

Project Overview:

The Personal Finance Manager is a Python-based command-line application that helps users track, manage, and analyze their personal expenses. The application allows users to store expenses persistently, generate reports, and maintain backups of financial data.

Objectives:

Record daily expenses with category, date, and description

Store expense data using CSV files

Provide analytical reports to understand spending habits

Ensure data safety through backup and restore features

Deliver a simple, user-friendly command-line interface

Installation Steps:

Download or clone the project folder

Open a terminal inside the project directory

Run the application using:

```
python main.py
```

Main Menu Options:

Add New Expense

View All Expenses

Edit Expense

Delete Expense

Search Expenses

Generate Reports

Export / Backup Data

Restore Backup

Export Data to JSON

Exit Application

Example:

Adding an Expense

Enter amount

Select category

Enter date or use today's date

Add optional description

The expense is saved automatically.

Code Organization

Expense Class: Defines expense structure using @dataclass

File Operations: CSV read/write and JSON export

Validation Functions: Input validation for date and amount

Reporting Functions: Total, average, category-wise, monthly reports

Menu System: Handles user interaction and program flow

Troubleshooting Guide:

Program does not run-

Ensure Python is installed correctly

Run using python main.py

CSV file not found-

The program automatically creates it on first run

Invalid input errors-

Enter valid numeric values for amount

Use date format YYYY-MM-DD

Keyboard interrupt-

Press Ctrl + C safely exits the application