

University of Barishal

Project

On

“Financial and Operational Analysis of a Shared Mess for November.”

**Submitted To:**

Md Mahbub E Noor

Assistant Professor

Dept. of Computer Science & Engineering

University of Barishal

**Submitted By:**

Ahad Sharif

Student ID: 18

Batch : 54

Mobile No: 01772715519

Department of Finance and Banking

University of Barishal

Date of Submission: 14th December 2024

**Title**

**“Financial and Operational Analysis of a Shared Mess for November.”**

Table of Contents

[CHAPTER ONE 1](#_Toc184503032)

[INTRODUCTION 1](#_Toc184503033)

[Introduction 1](#_Toc184503034)

[CHAPTER-TWO 2](#_Toc184503035)

[METHODOLOGY 2](#_Toc184503036)

[Methodology 2](#_Toc184503037)

[**1. Data Collection** 2](#_Toc184503038)

[**2. Data Organization** 2](#_Toc184503039)

[**3. Computation** 2](#_Toc184503040)

[**4. Data Validation** 3](#_Toc184503041)

[**5. Reporting and Analysis** 3](#_Toc184503042)

[CHAPTER THREE 4](#_Toc184503043)

[RESULT AND DISCUSSION 4](#_Toc184503044)

[RESULT AND DISCUSSION 4](#_Toc184503045)

[**1. Total Meal Consumption** 4](#_Toc184503046)

[**2. Financial Contribution vs. Expense** 4](#_Toc184503047)

[**3. Meal Charge Analysis** 5](#_Toc184503048)

[**4. Key Observations** 5](#_Toc184503049)

[**5. Discussion** 6](#_Toc184503050)

[CHAPTER FOUR 7](#_Toc184503051)

[FINDINGS AND CONCLUSIONS 7](#_Toc184503052)

[FINDINGS AND CONCLUSIONS 7](#_Toc184503053)

[Findings 7](#_Toc184503054)

[**1.** **Meal Contributions and Expenses:** 7](#_Toc184503055)

[**2. Individual Costs and Payments:** 7](#_Toc184503056)

[**3. Financial Balances:** 7](#_Toc184503057)

[**4. Equity and Transparency:** 7](#_Toc184503058)

[Conclusions 8](#_Toc184503059)

[Improved Financial Planning: 8](#_Toc184503060)

[Enhanced Accountability: 8](#_Toc184503061)

[Potential Automation: 8](#_Toc184503062)

[References: 9](#_Toc184503063)

# CHAPTER ONE

# INTRODUCTION

## Introduction

Managing the financial operations of a shared mess is essential for ensuring equitable cost distribution and operational efficiency. The provided dataset for November meticulously records meal contributions, total costs, and member-specific financial details, offering a comprehensive view of the mess's financial structure.

The dataset comprises daily meal counts for six members, culminating in a total monthly meal count and corresponding costs. It also includes a breakdown of deposits made by each member, their share of costs, and any outstanding dues or balances. Shared expenses, such as the housemaid's wage, are evenly distributed among members, emphasizing fairness in the cost-sharing arrangement.

This report aims to analyze and interpret the data to provide actionable insights into financial accountability within the mess. The objectives include:

Assessing individual contributions and their alignment with total expenses.

Evaluating the efficiency of the cost-sharing mechanism.

Highlighting any discrepancies or areas for financial improvement.

By documenting the financial operations for November, this report seeks to ensure transparency, foster trust among members, and establish a framework for improved financial planning in subsequent months.

# CHAPTER-TWO

# METHODOLOGY

## Methodology

The methodology for analyzing the mess expenses for the month of November involves systematic data collection, organization, and computation to ensure accurate representation of financial contributions and distributions. The following steps were undertaken:

### **1. Data Collection**

The dataset includes daily meal counts for six members across 30 days in November, along with financial records summarizing:

Total meals consumed by each member.

Overall expenses of the mess.

Individual meal charges, calculated based on total expenses and the mess's collective meal count.

Deposits made by each member.

Additional fixed costs, such as the housemaid's wages.

### **2. Data Organization**

The data was organized into two segments:

Daily Meal Tracking: A table capturing daily meal contributions, allowing the computation of total meals per person and overall mess meals.

Expense Tracking: A detailed summary including each member's deposited amount, meal charges, and other fixed costs to calculate individual dues or balances.

### **3. Computation**

Key calculations were performed as follows:

Total Meal Calculation: The sum of daily meals for each member was computed to derive their individual and collective contributions.

Meal Charge Calculation: The total expense of the mess was divided by the total meals consumed to determine the cost per meal.

Individual Cost Allocation: Each member's share of expenses was calculated as:

Individual Total Meal: =SUM(B3:AE3)

Individual Cost: = Total Meals× Meal Charge

Individual Due: =G18-D18

Mess Total meal: =SUM(B3:AE8)

Meal Charge: =AH3/AG3

Search Individual Information: VLOOKUP(L17,C17:H23,2,0)

Total Cost Allocation: Housemaid's wage was added to the computed individual costs to determine the total cost for each member.

Balance and Due Calculation: The difference between each member's deposited amount and their total cost was calculated to identify outstanding dues or remaining balances.

### **4. Data Validation**

Cross-verification of totals was conducted to ensure that:

The sum of all members' total meals matches the mess's collective meal count.

The sum of individual costs aligns with the total mess expenses.

### **5. Reporting and Analysis**

The findings were compiled into structured tables and graphs (if applicable), presenting:

Each member's financial contributions.

Their corresponding dues or balances.

Comparative analysis of expenses and meal contributions.

This methodological approach ensures that all computations are fair, transparent, and reflective of individual contributions to the mess operations.

# CHAPTER THREE

# RESULT AND DISCUSSION

## RESULT AND DISCUSSION

The provided dataset comprehensively captures the financial and operational details of a mess for the month of November. Below are the results and the associated discussion, highlighting key insights derived from the data:

### **1. Total Meal Consumption**

The total meals consumed by the mess members collectively amounted to 373.5 meals, with individual contributions as follows:

Karim: 44 meals

Piyas: 68 meals

Monirul: 66 meals

Noman: 69.5 meals

Imam: 66.5 meals

Ahad Sharif: 59.5 meals

This distribution indicates that while the members participated actively in the mess operations, there was a noticeable variance in meal consumption, which directly influenced the cost-sharing mechanism.

### **2. Financial Contribution vs. Expense**

Each member’s financial contribution was compared to their incurred costs, including a fixed housemaid wage of 420৳ per person:

Karim: Contributed 1,000৳, but his total expense was 2,620.59৳, resulting in a due of 1,620.59৳.

Piyas: Contributed 500৳, with a total expense of 3,820.91৳, leaving the highest due of 3,320.91৳.

Monirul: Contributed 1,500৳, with a total expense of 3,720.88৳, resulting in a due of 2,220.88৳.

Noman: Contributed 1,700৳, incurring a total expense of 3,895.93৳, leaving a due of 2,195.93৳.

Imam: Contributed 2,000৳, with a total expense of 3,745.89৳, resulting in a due of 1,745.89৳.

Ahad Sharif: Contributed 2,550৳, with a total expense of 3,395.80৳, leaving the smallest due of 845.80৳.

This analysis shows a significant gap between contributions and actual costs, with some members needing to settle larger dues.

### **3. Meal Charge Analysis**

The cost per meal was calculated as approximately 50.01৳, derived from the total expense (18,680৳) divided by the total meals consumed (373.5). This value ensures that all members are equitably charged based on their meal consumption.

Highest meal consumer: Noman (69.5 meals, total cost 3,475.93৳).

Lowest meal consumer: Karim (44 meals, total cost 2,200.59৳).

This fair allocation mechanism directly correlates meal consumption with individual costs, encouraging accountability and transparency in operations.

### **4. Key Observations**

Dues Management: Most members have significant dues to clear, with Piyas owing the most. This could highlight challenges in timely financial contributions.

Operational Efficiency: The total expenses, including fixed wages, appear well-balanced against the meal consumption, suggesting effective resource management.

Variations in Participation: Meal consumption varied notably among members, which impacts the equitable distribution of costs.

### **5. Discussion**

The results highlight the importance of maintaining a structured financial and meal-tracking system in shared environments. While the cost-per-meal approach is effective, the variance in contributions versus expenses underscores the need for better financial planning. Introducing periodic contributions or advance payments could mitigate high outstanding dues and foster smoother operations.

Additionally, analyzing consumption trends can offer insights for optimizing resources, reducing waste, and ensuring all members are equitably engaged in the mess’s functioning.

# CHAPTER FOUR

# FINDINGS AND CONCLUSIONS

## FINDINGS AND CONCLUSIONS

## Findings

### **Meal Contributions and Expenses:**

The total meals consumed in the mess during November amounted to 373.5 meals, distributed among six members. Individual meal counts varied, with Karim contributing 44 meals and Noman contributing the highest at 69.5 meals.

The total expense incurred for meals was 18,680৳, resulting in a calculated meal charge of approximately 50.01৳ per meal.

### **2. Individual Costs and Payments:**

Individual costs were determined by multiplying the number of meals by the meal charge. For instance, Karim's total cost was 2,200.59৳, while Noman incurred the highest cost at 3,475.93৳.

Additional shared expenses, such as the housemaid's wage of 420৳ per member, were uniformly distributed among all members.

### **3. Financial Balances:**

Individual financial contributions (deposits) ranged from 500৳ to 2,550৳, leaving some members with outstanding balances (dues). For example:

Karim: Total cost of 2,620.59৳ against a deposit of 1,000৳, resulting in a due of 1,620.59৳.

Ahad Sharif: Total cost of 3,395.80৳ against a deposit of 2,550৳, leaving a due of 845.80৳.

Among all members, Piyas had the highest due of 3,320.91৳, indicating a need for significant adjustment in their contribution.

### **4. Equity and Transparency:**

The consistent methodology used for calculating meal charges and shared costs ensured a transparent distribution of financial responsibilities.

However, the high variance in dues highlights potential gaps in preemptive financial planning or communication regarding expected monthly expenses.

# Conclusions

The analysis of the mess expenses for November indicates a well-maintained structure for tracking meals and financial contributions. However, several observations suggest areas for improvement:

## Improved Financial Planning:

Members should be informed in advance about expected monthly costs, including shared expenses, to minimize outstanding dues at the end of the month.

Introducing a standard deposit policy could ensure sufficient funds are available to cover monthly costs.

## Enhanced Accountability:

While the system ensures equitable distribution of costs based on consumption, clearer communication about financial responsibilities can help reduce discrepancies and promote smoother operations.

## Potential Automation:

The current manual tracking system is effective but may benefit from digital tools or software to automate calculations and provide real-time updates on financial balances.

This report demonstrates the effectiveness of the current system in fostering transparency but also identifies opportunities for optimization. Implementing the recommended changes could enhance financial stability and operational efficiency for the mess.

# References:

Atkinson, A., & Messy, F. A. (2012). Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study.

Fearon, J. D., & Laitin, D. D. (2004). Neotrusteeship and the problem of weak states. *International security*, *28*(4), 5-43.

Bloom, M. M. (2004). Palestinian suicide bombing: Public support, market share, and outbidding. *Political Science Quarterly*, *119*(1), 61-88.

Sun, Q., & Tong, W. H. (2003). China share issue privatization: the extent of its success. *Journal of financial economics*, *70*(2), 183-222.

Dyer, J. H., & Nobeoka, K. (2000). Creating and managing a high‐performance knowledge‐sharing network: the Toyota case. *Strategic management journal*, *21*(3), 345-367.