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CS 110

13 December 2020

Project Report

Section One: Overview and Summary of Projects

This program is used to compare the prices of Spotify's and Hulu's subscriptions plans. The user will enter which streaming service they use and how many months they were subscribed to the company for. They also specify which plan they're subscribed to. The program then outputs how much money the user has spent so far and also tells them how much money they would have spent if they were subscribed to another company/ plan. Below is a sample output of a user who has been subscribed to Netlifx's Standard Plan for 25 months.

```
Do you use Netflix or Hulu?
Enter 1 for Netflix and 2 for Hulu: 1

How many months have you had Netflix for? 25

Are you subscribed to the Basic, Standard, or Premium Plan?
Enter 1 for Basic, 2 for Standard, and 3 for Premium: 2

In the time that you have been subscribed to the Standard plan, you have paid $349.75
If you had been subscribed to the Premium plan, you would have paid an extra $100.00 bringing the total to $449.75
If you had been subscribed to the Basic plan, you would have saved $125.00 lowering the total to $224.75

Compared to Hulu:
If you had been subscribed to Hulu's Basic plan, you would have saved $200.00 lowering the total to $149.75
If you had been subscribed to Hulu's Premium plan, you would have saved $50.00 lowering the total to $299.75

If you are done with this program, please enter 1. If you would like to rerun it, enter 2: 1

Thank you for using this program, have a great day! :)
>>>
```

To gather the data and information (of how much each plan costs for both companies), I visited the company's websites.

Section Two: Target Audience

This program is targeted to attract consumers of streaming services, specifically of the companies Netflix and Hulu. It can be used to decide whether to switch to a different platform based on the money the consumer is spending. For example, if someone is currently subscribed to the Netflix Premium plan, and they are looking to save money, they are able to look at the prices of the other available plans from both Netflix and Hulu.

Section Three: Specific Programming Techniques Used

Decision Structures: Throughout the entirety of the program I implemented several if/ elif/ else loops. After each statement where I ask the user a question, I include a try/ except ValueError structure. This is so if the user inputs something incorrectly, such as if they were to input a string instead of an integer, the error() function runs (I explain this function in the next section). Below I included a picture of what this try/ except structure looks like.

```
try:
    print()
    print("Do you use Netflix or Hulu?")
    NorH = int(input("Enter 1 for Netflix and 2 for Hulu: "))
except ValueError:
    error()
```

The first if/ elif/ else loops asks the user whether they use Spotify or Hulu (this is shown in the image above).

Then the function asks how many months they were subscribed to the service; if they answer 0, the program informs the user that they have not spent any money on streaming services and then the done() function runs (I explain this function in the next section).

```
if ntime == 0:
    print("Congrats! You have not spent any money on Netflix")
    done()
```

If the user inputs a number greater than 0, they are then asked which plan they are subscribed to.

```
else:
    try:
        print("Are you subscribed to the Basic, Standard, or Premium Plan?")
        netf = int(input("Enter 1 for Basic, 2 for Standard, and 3 for Premium: "))
        Bcost = 8.99 * ntime #cost of Netflix's basic plan
        Scost = 13.99 * ntime #cost of Netflix's standard plan
        Pcost = 17.99 * ntime #cost of Netflix's premium plan
        BBcost = 5.99 * ntime #cost of Hulu's basic plan
        PPcost = 11.99 * ntime #cost of Hulu's premium plan
    except ValueError:
        error()
```

After that, the program runs one of three if/ elif/ else loops. Let's say that the user answers that they are subscribed to Netflix's Basic plan. This is what the corresponding loop looks like:

```
if netf == 1: #user is subscriber to Netflix's Basic plan
    print()
    print("In the time that you have been subscribed to the Basic plan, you have paid ${0:0.2f}".format(Bcost))
    print("If you had been subscribed to the Standard plan, you would have paid an extra ${0:0.2f}".format(Scost - Bcost), "bringing the total to ${0:0.2f}".format(Scost))
    print("If you had been subscribed to the Premium plan, you would have paid an extra ${0:0.2f}".format(Pcost - Bcost), "bringing the total to ${0:0.2f}".format(Pcost))
    print()
    print("Compared to Hulu:")
    print("If you had been subscribed to Hulu's Basic plan, you would have saved ${0:0.2f}".format(Bcost - BBcost), "lowering the total to ${0:0.2f}".format(BBcost))
    print("If you had been subscribed to Hulu's Premium plan, you would have paid an extra ${0:0.2f}".format(PPcost - Bcost), "bringing the total to ${0:0.2f}".format(PPcost))
    done()
```

The program shows how much they have spent so far on the Basic Plan, and then how much extra they would have paid if they were subscribed to Netflix's Standard or Premium plan. It also compares Netflix's prices to Hulu's, meaning that the user can see how much money they would have saved if they were subscribed to either one of Hulu's plans. Afterwards, the done() function is programmed to run. However, when asked what plan the user is subscribed to (option1, option 2, or option 3) and the user enters a number that is not 1,2, or 3, the else decisions sets the error() function to run:

```
else:
    error()
```

Functions: In the beginning of my program, I defined two functions: done() and error(). Below I included a picture of the error() function:

```
def error():
    print()
    print("Error: You entered something that was not one of the menu options")
    print("Please trying running the code from the beginning")
    main()
```

For example, in the beginning of the program the user has to enter a 1 if they use Spotify and a 2 if they use Hulu. If they enter lets say a 3, the error() function would run. They would see the above print statements and then the program would automatically run from the beginning.

Below I included a picture of the done() function:

```
def done():
    try:
        print()
        done = int(input("If you are done with this program, please enter 1. If you would like to rerun it, enter 2: "))
    except ValueError:
        error()
    if done ==1:
        print()
        print("Thank you for using this program, have a great day! :)")
    elif done ==2:
        main()
        print()
    else:
        error()
```

Once the user reaches the end of the decision structure, the above statements will appear. If they are done with the program and enter 1, they will get a "Thank you for using this program, have a great day" message and the program will end. If they enter 2, the program will rerun from the beginning. If they input any other number or a string, the error() function will run.

Section Four: Challenges

One thing I struggled with was outputting the monetary data in the correct format as $0.00. However, I looked back at the notes and figured out the correct format to display it. I included a picture of it below. This format ensures that there is no space between the dollar sign and the first digit and that each number is rounded to two decimal places.

```
"lowering the total to ${0:0.2f}".format(BBcost))
```

Another difficulty I had was maintaining the correct indentations. Since I had so many loops and decision structures, it was difficult to remain organized but I was just careful and made sure my indentations were correct.

Five: Future Extensions

If I were to continue to work on this project, I could include the features of each different plan. This way users can see what the advantages and disadvantages are of paying for each subscription.

Additionally, I could analyze the stock prices between both companies and how that could be affecting the plans. Especially since in the next few week's both Netflix's and Hulu's prices are expected to increase.