

National University of Computer & Emerging Sciences
Karachi Campus



Personal Finance Tracker
Lab instructor: Muhammad Nouman hanif

PROJECT REPORT
Programming Fundamentals
Section: BCY-1A

Group Members:
23k-2032 Muneeb Azam
23k-2012 Arham Alvi
23k-2018 Syed Faiez Mehboob

Title:

“Personal Finance Tracker”

Introduction:

The Personal Finance Tracker aims to simplify personal budget management, providing users with a tool to track income, expenses, savings, and financial goals.

Background:

Designed in response to the growing need for efficient personal finance management tools, the tracker streamlines budgeting and goal-setting processes for individuals.

Project Specification:

Console-based application facilitating budget recording, expense tracking, savings management, and financial goal setting. Supports multiple currencies, transaction history, and data export/import.

Problem Analysis:

Addresses challenges in manual personal finance management, offering a solution for accurate tracking of income, expenses, and savings, with a focus on achieving financial goals.

Solution Design:

Project Detail:

- **Programming Language:** Implemented in C for efficiency and portability.
- **User Interface:** Console-based interface for simplicity and accessibility.

Functionality:

- **Budget Recording:** Users can add budgets with specified income amounts.
- **Expense Tracking:** Enables users to record expenses, aiding in expenditure monitoring.
- **Savings Management:** Facilitates setting aside savings, contributing to overall financial health.
- **Financial Goal Setting:** Allows users to set goals for expenses, savings, and balance.
- **Transaction History:** Provides a record of financial transactions for user review.
- **Currency Conversion:** Supports flexible currency conversion to meet international financial needs.
- **Data Export/Import:** Offers functionality for exporting and importing financial data.

Features:

- **Accuracy:** Ensures precise budgeting, expense tracking, and goal assessment.
- **Backup & Accessibility:** Supports data export/import for secure backup and easy accessibility.

- **User-Friendly:** Designed with a straightforward console interface for ease of use.
- **Comprehensive Financial View:** Provides a holistic view of income, expenses, savings, and goals.

Implementation & Testing:

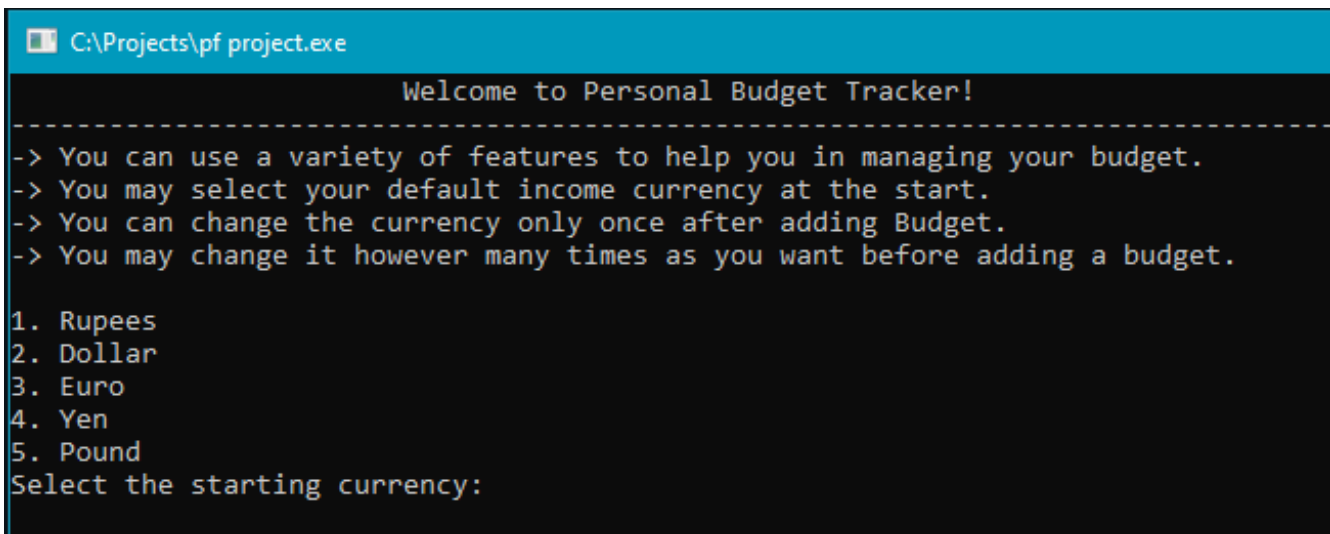
Implemented in C, rigorously tested for various scenarios, ensuring accuracy in budgeting, expense tracking, and goal setting.

Project Breakdown Structure:

- Addition of budget, expense, and savings along with calculating balance was done by Faiez.
- Then Arham worked on financial goals, and the export/import of data to and from a binary file.
- Then Muneeb worked on creating transaction history, financial report and converting currency from one to another.

Results (Output screenshots):

- Introductory page:

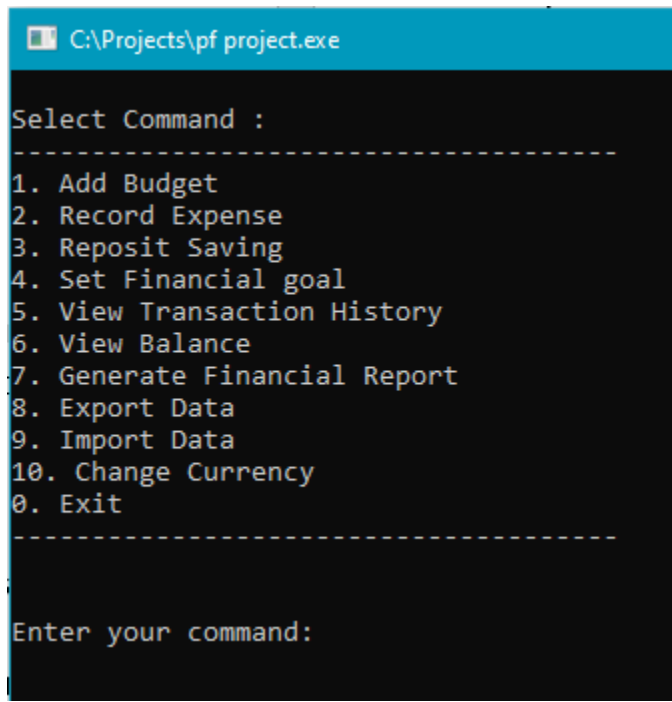


```
C:\Projects\pf project.exe

Welcome to Personal Budget Tracker!
-----
-> You can use a variety of features to help you in managing your budget.
-> You may select your default income currency at the start.
-> You can change the currency only once after adding Budget.
-> You may change it however many times as you want before adding a budget.

1. Rupees
2. Dollar
3. Euro
4. Yen
5. Pound
Select the starting currency:
```

- **Command Menu:**

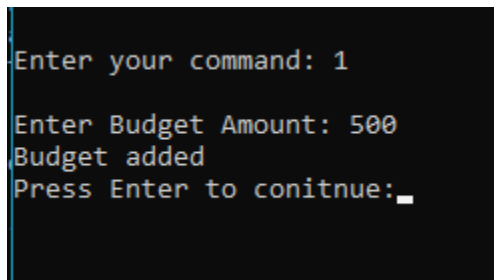


```
C:\Projects\pf project.exe

Select Command :
-----
1. Add Budget
2. Record Expense
3. Reposit Saving
4. Set Financial goal
5. View Transaction History
6. View Balance
7. Generate Financial Report
8. Export Data
9. Import Data
10. Change Currency
0. Exit
-----

Enter your command:
```

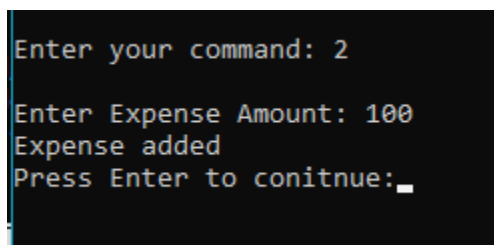
- **Add Budget:**



```
Enter your command: 1

Enter Budget Amount: 500
Budget added
Press Enter to conitnue: _
```

- **Record Expense:**



```
Enter your command: 2

Enter Expense Amount: 100
Expense added
Press Enter to conitnue: _
```

- **Reposit Savings:**

```
Enter your command: 3  
  
Enter Saving amount: 200  
Saving amount transferred  
Press Enter to conitnue:
```

- **Set Financial Goal:**

```
Enter your command: 4  
Enter Expense Goal: 150  
Enter Savings Goal: 180  
Enter Balance Goal: 200  
Press Enter to conitnue: _
```

- **View Transaction History:**

```
Enter your command: 5  
  
Transaction History:  
-----  
Budget added      Rs 500.00  
Expense recorded   Rs 100.00  
Savings secured    Rs 200.00  
  
Press Enter to conitnue: _
```

- **View Balance:**

```
Enter your command: 6  
  
Current Balance: Rs 200.00  
Press Enter to conitnue:
```

- **Financial Report:**

```
Enter your command: 7

      Financial Report:
-----
Total Budget      Rs 500.00
Total Expenses    Rs 100.00
Total Savings     Rs 200.00
Balance           Rs 200.00

Press Enter to conitnue: _
```

- **Data Export:**

```
Enter your command: 8
Data Exported successfully
Press Enter to conitnue:
```

- **Data Import:**

```
Enter your command: 9
Data Imported successfully
Press Enter to conitnue:
```

- **Currency Conversion:**

```
Enter your command: 10
1. Dollar
2. Euro
3. Yen
4. Pound
Select the currency for conversion from Rupees: 1
Press Enter to conitnue: _
```

- Exit

```
Enter your command: 0
-> Thank you for using the Personal Budget Tracker.Goodbye!
-----
Process exited after 174 seconds with return value 0
Press any key to continue . . .
```

- Currency conversions:

```
Transaction History:
-----
Budget added          $ 1.75
Expense recorded      $ 0.35
Savings secured       $ 0.70

Press Enter to conitnue: _
```

```
Financial Report:
-----
Total Budget          $ 1.75
Total Expenses        $ 0.35
Total Savings         $ 0.70
Balance               $ 0.70

Press Enter to conitnue: _
```

Conclusion:

The Personal Finance Tracker provides a concise and user-friendly solution for individuals to effectively manage their finances, offering features for comprehensive budget tracking and goal achievement.