PYTHON: ASSIGNMENT 02(Advanced Questions)

PROBLEM STATEMENT 1:

Given a list of lists

```
numbers_nested = [[1,-1,2],[0,-5,3,5,-2],[1,2,1,0,-2,-3]]
```

Write a program to grab only positive numbers in each nested list and put that in a new list

Expected Output

```
[1, 2, 3, 5, 1, 2, 1]
```

CODE:

```python
nested_list=[[1,-1,2],[0,-5,3,5,-2],[1,2,1,0,-2,-3]]
print("The given nested list is:",nested_list)
num=[]
for num1 in nested_list:
    for pos_num in num1:
        if pos_num>0:
            num.append(pos_num)
print("Positive numbers from the given nested list is:",num)
```

EXECUTION:

```python
nested_list=[[1,-1,2],[0,-5,3,5,-2],[1,2,1,0,-2,-3]]
print("The given nested list is:",nested_list)
num=[]
for num1 in nested_list:
    for pos_num in num1:
        if pos_num>0:
            num.append(pos_num)
print("Positive numbers from the given nested list is:",num)
```

```
The given nested list is: [[1, -1, 2], [0, -5, 3, 5, -2], [1, 2, 1, 0, -2, -3]]
Positive numbers from the given nested list is: [1, 2, 3, 5, 1, 2, 1]
```

OUTPUT:

The given nested list is: [[1, -1, 2], [0, -5, 3, 5, -2], [1, 2, 1, 0, -2, -3]]
Positive numbers from the given nested list is: [1, 2, 3, 5, 1, 2, 1]

PROBLEM STATEMENT 2:

Given a list of lists

L = [[1,2,3] , [4,5,6,3], [-1,-2,-10,5,8]]

Write a program to to print the average sum of value from each inner list and print the sum of each average

Expected Output

6/3 + 18/4 + 0 ⇒ 2 + 4.5 ⇒ 6.5

CODE:

```
nested_list=[[1,2,3], [4,5,6,3], [-1,-2,-10,5,8]]
print("The given nested list is:",nested_list)
average=[]
sum_average=[]
for x in nested_list:
    print("The inner list is",x)
    avg_list=sum(x)/len(x)
    print("average of inner list is",avg_list)
    average.append(avg_list)
print("The average values of each inner list is ",average)
sum_average=sum(average)
print("The sum of average of each inner list
is",sum_average)
```

EXECUTION:

```
nested_list=[[1,2,3], [4,5,6,3], [-1,-2,-10,5,8]]
print("The given nested list is:",nested_list)
average=[]
sum_average=[]
for x in nested_list:
    print("The inner list is",x)
    avg_list=sum(x)/len(x)
    print("average of inner list is",avg_list)
    average.append(avg_list)
print("The average values of each inner list is ",average)
sum_average=sum(average)
print("The sum of average of each inner list is",sum_average)
```

```
The given nested list is: [[1, 2, 3], [4, 5, 6, 3], [-1, -2, -10, 5, 8]]
The inner list is [1, 2, 3]
average of inner list is 2.0
The inner list is [4, 5, 6, 3]
average of inner list is 4.5
The inner list is [-1, -2, -10, 5, 8]
average of inner list is 0.0
The average values of each inner list is  [2.0, 4.5, 0.0]
The sum of average of each inner list is 6.5
```

OUTPUT:

```
The given nested list is: [[1, 2, 3], [4, 5, 6, 3], [-1, -2, -10, 5, 8]]
The inner list is [1, 2, 3]
average of inner list is 2.0
The inner list is [4, 5, 6, 3]
average of inner list is 4.5
The inner list is [-1, -2, -10, 5, 8]
average of inner list is 0.0
The average values of each inner list is  [2.0, 4.5, 0.0]
The sum of average of each inner list is 6.5
```

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