

National University of Computer & Emerging Sciences
Karachi Campus



Secure Budget Tracker (BudgetSafe)
Project Proposal

Programming Fundamentals (PF)

Section: BCS-1F

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Project Proposal

- **Introduction**

BudgetSafe is a Secure Budget Tracker which will help users manage their income and expenses securely. It allows users to record transactions, notify financial alerts, and generate monthly reports.

- **Existing System**

There are several existing budget tracking tools and mobile applications (like *Mint*, *YNAB*) which provide users with the ability to record transactions, categorize expenses, and visualize spending patterns. But most of them are not focusing on data privacy and security which becomes our problem statement to be addressed.

- **Problem Statement**

Most budget management systems prioritize user interface and analytics but often overlook data privacy and data security. Users' financial data — including income details, spending habits, and payment records — are stored in plain text or transmitted online without encryption.

Therefore:

"To develop a simple, offline, and secure budget tracking system that allows users to manage their personal finances while ensuring data confidentiality, and controlled access."

- **Proposed Solution**

The proposed Secure Budget Tracker will address the above problem by incorporating basic cybersecurity into a C program.

- **Salient Features**

1. User Registration & Secure Login System (with password encryption)
2. Add, View, Edit, and Delete Transactions
3. Expense Threshold Alerts (detect abnormal spending)
4. Monthly Reports

- **Tools & Technologies**

Programming Language	C
Development Environment / IDE	Visual Studio Code
Libraries	Standard C Libraries (stdio.h, string.h)
Operating System	Windows