VIT®
BHOPAL

Project Report

Title: Expense Tracker

By : Dinesh Kumawat

Reg.NO.: 25BCY10143

Date : 24th December, 2025

System Architecture

The application uses a modular Python script structure:

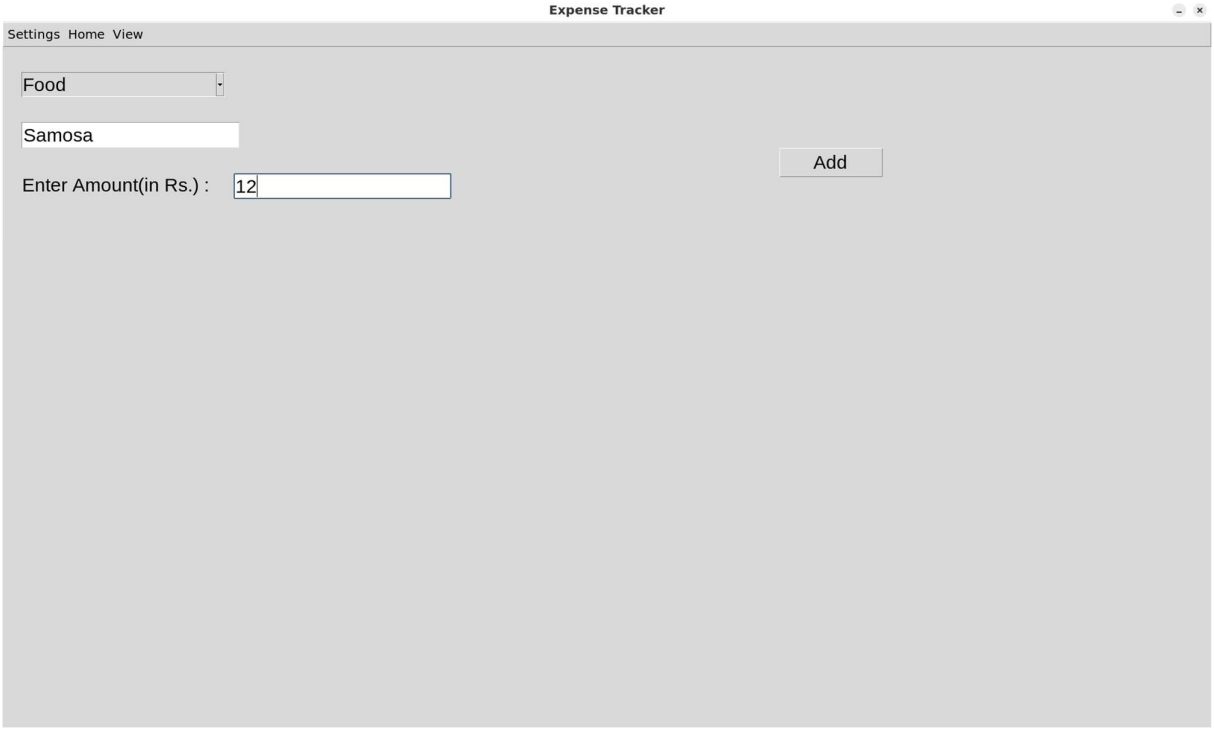
1. main.py (GUI)

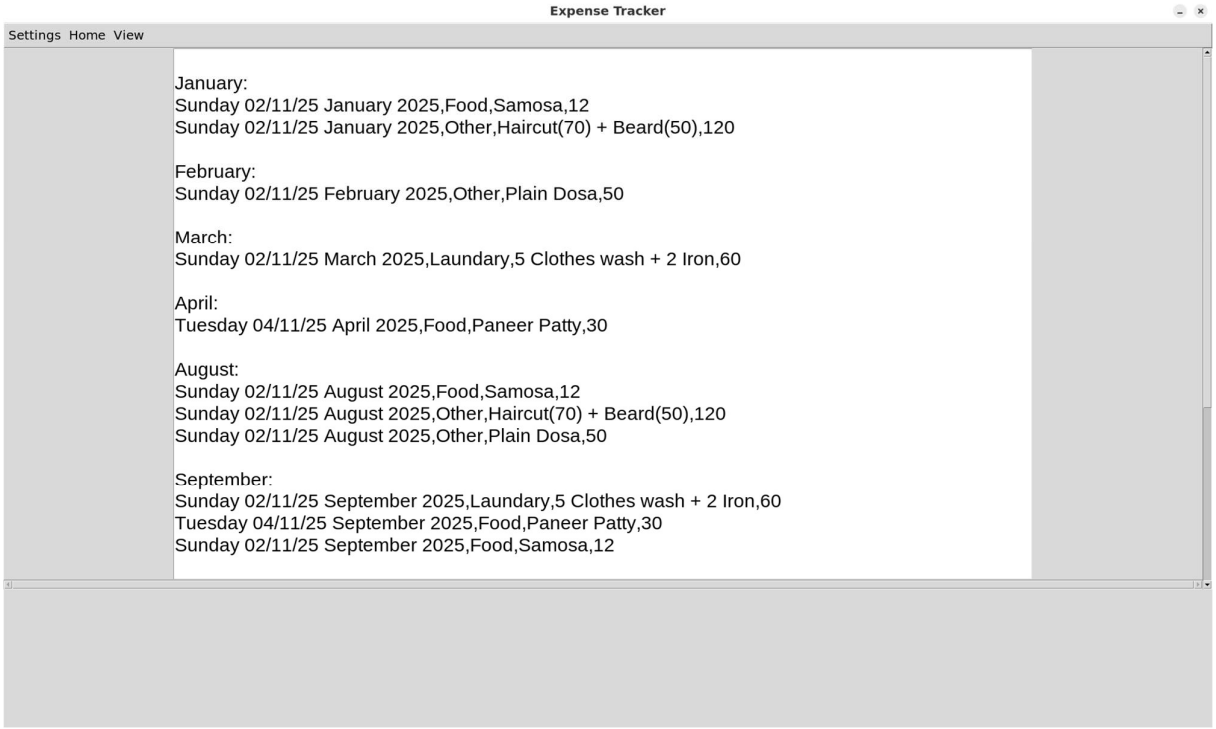
2. backend.py (file operations and logic)

3. Data stored in Storage.txt

4. GUI interacts with backend via imported functions

Screenshots





References

1. Python Tkinter documentation

2. Python official documentation

3. Various Tkinter and expense tracker tutorials

Future Enhancements

1. Data visualization (graphs of spending)

2. A settings tab for user to customie the categories, data representation, visuals.

3. Expense list to be sent to user via whatsapp or mail at the end of month.

Learnings & Key Takeaways

1. Practical GUI application development in Python.

2. Data flow between interface and backend.

3. Importance of user input validation.

Challenges Faced

1. String parsing and error handling for file I/O.

2. Designing a layout that is both functional and beginner-friendly.

Implementation Details

1. GUI has dropdown for categories, entry fields for detail nd price, buttons for actions.

2. Backend handles input validation, formatting dates, and sorting expenses by month.

3. Data persistence via opening and appending in Storage.txt.

Design Decisions & Rationale

1. Tkinter was chosen for its simplicity and cross-platform nature.

2. Plain text file storage allows easy reading and portability.

3. Data structure: each expense is stored as a line with date, category, detail, and price for straightforward parsing.

Non-Functional Requirements

1. Responsive and intuitive interface.

2. Efficient file operations.

3. Error handling for invalid or missing inputs.

Functional Requirements

1. Ability to add expenses with category, detail, and amount.

2. Display saved expenses, grouped by month and day.

3. Summing total expenses.

4. File-based persistent storage.

Introduction

The Expense Tracker project is a user-friendly desktop tool that helps users log and manage their daily expenses by category and date using a simple graphical interface.

Problem Statement

Individuals often struggle with tracking day-to-day spending, leading to poor budget awareness and planning. This project provides a structured, automated solution for accurate expense logging and review.