SE309/SE323 2023-2024 FALL
Lab Work 2 11 Oct 2023
Goal: Practice on Coding Pt. 2: PYTHON

In this lab work, you will implement a script that calculates your total expenses. The application will track the user's income and expenses, categorize expenses, and provide summaries of the user's financial status. Please read whole lab sheet first and then start coding.

Requirements:

- A global list of words that will hold predefined categories: Food, Transport and Entertainment.
- Expenses will be stored in a "pandas dataframe" that holds tuples with a string and an integer representing the item and its cost, respectively, under each category. Ex. ("Hamburger", 100), it will be stored under Food. (You require "pandas" library).

Functions:

- A function named "initial" that sets up the scene by initializing the global categories list and expenses dictionary.
- A data entry function "saveExpense" that allows users to enter the item and its cost under specific categories into the expenses dictionary.
- A "finance" function that takes user's income and computes the remaining income after expenses.
- Lastly, implement a nested function within the "finance" function to calculate the total expenses from the dictionary. This function must demonstrate the use of "nonlocal" keyword.

When your application starts, "initial" will make it ready to be used. Then, user will enter his/her expenses with "saveExpense" one by one. After he/she finishes entering expenses, the net value remaining from the income will be calculated by calling "finance" function.