Solution Review: Average of a List

This lesson will explain the solution to the exercise in the previous chapter.

WE'LL COVER THE FOLLOWING

Solution

```
# function to compute average of a list
def average(input_list):
    # sum calculation
    sum_list = 0
    for i in input_list:
        sum_list = sum_list + i

    # average calculation
    avg = sum_list /len(input_list)
    return avg


sample_list = [2,4,5,1]
avg_list = average(sample_list)
print(avg_list)
```

We define the `average` function in **lines 2-8**. Let's break this function down. For computing the average of the list, we need to find the sum of the numbers in the list and the length of the list. We already know we can use the `len` function to compute the length of the list.

We have found the sum of the list in **lines 4-6**. To find the sum, we need to iterate over the list and add each element to a variable as we iterate through the list. Therefore, we initialize the variable `sum_list` to `0` in **line 4**. Then we use a `for` loop as:

```
for i in input_list:
```

The above line means that variable `i` will be assigned the value of every element of `input_list` one by one, in each iteration.

Then **line 6** is:

```
sum_list = sum_list + i
```

This line means that in each iteration we add `i` to `sum` and store the result of the expression in `sum_list`. So, in each iteration, `sum_list` is updated.

After the loop ends, we have the sum of the list in `sum_list`. Then we just divide `sum_list` by the length of the list in **line 9** and store the result in `avg`. We return the average of the list in **line 10**.

This was the end of your first challenge. In the next lesson, you will be tested on a slightly more difficult challenge.