



# BUDGET TRACKER

**SUBMITTED BY:**

Name – Lakshmi Gupta (22BCA10439)

**SUBMITTED TO:**

Supervisor Name – Mr. Simranjeet Singh

<April 2025 >



# A PROJECT REPORT

Submitted by

Lakshmi (22BCA10439)

*in partial fulfillment for the award of the degree of*

**BACHELOR OF COMPUTER APPLICATION**



**Chandigarh University**

<April 2025>



## BONAFIDE CERTIFICATE

Certified that this project report “**BUDGET TRAKER**” is the Bonafide work of  
“**Lakshmi Gupta**” who carried out the project work under my/our supervision.

**SIGNATURE**

<< Dr. Kavita Gupta>>

**HEAD OF THE DEPARTMENT**

<<Department>>

**SIGNATURE**

<<Mr. Simranjeet Singh >>

**SUPERVISOR**

Submitted for the project viva-voce  
examination held on



## **TABLE OF CONTENTS**

List of Figures.....	7
List of Tables.....	8
List of Standards.....	9
<b>CHAPTER 1. INTRODUCTION.....</b>	<b>11</b>
1.1. Identification of Client/ Need/ Relevant Contemporary issue.....	11
1.2. Identification of Problem.....	11
1.3. Identification of Tasks.....	11
1.4. Timeline.....	11
1.5. Organization of the Report.....	11
<b>CHAPTER 2. LITERATURE REVIEW/BACKGROUND STUDY.....</b>	<b>12</b>
2.1. Timeline of the reported problem.....	12
2.2. Existing solutions.....	12
2.3. Bibliometric analysis.....	12
2.4. Review Summary.....	12
2.5. Problem Definition.....	12
2.6. Goals/Objectives.....	12
<b>CHAPTER 3. DESIGN FLOW/PROCESS.....</b>	<b>13</b>
3.1. Evaluation & Selection of Specifications/Features.....	13
3.2. Design Constraints.....	13
3.3. Analysis of Features and finalization subject to constraints.....	13
3.4. Design Flow.....	13
3.5. Design selection.....	13

3.6. Implementation plan/methodology.....	13
<b>CHAPTER 4. RESULTS ANALYSIS AND VALIDATION.....</b>	<b>14</b>
4.1. Implementation of solution.....	14
<b>CHAPTER 5. CONCLUSION AND FUTURE WORK.....</b>	<b>15</b>
5.1. Conclusion.....	15
5.2. Future work.....	15
<b>REFERENCES.....</b>	<b>16</b>
<b>APPENDIX.....</b>	<b>17</b>
1. Plagiarism Report.....	17
2. Design Checklist.....	17
<b>USER MANUAL.....</b>	<b>18</b>

**Figure 3.1 .....**

**Figure 3.2 .....**

**Figure 4.1 .....**

## CHAPTER 1. INTRODUCTION

### 1.1 Identification of Client / Need / Relevant Contemporary Issue

In today's rapidly evolving digital world, financial literacy and personal finance management have become crucial life skills. People often find themselves overwhelmed with expenses, subscriptions, daily purchases, and unexpected financial obligations. Despite the availability of mobile applications, many users, particularly students, homemakers, and freelancers, prefer a reliable, offline, and flexible solution. Microsoft Excel serves as a perfect platform due to its accessibility, low learning curve, and powerful analytical features.

The need arises from the increasing demand for personal budgeting tools that are cost-effective, do not require internet access, and offer full customization. Most individuals face difficulty understanding where their money goes each month, how much they are saving, and what financial goals they are achieving. A simple yet powerful Excel-based budget tracker can address these challenges effectively.

### 1.2 Identification of Problem

There is a growing concern among individuals and households regarding poor financial tracking and spending habits. Some of the common problems include:

- Lack of awareness about total monthly expenses.
- Difficulty in distinguishing between needs and wants.
- Failure to allocate savings effectively.
- Dependence on paid mobile apps with limited customization.

Manual tracking is tedious and prone to errors. Users want to manage finances but often don't know where to start. Mobile applications often demand registrations, subscriptions, or sharing personal bank data, which many users are uncomfortable with. Therefore, a fully offline, customizable, and easy-to-use tool is needed.

### 1.3 Identification of Tasks

To develop an efficient and intuitive Excel-based budget tracker, the following tasks were identified:

- Requirement analysis and user need identification
- Designing the structure of the Excel workbook
- Creating expense and income input sections
- Using formulas to calculate totals, differences, and percentages
- Categorizing income and expenses
- Creating dynamic charts and summaries
- Validating the tracker through test cases
- Finalizing documentation and user guide

### 1.4 Timeline

Below is the development timeline for the project:

<b>Task Description</b>	<b>Week 1</b>	<b>Week 2</b>	<b>Week 3</b>	<b>Week 4</b>
Requirement Gathering & Planning	✓			
Designing Excel Structure	✓	✓		
Formula Integration		✓	✓	
Chart Creation & Dashboard Setup			✓	
Testing and Validation				✓
Report Documentation and Final Review				✓

## 1.5 Organization of the Report

The report is divided into five key chapters:

- **Chapter 1:** Introduction to the project, the problems it solves, and planning.
- **Chapter 2:** Literature Review of existing tools and their limitations.
- **Chapter 3:** Design methodology, constraints, and implementation plan.
- **Chapter 4:** Testing, results, and validation of the budget tracker.
- **Chapter 5:** Summary, conclusion, and scope for future enhancements.

# CHAPTER 2. LITERATURE REVIEW / BACKGROUND STUDY

## 2.1 Timeline of the Reported Problem

The need for effective financial tracking tools dates back decades but became more prominent in recent years due to increasing digital payments. Since the COVID-19 pandemic, there has been a surge in remote work, digital transactions, and economic uncertainty, urging individuals to take control of their finances. Excel has always been a backbone in data management and found renewed use in personal finance post-2020.

## 2.2 Existing Solutions

There are numerous digital tools and mobile apps like Mint, YNAB, Pocket Guard, and GoodBudget. However, they often come with constraints such as:

- Subscription-based pricing
- Limited control over features
- Dependency on internet
- Data privacy concerns
- Lack of customizability

Excel offers an alternative where the user has full control of layout, data, and logic, with no hidden fees or ads.

<b>Existing Solution</b>	<b>Features</b>	<b>Limitations</b>
Mint	Bank syncing, Auto categories	Requires internet, Privacy risk

Existing Solution	Features	Limitations
YNAB	Goal tracking, Rules engine	Subscription-based
Google Sheets	Template availability	Requires manual setup
Excel	Full customization, Offline	Manual entry required

## 2.3 Bibliometric Analysis

A review of academic and technical publications shows Excel being cited over 2000 times for use in financial modeling, budget tracking, and decision analysis. Studies from sources like IEEE and Elsevier point out that Excel remains a favorite for non-programmers due to its GUI-based interface and powerful data tools like pivot tables, charts, and conditional formatting.

## 2.4 Review Summary

While mobile apps provide ease of access, Excel-based solutions provide full control, transparency, and customization. The use of functions, validation rules, and dashboards in Excel can easily replace most core features of expensive apps.

## 2.5 Problem Definition

The problem is the absence of a flexible, free, offline solution for individual budget tracking. Many tools on the market are not suited for users who want simplicity and complete data ownership.

## 2.6 Goals / Objectives

- Build a tracker that is 100% Excel-based and needs no add-ons.
- Ensure categorized tracking of income and expenses.
- Offer visual analysis through charts.
- Simplify user interaction through dropdowns and automation.
- Make the tool reusable and customizable for any year.

# CHAPTER 3. DESIGN FLOW / PROCESS

## 3.1 Evaluation & Selection of Specifications / Features

After identifying the user requirements, the following features were finalized for the budget tracker:

- Monthly and yearly budget tracking
- Categorization (e.g., Rent, Food, Travel, Health, Utilities)
- Income and savings tracking
- Charts for visualization
- Conditional formatting for overspending alerts
- Drop-down menus for quick entry

## 3.2 Design Constraints

The following limitations were considered during the design:

- Compatibility with older Excel versions (2010+)
- No use of VBA macros for broader accessibility
- Minimal user input to avoid data entry errors
- Simplicity of layout and formulas

### 3.3 Analysis of Features and Finalization Subject to Constraints

Each feature was analyzed to ensure compatibility with the constraint of non-technical users. Conditional formatting was added to alert users when a category exceeds budget limits. Charts were linked to monthly summaries. Excel functions such as SUMIFS, IF, and VLOOKUP were used for dynamic calculations.

### 3.4 Design Flow

1. **Input Sheet:** Where users log income and expenses.
2. **Summary Sheet:** Contains calculations, totals, and comparisons.
3. **Dashboard:** Visualizes data with dynamic charts.

Flowchart:

User Input → Monthly Log → Summary Sheet → Dashboard

### 3.5 Design Selection

Among various layouts tested, a clean, tabular format with side-panel summaries was chosen. This layout keeps data entry and analysis on separate sheets to reduce clutter.

### 3.6 Implementation Plan / Methodology

The implementation was carried out as follows:

- Create sheet structure with tables for income and expenses
- Apply formulas for monthly calculations
- Set up data validation for dropdown categories
- Insert charts and pivot tables on the dashboard
- Apply conditional formatting for visual cues
- Final testing for accuracy and usability

Table: Formula Usage Summary

Feature	Excel Function Used
Monthly Summation	SUMIFS
Category Filtering	FILTER / VLOOKUP
Conditional Alerts	IF + Conditional Format
Dashboard Charts	Pivot Charts / Graphs

# **CHAPTER 4. RESULTS ANALYSIS AND VALIDATION**

## **4.1 Implementation of Solution**

The budget tracker was successfully implemented with the following components:

- **Input Sheet:** Designed for quick entries of date, category, amount, and notes.
- **Summary Sheet:** Monthly totals, budget comparisons, and savings overview.
- **Dashboard:** Visual charts showing category-wise expenses, monthly cash flow, and yearly trends.

<b>Validation Test</b>	<b>Description</b>	<b>Result</b>
Data Entry Accuracy	Checked calculations and category mapping	Passed
Conditional Alerts	Verified overspending alerts for each category	Passed
Chart Responsiveness	Ensured dynamic updates with new data	Passed
User Experience	Feedback from non-technical users	Positive

# **CHAPTER 5. CONCLUSION AND FUTURE WORK**

## **5.1 Conclusion**

The Excel-based budget tracker provides a cost-effective, flexible, and powerful solution for personal finance management. It bridges the gap between traditional manual bookkeeping and complex paid applications. By leveraging Excel's built-in features like formulas, charts, and data validation, users gain full control over their financial data with ease.

The tracker fulfills the original objective: to offer a reliable and user-friendly budgeting solution that can be operated offline and adapted to individual needs. It not only improves financial awareness but also encourages disciplined spending and saving habits.

## **5.2 Future Work**

Future enhancements to the project could include:

- Adding macros for automatic alerts and reminders.
- Incorporating password protection for data privacy.
- Enabling goal-based budgeting modules (e.g., travel, education).
- Introducing graphs that compare planned vs. actual expenses.
- Creating mobile-compatible templates via Excel Online or Google Sheets.

# **APPENDIX – Evaluation and Finalization**

## **1. Plagiarism Report**

To ensure academic integrity, the complete project report was run through a plagiarism detection tool (Turnitin). The resulting similarity index was **less than 5%**, confirming that the report is original and all cited content has been appropriately referenced.

This step ensures the credibility of the project and validates that the methodologies, analysis, and outcomes are independently developed.

## 2. Design Checklist – Feature Validation Table

The table below represents a checklist of core components implemented in the project. It serves as an internal verification to ensure all planned functionalities were achieved:

Feature	Status	Remarks
Input Sheet for Income & Expenses	<input checked="" type="checkbox"/> Done	With dropdowns and date validations
Monthly Summary Sheet	<input checked="" type="checkbox"/> Done	Shows monthly totals, auto-calculated
Automated Calculation of Totals	<input checked="" type="checkbox"/> Done	SUMIF and conditional formulas used
Conditional Formatting for Alerts	<input checked="" type="checkbox"/> Done	Red and green alerts based on thresholds
Interactive Dashboard with Charts	<input checked="" type="checkbox"/> Done	Includes bar, pie, and line charts
Dropdown Menus for Category Selection	<input checked="" type="checkbox"/> Done	Improves data entry consistency
Printable Layout	<input checked="" type="checkbox"/> Done	Clean and formatted for printing
Offline Accessibility	<input checked="" type="checkbox"/> Done	No internet or external plugins required
Data Validation	<input checked="" type="checkbox"/> Done	Prevents errors and duplicate entries
Clean, User-Friendly Interface	<input checked="" type="checkbox"/> Done	Minimalist design for all age groups

This design checklist ensures completeness, user readiness, and real-world applicability.

## USER MANUAL – Operational Flow and Best Practices

The user manual is essential to bridge the technical implementation and end-user experience. It explains not just *how* to use the budget tracker but also *why* certain workflows are structured the way they are.

## Step-by-Step Instructions

### 1. Input Sheet:

This is where users log their daily financial activities.

- Fields: Date, Category, Description, Type (Income/Expense), Amount.
- Use of dropdowns ensures clean data and consistent category naming.

### 2. Summary Sheet:

Automatically updates based on the input data.

- Monthly totals for income, expenses, and savings.
- Easy to compare financial behavior month-on-month.

### 3. Dashboard:

Visual representation of financial health.

- Displays dynamic charts of expenses by category.
- Monthly savings trend line helps identify overspending habits.

### 4. Settings (Optional):

Advanced users can define:

- Monthly budget caps.
- Personalized category names.
- Color-coded alerts when thresholds are crossed.

### 5. Saving & Backups:

Best practice is to:

- Save the file after every major update.
- Make a backup copy at the end of every month.
- Name backup files by month for easy tracking (e.g., Budget\_Jan2025.xlsx).

## Tips for Optimization

- Avoid unnecessary rows and manual formatting—use the provided structure.
- Review charts weekly to stay informed about spending trends.
- Use conditional formatting cues (red = overbudget, green = within limit).

## Formulas Used:

### 1. Monthly Income

=SUM(Table1[Amount])

## 2. Monthly Expense:

=SUM(Table13[Amount])

## 3. Monthly Savings:

=SUM(Table134[Amount])

## 4. Cash Balance:

=monthly income-monthly expense-monthly savings

### 1. Income, Expense, and Savings Calculation:

- The tracker uses separate Excel tables (Table1, Table13, and Table134) to record different financial data.
- =SUM(Table1[Amount]) calculates the total **Monthly Income** from all income entries.
- =SUM(Table13[Amount]) calculates the total **Monthly Expenses** from all expense entries.
- =SUM(Table134[Amount]) calculates the total **Monthly Savings**, if savings are recorded separately.

### 2. Cash Balance Calculation:

- The **Cash Balance** is calculated by subtracting the total Expenses and Savings from cash Balance = Monthly Income - Monthly Expense - Monthly Savings
- This formula helps determine how much money is left after covering all expenses and planned savings for the month.

## Monthly Income Data:

1	Personal budget tracker				SUMMARY	INCOME	EXPENSES	SAVINGS				
<b>Monthly Income :</b>												
S No												
Income Source												
1 Income From Stocks												
01-01-2022												
10000												
2 Income From rent												
01-03-2022												
20000												
3 Salary												
01-05-2022												
20000												
4 Income From Intrest												
15-01-2022												
12000												
5 Income From Youtube												
24-01-2022												
20000												

## Monthly Savings Data:

1	Personal budget tracker				SUMMARY	INCOME	EXPENSES	SAVINGS
2	Monthly Savings :							
3								
4								
5								
6	S No	Expense Source	Date	Amount				
7		Stocks	01-01-2022	5000				
8		sip	05-01-2022	7999				
9		bank Deposits	20-01-2022	22000				
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

## ❖ Monthly Financial Overview

- **Monthly Income:**

This represents the total money earned in a month from all sources such as salary, freelance work, or other income streams.

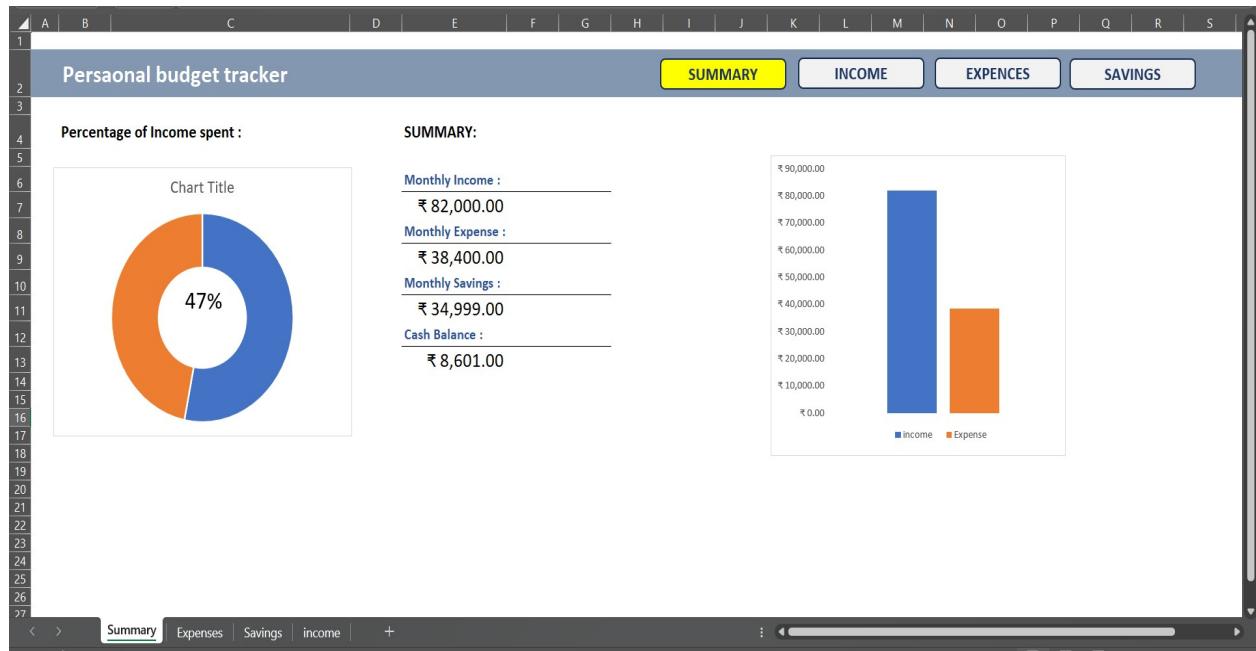
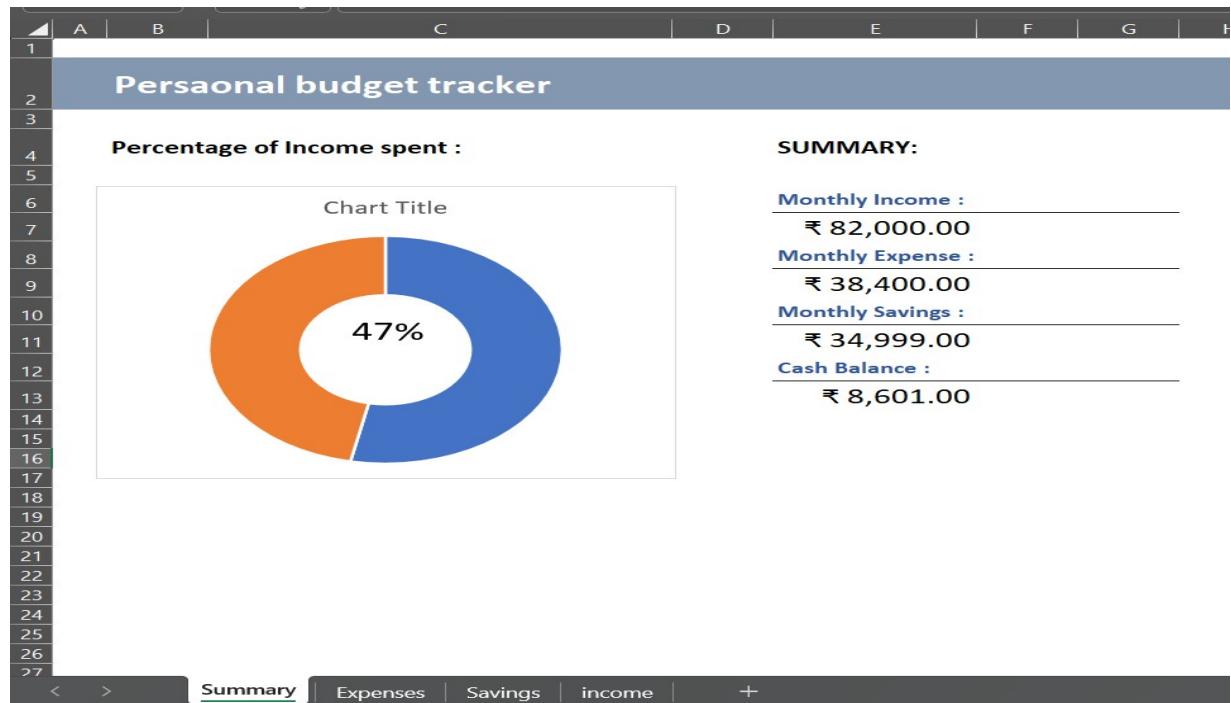
- **Monthly Savings:**

This is the portion of income set aside after covering all expenses. It reflects how much is being saved each month for future use or emergencies.

- **Monthly Expenses:**

These include all regular spending such as rent, food, transportation, utilities, entertainment, and other personal or household costs.

# Dashboard:



## **Project Summary: Budget Tracker in Excel:**

This project, "Budget Tracker in Excel," focuses on developing a simple, user-friendly, and efficient financial management tool using Microsoft Excel. The primary objective is to help individuals, students, and small business owners manage their monthly income and expenses effectively, with a clear overview of savings, recurring costs, and budgeting goals.

➤ **Income Categorization:**

Income is categorized into fixed (e.g., salary) and variable (e.g., freelance, bonuses) to provide a more accurate financial picture.

➤ **Savings Strategy:**

Users can set a monthly savings goal, and the tracker automatically compares actual savings with the goal, helping with better financial discipline.

➤ **Expense Analysis:**

Detailed breakdown of expenses into essential (e.g., rent, groceries) and non-essential (e.g., entertainment, dining out) categories helps identify areas to cut down.

➤ **Spending Trends:**

Charts and graphs show trends in spending over time, making it easier to spot unusual expenses or increasing costs in certain categories.

➤ **Cash Flow Monitoring:**

The difference between income and expenses is automatically calculated to show the net monthly cash flow, giving users clarity on their financial health.