Expense Tracker Project Report

Introduction

The Expense Tracker is a Python-based command-line application designed to help users track their expenses efficiently. This report provides an overview of the project, its features, and implementation details.

Objective

The primary objective of the Expense Tracker project is to create a simple yet effective tool for users to record, view, and generate reports on their expenses categorized by different expense categories.

Features

- Add Expense: Users can input their expense category and the corresponding amount, which will be recorded with a timestamp.
- View Expenses: Users can view their expenses categorized by expense type.
- Generate Report: A summary report can be generated, displaying total expenses for each category and overall.

Implementation Details

The project is implemented in Python and utilizes the following key components:

1. Data Storage
   Expenses are stored in a JSON file named expenses.json. The json module is used for reading from and writing to this file.
2. Expense Management Functions
   load_expenses(): Loads expenses from the JSON file.
   save_expenses(expenses): Saves expenses to the JSON file.
   add_expense(expenses, category, amount): Adds a new expense with the provided category, amount, and timestamp.
   view_expenses(expenses): Displays expenses categorized by type.
   generate_report(expenses): Generates a summary report of total expenses by category and overall.
3. User Interface
   The application provides a simple command-line interface with the following options:
   Add Expense
   View Expenses
   Generate Report
   Exit

4. Main Function
   The main() function acts as the entry point of the application. It repeatedly prompts the user for input until the user chooses to exit.

Usage

To use the Expense Tracker, follow these steps:

1. Run the Python script expense_tracker.py.
2. Choose from the available options to add expenses, view expenses, generate reports, or exit.

Conclusion

The Expense Tracker project provides a convenient solution for individuals to manage their expenses effectively. With its user-friendly interface and essential features, it serves as a useful tool for personal finance management.