**USER MANUAL**

**This user manual explains how to install and use the Personal Finance Management Application, which allows you to track your finances, set budgets, and generate reports. The app uses SQLite to store local data.**

**Key Features:**

1. User Registration and Login
2. Income and Expense Tracking
3. Budget Management
4. Financial Reports (Monthly and Yearly)
5. Data Backup and Restore

**Installation Instructions**

**Pre-requisites:**

* Python 3.x installed on your system.
* SQLite3 library (comes pre-installed with Python).
* The following Python libraries (no need for additional installation as they are standard):
  + sqlite3
  + hashlib

**Step 1: Download the Code**

* Save the provided code in a file named finance\_app.py on your local machine.

**Step 2: Run the Application**

1. **Open your command line interface (CLI)**:
   * On Windows: Open Command Prompt (search for "cmd" in the Start menu).
   * On macOS or Linux: Open Terminal.
2. **Navigate to the directory where the file is saved**:
   * Example for Windows: cd C:\path\to\your\file
   * Example for macOS/Linux: cd /path/to/your/file
3. **Run the Python script**:
   * Enter the following command to run the application:

python finance\_app.py

**Usage Instructions**

**Main Menu**

Once the application starts, the following menu will be displayed:

Welcome to Personal Finance Management App!

Menu:

1. Register

2. Login

3. Exit

You can perform the following actions:

**1. Register**

* **Input**:
  + Username: Choose a unique username.
  + Password: Enter a password of your choice.
* **Output**: A message indicating whether the registration was successful or if the username already exists.

**2. Login**

* **Input**:
  + Username: Enter your registered username.
  + Password: Enter your password.
* **Output**: On successful login, you'll be taken to the Dashboard.

**Dashboard Options**

Once logged in, the following menu will appear:

Dashboard:

1. Add Transaction

2. Update Transaction

3. Delete Transaction

4. Generate Reports

5. Set Budget

6. Check Budget

7. Backup Data

8. Restore Data

9. Logout

**1. Add Transaction**

* **Input**:
  + Type: Specify whether it is an Income or Expense.
  + Amount: Enter the transaction amount.
  + Category: E.g., Food, Rent, Salary.
  + Date: Enter the date in YYYY-MM-DD format.
* **Output**: A confirmation that the transaction has been added.

**2. Update Transaction**

* **Input**:
  + Transaction ID: The ID of the transaction you want to update.
  + Amount: Enter the new amount.
  + Category: Enter the new category.
* **Output**: A confirmation that the transaction has been updated.

**3. Delete Transaction**

* **Input**:
  + Transaction ID: The ID of the transaction you want to delete.
* **Output**: A confirmation that the transaction has been deleted.

**4. Generate Reports**

* **Options**:
  + **Monthly Report**:
    - Input: Month (MM) and Year (YYYY).
    - Output: A summary of income and expenses for the specified month.
  + **Yearly Report**:
    - Input: Year (YYYY).
    - Output: A summary of income and expenses for the specified year.

**5. Set Budget**

* **Input**:
  + Category: Choose the category for the budget (e.g., Food, Entertainment).
  + Limit Amount: Set a maximum limit for spending in this category.
* **Output**: A confirmation that the budget has been set.

**6. Check Budget**

* **Output**:
  + Displays whether you are within or have exceeded the budget for each category.

**7. Backup Data**

* **Output**:
  + Creates a backup of the entire database (finance.db) in an SQL file called backup.sql.

**8. Restore Data**

* **Output**:
  + Restores data from the backup.sql file, recovering all transactions, users, and budget data.

**9. Logout**

* Logs out the current user and returns to the main menu.

**Backup and Restore**

**Backup Process:**

* Select option 7 (Backup Data) from the Dashboard. This will create a file backup.sql containing all current data.

**Restore Process:**

* Select option 8 (Restore Data) from the Dashboard. This will restore the database from the backup.sql file. **Note**: The current data will be overwritten.

**Data Structure**

1. **Users Table**:
   * Stores the registered users, with fields for the unique ID, username, and password (stored as a SHA-256 hash).
2. **Transactions Table**:
   * Stores all transactions, with fields for the user ID, transaction type (Income/Expense), amount, category, and date.
3. **Budgets Table**:
   * Stores user-set budgets, with fields for the user ID, category, and limit amount.

**Conclusion**

The Personal Finance Management Application provides a simple yet effective way to track income, expenses, set budgets, and generate financial reports. Use the backup and restore features to maintain the integrity of your data.