# **Creating a Personal Budget Tracker**

## Step 1: Set Up the Environment

Start by setting up your Python environment. Create a new Python file named budget\_tracker.py.

## Step 2: Define Variables

Define two variables: monthly\_budget and expenses. Initialize monthly\_budget to 0.0 and expenses as an empty list.

# Define variables

monthly\_budget = 0.0  # Initial budget set to 0.0

expenses = []  # List to store expenses

## Step 3: Create a Function to Set the Budget

Write a function called set\_budget() that allows the user to input their monthly budget. This function should update the monthly\_budget variable.

# Function to set the monthly budget

def set\_budget():

    global monthly\_budget

    monthly\_budget = float(input("Enter your monthly budget: "))

    print(f"Monthly budget set to ${monthly\_budget:.2f}")

## Step 4: Create a Function to Add an Expense

Write a function called add\_expense() that allows the user to input the description and amount of an expense. This function should add a dictionary with the expense details to the expenses list.

# Function to add an expense

def add\_expense():

    description = input("Enter the description of the expense: ")

    amount = float(input("Enter the amount of the expense: "))

    expenses.append({"description": description, "amount": amount})

    print(f"Added expense: {description} (${amount:.2f})")

## Step 5: Create a Function to Display All Expenses

Write a function called display\_expenses() that prints all the expenses in the expenses list.

# Function to display all expenses

def display\_expenses():

    print("\nExpenses:")

    for expense in expenses:

        print(f"- {expense['description']}: ${expense['amount']:.2f}")

## Step 6: Create a Function to Calculate the Remaining Budget

Write a function called remaining\_budget() that calculates the remaining budget and prints it.

# Function to calculate and display the remaining budget

def remaining\_budget():

    total\_expenses = sum(expense['amount'] for expense in expenses)

    remaining = monthly\_budget - total\_expenses

    print(f"Remaining budget: ${remaining:.2f}")

## Step 7: Create the Main Program Loop

Write a while True loop to display menu options to the user. The loop should allow the user to set the budget, add an expense, display expenses, calculate the remaining budget, or exit the program. Use input() to get the user's choice and call the appropriate function based on the input.

# Main program loop at displays options to the user and performs actions based on the user's choice.

while True:

    print("\nOptions:")

    print("1. Set monthly budget")

    print("2. Add expense")

    print("3. Display all expenses")

    print("4. Calculate remaining budget")

    print("5. Exit")

    choice = input("Enter your choice (1-5): ")

    if choice == '1':

        set\_budget()

    elif choice == '2':

        add\_expense()

    elif choice == '3':

        display\_expenses()

    elif choice == '4':

        remaining\_budget()

    elif choice == '5':

        print("Thank you for using the Personal Budget Tracker!")

        break

    else:

        print("Invalid choice. Please try again.")

## Final Step: Test the Program

Run the script and test each feature to ensure everything works as expected. Make sure you can set the budget, add expenses, display expenses, calculate the remaining budget, and exit the program.