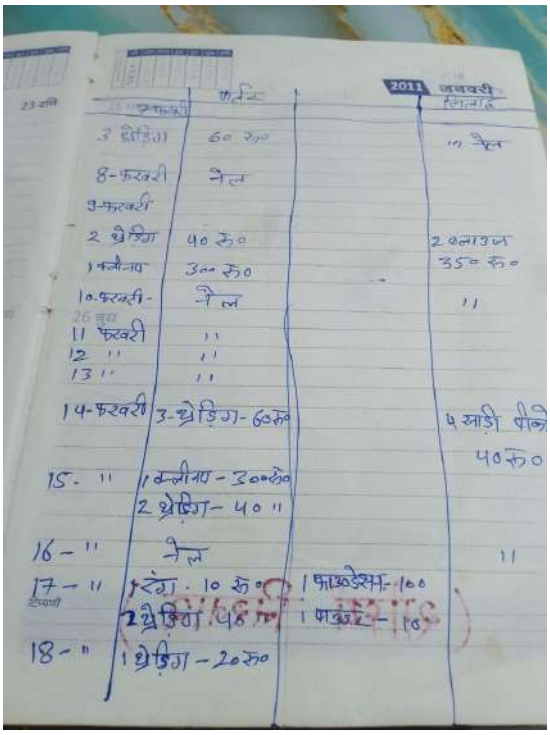
3. Boutique Services - Blouse sewing, Saree pico, Suit sewing, Suit fitting, Kurti fitting, Saree fall, Lehenga blouse sewing.

4. Cosmetics sale - Lipstick, Powder, Bindi, Fruit-cream, Cluture, Nail-polish, Kajal pencil, Hair colours, Foundation kit.

5. Quantity - no. of counts of service or product

6. Amount - amount of service or product

here is the pic of an informal picture of sales and purchase data -



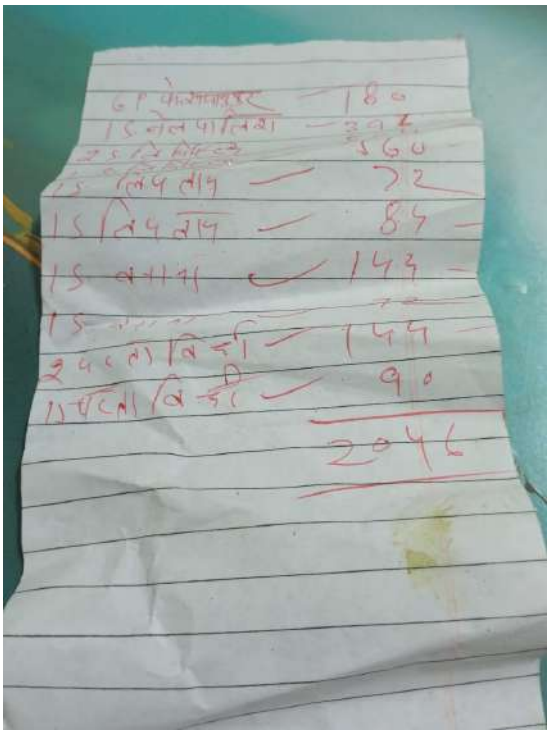


fig.(3.a.a)(pic of the data for services provided to the customer) fig.(3.a.b)(pic of the purchased items for the shop)

C. DATA RELEVANT TO ANALYSIS

I have meticulously gathered three months data from 25th January to 25th April 2025. Throughout this period, my data collection approach involved weekly conversations with the owner and the data collection, allowing me to compile a comprehensive set of cumulative data encompassing the entire period. After cleaning the data, it is maintained for analysis in this format - Business data link.

Here is the Descriptive statistics and analysis conducted based on the collected data.

1. Dataset Overview
    - Time Frame: 25 feb - 25 april 202
    - Number of SKUs: 28
    - Number of Transactions: 181
    - Total Revenue: 29420
    - Average Revenue Value: 197.44
    - Business closed = 30 days

2. Central Tendency and Distribution

	Quantity	Amount
count	151.000000	151.000000
mean	1.576159	195.099338
std	0.905075	665.006133
min	1.000000	10.000000
25%	1.000000	20.000000
50%	1.000000	60.000000
75%	2.000000	200.000000
max	5.000000	8000.000000

4. Detailed Explanation of Analysis Process/Methods:

The analysis was conducted using three months of sales data that were collected and stored in Google Sheets. This spreadsheet served as the primary data source and also facilitated the creation of some initial visualizations. The structured dataset was then exported and processed in Python using Jupiter Notebook to perform deeper analysis and to generate additional insights. The full analytical process consisted of the following steps:

1. Data Collection & Initial Vizualization:
   - Sales data from daily transactions, categorized into Parlour services, Boutique services and Cosmetic sales, then stored in Google sheets.
   - Some visualizations such as pie charts, bar, column graphs and line chart were created directly within Google Sheets to get an initial sense of distribution and trends.
2. Data Cleaning and Preparation:
   - The dataset was imported into Python using Pandas library.
   - Data cleaning involved:
     - Handling missing values and blank entries.
     - Removing or tagging rows with zero revenue, often indicating days the shop was closed or not operational.
3. Exploratory Data Analysis(EDA):
   - Descriptive statistical measures such as total revenue, mean daily revenue, and category-wise distribution were computed.
   - Data was segmented by service type to facilitate category-specific insights.
4. Advanced Visualization:
   - In addition to the charts made in Google Sheets, further visualization were created in Python using Matplotlib and Seaborn:
     - Line graphs to observe revenue trends over time.
     - Bar charts to compare counts of services.
     - Pie charts for revenue share across service types.
   - These charts provide a clearer picture of customer behaviour, demands and seasonal patterns.
5. Insight Extraction:
   - Trends were identified, such as peak revenue days and the most frequently availed services.
   - The analysis accounted for outlier days, such as one significant spike caused by a bridal package transaction.

- Blank or zero-sales days were highlighted to understand operational efficiency and lost revenue opportunities.

5. Results and Findings :

1. Graphs and Charts.

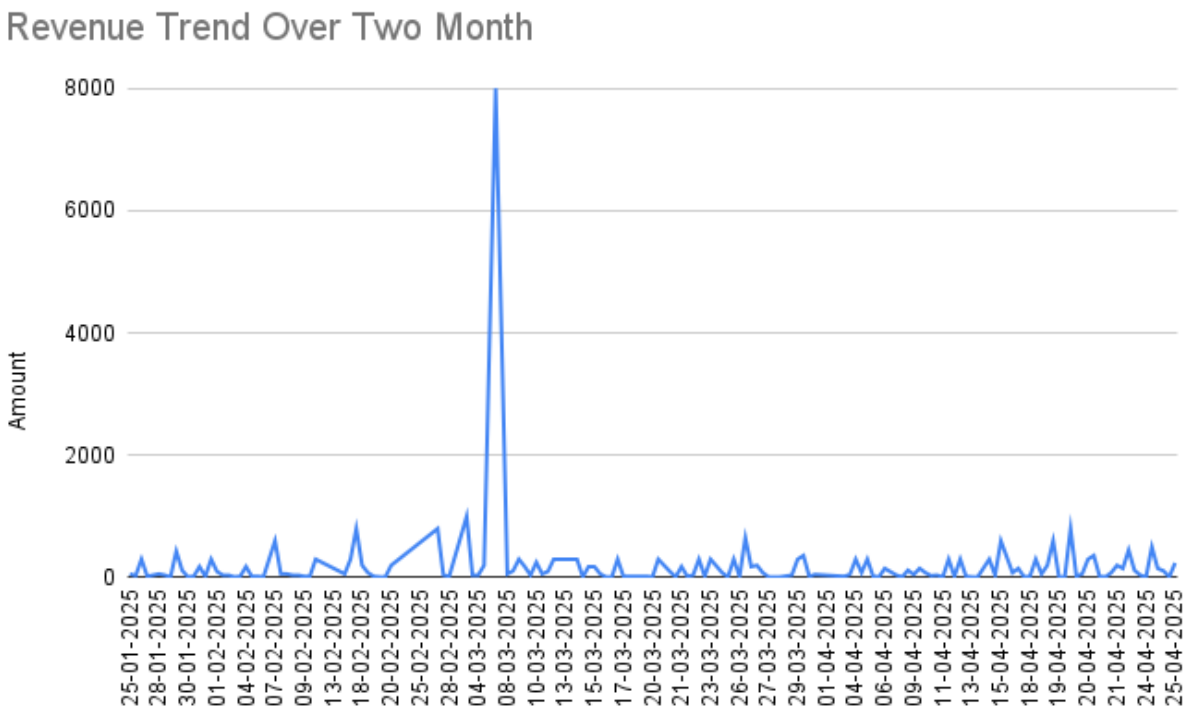


Fig. (5.1.a) Total Revenue Trend over three months.

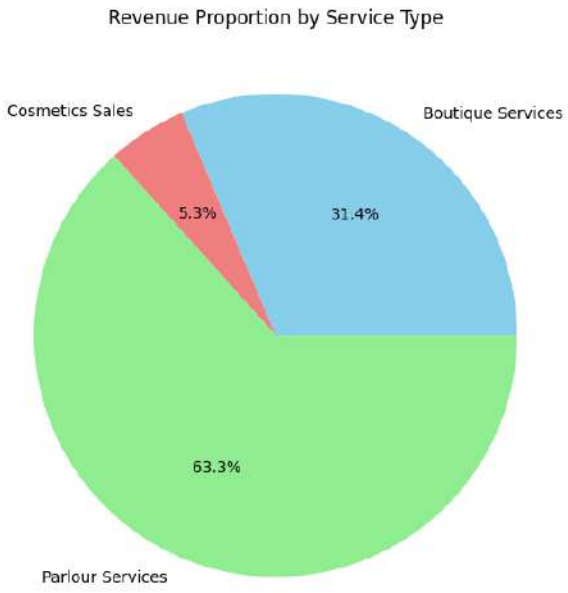


Fig. (5.1.b) Revenue Proportion by Service Type observed over three months.

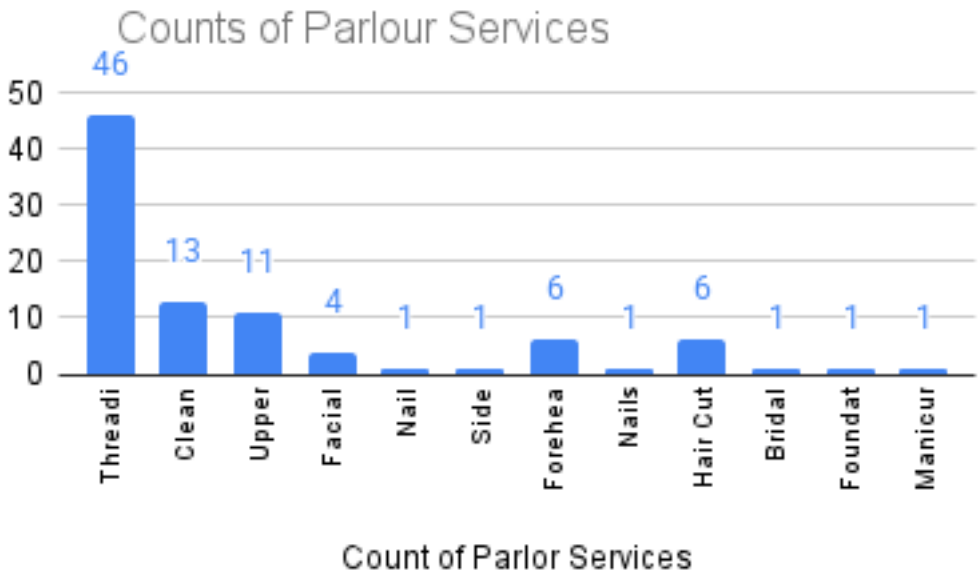


Fig. (5.1.c) Total Number of Counts of parlour services over three months.

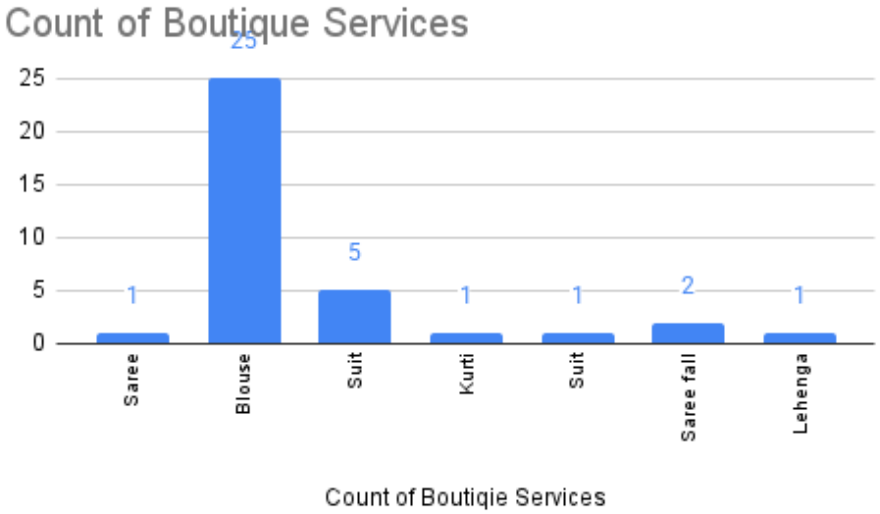


Fig. (5.1.d) Total Number of Counts of Boutique services over three months.

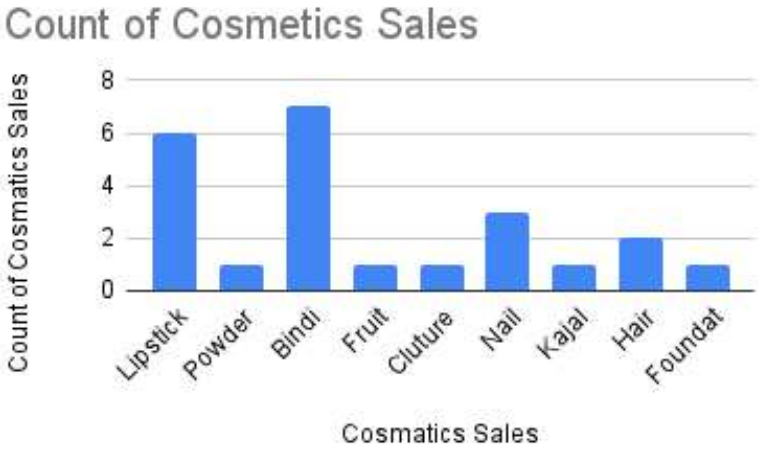


Fig. (5.1.e) Total Number of Counts cosmetics services over three months.

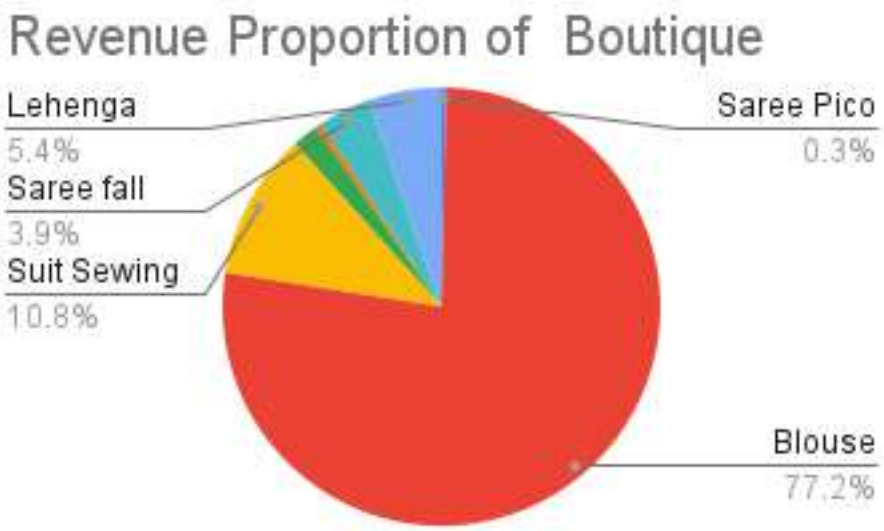


Fig. (5.1.f) Revenue Proportion of boutique services over three months

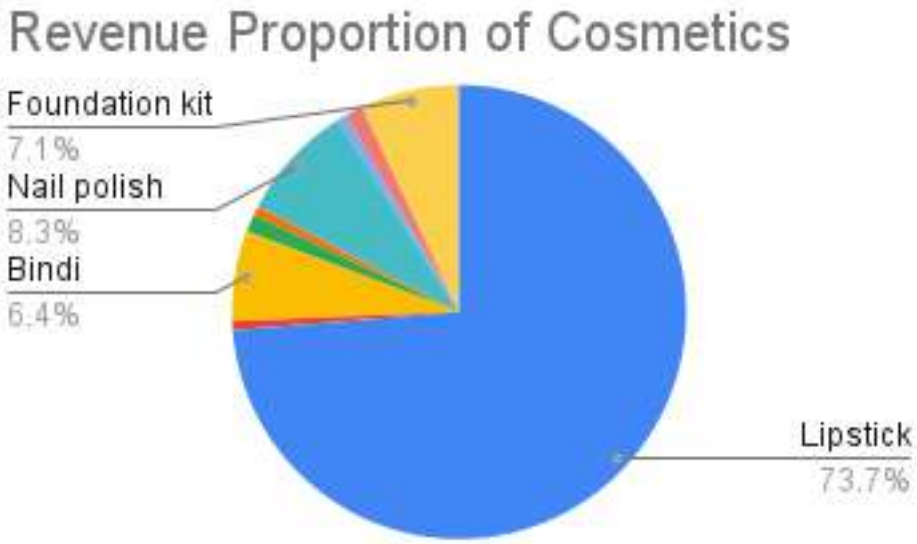


Fig. (5.1.g) Revenue Proportion of cosmetics sales over three months.

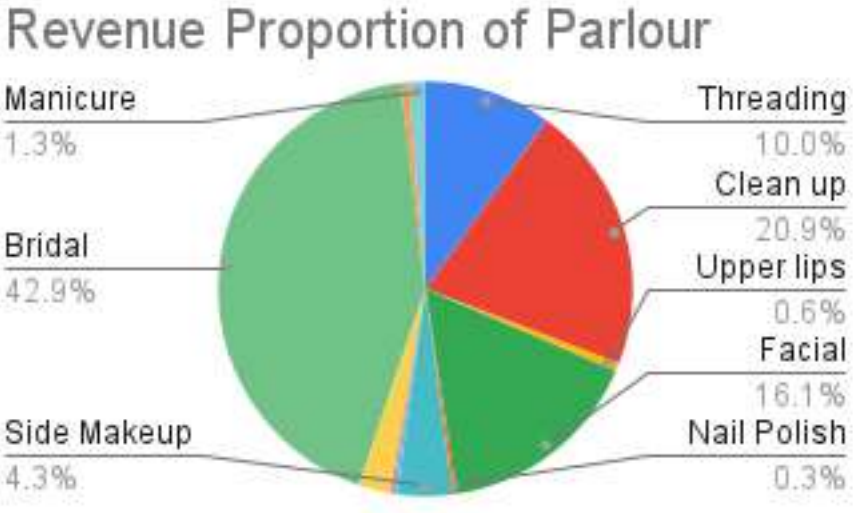


Fig. (5.1.h) Revenue Proportion of parlour services over three months.

2. Findings and conclusion:

Based on the analysis conducted using the graphs and charts, several key findings have emerged:

Over the three months, a total of 29420 in total revenue was made with 63.3% of parlour services, 31.4% of boutique services and 5.3% of cosmetic sales

1. Parlour services contribute the highest revenue, and it has the most popular services, as we can see in the Fig. (5.1.b) parlour services were the most frequently used.

2. Boutique services were used less frequently but still contributed significantly to the revenue

3. Cosmetic sales had the lowest contribution in terms of revenue and transaction count.

4. The dataset contained 30 days of blank records which indicates days with no transaction, which implies that the shop was closed or did not receive work which had a direct impact on revenue

5. The revenue trend in Fig. (5.1.a) shows that the revenue is low to moderate daily revenue, and there is one major spike around 01-03-2025 because of the bridal package otherwise stable but relatively low day-to-day

In summary, the analysis highlights that Parlour services have the highest revenue, also in this region, customers demand increases most during wedding seasons and special packages during wedding seasons significantly boost revenue and could be a strategic focus. It also indicates that more tracking and analysis of sales data can further identify patterns. The final report will prioritise to identify these common details and devising a solution.