Exercise 10: Change value of a key in a nested dictionary

Write a Python program to change Brad's salary to 8500 in the following dictionary.

Given:

```
sample_dict = {
    'emp1': {'name': 'Jhon', 'salary': 7500},
    'emp2': {'name': 'Emma', 'salary': 8000},
    'emp3': {'name': 'Brad', 'salary': 500}
}
```

Expected output:

```
{
   'emp1': {'name': 'Jhon', 'salary': 7500},
   'emp2': {'name': 'Emma', 'salary': 8000},
   'emp3': {'name': 'Brad', 'salary': 8500}
}
```

Show Solution

```
sample_dict = {
    'emp1': {'name': 'Jhon', 'salary': 7500},
    'emp2': {'name': 'Emma', 'salary': 8000},
    'emp3': {'name': 'Brad', 'salary': 6500}
}
```

```
sample_dict['emp3']['salary'] = 8500
print(sample_dict)
```

Exercise 9: Remove items from set1 that are not common to both set1 and set2

Given:

```
set1 = {10, 20, 30, 40, 50}
set2 = {30, 40, 50, 60, 70}
```

Expected output:

```
{40, 50, 30}
```

```
set1 = {10, 20, 30, 40, 50}
set2 = {30, 40, 50, 60, 70}

set1.intersection_update(set2)
print(set1)
```

Given a string s1, write a program to return the sum and average of the digits that appear in the string, ignoring all other characters

Given:

```
str1 = "PYnative29@#8496"
```

Expected Outcome:

```
Sum is: 38 Average is  6.333333333333333
```

```
input_str = "PYnative29@#8496"
total = 0
cnt = 0
for char in input_str:
    if char.isdigit():
        total += int(char)
        cnt += 1
```

```
# average = sum / count of digits
avg = total / cnt
print("Sum is:", total, "Average is ", avg)
```

Write a program to print the below pattern

```
P
Py
Pyt
Pyth
Pytho
Python
```

```
word = "Python"
x = ""
for i in word:
    x += i
    print(x)
```

Equilateral triangle pattern of characters/alphabets

```
 A
           B C
         D E F
       G H I J
     K L M N O
   P Q R S T U
 V W X Y Z [ \
```

```
print("Print equilateral triangle Pyramid with characters ")
size = 7
asciiNumber = 65
m = (2 * size) - 2
for i in range(0, size):
    for j in range(0, m):
        print(end=" ")
    m = m - 1
    for j in range(0, i + 1):
```

```
        character = chr(asciiNumber)
        print(character, end=' ')
        asciiNumber += 1
    print(" ")
```

Pattern of same character

```
V
V V
V V V
V V V V
V V V V V
```

```
# Same character pattern
character = 'V'
# convert char to ASCII
char_ascii_no = ord(character)
for i in range(0, 5):
    for j in range(0, i + 1):
        # Convert the ASCII value to the character
        user_char = chr(char_ascii_no)
        print(user_char, end=' ')
    print()
```