TEAM NO:15

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SOFTWARE REQUIREMENT SPECIFICATION (SRS)DOCUMENT

MONTHLY BUDGET PLANNER

Usefulness of a Monthly Budget Planner

1. Introduction

A Monthly Budget Planner is an essential financial tool designed to help individuals and households manage their income and expenses effectively. By providing a structured approach to tracking financial activities, it aids in achieving financial stability and long-term goals.

2. Key Benefits

2.1 Financial Control

Implementing a budget planner offers a clear overview of one's financial situation, enabling better control over spending habits. It assists in identifying unnecessary expenditures and reallocating funds towards more critical needs .

2.2 Goal Setting and Achievement

A budget planner facilitates the setting of short-term and long-term financial goals, such as saving for a home, education, or retirement. By monitoring progress, individuals can stay motivated and make informed decisions to achieve these objectives .

2.3 Debt Management

Tracking income and expenses helps in formulating strategies to manage and reduce debt. By allocating funds appropriately, individuals can prioritize debt repayment and avoid accumulating additional liabilities .

2.4 Emergency Preparedness

Regular budgeting allows for the creation of an emergency fund, providing a financial cushion during unforeseen circumstances such as medical emergencies or job loss .

2.5 Stress Reduction

Having a clear financial plan reduces anxiety related to money matters. Knowing that expenses are accounted for and savings are on track contributes to overall mental well-being .

Peoples Security Bank & Trust

3. Practical Applications

Expense Tracking: Monitor daily, weekly, and monthly expenditures to identify spending patterns.

Income Management: Allocate income towards necessities, savings, and discretionary spending.

Financial Forecasting: Predict future financial positions based on current spending and saving habits.

Resource Allocation: Ensure funds are available for essential expenses and avoid overspending.

5. Conclusion

A Monthly Budget Planner is a vital instrument for effective financial management. It empowers individuals to take control of their finances, set and achieve goals, manage debts, prepare for emergencies, and reduce financial stress. Utilizing available tools and maintaining consistent budgeting practices can lead to improved financial health and stability.

6.hardware/software involved

Hardware Requirements:

Standard pc/laptop

Minimum 2GB RAM

500MB disk space

7.Software Requirements :

Programming languages:c

Compiler: GCC

Operating system : windows/linux/macos

8.Detailed Feature list

**Core Features**

1. **Expense Management**
   * Add individual expenses with:
     + Category name (e.g., Food, Rent, Transport)
     + Amount (in ₹)
     + Automatic timestamp (current date and time)
2. **Category Handling**
   * Supports up to 20 custom categories
   * Automatically adds new categories on entry
   * Each category is assigned a unique color for pie chart display
3. **Expense Limits**
   * Supports up to 100 total expenses
   * Notifies user when limits are reached

**Summary & Reporting**

1. **Spending Summaries**
   * Calculates total expenses for:
     + **This week**
     + **This month**
     + **This year**
   * Compares spending against the monthly income
   * Displays remaining balance for each period
2. **Detailed Expense View**
   * List of all recorded expenses with:
     + Date and time
     + Category name
     + Amount

**Graphical Visualization**

1. **Pie Chart Visualization**
   * Launches a GUI window using Windows GDI
   * Displays a pie chart of spending distribution across categories
   * Proportional slices with dynamic colors
2. **Legend Display**
   * Displays a color-coded legend alongside the pie chart
   * Shows category names and their corresponding total spending

**Technical Highlights**

1. **Time-based Calculations**
   * Uses struct tm and time library to:
     + Determine if an expense is in the same week, month, or year as current time
     + Calculate accurate summaries
2. **Unicode and Currency Formatting**
   * Displays amounts in ₹ with UTF-8 encoding
   * Uses Unicode symbols for clean CLI feedback
3. **User Interface (Text + GUI)**
   * CLI-based main menu for navigation
   * Interactive and real-time Windows GUI for pie chart

Individual member contribution :

student 1,vidya sri ganesh : GUI

student 2,Vishnu S.R : Helpers,Add expenses

student 3, Vasu Tripathi: Drawing ( Pie Chart , Legend )

student 4, Varun : int main,Summary,starting code