**Technical Design Document Exercise 3**

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**Program Description:** This program asks ​​the user to enter a list of their monthly expenses. Each expense consists of a type like rent, groceries, or utilities and an amount. The program stores these expenses in a list of tuples. Using the reduce function, the program calculates the total of all expenses, determines the highest expense, and the lowest expense. The program then displays the total expense, and clearly labels the highest and lowest expense by type and amount.

**Functions used in the Program (list in order as they are called):**

### **1. Function Name:** main

**Description:** Handles user input for expense type and amount, stores expenses, and calls the calculations using **reduce.**

**Parameters:** None

**Variables:**

1. expenses (list of tuples) - stores expense name and amount entered by the user.
2. total (float) - The sum of all expense amounts.
3. highest (tuple) - The tuple representing the highest expense.
4. lowest (tuple) - The Tuple representing the lowest expense.

**Logical Steps:**

1. Ask the user to input expense types and amounts until they type “done”.
2. Append each (expense\_type, amount) to the expenses list.
3. Use reduce with a **lambda** function to calculate:
4. The total of all amounts.
5. The highest expense.
6. The Lowest Expense.

4. Display the total, highest, and lowest expenses with labels.

**Returns:** None, prints results to screen

**Link to your repository:**

[loganflynnn (Logan Flynn)](https://github.com/loganflynnn)

**Output Screenshot:**

