Final Project Report: Personal Budget Tracker

Project Title

Personal Budget Tracker

Group Number

Group 17P

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1. Project Overview

The **Personal Budget Tracker** is a web-based application developed with **Streamlit**, designed to help users manage their income and expenses effectively. The goal is to provide a simple, intuitive interface that enables users to log transactions, track monthly savings, and visualize financial trends using charts.

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2. Key Features

- 🔐 **User Authentication:** Secure login with hashed passwords and support for creating multiple users.
- 💸 **Transaction Logging:** Add income and expenses with date, category, and amount.
- 📊 **Monthly Overview:** Automatically calculates total savings per month and shows them using a bar chart.
- 🧾 **Transaction History:** Full list of all transactions with delete option.
- ⚙️ **Account Settings:** Change password, create new users, and logout.
- 📁 **SQLite Database:** Persistent local storage using SQLite.
- 🖥️ **Modern UI:** Interactive frontend built with Streamlit.

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3. Technologies Used

- **Python 3.11**
- **Streamlit**
- **Pandas**
- **SQLite**
- **Hashlib (for password hashing)**

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4. File Structure

```
bash
КопироватьРедактировать
/src/                 - Application source code (main Streamlit app)
/docs/
  ├ final_report.pdf - This document
  └ screenshots/     - Screenshots showing the workflow
/data/                - (empty, not used in this project)
/tests/               - (empty, not used in this project)
/README.md            - Project overview
/LICENSE              - Optional (not included)
```

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5. How to Run

1. Install dependencies:

   ```
   bash
   КопироватьРедактировать
   pip install streamlit pandas
   ```

2. Launch the app:

   ```
   bash
   КопироватьРедактировать
   streamlit run src/budget_tracker_app.py
   ```

3. Open the app in browser and login with default credentials:
   - **Username:** `admin`
   - **Password:** `admin`

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6. Screenshots / Demo

Note: If demo video is not available, include minimum 5 screenshots in `/docs/screenshots/`.

- Login page
- Dashboard with monthly savings
- Adding a transaction
- Viewing transaction history
- Account settings panel

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7. Challenges Faced

- Designing a simple yet functional login system using SQLite.
- Making Streamlit rerun reliably after database updates.
- Managing user-specific data and linking transactions to individual accounts.

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8. Future Improvements

- Add export to CSV or Excel.
- Integrate user-defined categories with color tags.
- Enable filters by date or category.
- Deploy the app online using Streamlit Cloud or Docker.

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9. Conclusion

This project successfully achieved its goal of helping users track and analyze their budget. It can be further extended with richer analytics and modern UI styling. The project is simple but functional, and it demonstrates understanding of full-stack principles — from backend database handling to frontend interactivity.
