**Program Description:**

A program that allows users to store their monthly expenses and then the program totals the expenses. It also shows the highest and lowest monthly expense.

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

1. **Function Name:** get\_expenses()

**Description:**

Collects user input for expenses.

**Parameters:**

None

**Variables:**

expenses: list of tuples containing expense\_name and amount.

expense\_name: the name of the expense the user typed.

amount: the cost of the expense the user put in.

**Logical Steps:**

1. Keep asking the user to enter the expense names and amounts.
2. Stores each entry in the expenses list.
3. Stops the process when the user types ‘+’.

**Returns:**

A list of expense\_name and amount.

2. **Function Name:** analyze\_expenses(expenses)

**Description:**

Uses reduce to calculate the highest, lowest, and total expenses.

**Parameters:**

expenses.

**Variables:**

total\_expense: the total amount of all expenses.

highest\_expense: the highest amount of all the expenses.

lowest\_expense: the lowest amount of all the expenses.

**Logical Steps:**

1. Uses reduce to calculate the total sum.
2. Uses reduce to find the highest and lowest expense.

**Returns:**

Dictionary containing total, highest, and lowest expense details.

3. **Function Name:** main()

**Description:**

Controls the whole flow of the codes

**Parameters:**

None

**Variables:**

expenses: stores the list of expenses returned from get\_expenses().

results: stores the dictionary returned from analyze\_expenses(expenses).

**Logical Steps:**

1. Gets get\_expenses() to collect expenses.
2. Gets analyze\_expenses() to process the data.
3. Displays the results.

**Returns:**

Prints the expense result.

**Logical Steps:**

1. Asks the user to input expense details and then stores them in a list.
2. Processes the expenses using reduce() for the highest, lowest, and total.
3. The results are displayed.

A screenshot of a computer program

AI-generated content may be incorrect.

**Link:** <https://github.com/Art389/COP-2373>