💰 PERSONAL EXPENSE TRACKER

A simple and interactive Personal Expense Tracker built using Python and Jupyter Notebook. This project allows users to log, analyze, and visualize their income and expenses efficiently. Ideal for students or individuals aiming to manage their monthly budgets better.

📖 Table of Contents

🧾 Introduction

- Managing finances is a critical skill, and this Personal Expense Tracker is designed to simplify that.
- Built using Python, pandas, and matplotlib, this tool allows users to input their daily expenses and incomes, automatically calculate summaries, and visualize spending habits with charts — all in an interactive Jupyter Notebook environment.

📌✨ Features

- 🔘 **Add Transactions**
  Log income and expense entries with date, description, category, and amount.
- 📊 **Summary Calculations**
  Compute total income, total expenses, and current balance.
- 📈 **Data Visualization**
  Generate bar and pie charts showing expenses by category or over time using matplotlib.
- 🔍 **Filtering and Analysis**
  Filter transactions by category, date range, or type (income/expense).
- 🧠 **User-Friendly Input**
  Simple and guided inputs for easy data entry.

🛠️💼 Technologies Used

Technology	Purpose
Python	Core logic and data manipulation
Jupyter Notebook	Interactive execution environment
matplotlib	Visualization
datetime	Date management

📁 Project Structure

⚙️ Installation

- **Clone the repository or download the notebook:**

`git clone https://github.com/your-username/personal-expense-tracker.git`

- **Make sure Python and Jupyter are installed. If not:**

  `pip install notebook matplotlib`

- **Launch the notebook:**

  `jupyter notebook Personal_Expense_Tracker.ipynb`

  `OR`

▶ How to Run

1. Clone or download this repository.
2. Open Personal_Expense_Tracker.ipynb using Jupyter Notebook or any compatible editor.
3. Run each cell sequentially to:
   - Input expenses/income
   - View summary
   - Generate charts

Ensure you have the required Python packages installed:

`pip install pandas matplotlib`

▶ How to Use

1. **Run Each Cell Sequentially**
   Start from the top and execute each cell in order.
2. **Add Your Income and Expenses**
   Use the provided input cells to add transactions.
3. **View Transaction Table**
   See all your records organized in a clean table.
4. **Check Monthly Summary**
   Get quick totals of your income, expenses, and net savings.
5. **Visualize Your Data**
   Use pie charts or bar graphs to understand where your money is going.
6. **Analyze Spending**
   Apply filters to focus on specific categories or date ranges.

📊 📸 Project Screenshots

```
[B] Remove/Delete Expense.
[C] View Expenses.
[D] Edit Expense.
[E] Generate Monthly Report.
[F] Visualized Report.
Enter Your Choise :A
Enter the amount of expense = 1200
Enter the Category of the expense :food
Enter the method of payment[eg:UPI,cash...] :Upi
Enter the description of expense :
Expense added Successfully...
Are you want to continue or do work on the expense...
     Yes --> choice = Y
     No --> choice = N
Enter your choice : Y
Enter Your Choise :A
Enter the amount of expense = 2000
Enter the Category of the expense :Furniture
Enter the method of payment[eg:UPI,cash...] :Cash
Enter the description of expense :
Expense added Successfully...
Are you want to continue or do work on the expense...
     Yes --> choice = Y
     No --> choice = N
Enter your choice : Y
Enter Your Choise :A
Enter the amount of expense = 500
```
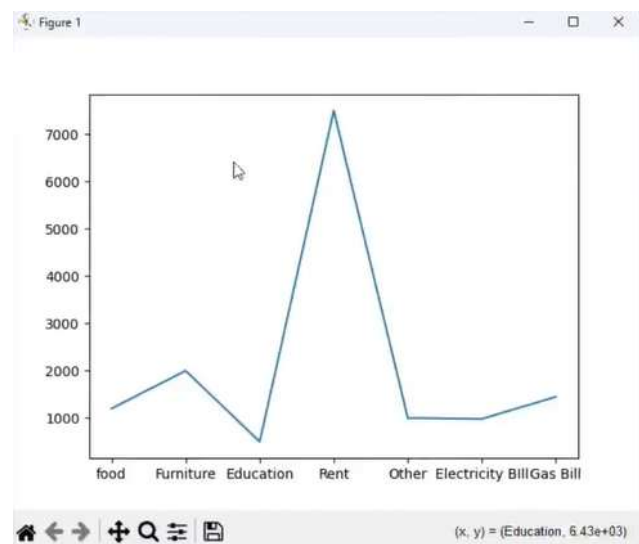
Summary Stats	Expense Chart

📂 Folder Structure

📦Personal-Expense-Tracker

　├ 📄 Personal_Expense_Tracker.ipynb

　├ 📄 Thesis.pdf

　├ 📄 index.py [same code in single module]

　├ 📄 README.md

　└ 📄 report_{month}_{year}.txt

📝 Future Enhancements & 🚀 Improvements

- 📤 Export data to CSV or Excel
- 🌐 Build a web-based version using Flask/Streamlit
- 📱 Make it a mobile-friendly app
- 🔐 Add login and user profiles
- 🧠 Add AI/ML insights and spending recommendations
- 🗓️ Category-wise monthly report generator

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