

MINI PROJECT

TITLE : TO SOLVE A DIALY LIFE PROBLEMS

TOPIC : PERSONAL FINANCE MANEGER

Name : Gajjela Shailasree

EMAIL : shailasreegajjela2005@gmail.com

DESCRIPTION :

Personal Finance Manager :

This program helps to track expenses, income, and budget. It takes into account your name, income, expenses, and savings goals to provide personalized recommendations.

Features :

1. Name: Enter your name
2. Income: Enter your monthly income
3. Expenses: Enter your monthly expenses (e.g. rent, utilities, groceries, transportation, entertainment)
4. Savings: Enter your monthly savings goal
5. Budget Calculation: The program calculates your budget based on your income, expenses, and savings goal
6. Recommendations :
 - If your budget is positive, the program prints a statement congratulating you on having a surplus apart from all expenses and savings
 - If your budget is negative, the program recommends how much money you need to earn to cover expenses and savings

➤ CASE STUDY OF THE PROJECT:

Background :

The Personal Finance Manager program is designed to help individuals track their income, expenses, and savings. It provides a simple and easy-to-use interface for users to input their financial data and generates a financial statement that shows their budget and recommends to improve their financial situation.

Case Study : 1

Name	:	Rajesh
Income	:	\$4,000 per month
Expenses	:	
• Rent	:	\$1,500
• Utilities	:	\$150
• Groceries	:	\$500
• Transportation	:	\$200
• Entertainment	:	\$500
Total Expenses	:	\$2,850
Savings	:	\$500

Budget Calculation :

$$\begin{aligned}\text{Budget} &= \text{Income} - \text{Total Expenses} - \text{Savings} \\ &= \$4,000 - \$2,850 - \$500 = \$650\end{aligned}$$

Recommendation :

Since the budget is positive (\$650), the program will print a statement congratulating Rajesh on having a surplus apart from all expenses and savings.

Output :

"Congratulations Rajesh! You have a surplus of \$650 apart from all expenses and savings."

Case Study 2 :

Name : Vasavi Kumari

Income : \$3,500 per month

Expenses :

- Rent : \$1,200
- Utilities : \$100
- Groceries : \$400
- Transportation: \$150
- Entertainment: \$300

Total Expenses : \$2,150

Savings : \$500

Budget Calculation :

$$\begin{aligned}\text{Budget} &= \text{Income} - \text{Total Expenses} - \text{Savings} \\ &= \$3,500 - \$2,150 - \$500 = \$850\end{aligned}$$

Recommendation :

Since the budget is positive (\$850), the program will print a statement congratulating Vasavi on having a surplus apart from all expenses and savings.

Output :

"Congratulations Vasavi Kumari! You have a surplus of \$850 apart from all expenses and savings."

Implementation:

The Personal Finance Manager program will be implemented using Python programming language. The program will use a simple text-based interface to accept user input and display the financial statement. The program will use basic arithmetic operations to calculate the user's budget and will use conditional statements to provide recommendations for improving their financial situation.

Testing :

The Personal Finance Manager program will be tested using a combination of manual testing and automated testing. Manual testing will involve testing the program with different inputs and verifying that the output is correct. Automated testing will involve writing test cases to verify that the program is working as expected.

Deployment :

The Personal Finance Manager program will be deployed as a standalone application that can be run on a user's local machine. The program will be distributed as a Python script that can be downloaded and run by users. The program will not require any additional software or libraries to run.

MINI PROJECT CODE

```
f.py - C:\Users\shah\OneDrive\Desktop\python\fp.py (3.12.5)
File Edit Format Run Options Window Help

class PersonalFinanceManager:
    def __init__(self):
        self.name = ""
        self.income = 0
        self.expenses = {}
        self.savings = 0
        self.budget = 0
    def set_name(self):
        self.name = input("Enter your name: ")
    def set_income(self):
        self.income = float(input("Enter your monthly income: "))
    def add_expense(self):
        expense_name = input("Enter expense name: ")
        expense_amount = float(input("Enter expense amount: "))
        self.expenses[expense_name] = expense_amount
    def set_savings(self):
        self.savings = float(input("Enter your monthly savings: "))
    def view_expenses(self):
        print("Expenses:")
        for expense, amount in self.expenses.items():
            print(f"{expense}: {amount}")
    def calculate_budget(self):
        self.budget = self.income - sum(self.expenses.values()) - self.savings
        print(f"Budget: {self.budget}")
    if self.budget < 0:
        recommended_earning = abs(self.budget)
        print(f"Sorry {self.name} your Expenses and savings are greater than income! Recommended earning to lead a happy life: {recommended_earning}")
    else:
        print(f"Congratulations {self.name}! You have a surplus of {self.budget} apart from all expenses and savings.")
    def run(self):
        while True:
            print("1. set name")
            print("2. Set Income")
            print("3. Add Expense")
            print("4. View Expenses")
            print("5. set savings")
            print("6. Calculate Budget")
            print("7. Exit")
            choice = input("Choose an option: ")
            if choice == "1":
                self.set_name()
            elif choice == "2":
```

Ln: 1 Col: 0

```
'untitled'
File Edit Format Run Options Window Help

        self.set_income()
    elif choice == "3":
        self.add_expense()
    elif choice == "4":
        self.view_expenses()
    elif choice == "5":
        self.set_savings()
    elif choice == "6":
        self.calculate_budget()
    elif choice == "7":
        break
    else:
        print("Invalid option. Please choose again.")
if __name__ == "__main__":
    finance_manager = PersonalFinanceManager()
    finance_manager.run()
```

Ln: 1 Col: 16

OUTPUT :

```

1.set name
2.Set Income
3. Add Expense
4. View Expenses
5.set savings
6. Calculate Budget
7. Exit
Choose an option: 1
Enter your name: Rajesh
1.set name
2.Set Income
3. Add Expense
4. View Expenses
5.set savings
6. Calculate Budget
7. Exit
Choose an option: 2
Enter your monthly income: 4000
1.set name
2.Set Income
3. Add Expense
4. View Expenses
5.set savings
6. Calculate Budget
7. Exit
Choose an option: 3
Enter expense name: rent
Enter expense amount: 1500
1.set name
2.Set Income
3. Add Expense
4. View Expenses
5.set savings
6. Calculate Budget
7. Exit
Choose an option: 3
Enter expense name: utilities
Enter expense amount: 150
1.set name
2.Set Income
3. Add Expense
4. View Expenses
5.set savings
6. Calculate Budget
7. Exit
Choose an option: 3
Enter expense name: groceries
Ln: 110 Col: 0
```

```

Enter expense amount: 500
1.set name
2.Set Income
3. Add Expense
4. View Expenses
5.set savings
6. Calculate Budget
7. Exit
Choose an option: 3
Enter expense name: transportation
Enter expense amount: 200
1.set name
2.Set Income
3. Add Expense
4. View Expenses
5.set savings
6. Calculate Budget
7. Exit
Choose an option: 3
Enter expense name: Entertainment
Enter expense amount: 500
1.set name
2.Set Income
3. Add Expense
4. View Expenses
5.set savings
6. Calculate Budget
7. Exit
Choose an option: 5
Enter your monthly savings: 500
1.set name
2.Set Income
3. Add Expense
4. View Expenses
5.set savings
6. Calculate Budget
7. Exit
Choose an option: 6
Budget: 650.0
Congratulations Rajesh! You have a surplus of 650.0 apart from all expenses and savings.
1.set name
2.Set Income
3. Add Expense
4. View Expenses
5.set savings
6. Calculate Budget
7. Exit
Ln: 172 Col: 0
```


Conclusion :

In conclusion, the Personal Finance Manager program is a simple yet effective tool for individuals to track their income, expenses, and savings. It provides a user-friendly interface for inputting financial data and generates a comprehensive financial statement that shows the user's budget and recommends ways to improve their financial situation. The program is easy to use, understand, and deploy, making it an ideal solution for anyone looking to take control of their finances.

By using the Personal Finance Manager program, individuals can:

- Easily track their income, expenses, and savings
- Generate a comprehensive financial statement
- Identify areas for improvement in their financial situation
- Receive recommendations for improving their financial situation

Overall, the Personal Finance Manager program is a valuable tool for anyone looking to manage their finances effectively. Its simplicity, ease of use, and comprehensive features make it an ideal solution for individuals of all financial backgrounds.