PROJECT

Carly's Clippers

You are the Data Analyst at Carly's Clippers, the newest hair salon on the block. Your job is to go through the lists of data that have been collected in the past couple of weeks. You will be calculating some important metrics that Carly can use to plan out the operation of the business for the rest of the month.

You have been provided with three lists:

- `hairstyles`: the names of the cuts offered at Carly's Clippers.
- `prices`: the price of each hairstyle in the `hairstyles` list.
- `last_week`: the number of purchases for each hairstyle type in the last week.

Each index in `hairstyles` corresponds to an associated index in `prices` and `last_week`.

For example, The hairstyle `"bouffant"` has an associated price of `30` from the `prices` list, and was purchased `2` times in the last week as shown in the `last_week` list. Each of these elements are in the first index of their respective lists.

Let's get started!

If you get stuck during this project or would like to see an experienced developer work through it, click "**Get Unstuck**" to see a **project walkthrough video**.

Tasks

13/13 Complete
Mark the tasks as complete by checking them off

Prices and Cuts:

1.

Carly wants to be able to market her low prices. We want to find out what the average price of a cut is.

First, let's sum up all the prices of haircuts. Create a variable `total_price`, and set it to `0`.
Hint

A variable is something that holds a value that may change.

```
lucky = 7
```

This code creates a variable called `lucky`, and assigns to it the integer number 7.

2.

Loop through the `prices` list and add each price to the variable `total_price`.

Hint

You need a `for` loop that loops through the `prices` list:

```
for price in prices:
  total_price = total_price + price
```

You can also simplify the code by using the `+=` operator:

```
for price in prices:
  total_price += price
```

3.

After your loop, create a variable called `average_price` that is the `total_price` divided by the number of prices.

You can get the number of prices by using the `len()` function.

Hint

The number of haircuts can be represented as `len(prices)`.

4.

Print the value of `average_price` so the output looks like:

```
Average Haircut Price: <average_price>
```

Hint

To print a string with a variable, you can use syntax like:

```
age = 101

print("My age: " + str(age))
```

And the output would be:

```
My age: 101
```

5.

That average price is more expensive than Carly thought it would be! She wants to cut all prices by 5 dollars.

Use a list comprehension to make a list called `new_prices`, which has each element in `prices` minus `5`.

Hint

List comprehensions provide a concise way to create lists:

```
new_prices = [price - 5 for price in prices]
```

6.

Print `new_prices`.

Hint

The new prices should look like:

```
[25, 20, 35, 15, 15, 30, 45, 30]
```

Revenue:

7.

Carly really wants to make sure that Carly's Clippers is a profitable endeavor. She first wants to know how much revenue was brought in last week.

Create a variable called `total_revenue` and set it to `0`.

8.

Use a `for` loop to create a variable `i` that goes from `0` to `len(hairstyles)`

Hint: You can use `range()` to do this!

Hint

```
for i in range(len(hairstyles)):
  # We will add code here in the next step
```

9.

Add the product of `prices[i]` (the price of the haircut at position `i`) and `last_week[i]` (the number of people who got the haircut at position `i`) to `total_revenue` at each step.

Hint

So now your `for` loop should look something like:

```
for i in range(len(hairstyles)):
  total_revenue += prices[i] * last_week[i]
```

10.

After your loop, print the value of `total_revenue`, so the output looks like:

```
Total Revenue: <total_revenue>
```

11.

Find the average daily revenue by dividing `total_revenue` by 7. Call this number `average_daily_revenue` and print it out.

12.

Carly thinks she can bring in more customers by advertising all of the haircuts she has that are under `30` dollars.

Use a list comprehension to create a list called `cuts_under_30` that has the entry `hairstyles[i]` for each `i` for which `new_prices[i]` is less than `30`.

You can use `range()` in your list comprehension to make `i` go from `0` to `len(new_prices) - 1`.

Hint

Syntax you can use for your list comprehension might look like:

```
new_list = [old_list[i] for i in range(len(old_list)) if different_list[i] < 0]
```

This makes a new list of every entry in `old_list` for which the index `i` satisfies the condition `different_list[i] < 0`.

13.

Print `cuts_under_30`.

script.py

```
hairstyles = ["bouffant", "pixie", "dreadlocks", "crew", "bowl", "bob", "mohawk",
 "flattop"]

prices = [30, 25, 40, 20, 20, 35, 50, 35]

last_week = [2, 3, 5, 8, 4, 4, 6, 2]

total_price = 0
for price in prices:
  total_price += price

average_price = total_price/len(prices)
print("Average Haircut Price: $" + str(average_price))

new_prices = [price - 5 for price in prices]
print(new_prices)

total_revenue = 0
for i in range(len(hairstyles)):
  total_revenue += prices[i] * last_week[i]

print("Total Revenue: $" + str(total_revenue))

average_daily_revenue = total_revenue/7
print(average_daily_revenue)
```

```
cuts_under_30 = [hairstyles[i] for i in range(len(hairstyles)) if new_prices[i] <
 30]

print(cuts_under_30)
```

```
Average Haircut Price: $31.875
[25, 20, 35, 15, 15, 30, 45, 30]
Total Revenue: $1085
155.0
['bouffant', 'pixie', 'crew', 'bowl']
```