

Name: Ajay

- **Problem:** I figured out that the best way to store the data would be in a dictionary where the access to the different purchases that one made would be based on a key value. I think that the best way to do this key would be the date that the item was purchased.
- **Experimentation:** One of the main problems that I had was the storage of the key values by date and the overwriting of the different values in that key every time the method was iterated. Through some experimentation, I realized that the reason why it was doing this was that I was either establishing the new dictionary in the while loop or I was overwriting the keys rather than adding to their values. Another main issue that I had through the creation of the class was the creation of the class object and the usage of the `__init__` method. I remembered that we used this type of class and console interaction on the drive exercise, so consulting that led me to the conclusion that I needed to create the class object first and then perform different functions on that object that I created. This object that I created also maintained all the information that I gave it, leading to the loop that I created being different every time based on the budget requirements.
- **File with solution:** possible_user_input.py

Name: Ellis

- **Problem:** The problem that I set out to solve was trying to create a time series chart based on a CSV file that we are turning into a dataframe. Along with that, creating a new dataset for the average amount that an individual spends on a specific item.
- **Main Points:** I figured that the best way to handle this problem is by keeping the data the same and not using any aggregate functions. In the chart, the date can serve as the x-axis while the price takes on the y-axis. However, I am not too familiar with graphing data in python.
- **Notes:** There currently is no .csv file for the program to use. The code for the current .csv is just a placeholder for now and an actual .csv file will be used later on.
- **Modules:** import pandas as pd, import matplotlib.pyplot as plt

Name: Dennis

- **Problem:** I was thinking of creating a method that would predict the next item that the person will buy based on frequencies and or time of date.

- **Main points:** The idea here is we would add up all the occurrences of the particular expense being bought and then find the probability of the person buying it. Basically it will be the frequency of the expense/ all expenses and then using a random generator we create the next potential. Another thing I wanted to try and implement is to create an algorithm that can find patterns based on the person paying expenses on a specific day a few days in a row.

Name: Zain

- **Problem:** The problem that I chose to solve is a rather interesting one. I want the budgeting program to be able to tell if buying another item is a viable option with the average budget found in the last week.
- **Main points:** predicting this would be very difficult, but if there is a max amount that the user cannot go over, we can look at the previous week's average budget, and determine if the new item that the user would like to add on is a viable option. If it does not go over the max amount, then the program will allow it, but say that it is a less-than-optimal decision. If this new item added on equals less than the previous week's average amount spent, then the program will say that it is a good idea. Finally, if the new item added onto the budget is more than the average budget, then the program will let the user know that this addition is a bad idea, and would hurt the budget.