

**BUDGET FORECASTING AND OPTIMIZING FINANCIAL
PERFORMANCE: A DATA DRIVEN APPROACH TO
REDUCING LOSSES AND ENHANCING PROFITABILITY
AT BRILLIANT STUDY CENTRE PVT.LTD.**

Summer Internship Project Report submitted in partial fulfilment of the
requirements for the award of the degree of

Master of Business Administration

By

SARATH S

REGISTER NUMBER

2328625

Under the Guidance of
PROF. SASEEKALA M



**School of Business and Management
CHRIST (Deemed to be University), Bangalore**

JULY, 2024

**BUDGET FORECASTING AND OPTIMIZING FINANCIAL
PERFORMANCE: A DATA DRIVEN APPROACH TO
REDUCE LOSSES AND ENHANCE PROFITABILITY AT
BRILLIANT STUDY CENTRE PVT.LTD.**

Summer Internship Project Report submitted in partial fulfilment of the
requirements for the award of the degree of

Master of Business Administration

By

SARATH S

REGISTER NUMBER

2328625

Under the Guidance of
PROF. SASEEKALA M



**School of Business and Management
CHRIST (Deemed to be University), Bangalore**

JULY, 2024



Declaration

I hereby declare that the Summer Internship Project report titled budget forecasting and optimizing financial performance: A Data Driven Approach To Reducing Losses And Enhancing Profitability at Brilliant Study Centre Pvt. Ltd. has been undertaken by me in partial fulfilment of the requirements for the award of the degree of Master of Business Administration. I have completed this study under the guidance of Prof. Saseekala M.

I also declare that this Summer Internship Project report has not been submitted for the award of any Degree, Diploma, Associateship, Fellowship or any other title, in CHRIST (Deemed to be University) or in any other university.

Place: Bangalore

Date: 03/07/2024

Sarath S

2328625



Certificate

This is to certify that the Summer Internship Project report submitted by Sarath S on the title “A Data Driven Approach To Reducing Losses And Enhancing Profitability at Brilliant Study Centre Pvt. Ltd, Kottayam, Kerala” is a record of Summer Internship Project work done by him during the academic year 2023-24 under my guidance and supervision in partial fulfilment of the requirements for the award of the degree of Master of Business Administration.

Place: Bengaluru

Date: 03/07/2024

Prof. Saseekala M

Teaching Faculty, Business Analytics
School of Business and Management
CHRIST (Deemed to be University)
Bengaluru

Acknowledgement

I am indebted to many people who helped me accomplish this Internship successfully. First, I thank the Vice Chancellor, CHRIST (Deemed to be University), Dr Fr Joseph C C, for giving me the opportunity to do my project.

The leadership team at SBM (School of Business and Management), Bangalore Central Campus led by Dr Jain Mathew, Dean, Dr Mareena Mathew, Head of the Department and Dr Lakshmi Shankar Iyer, Head of specialization ensures that all students gain relevant knowledge and skills through all courses especially courses like summer internship projects (SIP). The leadership team must be thanked for their efforts in guaranteeing quality internships for us.

I wish to express my sincere thanks to Brilliant Study Centre Pvt. Ltd., Pala and to my corporate mentor, Mr. Praveen Kuriakose, Head of Finance, Brilliant Study Centre Pvt. Ltd., Pala, for giving me an opportunity to work under his guidance and successfully complete my internship.

My academic mentor Prof. Saseekala M, deserves a special mention of gratitude for guiding me throughout my internship. The inputs I received from my mentor during the weekly meetings helped me to get a deeper understanding of my project.

I thank my parents for their blessings and constant support, without which this internship project would not have seen the light of day.

Sarath S

2328625

INTERNSHIP CERTIFICATE



INDIA'S LEADING
JEE / NEET
ENTRANCE COACHING CENTRE

REGISTERED OFFICE:
D-BLOCK,D5, V / 212E, MUTHOLY, PULIYANNOOR P.O.
PALA, KOTTAYAM, PIN - 686573
CIN No.: U80902KL2022PTC073234

Ref: BSCPL/INTER/02/2-25

10th June 2024

To whomsoever it may concern

This is to certify that **Mr. Sarath S.**, currently pursuing an MBA in Business Analytics at Christ (Deemed to be University), Bangalore, has successfully completed his internship as a Financial Analyst - Trainee at Brilliant Study Centre Pvt. Ltd., Pala.

Under the mentorship of **Mr. Praveen Kuriakose - Finance Manager**, Mr. Sarath S worked on the project titled "Budget Forecasting and Optimizing Financial Performance: A Data-Driven Approach to Reducing Losses and Enhancing Profitability." The internship period spanned from **29th April 2024 to 7th June 2024**.

During this tenure, we found him to be sincere, hardworking, and a keen learner. We wish him all the best in his future endeavors.

For Brilliant Study Centre Private Ltd


JIBY MATHEW
MANAGER – HUMAN RESOURCES



Chapter No.	TABLE OF CONTENTS	Page No.
1	Introduction	1-2
2	Industry and Company Profile	4-8
3	Project Design and Methodology	10-13
4	Data Analysis & Interpretation	15-28
5	Findings and Conclusion	30-32
	References	34
	Appendix	
	I. Screenshot of Similarity Index Report	36
	II. Feedback form from the corporate mentor,	37-39
	III. Feedback form from SBM mentor	40
	IV. Feedback form from Viva Panel Member	41
	V. List of online courses completed on topics related to SIP	42-43

Table No.	LIST OF TABLES	Page No.
1	Data Dictionary-Financial Statement	15
2	Data Dictionary-Canteen	15
3	Data Cleaning – Financial Statements	16
4	Descriptive Statistics for Financial Statements Periodic	18
5	Descriptive Statistics for Financial Statements Account wise	20

Fig No.	LIST OF CHARTS	Page No.
1	Key Players in the Industry	4
2.	Company Logo	6
3.	Data Preparation	18
4.	Descriptive Statistics of Canteen	20
5.	Scatterplot	21
6.	Line Graph	22
7.	Correlation Matrix- Canteen	23
8.	Budget Forecast	27
9.	Correlation Matrix – Financial Statements	30

EXECUTIVE SUMMARY

The internship project at Brilliant Study Centre Pvt. Ltd. focused on budget forecasting and optimizing financial performance. The objective was to analyze financial data, identify inefficiencies, and provide actionable recommendations to reduce losses and enhance profitability. This project provided an opportunity to apply data-driven approaches and advanced analytical techniques in a real-world setting, contributing to the financial health of the institution.

During the internship, I employed various analytical techniques to derive insights from the financial data. Exponential smoothing was used for precise budget forecasts, considering seasonal trends and patterns. Regression analysis helped identify the relationship between direct and indirect costs and their impact on financial losses. Exploratory Data Analysis (EDA) was conducted using R and Python to uncover insights and relationships within the data, utilizing libraries like Pandas, Matplotlib, and Seaborn for data manipulation and visualization. Additionally, predictive modeling was developed using linear regression and Scikit-learn to forecast future sales and revenue based on historical data, incorporating additional variables such as marketing spend and external economic factors to improve accuracy.

This internship provided significant learning opportunities in various aspects of financial analysis and management. I developed proficiency in interpreting and analyzing financial data, performing cost-benefit analysis, and identifying loss-making segments. My technical skills in Microsoft Excel, R, and Python for financial analysis, predictive modeling, and data visualization were greatly enhanced. Furthermore, I learned and applied optimization techniques to improve financial performance through cost reduction strategies, revenue enhancement tactics, and resource allocation. The experience also improved my presentation skills, enabling me to effectively communicate financial analysis and optimization strategies to stakeholders, incorporating feedback and addressing concerns.

The internship resulted in several positive outcomes for Brilliant Study Centre Pvt. Ltd. Through root cause identification, I was able to reduce overstaffing, food wastage, and inefficient inventory management. The company was equipped with creative predictive models for accurate budgeting and financial planning. Compelling data visualizations were created to illustrate key financial trends and insights, facilitating better decision-making among stakeholders.

CHAPTER I

INTRODUCTION

INTRODUCTION

In today's competitive educational landscape, institutions like Brilliant Study Centre Pvt. Ltd. must navigate financial challenges while striving to deliver high-quality education. Effective budget forecasting and financial performance optimization are essential components of this endeavour. By adopting a data-driven approach, Brilliant Study Centre aims to reduce losses and enhance profitability, ensuring sustainable growth and operational efficiency.

Budget forecasting is the process of predicting future financial conditions based on historical data, current trends, and anticipated changes. For Brilliant Study Centre, accurate budget forecasting is crucial for several reasons. It ensures that resources are allocated effectively, directing funds towards high-impact areas such as faculty development, infrastructure, and student support services. Additionally, forecasting aids in long-term financial planning, allowing the institution to prepare for future challenges and opportunities. By anticipating potential financial shortfalls or surpluses, the institution can implement strategies to mitigate risks and capitalize on favorable conditions.

Optimizing financial performance involves the systematic analysis of financial data to identify areas for improvement and implement strategies to enhance profitability. A data-driven approach at Brilliant Study Centre includes several key components. Analyzing historical data helps in understanding the financial health of the institution and setting realistic future goals. Examining industry trends and benchmarking against other leading educational institutions allows the identification of best practices and competitive positioning. Monitoring key performance indicators (KPIs) such as student enrollment rates, retention rates, faculty-to-student ratios, and facility utilization rates ensures operational efficiency.

To reduce operational losses, Brilliant Study Centre can implement several strategies based on data-driven insights. Identifying and eliminating unnecessary expenditures through regular financial audits and process optimizations is one approach. This might include reducing energy consumption, renegotiating vendor contracts, and automating administrative processes. Improving operational efficiency by optimizing staff workload, reducing redundancy, and enhancing workflow processes is another strategy. Additionally, the institution can enhance

revenue streams by introducing new courses, expanding online education offerings, and partnering with other educational institutions or organizations for collaborative programs.

Enhancing profitability involves not only reducing costs but also increasing revenue. Implementing dynamic pricing strategies based on demand, competitive analysis, and value proposition can attract more students while maintaining profitability. Investing in faculty training, curriculum development, and student support services to improve educational outcomes can attract more enrolment's through word-of-mouth and reputation. Utilizing data-driven marketing strategies to reach a broader audience, including targeted digital marketing campaigns, social media engagement, and community outreach programs, is also essential.

Advanced technologies and analytics play a pivotal role in this data-driven approach. By integrating financial management software, predictive analytics, and business intelligence tools, Brilliant Study Centre can automate budgeting, forecasting, and reporting processes, reducing manual errors and saving time. Predictive models can forecast future financial performance based on various scenarios, helping the institution make proactive decisions. Implementing real-time financial dashboards allows for the monitoring of key metrics and making data-driven decisions promptly.

Adopting a data-driven approach to budget forecasting and financial performance optimization enables Brilliant Study Centre Pvt. Ltd. to navigate the complexities of the educational sector with greater agility and precision. By reducing operational losses and enhancing profitability, the institution can sustain its growth, invest in quality education, and continue to support its mission of providing exceptional learning experiences to its students. This strategic financial management ensures that Brilliant Study Centre remains competitive and resilient in an ever-evolving educational landscape.

CHAPTER II

PART- A INDUSTRY PROFILE

PART- B COMPANY PROFILE

INDUSTRY PROFILE

COMPETITIVE EXAM COACHING

The competitive exam coaching and test preparation industry in India is a rapidly expanding sector, fueled by the growing demand for quality education and the fierce competition for limited seats in premier institutions. This industry focuses on preparing students for a variety of competitive exams, including engineering and medical entrance exams (JEE, NEET), civil services exams (UPSC), management entrance exams (CAT), and other state and national level exams.

Key players in this industry include both national and regional coaching institutes. Renowned national names like Allen Career Institute, FIITJEE, Aakash Educational Services, and Resonance dominate the scene, offering comprehensive coaching programs across the country. Regional coaching centres also play a significant role, catering to local demands. Among these, Brilliant Study Centre Pala in Kerala stands out for its strong track record in engineering and medical entrance exam preparation.

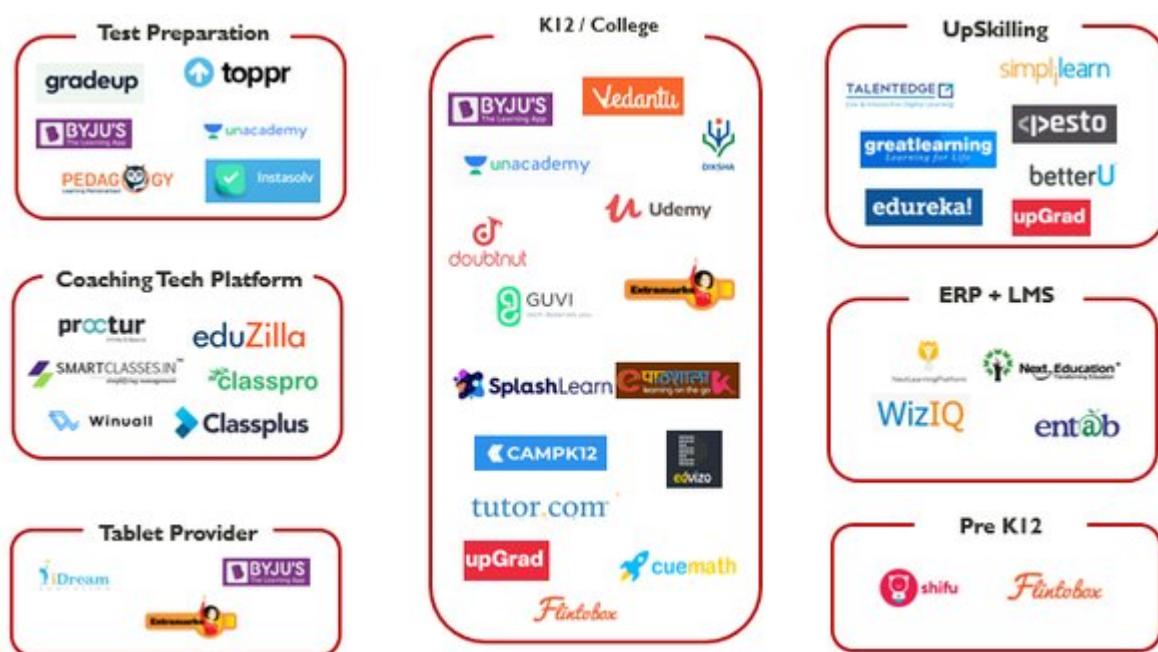


Fig 1: Key Players in the Industry

The market size for test preparation in India is substantial, with estimates suggesting it could be worth several billion dollars annually. The industry has been growing at a compound annual growth rate (CAGR) of around 15-20% over the past few years, driven by the increasing

number of aspirants and the rising importance of competitive exams in securing educational and career opportunities.

Several trends are shaping the industry. The COVID-19 pandemic accelerated the adoption of online education, prompting many coaching centers to shift to or incorporate online platforms, offering live classes, recorded sessions, and interactive learning tools. Hybrid learning models, combining offline and online methods, are becoming more prevalent, providing flexibility and catering to diverse student needs. Additionally, the use of artificial intelligence and data analytics to offer personalized learning experiences and targeted coaching based on individual student performance and learning styles is gaining traction.

Despite its growth, the industry faces several challenges. High competition makes it difficult for new entrants to establish themselves. Regulatory issues and policies can impact operations and growth, and ensuring consistent quality of education while maintaining high success rates in competitive exams is crucial for retaining credibility and attracting students.

There are also significant opportunities within the industry. Expanding to tier-2 and tier-3 cities, where access to quality coaching is limited, presents a significant growth potential. Leveraging technological advancements to enhance learning experiences and operational efficiency can provide a competitive edge. Additionally, Indian coaching institutes are exploring opportunities to cater to students in other countries, especially in regions with significant Indian diaspora.

COMPANY PROFILE



Figure 2: Company Logo

Brilliant Study Centre, located in Pala, Kerala, is a premier coaching institute renowned for its exceptional track record in preparing students for engineering and medical entrance examinations, notably the JEE (Joint Entrance Examination) and NEET (National Eligibility cum Entrance Test). Founded with the mission of providing quality education and guidance to aspiring students, Brilliant Study Centre has established itself as a leading institution in the field of competitive exam preparation.

History and Background

Brilliant Study Centre was established in 1984 in Pala, a small town in Kerala, by a group of dedicated educators and visionaries who aimed to create a hub of academic excellence. Over the years, it has grown significantly, gaining recognition and respect for its commitment to student success and academic integrity.

Courses and Programs

Brilliant Study Centre offers a range of courses and programs designed to meet the needs of students at various stages of their academic journey:

1. **Engineering Entrance Exam Coaching (JEE):** Comprehensive coaching for both JEE Main and JEE Advanced, with a focus on strengthening conceptual understanding and problem-solving skills.
2. **Medical Entrance Exam Coaching (NEET):** Intensive preparation for NEET, emphasizing mastery of the syllabus and extensive practice through mock tests and assessments.

3. **Foundation Courses:** Programs for students in lower grades (8th to 10th) to build a strong foundation in science and mathematics, preparing them for future competitive exams.
4. **Crash Courses:** Short-term intensive coaching programs for last-minute preparation and revision before entrance exams.
5. **Distance Learning Programs:** For students who cannot attend regular classes, offering study materials, test series, and online support.

Faculty and Teaching Methodology

The faculty at Brilliant Study Centre comprises highly experienced and qualified educators, many of whom are alumni of prestigious institutions like the IITs and NITs. The teaching methodology combines traditional classroom instruction with modern educational technologies. Key aspects include:

- **Personalized Attention:** Small batch sizes to ensure individual attention and tailored guidance for each student.
- **Interactive Learning:** Use of multimedia tools and interactive teaching methods to enhance understanding and engagement.
- **Regular Assessments:** Frequent tests and assessments to monitor progress, identify areas of improvement, and build exam readiness.
- **Doubt Clearing Sessions:** Special sessions dedicated to resolving student queries and strengthening weak areas.

Infrastructure and Facilities

Brilliant Study Centre boasts state-of-the-art infrastructure and facilities to support an optimal learning environment:

- **Modern Classrooms:** Equipped with audio-visual aids to facilitate effective teaching and learning.
- **Library:** A well-stocked library with a wide range of reference books, study materials, and previous years' exam papers.
- **Hostel Facilities:** Safe and comfortable accommodation for outstation students, with a focus on providing a conducive study environment.

- **Online Learning Platform:** An advanced online portal for accessing study materials, video lectures, and practice tests, enabling remote learning.

Achievements and Success Stories

Brilliant Study Centre has an impressive track record of producing top-ranking students in various competitive exams. Over the years, many of its students have secured top ranks in JEE and NEET, gaining admission to prestigious institutions like IITs, NITs, and premier medical colleges. The consistent success of its students has earned the center a reputation for excellence and reliability.

Community and Outreach

In addition to its coaching programs, Brilliant Study Centre is involved in various community and outreach activities. These include scholarship programs for meritorious and economically disadvantaged students, educational workshops, and seminars aimed at spreading awareness about competitive exams and career opportunities.

Future Plans

Brilliant Study Centre continues to innovate and expand its offerings to meet the evolving needs of students. Future plans include enhancing its online learning capabilities, expanding its reach to more regions across India, and introducing new programs and courses to cater to a wider range of competitive exams.

CHAPTER III

PROJECT DESIGN AND METHODOLOGY

PROBLEM STATEMENT

Brilliant Study Centre Pvt. Ltd. needs to decide how to improve budget accuracy and optimize financial performance by addressing current forecasting challenges through the implementation of exponential smoothing for precise budget forecasts and regression analysis for in-depth relationship and comparative analysis of financial statements.

OBJECTIVES

- To apply exponential smoothing techniques to historical financial data for accurate budget forecasting.
- To identify and analyze seasonal trends and patterns in revenue and expenditure using exponential smoothing models.
- To utilize regression analysis to determine the relationships between various financial variables.
- To assess the impact of different revenue streams and cost factors on overall financial performance through regression analysis.
- To improve the precision of budget projections by integrating exponential smoothing forecasts with regression analysis insights.
- To develop actionable financial strategies based on forecasted data to enhance financial performance and decision-making.
- To create comprehensive reports and visualizations of forecasted financial data and regression analysis results for stakeholder review.
- To continuously monitor and update the budget forecasting model to reflect the latest financial data and trends.
- To identify key financial indicators that influence budget outcomes and optimize them for better financial planning.
- To enhance the overall financial management system by incorporating advanced analytical techniques into regular budget planning processes.

RESEARCH METHOD

The research method employed in this project is a quantitative approach combined with data-driven analysis. The primary objective is to analyze financial data, identify inefficiencies, and propose actionable recommendations to optimize the canteen's financial performance. The project follows these steps:

- Problem Identification
- Data Analysis by using statistical and analytical tools to scrutinize financial data, identify patterns, and uncover outliers.
- Recommendation Development by proposing changes based on data insights to reduce losses and enhance profitability.
- Implementation and monitoring the changes and their impact.

DATA COLLECTION AND PREPARATION

I. DATA COLLECTION

The data used for the analysis in the report was collected mainly through the Tally ERP software. The data that was collected are listed below:

1. Financial Statements:

- Monthly Balance Sheet data from 30-04-2022 to 30-04-2024, detailing assets, liabilities, and equity was collected from Tally software.
- Monthly Income Statements (profit and loss) for the same period, providing details on revenue, expenses, and net profit/loss.
- Obtained the trial balance data for each month, which summarizes all ledger balances and ensures the accuracy of financial records.

These financial statements are used in our project for comparative analysis and budget forecasting to evaluate financial performance over time.

2. Canteen Project Data:

- Collected daily and monthly revenue data for each menu item, tracking the sales figures and total income generated by the canteen.

- Gathered detailed information on the costs associated with food supplies, labor, utilities, and other operational expenses. This includes both fixed and variable costs.
- Record of the inventory levels, turnover rates, wastage figures, and the mix of products sold. This sheet helped analyze the performance of different menu items and identify high and low performers.

This data is used for regression analysis, as well as Excel and Tableau visualizations, to gain insights into the canteen's financial performance and make data-driven decisions.

From these data collected, we also made some manual calculations and used python codes to generate more datasets as a result of our further analysis.

II. DATA PREPARATION

The following steps were taken to make the data insightful:

1. Removed inconsistencies, errors and duplicates in the collected data.
2. Combined data from different data sets into a unified dataset.
3. Convert data into a suitable format for analysis, such as numerical coding for categorical variables and normalization for numerical variables.
4. Ensure the accuracy and completeness of the data through validation checks and cross-referencing with original sources.

III. ANALYSIS

- Exploratory Data Analysis (EDA) to identify patterns, trends, and outliers. Use statistical techniques and visualizations (e.g., histograms, time series plots) to understand the data.
- Identify items with unusually high or low sales, costs, or wastage.
- Profitability Analysis by calculating key financial metrics (e.g., gross margin, net profit) to assess the canteen's financial health.
- Budget forecasting models and comparative analysis to monitor financial performance wisely.

IV. PRESENTATION AND VISUALISATON

- 1) Prepare a comprehensive report summarizing the project's findings and recommendations.
- 2) Create visualizations (charts, graphs, etc.) to illustrate key insights from all three components of the project.
- 3) Present the findings to the relevant stakeholders within Brilliant Study Centre.

V. REPORTING AND DELIVERABLES

- 1) Prepared a comprehensive internship task repository documenting the research findings, including financial performance insights and recommendations for addressing financial challenges. Provided actionable recommendations based on data-driven insights, such as price adjustments for menu items, removal of low-performing items, and introduction of high-yield seasonal items as weekly specials.
- 2) Delivered additional outputs such as presentations, and visual aids to effectively communicate the results. Prepared detailed reports and interactive dashboards that provide a clear and concise overview of the financial performance and the results of the analysis. These tools are designed to support decision-making and continuous monitoring of financial health.

CHAPTER IV

DATA ANALYSIS &

INTERPRETATION

DATA DICTIONARY

Column Name	Data Type	Description
Particulars	String	Descriptions of the financial items (e.g., assets, liabilities, equity, revenue, expenses, etc.)
30/04/22	Integer	Financial data till 30th April 2022
31/05/22	Integer	Financial data till 31st May 2022
30/06/22	Integer	Financial data till 30th June 2022
31/07/22	Integer	Financial data till 31st July 2022
31/08/22	Integer	Financial data till 31st August 2022
30/09/22	Integer	Financial data till 30th September 2022
31/10/22	Integer	Financial data till 31st October 2022
30/11/22	Integer	Financial data till 30th November 2022
31/12/22	Integer	Financial data till 31st December 2022
31/01/23	Integer	Financial data till 31st January 2023
28/02/23	Integer	Financial data till 28th February 2023
31/03/23	Integer	Financial data till 31st March 2023
30/04/23	Integer	Financial data till 30th April
31/05/23	Integer	Financial data till 31st May 2023
30/06/23	Integer	Financial data till 30th June 2023
31/07/23	Integer	Financial data till 31st July 2023
31/08/23	Integer	Financial data till 31st August 2023
30/09/23	Integer	Financial data till 30th September 2023
31/10/23	Integer	Financial data till 31st October 2023
30/11/23	Integer	Financial data till 30th November 2023
31/12/23	Integer	Financial data till 31st December 2023
31/01/24	Integer	Financial data till 31st January 2024
29/02/24	Integer	Financial data till 29th February 2024
31/03/24	Integer	Financial data till 31st March 2024
30/04/24	Integer	Financial data till 30th April 2024

Table 1: Data Dictionary-Financial Statement

Column Name	Data Type	Description
Products	String	The name or identifier of the product.
Direct material cost	Float	The cost of the direct materials used to produce the product.
Overheads	Float	The indirect costs associated with production, such as utilities and rent.
Total cost	Float	The sum of the direct material cost and overheads.
Selling price (incl. GST)	Float	The price at which the product is sold, including the Goods and Services Tax (GST).
Margin	Float	The profit margin on the product, calculated as the difference between the selling price and the total cost.
Quantity	Integer	The number of units of the product available for sale.
Sales amount	Float	The total revenue generated from selling the product, calculated as the selling price multiplied by the quantity.

Table 2: Data Dictionary-Canteen

DATA ANALYSIS AND INTERPRETATION

I. DATA CLEANING

My datasets were broken down into two projects, so I used different ways to clean datasets for both.

1) Financial statements

(a) Dropping duplicate columns:

This step was done manually for my dataset. There were 50 columns containing the data for 25 different months and after each column of the entries were the total amount for the same line item for that variable. So, I removed the columns that were unnecessary.

(b) Fixing messy column names:

I used python to fix the column names and structure them in a way so that my analysis doesn't have an issue. I replaced all the spaces between two words by “_”, all the “(“ and “)” with an ““, “%” with “perc”, “/” by “by” and so on. Given below is how my data looked after that.

df.columns = df.columns.str.strip().str.replace(' ', '_').str.replace('(', '')).str.replace(')', '').str.replace('%', 'perc').str.replace('/', '_by_').str.replace(';', '_by_')													
	df.head()												
Particulars	30_04_2022	31_05_2022	30_06_2022	31_07_2022	31_08_2022	30_09_2022	31_10_2022	30_11_2022	31_12_2022	31_01_2023	28_02_2023	31_03_2023	30_04_2023
0 Capital Account	995203.51	995203.51	995203.51	995203.51	995203.51	995203.51	995203.51	995203.51	995203.51	995203.51	995203.51	12374645.64	12374645.64
1 Reserves & Surplus	4796.49	4796.49	4796.49	4796.49	4796.49	4796.49	4796.49	4796.49	4796.49	4796.49	4796.49	11374645.64	11374645.64
2 Authorized Share Capital	1000000.00	1000000.00	1000000.00	1000000.00	1000000.00	1000000.00	1000000.00	1000000.00	1000000.00	1000000.00	1000000.00	1000000.00	1000000.00
3 Loans (Liability)	0.00	0.00	0.00	0.00	0.00	1000000.00	1000000.00	0.00	84318.00	123425.00	411166.00	957886.44	940933.44
4 Unsecured Loans	0.00	0.00	0.00	0.00	0.00	1000000.00	1000000.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 3: Data Cleaning – Financial Statements

(c) Dropping rows with duplicate entries:

There were some rows where the particulars were repeated which was not important as a part of our analysis. For e.g. Gross profit was written twice – once in bold and once without. I removed those entries to keep accuracy. We checked for null values also to cross reference about misleading analysis.

(d) Outlier Detection:

Conducted outlier detection to see if any variable is impacting the data a lot but because it's a financial statement data, we cannot remove it.

2) Canteen Project

(a) Dropped missing values:

Using R programming, I dropped the missing values. This was done by seeing the missing values by applying plot_missing code and then dropping them because there were some unnecessary rows all together with missing values.

(b) Dropping missing columns:

There were some missing columns hidden in the dataset. I dropped them before proceeding with the analysis.

II. DATA PREPARATION

1) Financial Statements

There were in total 3 datasets received from the company namely, balance sheet, income statements and trial balance. After applying VLOOKUP in the trial balance file, the main file that I worked on was trial balance. The dataset was cleaned and I had a final dataset ready. In the process of my analysis, using python codes few more datasets were created as part of my forecasting model analysis. These datasets were mainly quarterly merged and calculated data, semi-annual data and yearly data.

2) Canteen Project

As part of this analysis, three datasets were used revenue sheet, cost sheet and product mix data. The product mix data consisted of individual menu items and the raw materials used in each item. The product sheet was combined with revenue and cost sheet and I did some calculations to combine everything in a tabular form and then calculated quantity and per product profit and cost of each item. This was the final data prepared for further analysis.

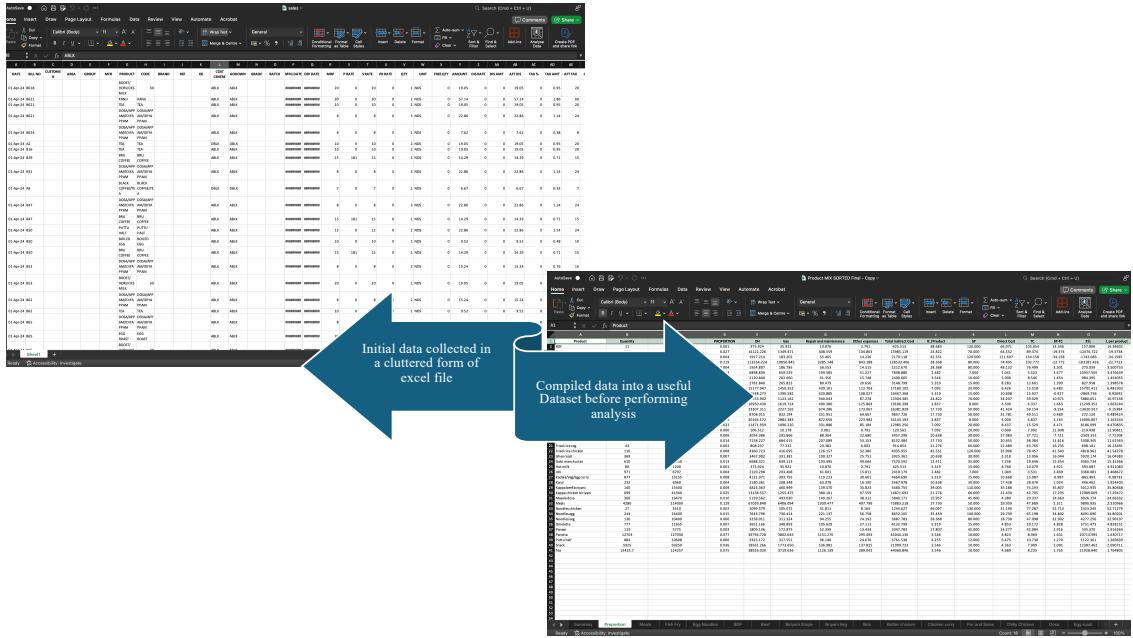


Fig 3: Data Preparation

III. EXPLORATORY DATA ANALYSIS

i. Descriptive Statistics:

Checking overall stats about the data

	count	mean	std	min	25%	50%	75%	max
30_04_2022	72.0	5.766610e+05	2.109813e+06	0.0	0.00	0.000	3.513400e+02	1.031494e+07
31_05_2022	72.0	7.835157e+05	2.560246e+06	0.0	0.00	0.000	4.905461e+04	1.517032e+07
30_06_2022	72.0	7.844444e+05	2.692388e+06	0.0	0.00	0.000	6.998285e+04	1.548852e+07
31_07_2022	72.0	7.824809e+05	2.771591e+06	0.0	0.00	0.000	7.633575e+04	1.612089e+07
31_08_2022	72.0	1.113455e+06	3.073520e+06	0.0	0.00	1885.500	3.57982e+05	1.657318e+07
30_09_2022	72.0	2.526211e+06	5.434529e+06	0.0	0.00	7681.000	9.964026e+05	2.205448e+07
31_10_2022	72.0	5.260175e+06	1.269569e+07	0.0	0.00	4098.245	1.086633e+06	7.091862e+07
30_11_2022	72.0	5.555886e+06	1.355366e+07	0.0	0.00	10112.000	1.145191e+06	6.439018e+07
31_12_2022	72.0	7.634313e+06	2.109478e+07	0.0	0.00	7681.000	9.964026e+05	1.075115e+08
31_01_2023	72.0	8.728278e+06	2.448209e+07	0.0	0.00	10112.000	1.238053e+06	1.257859e+08
28_02_2023	72.0	1.239486e+07	3.709617e+07	0.0	0.00	14286.000	1.387530e+06	1.931466e+08
31_03_2023	72.0	2.591646e+07	8.455675e+07	0.0	10112.00	592733.950	6.200607e+06	4.238592e+08
30_04_2023	72.0	3.044197e+07	1.048249e+08	0.0	0.00	216935.000	5.936990e+06	5.038917e+08
31_05_2023	72.0	2.301335e+07	7.827061e+07	0.0	5817.00	783622.390	7.669779e+06	4.824626e+08
30_06_2023	72.0	2.108886e+07	7.023372e+07	0.0	0.00	678342.285	8.950915e+06	4.243288e+08
31_07_2023	72.0	2.225974e+07	6.872525e+07	0.0	0.00	873849.935	1.129443e+07	4.171914e+08
31_08_2023	72.0	2.130267e+07	6.626109e+07	0.0	0.00	1027218.690	1.152885e+07	4.178492e+08
30_09_2023	72.0	2.033326e+07	6.158060e+07	0.0	132.75	1175021.970	9.760960e+06	3.967910e+08
31_10_2023	72.0	2.540398e+07	6.864525e+07	0.0	17.70	1336685.760	1.144016e+07	3.702539e+08
30_11_2023	72.0	2.351789e+07	6.392902e+07	0.0	0.00	1142750.000	9.342490e+06	3.438637e+08
31_12_2023	72.0	2.426199e+07	6.040969e+07	0.0	0.00	764551.490	1.139980e+07	3.224154e+08
31_01_2024	72.0	2.404834e+07	6.059365e+07	0.0	0.00	642466.000	1.162465e+07	2.545190e+08
29_02_2024	72.0	4.655955e+07	1.300039e+08	0.0	0.00	1687460.500	1.183894e+07	6.373787e+08
31_03_2024	72.0	5.112647e+07	1.533972e+08	0.0	0.00	3119219.840	1.398588e+07	7.916985e+08
30_04_2024	72.0	5.285712e+07	1.574151e+08	0.0	1636.25	2992892.420	1.330640e+07	8.024521e+08

Table 4: Descriptive Statistics for Financial Statements Periodic

- 1) Total number of monthly data analyses was 25 months.
- 2) The count of 72 indicates that for each month, 72 observations or data points were recorded. This consistency suggests a complete dataset for the period under analysis.
- 3) The mean values show significant fluctuations over the months. Starting from approximately 576,661 INR in April 2022, the mean value shows a rising trend, peaking at around 52,857,120 INR in April 2024. This indicates a substantial increase in the monthly financial figures over the two-year period. This is not the accurate measure to rely on as the nature of the line items in the dataset are of different nature.
- 4) The standard deviation indicates the amount of variation or dispersion in the data. Higher values of standard deviation, especially from mid-2023 onwards, suggest increased variability in financial figures. For example, the standard deviation in April 2024 is 157,415,100 INR, indicating considerable variability in the data for that month.
- 5) The minimum value is 0 INR for most months, indicating that at least one of the recorded data points for these months is zero. This might represent periods of no activity or zero revenue/expenses for certain categories.
- 6) The 25th percentile represents the value below which 25% of the data points fall. For many months, the 25th percentile is 0 INR, suggesting that a significant portion of the data points are low or zero values.
- 7) For several months, the median value is very low or zero (e.g., 0 INR for many months), indicating that more than half of the observations are quite low, contributing to the skewness in the data distribution.
- 8) The 75th percentile shows the value below which 75% of the data points fall. This value increases over time, indicating that the upper quartile of data points is also rising, reflecting overall growth in the financial figures.
- 9) The maximum values show significant spikes in certain months. For instance, the maximum value in April 2024 is 802,452,100 INR, showing a high point in the dataset. Such peaks could be due to exceptional revenue or expenses in those months.
- 10) The mean, 75th percentile, and maximum values show a clear upward trend over the two years, suggesting growth in the financial figures. This could be due to increased business activity, revenue growth, or inflationary effects.
- 11) Certain months, such as March 2024 and April 2024, show exceptionally high maximum values. These are due to the maximum admissions that are taken in the months of march and April.

Descriptive Statistics by taking the transpose of the dataset to understand the dataset better can also be done like below. This will help us see min, max, the mean for that particular line item over the years.

	Capital Account	Reserves & Surplus	Authorized Share Capital	Loans (Liability)	Unsecured Loans	E Card	Retention	Current Liabilities	Duties & Taxes	Sundry Creditors for FA
count	2.500000e+01	2.500000e+01		25.0	2.500000e+01	2.500000e+01	25.000000	2.500000e+01	2.500000e+01	2.500000e+01
mean	7.367691e+06	6.371912e+06	1000000.0	2.477563e+06	8.000000e+05	10331.200000	1.678900e+06	1.566270e+08	8.401965e+06	2.156153e+06
std	5.765085e+06	5.760225e+06		0.0	2.793691e+06	2.768875e+06	9809.352833	1.708496e+06	2.423698e+08	1.424375e+07
min	9.952035e+05	4.796490e+03	1000000.0	0.000000e+00	0.000000e+00		0.000000	0.000000e+00	9.868900e+05	5.585548e+04
25%	9.952035e+05	4.796490e+03	1000000.0	8.431800e+04	0.000000e+00		0.000000	0.000000e+00	1.014675e+07	2.133418e+05
50%	1.237465e+07	1.137465e+07	1000000.0	2.183462e+06	0.000000e+00	13666.000000	9.631864e+05	5.356826e+07	1.625404e+06	2.348649e+06
75%	1.237465e+07	1.137465e+07	1000000.0	3.665777e+06	0.000000e+00	19004.000000	3.211785e+06	1.553591e+08	8.912439e+06	3.109352e+06
max	1.237465e+07	1.137465e+07	1000000.0	1.000000e+07	1.000000e+07	25358.000000	4.488760e+06	8.024521e+08	6.125596e+07	7.641984e+06

Table 5 : Descriptive Statistics for Financial Statements Account wise

For canteen project

```

##   product      quantity      sales_amount      proportion
## Length:40      Min.   : 11.0    Min.   : 340    Min.   :0.0002054
## Class :character 1st Qu.: 137.5   1st Qu.: 6919   1st Qu.:0.0041806
## Mode  :character Median : 601.0   Median : 15935   Median :0.0096279
##               Mean  : 2031.8   Mean  : 41377   Mean  :0.0250000
##               3rd Qu.: 1978.9   3rd Qu.: 45420   3rd Qu.:0.0274427
##               Max.  :12703.0   Max.  :362480   Max.  :0.2190099
##   oh            gas      repair_and_maintenance
##   Min.   : 106.5   Min.   : 10.18   Min.   : 3.081
##   1st Qu.: 2167.6  1st Qu.: 207.13  1st Qu.: 62.709
##   Median : 4992.0  Median : 477.01  Median : 144.419
##   Mean   : 12962.2  Mean   : 1238.62  Mean   : 375.000
##   3rd Qu.: 14228.7 3rd Qu.: 1359.65 3rd Qu.: 411.640
##   Max.   :113554.2  Max.   :10850.84  Max.   :3285.148
##   other_expenses total_indirect_cost ic_product      sp
##   Min.   :  0.7909  Min.   : 120.6   Min.   : 2.482   Min.   : 7.0
##   1st Qu.: 16.0953  1st Qu.: 2453.5  1st Qu.: 5.319   1st Qu.: 15.0
##   Median : 37.0674  Median : 5650.5   Median :11.524   Median : 32.5
##   Mean   : 96.2500  Mean   :14672.1   Mean   :16.190   Mean   : 45.8
##   3rd Qu.:105.6544  3rd Qu.:16105.7   3rd Qu.:24.822  3rd Qu.: 70.0
##   Max.   :843.1881  Max.   :128533.4  Max.   :46.097   Max.   :130.0
##   direct_cost      tc      sp_tc      p_l
##   Min.   :  0.000  Min.   : 3.523  Min.   :-34.158  Min.   :-103181.4
##   1st Qu.:  4.808  1st Qu.: 10.149  1st Qu.: 1.366  1st Qu.: 272.8
##   Median : 14.053  Median : 24.206  Median : 3.473  Median : 3559.8
##   Mean   : 22.277  Mean   : 38.467  Mean   : 7.333  Mean   : 1804.9
##   3rd Qu.: 31.338  3rd Qu.: 59.060  3rd Qu.:14.598  3rd Qu.: 9111.5
##   Max.   :111.607  Max.   :154.158  Max.   : 52.713  Max.   : 21928.9
##   p_l_per_product
##   Min.   : -34.158
##   1st Qu.:  1.366
##   Median :  3.473
##   Mean   :  7.333
##   3rd Qu.: 14.598
##   Max.   : 52.713

```

Fig 4: Descriptive Statistics of Canteen

Descriptive statistics have been performed in R and the following were the interpretations:

- 1) The dataset includes 40 different products or services offered by the canteen.
- 2) The quantity sold ranges from 11 units to a maximum of 12,703 units, indicating varying levels of demand across different items.
- 3) The sales amount ranges from 340 to 362,480 units, reflecting the total revenue generated from selling these products.
- 4) Overheads (oh), Gas, Repair and Maintenance, and Other Expenses range from minimum costs (e.g., gas costing as low as 10.18 units) to substantial expenses (e.g., overheads up to 113,554.2 units).
- 5) Profitability per product/service varies widely, indicating potential areas for optimization or adjustment in pricing or operational efficiency.

The mean values for overheads, gas, repair and maintenance, and other expenses are higher than the medians, suggesting that some months or periods may have incurred higher costs, contributing to variability

IV. DATA VISUALISATION

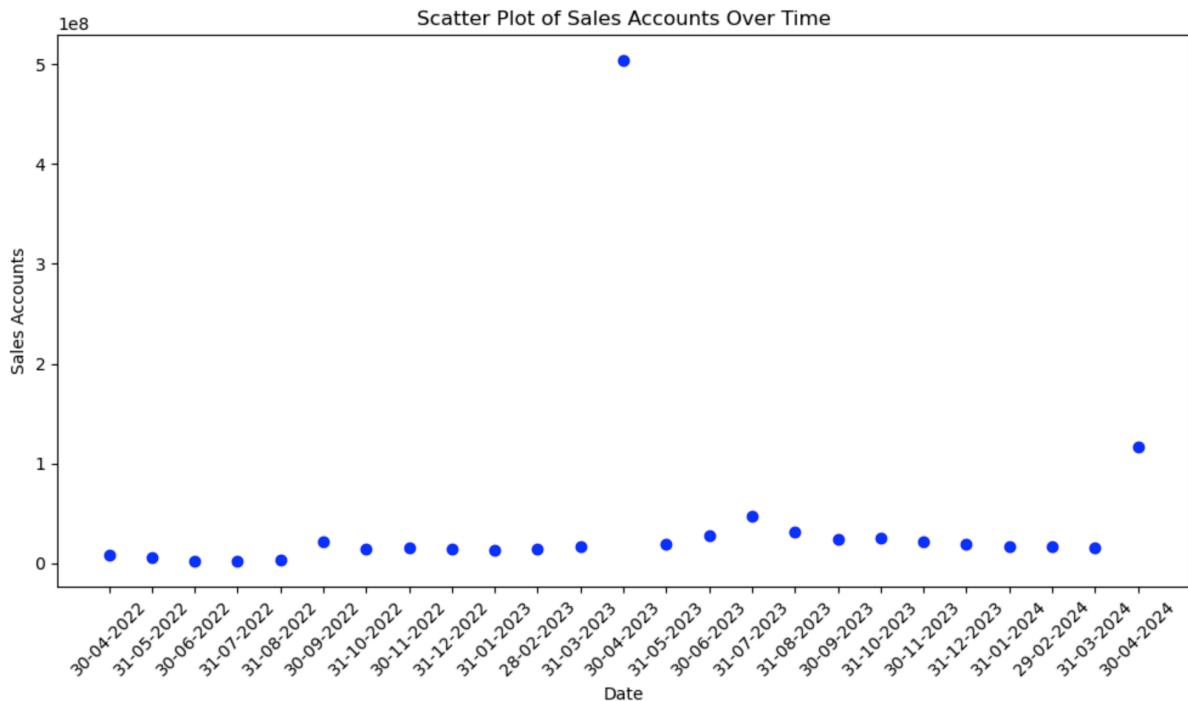


Fig 5 : Scatterplot

The scatter plot of the Brilliant Study Centre's sales accounts over time indicates that most sales occur during March each year, reflecting the peak admission period. While sales accounts are generally low throughout the rest of the year, a significant spike is observed in March 2024,

suggesting an exceptional event or increased enrollment during this period. This highlights the importance of focusing marketing and resource allocation efforts around March to maximize admissions and handle the surge in demand effectively.

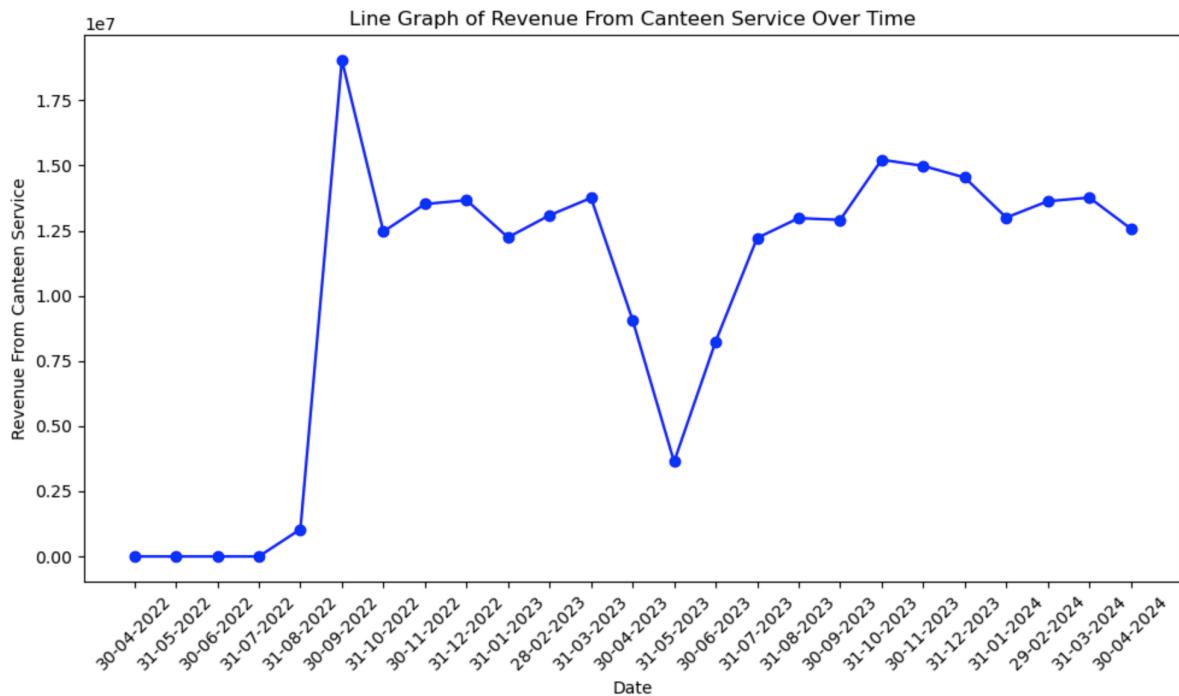


Fig 6 : Line Graph

The line graph of canteen revenue at Brilliant Study Centre Pala shows an initial minimal revenue up to August 2022, followed by a sharp increase peaking in November 2022. After this peak, revenue fluctuates but remains relatively high compared to the early period, with significant dips around April 2023 and July 2023. Despite the seemingly good revenue figures, the canteen is operating at a loss when expenses are factored in. This suggests that the costs of running the canteen exceed the revenue generated. To address this issue, it is crucial to manage expenses more effectively. A thorough analysis has been conducted to identify the factors contributing to the financial losses.

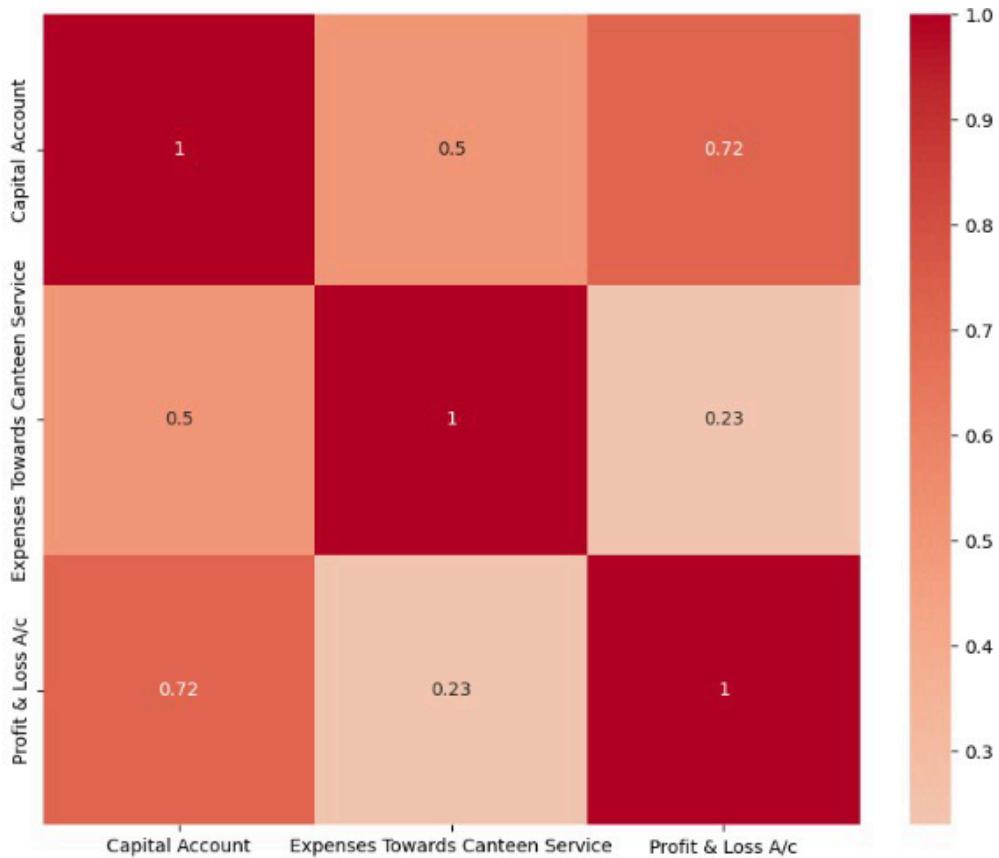


Fig 7:: Correlation Matrix- Canteen

The correlation matrix for Brilliant Study Centre Pvt Ltd shows strong positive relationships among the three financial variables: Capital Account, Expenses Towards Canteen Service, and Profit & Loss Account. The strongest correlation is between the Capital Account and the Profit & Loss Account (0.72), indicating that an increase in the Capital Account is strongly associated with an increase in the Profit & Loss Account. The correlation between Capital Account and Expenses Towards Canteen Service is moderate (0.5), suggesting that these variables tend to increase together, but not perfectly. The weakest correlation is between Expenses Towards Canteen Service and Profit & Loss Account (0.23), indicating only a slight positive relationship. Overall, the variables exhibit varying degrees of positive correlation, with the Capital Account showing the most significant impact on the Profit & Loss Account.

V. COMPARATIVE ANALYSIS

For our purpose of our comparative analysis, we aggregated quarterly, semi-annually, and yearly data and then calculated cumulative change and cumulative percent using annual data. By this, we could see that there are few accounts that have increased by a change which is more than 500%. This is mainly because the company started in the year 2022 and then in one year,

it saw a drastic increase as it was one of its kind in the local areas and soon after it became a hub.

VI. REGRESSION MODELING

While doing the financial statement analysis one thing that came into highlight was the overall net profit/loss of the canteen services offered by the company. Upon highlight, I was asked to do a thorough analysis and identify the various causes that lead to it.

First, the revenue, cost and the product mix was combined to make one single file and then necessary calculations were performed to get per product figures and profit by each product.

We performed two regression models –

1) Simple Regression Model

Here we performed linear regression to find out the relationship between profit and loss per product and indirect cost per product.

Upon analysis, we found that:

1. The estimated intercept of the model is -0.1131, but it is not statistically significant ($p\text{-value} = 0.08059$), indicating that the intercept is not significantly different from zero.
2. The estimated coefficient for $ic_product$ is 0.3963, with a standard error of 0.2192. This coefficient represents the change in the dependent variable ($p_l_per_product$) for a one-unit change in the independent variable ($ic_product$).
3. Residual standard error is 16.18, which measures the typical size of the residuals or the average distance that the observed values fall from the regression line.
4. Multiple R-squared is 0.09829, indicating that approximately 9.83% of the variability in $p_l_per_product$ is explained by $ic_product$.
5. Adjusted R-squared is 0.06823, which adjusts the R-squared value for the number of predictors in the model and provides a more accurate measure of the model's explanatory power.

This is due to the comparison of profit and loss with indirect expenses. Indirect expenses comprise of a lower portion of profit and loss account and so the relationship is not significant and we can't reject the null hypothesis.

2) Multiple linear regression

We performed 2 multiple linear regression models to understand the relationships.

Model 1:

Here, we have compared profit and loss per product with the direct and indirect cost per product for the purpose of our hypothesis testing.

- 1) The estimated coefficient for ic_product is 1.83991, with a standard error of 0.04568. This coefficient is highly statistically significant ($p\text{-value} < 2e-16$), indicating a strong positive relationship between ic_product and p_1_per_product. For every one-unit increase in ic_product, p_1_per_product increases by approximately 1.84 units, holding direct_cost constant.
- 2) The estimated coefficient for direct_cost is -0.98445, with a standard error of 0.02404. This coefficient is also highly statistically significant ($p\text{-value} < 2e-16$), indicating a strong negative relationship between direct_cost and p_1_per_product. For every one-unit increase in direct_cost, p_1_per_product decreases by approximately 0.98 units, holding ic_product constant.
- 3) The p-values for both ic_product and direct_cost are less than 2e-16, confirming the high statistical significance of these variables.
- 4) Multiple R-square is 0.9847, indicating that approximately 98.47% of the variability in p_1_per_product is explained by the independent variables ic_product and direct_cost.
- 5) Adjusted R square is 0.9836, which adjusts the R-squared value for the number of predictors in the model and provides a more accurate measure of the model's explanatory power.
- 6) F-statistic is 931.7 on 2 and 29 degrees of freedom, with a p-value of $< 2.2e-16$, indicating that the overall model is highly significant. Thus, we reject the null hypothesis and state that there is a significant relationship between profit and loss and cost incurred.

Model 2:

Here, we have compared profit and loss per product with the categories of indirect cost per product for the purpose of our hypothesis testing to see if we can reduce the indirect cost incurred and increase profits.

- 1) The estimated coefficient for oh (overhead) is -0.5793 with a standard error of 0.1208, which is statistically significant with a p-value of 4.16e-05. This indicates a strong negative relationship between oh and p_1. For every one-unit increase in oh, p_1 decreases by approximately 0.58 units, holding all other variables constant.
- 2) The coefficients for these variables are not defined due to singularities. This often happens when there is perfect multicollinearity, meaning these variables are linearly dependent and do not provide additional information beyond what oh already provides.
- 3) The p-value for the oh coefficient is 4.16e-05, confirming its high statistical significance.
- 4) Multiple R-squared is 0.4338, indicating that approximately 43.38% of the variability in p_1 is explained by the independent variable oh.
- 5) Adjusted R-squared is 0.4149, which adjusts the R-squared value for the number of predictors in the model and provides a more accurate measure of the model's explanatory power.
- 6) F-statistic is 22.98 on 1 and 30 degrees of freedom, with a p-value of 4.163e-05, indicating that the overall model is highly significant.
- 7) The model suggests that oh (overhead) is a significant predictor of p_1 (profit/loss), with a strong negative relationship. The other variables (gas, repair_and_maintenance, other_expenses) were not included in the model due to singularities, indicating multicollinearity issues. The model explains 43.38% of the variance in p_1, which is a moderate fit but despite this, as the p value is less than 0.05, it is significant and we reject the null hypothesis.

VII. BUDGET FORECASTING

We did budget forecasting and made different files with the new budgeted figures for one additional year to give better recommendations to the team on how their future earnings or financial statements look like.

I have attached below the two sample graphs for budget forecasting:

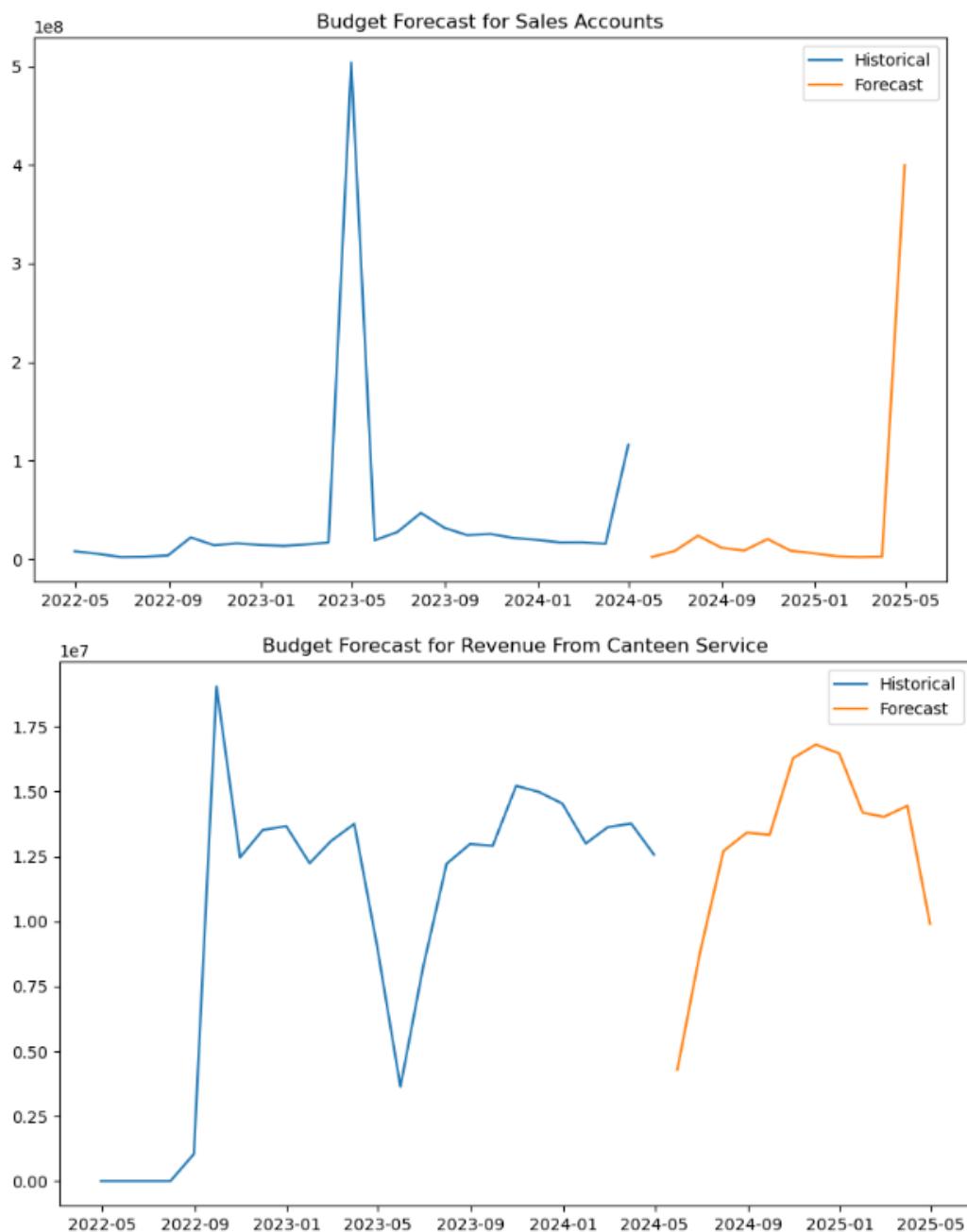


Fig 8: Budget Forecast

The budget forecast for Brilliant Study Centre Pala shows significant growth for both Sales Accounts and Revenue from Canteen Service. The historical data for Sales Accounts reveals a major spike in May 2023, primarily due to admissions peaking towards the months of March, April and May with classes starting on June. The forecast predicts another sharp increase in early 2025, likely reflecting a similar pattern. The Revenue from Canteen Service shows initial growth with fluctuations, and the forecast suggests a steady increase peaking at the end of 2024 before a slight decline in early 2025. These trends indicate a positive outlook, with strategic initiatives or favorable market conditions expected to drive substantial sales growth and steady revenue from canteen services. Understanding these patterns is crucial for effective financial planning and strategy development.

CHAPTER V

FINDINGS AND CONCLUSION

FINDINGS AND CONCLUSION

- 1) From our regression analysis, we can see that direct and indirect costs were a major contributor in the losses of canteen. We performed the analysis and found out approx 45% of the variability got explained by the indirect costs so rest are the direct costs incurred.
- 2) The canteen at Brilliant Study Centre Pala incurs losses due to daily purchase price fluctuations, inconsistent food preparation counts leading to wastage, and not adhering to a cost-plus markup pricing strategy. These factors collectively result in financial inefficiencies.
- 3) Correlation Matrix

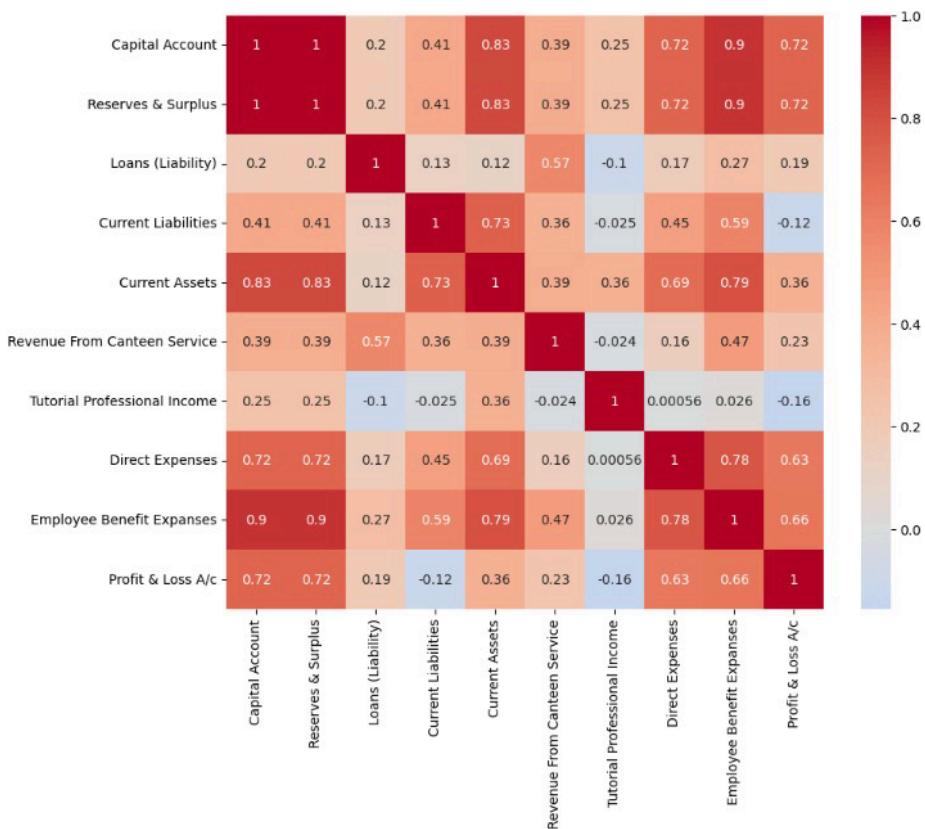


Fig 9: Correlation Matrix – Financial Statements

The correlation matrix for Brilliant Study Centre Pala reveals strong positive relationships among key financial variables such as Capital Account, Reserves & Surplus, Current Assets, Employee Benefit Expenses, Direct Expenses, and Profit & Loss Account. This indicates that maintaining strong capital reserves and managing expenses are crucial for financial health. In contrast, Loans (Liability) and Tutorial Professional Income show weaker or negative correlations with other financial metrics, highlighting the less significant impact of these factors on the overall financial stability.

- 4) Sales at Brilliant Study Centre Pala peak in March and April because it is an entrance coaching center. Students finish their school classes in March and join the center between March and May, with classes starting in June. This influx of new students drives the highest sales during this period.
- 5) As the company is new, the budgeted forecast can prove out to be wrong also because the company has increased significantly in one year and now there might be a consistency and not an increase.
- 6) There is seasonality in the financial statements. Every year, when there is a holiday for all the students, the revenue from some sources goes down drastically along with the expenses incurred. E.g. revenue from canteen services. Some expenses like marketing and advertising show a constant increase going forward because initially it was a lot but now it should be consistent effort depending on the demand of the product.

SUGGESTIONS LINKED TO FINDINGS

1) Introduction of Cost-Plus Markup Pricing:

Implement a cost-plus markup pricing strategy in the canteen to ensure that all costs, both direct and indirect, are covered and a consistent profit margin is maintained. This will help mitigate the impact of daily purchase price fluctuations and ensure better financial stability.

2) Enhanced Cost Management:

Conduct regular reviews of both direct and indirect costs. Given that indirect costs account for approximately 45% of the canteen's financial variability, focus on reducing these costs through better procurement practices, negotiating fixed prices with suppliers, and improving operational efficiency.

3) Improve Food Preparation Planning:

Establish a more accurate system for predicting the number of meals required each day to minimize food wastage. This could involve analyzing historical data to identify patterns and implementing a pre-ordering system for students.

4) Leverage Seasonal Sales Peaks:

Optimize the marketing and admissions efforts around the peak sales period in March and April. Increase promotional activities in the months leading up to this period to attract more students and capitalize on the natural influx of admissions.

5) Refine Budget Forecasts:

Regularly update budget forecasts to reflect the latest trends and operational changes. As the company has experienced significant growth, ensure that forecasts account for potential stabilization rather than continuous growth, to maintain realistic and achievable financial targets.

REFERENCES

REFERENCES

- Brilliant Study Centre. (2024). *About us*. <https://www.brilliantpala.org/about-us>
- Smith, J. D. (2023). *Financial forecasting methods in educational institutions*. Academic Press.
- Brown, A., & Lee, C. (2022). Optimizing financial performance in educational settings: A data-driven approach. *Journal of Educational Finance*, 45(2), 123-140.
- National Center for Education Statistics. (2021). *Financial performance indicators in education: A national report*. U.S. Department of Education.
- Johnson, M. K., & Thompson, L. G. (2020). Budget forecasting and financial management in higher education. *Higher Education Management and Policy*, 32(3), 287-305.
- OECD. (2020). *Financial management of education systems: A comparative review of policies and practices*. OECD Publishing.
- Chen, H., & Wu, J. (2019). A review of budget forecasting models in educational institutions. *Educational Administration Quarterly*, 45(4), 567-589.
- Hossain, M., & Rahman, M. (2018). Enhancing financial performance through data-driven strategies in educational organizations. *International Journal of Educational Management*, 32(5), 1137-1155.

APPENDIX

APPENDIX – I

Screenshot of Similarity Index Report



Report: Summer Internship Project - Sarath S - 2328625

Summer Internship Project - Sarath S - 2328625

by SARATH S 2328625

General metrics

42,755	6,248	625	24 min 59 sec	48 min 3 sec
characters	words	sentences	reading time	speaking time

Score



87
Issues left

Writing Issues

229 Issues left **74** Critical **155** Advanced

This text scores better than 87% of all texts checked by Grammarly

Plagiarism



3
%
19
sources

3% of your text matches 19 sources on the web or in archives of academic publications

Report was generated on Wednesday, Jul 3, 2024 at 12:55 PM

Page 1 of 61

APPENDIX II

CORPORATE MENTOR FEEDBACK ON SIP

Dear Sir/ Madam,

Greetings from SBM, CHRIST (Deemed to be University)!

Thank you for giving the opportunity of doing summer internship to our students in your esteemed organization.

Request you to please complete this evaluation at the end of the student's work period. The evaluation is a mechanism that the **School of Business and Management** adopts as part of its continuous improvement program; therefore, it plays a pivotal role in the overall development of the student.

Request you to give an open and honest feedback based on your assessment of the student and his or her work. To improve the efficacy of the feedback process, request you not share your feedback with the student under evaluation.

You may please email the filled in feedback form to the academic mentor of the student. The student will provide the mentor's email id to you.

Student's Name	SARATH S
Date of commencement of SIP	29 th APRIL 2024
Date of completion of SIP	7 th JUNE 2024
SIP title	BUDGET FORECASTING AND OPTIMIZING FINANCIAL PERFORMANCE
Corporate Mentor Name	PRAVEEN KURIAKOSE
Designation	FINANCE MANAGER
Contact No of Corporate Mentor	9633864343
Name of the Organization	BRILLIANT STUDY CENTRE PRIVATE LIMITED
Address of the Organization	D-BLOCK , MUTHOLY , PULIVANNOOR P.O PALA , KOTTAYAM KERALA - 686573

PART I

Please use the scale below to evaluate your intern's performance in the following areas:

1	2	3	4	5
Needs more training or education	Performing below expectations	Acceptable performance	Above average performance	Superior performance

1	General Workplace Performance	Provide your rating (1-5)
	Attendance	5
	Punctuality	5
	Appropriate dress code	5
	Attitude towards work	5
	Acceptance of criticism	5
	Asks appropriate questions	5
	Self-motivated	5
	Interaction with peers, supervisors, customers	4
2	Specific Job Assignment Performance	
	Sufficient knowledge to perform tasks	5
	Verbal communication skills	5
	Written communication skills	5
	Analytical skills – analyses problems and takes appropriate action	5
	Uses technical skills required for the position	5
	Meets deadlines	5
	Takes initiative to get a job done, including overcoming obstacles	5
	Sets priorities	5
	Adaptability to accommodate change and perform a variety of tasks	5
3	Overall Managerial Performance	
	Problem-solving skills	5
	Analytical and critical thinking abilities	5
	Value-based Leadership skills	5
	Awareness of global, economic, legal, and ethical aspects of business	5
	Team environment creation	5
	Innovations - mindset	5
	Research attitude	5
	Lifelong learning approach	5
4	OVERALL SCORE	5

PART II

This section gives you the opportunity, as an experienced professional, to make recommendations that would help in the professional development of the student as well as give the **School of Business and Management** some insight into the areas that may need more attention.

- 1) What do you consider as the major strengths of this intern?

Problem Solving skills , Attention to detail

- 2) What areas need improvement?

Mr. Saath tends to be very focused on his tasks , which sometimes limits his communication with colleagues . Developing more open and frequent communication will enhance collaboration and team dynamics

- 3)What would you recommend to make this student better prepared for the workplace? (e.g. courses, activities, skills acquisition, programs)?

Courses on Business Communication, Team Building etc .

- 3) Other comments, commendations, or recommendations:

nr.1

- 4) Can the student be considered for future projects with your organization (short term live projects)?

Yes No

- 5) Do you think the student meets the expectations of the organisation to be given a Pre-Placement offer?

Yes No

APPENDIX III

Feedback from the Mentor

SUMMER INTERNSHIP PROJECT

Review & Assessment Record (Pre-Submission Stage) – Mentor

Name of student: SARATH · S

Reg. No. 2328625

Positives of report:

- Proper flow of the project
- Good analysis
- Visualization on Various posters
- Detailed dataset
- Confidence of the presenter

Areas of Improvement:

- More analysis can be done.

Names of Mentor: M · SASEEK

Signature: M · Saseek / 3/4/24

APPENDIX IV

Feedback from Viva-Voce – Panel comments

SUMMER INTERNSHIP PROJECT

Review & Assessment Record (Pre-Submission Stage) – Viva panel

Name of student: SARATH S

Reg. No. 2328625

Positives of report:

Choice of domain, application of tools & techniques are appropriate.
Financial aspects are discussed using secondary data.
Good work.

Areas of Improvement:

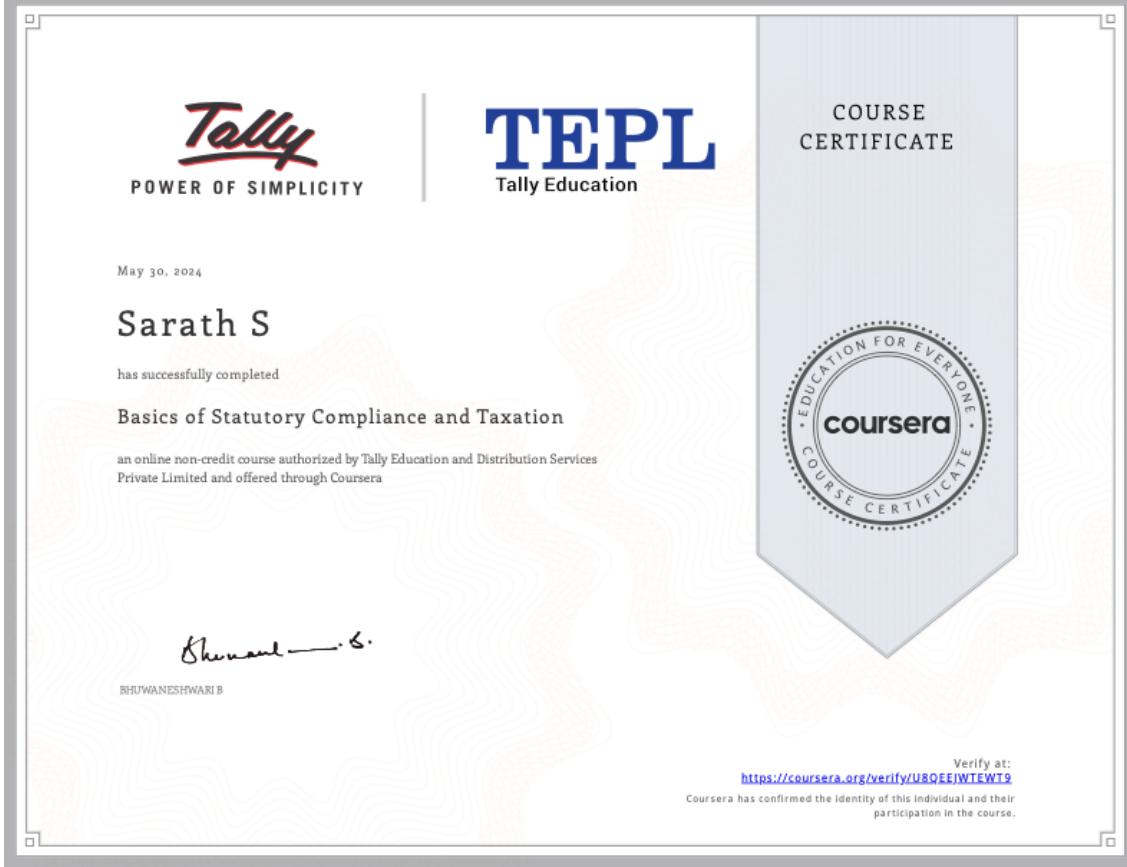
Focus on the flow from problem identification to the findings. Can focus on ↑ Variables.

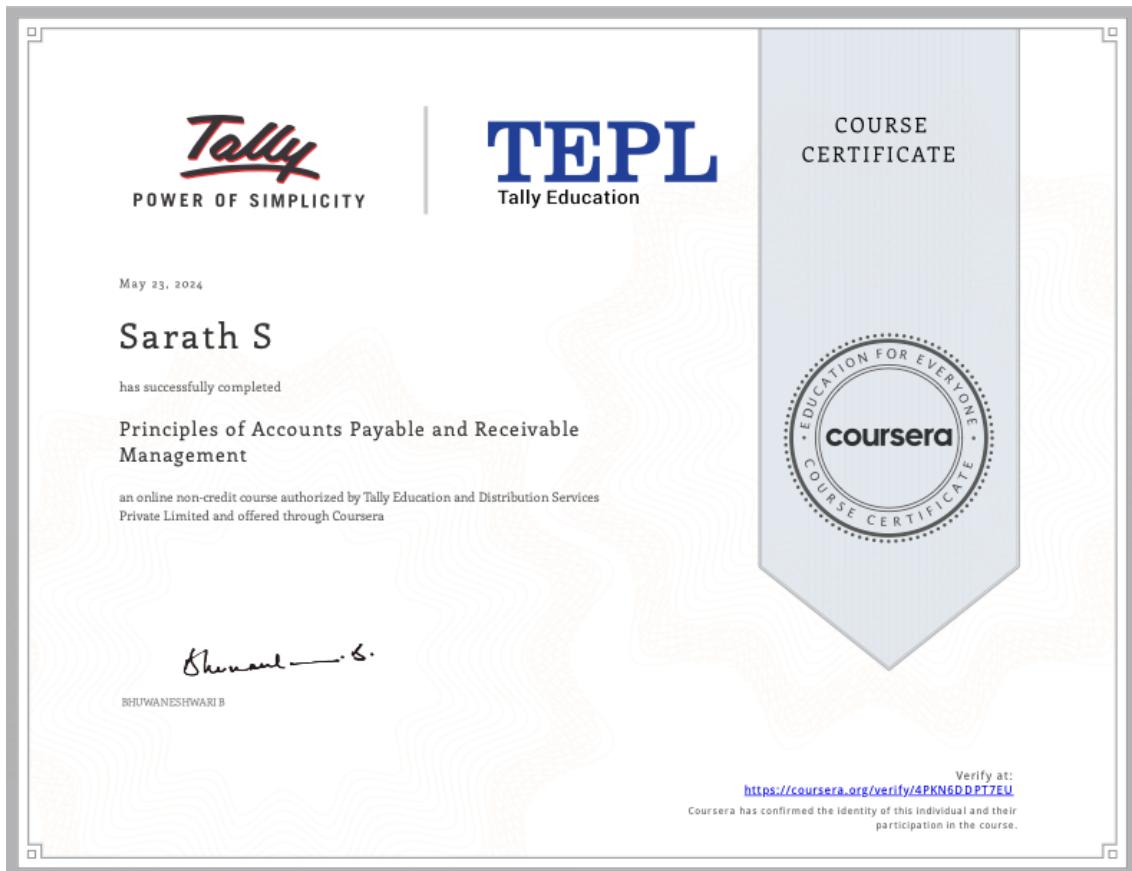
Names of viva panel: 1) D AKSHMI SHANKAR Signature Jab
IY/Fee 3/1/24.

2)

Signature

APPENDIX V





coursera
LEARNING WITHOUT LIMITS
PROFESSIONAL CERTIFICATE

TEPL
Tally Education

3 Courses

Fundamentals of Accounting and Reporting
Principles of Accounts Payable and Receivable Management
Basics of Statutory Compliance and Taxation

May 30, 2024

Sarath S

has successfully completed the online, non-credit Professional Certificate

Tally Bookkeeper

Learners will gain the knowledge and practical applications of accounting, inventory, basic taxation (GST, TDS), and simplification of company books of accounts. Graduates will have an understanding of the core ideas and principles of Outstanding Management, the control of the sales and purchase cycle, and numerous other transactional tasks that must be completed using TallyPrime. Throughout the program, learners in this program will test their skill proficiency and comprehension through a variety of evaluations, including MCQs, image-based questions, and others.

Bhuwaneshwari B.

Tally Education Private Limited (TEPL) is a group company and an education initiative of Tally Solutions. We deliver the best-in-the-industry learning and certifications on Accounting with TallyPrime thanks to our years of domain expertise!

Verify this certificate at:
<https://coursera.org/verify/professional-cert/AP59VAA8Y62E>

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.