Pocket Sense: A Budget Tracker App

Problem Statement:
According to a study by Standard & Poor's (S&P Global Ratings), only about a quarter of Filipino adults are considered financially literate. This means that many people even in the Philippines alone are prone to financial problems due to bad spending and budgeting habits, making unintelligent financial decisions such as incurring too much debt, and in some instances, being financially illiterate or the lack of knowledge in basic personal finance. Therefore, a solution is needed to provide people with a system that can help and assist people in performing proper budgeting and tracking their cash flow while also gaining some basic knowledge in personal finance.

Project Objectives:
- Assist the user in the process of making a budget and tracking spending
- Foster to the user proper financial management, meaningful spending, and adherence to their created budget
- Give some basic information about some key financial concepts that are in the scope of this project.

Planned Features:
- **Debt Tracker**
- It tracks how much people owe to you and how much you owe to people. (**Ex:** Debt to Xanthus - ₱100)
- It also takes into account the conditions and key details of the debt which is to be inputted by the user like the interest rate, due date/schedule for payment/installment, and the name of the person you owe/owes you. (**Ex:** Debt to Xanthus - ₱100, Interest rate - 10% interest, Time Interval - Weekly, Deadline: October 27)
- It also has a debt forecasting section that will primarily forecast what-if scenarios regarding debt payment or debt growth at a certain rate in a menu type (***Example Question:*** How long will I be able to pay my ₱500 debt with a 5% interest weekly if I pay in installments of ₱100 per week?)

- **Budgeting and Spending Tracker**
- It allows for the creation of a general budget that is the combination of the categorization and allocation for the different expenses such as food, transportation, etc. It is also to be inputted by the user. (**Ex:** Food and Drinks - ₱500, School Stuff - ₱400, Transportation - ₱100 General Budget - ₱1000)
- It has a platform where the user can annotate the expenses that they incur on different aspects of their budget. (**Ex:** Food and Drinks - ₱500, Rice and Viand Meal (5) - ₱60 each, Nestea (5) - ₱32 each, Graham Bar (1) - ₱35 each, Total Spending: ₱495)
- It tracks and determines whether or not the total spending that has been annotated/entered in the platform has exceeded or is still under the allocated budget threshold of a specific aspect of the budget or the entire budget as a whole. (**Ex:** Food

and Drinks - ₱500, Total Spending: ₱495, Remaining Allocation: ₱5, Remaining Total Budget: ₱505)

Planned Inputs and Outputs:

Input
→ If A, it will take you to another menu for the Debt Tracker (1)
→ If B, it will take you to another menu for the Spending Tracker (2)

1.1 → If A, it will take you to an input process for your debt (what you owe to people(1.1.1)
→ If B, it will take you to an input process for other people's debt (what people owe you(1.2.2))

1.1.1 → asks for name input for who you owe.
1.1.2 → asks for the amount you owe
1.1.3 → whichever letter in the menu picked will be noted into a variable to be displayed later.
1.1.4 → Displays a short menu regarding the kind of interest for input (A,B,C)
1.1.4.A → Asks for input on how much percent of interest and calculates the amount.
1.1.4.B → Asks for input on how much money per time interval

2.1 → Asks for input on how much money you currently have.
2.2 → Asks for general_budget
2.3,2.4 loops until user inputs '='
2.3 → Asks for sub-budgets/ items with a budget
2.4 → Asks for amount of budget each item has

Output

→ Starting Menu (A or B) for whether you want to focus on the Debt Tracker or the Spending Tracker.

MENU 1
A. Debt Tracker
B. Spending Tracker

1.1 → Debt Tracker Menu (A or B) if you want to put it to your debt (what you owe to people(1.1.1) or other people's debt (what people owe you(1.2.2))

              Debt Tracker MENU
                A. track your debt
                B. track other people's debt

      1.1.1 → Displays "name:"
      1.1.2 → Displays "write how much you owe."
      1.1.3 → Displays a short menu regarding the time interval of the interest (Example)

      Is this____?:
A. Daily
B. Weekly
C. Monthly
D. Quarterly
E. Semi-Annually
F. Annually

      1.1.3.A → variable 'time_interval' will have string amount 'Daily'
      1.1.3.B → variable 'time_interval' will have string amount 'Weekly'
      1.1.3.C → variable 'time_interval' will have string amount 'Monthly'
      1.1.3.D → variable 'time_interval' will have string amount 'Quarterly'
      1.1.3.E → variable 'time_interval' will have string amount 'Semi Annually'
      1.1.3.F → variable 'time_interval' will have string amount 'Annually'

      1.1.4 → Displays a short menu regarding the kind of interest: (Is this __?:)

        A. Percent (Ex: 5%)
        B. Other (Ex: +₱20 per day past the deadline)
        C. N/A

      1.1.4.A → Displays "how much percent?"
      1.1.4.B → Displays "how much", time_interval,"?"
      1.1.5 → Displays final output in this format: name,":", how_much_you_owe, ","interest_amount, time_interval

      2.1 → Displays "Input how much money you currently have."
      2.2 → Displays "What's your general budget?"
      2.3, 2.4 loops until the user inputs '='
      2.3 → Displays "Input budget item name."
      2.4 → Display "Input budget amount."

2.4.1 → If the total expense is above the allocation or the general budget, display "You have overspent your budget by ₱___."

2.4.2 → If the total expense is under the allocation or the general budget, display "You have ₱___ remaining in your budget."

2.5 → Displays total amount spent

Logic Plan:

START

DISPLAY "MAIN MENU"
DISPLAY "A. Debt Tracker"
DISPLAY "B. Spending Tracker"
INPUT choice_main

IF choice_main == 'A' THEN
  // Debt Tracker Menu
  DISPLAY "DEBT TRACKER MENU"
  DISPLAY "A. Track your debt"
  DISPLAY "B. Track other people's debt"
  INPUT choice_debt

  IF choice_debt == 'A' THEN
    // Track your debt
LOOP
    DISPLAY "Enter the name of the person you owe:"
    INPUT debtor_name

    DISPLAY "Enter the amount you owe:"
    INPUT amount_owed

    DISPLAY "Select time interval for interest:"
    DISPLAY "A. Daily"
    DISPLAY "B. Weekly"
    DISPLAY "C. Monthly"
    DISPLAY "D. Quarterly"
    DISPLAY "E. Semi-Annually"
    DISPLAY "F. Annually"
    INPUT interval_choice

    SWITCH interval_choice:
      CASE 'A': time_interval = "Daily"
      CASE 'B': time_interval = "Weekly"
      CASE 'C': time_interval = "Monthly"

```
            CASE 'D': time_interval = "Quarterly"
            CASE 'E': time_interval = "Semi-Annually"
            CASE 'F': time_interval = "Annually"

        DISPLAY "Select interest type:"
        DISPLAY "A. Percent"
        DISPLAY "B. Fixed per interval"
        DISPLAY "C. N/A"
        INPUT interest_type

        IF interest_type == 'A' THEN
            DISPLAY "Enter interest percent:"
            INPUT interest_percent
            interest_amount = amount_owed * (interest_percent / 100)

        ELSE IF interest_type == 'B' THEN
            DISPLAY "Enter additional amount per", time_interval, ":"
            INPUT fixed_interest
            interest_amount = fixed_interest

        ELSE IF interest_type == 'C' THEN
            interest_amount = 0

        END IF

        DISPLAY debtor_name, ": ₱", amount_owed, ", Interest: ₱", interest_amount, " per ",
time_interval

        DISPLAY "Would you like to continue? [Y/N]"
        INPUT continuing_choice
        IF continuing_choice == 'N' THEN
            BREAK LOOP

    ELSE IF choice_debt == 'B' THEN
        // Track others' debt to you
        DISPLAY "Enter the name of the person who owes you:"
        INPUT creditor_name

        DISPLAY "Enter the amount they owe you:"
        INPUT amount_owed_to_you

        // Optional: could reuse similar interest structure here

        DISPLAY creditor_name, " owes you ₱", amount_owed_to_you
```

```
      END IF


ELSE IF choice_main == 'B' THEN
   // Spending Tracker
   DISPLAY "Enter how much money you currently have:"
   INPUT current_money

   DISPLAY "Enter your general budget:"
   INPUT general_budget

   total_spent = 0
   budget_items = EMPTY_LIST

   LOOP
      DISPLAY "Input budget item name (or type '=' to finish):"
      INPUT item_name

      IF item_name == '=' THEN
         BREAK LOOP

      DISPLAY "Input budget amount for ", item_name, ":"
      INPUT item_amount

      ADD (item_name, item_amount) TO budget_items
      total_spent = total_spent + item_amount

   END LOOP

   IF total_spent > general_budget THEN
      overspent_amount = total_spent - general_budget
      DISPLAY "You have overspent your budget by ₱", overspent_amount

   ELSE
      remaining_budget = general_budget - total_spent
      DISPLAY "You have ₱", remaining_budget, " remaining in your budget."

   END IF

   DISPLAY "Total spent: ₱", total_spent

END IF
```

END