

Q1. What are the comments in python?

Ans. Comments are important to make sure that you and others can understand what your code is about. To add comments to your Python script, you can use the # tag. Example

```
#value of A
A=10
#value of B
B=20
C=A+B #sum of A and B
```

Q2. Python as a calculator. Define the operation Addition, Multiplication, Subtraction, Division, Floor Division, Exponentiation, Modulo (Modulus)?

Ans. Python is perfectly suited to do basic calculations

Addition, subtraction

```
print (5 + 5)
```

```
print (5 - 5)
```

Multiplication, division, modulo, and exponentiation

```
print (3 * 5)
```

```
print(10 / 2)
```

```
print(18 % 7)
```

```
print(4 ** 2)
```

```
print(12//5)
```

Q3. Suppose you have \$100, which you can invest with a 10% return each year. After one year, it's $100 \times 1.1 = 110$ dollars, and after two years it's $100 \times 1.1 \times 1.1 = 121$. Add code on the right to calculate how much money you end up with after 7 years.

Ans. #the formula for future value of FD is:

```
#A=P(1+R/N)**T
```

#Where, A = Total amount earned on maturity

#P= Amount invested

#R= Rate of interest

#N= Number of times interest is compounding in a year

#T= Period of investment

```
P=100
```

```
R=10
```

```
N=1
```

```
T=7
```

```
A=P*(1+R/N)**T
```

```
print(A)
```

Q4. What is the variable Assignment procedure in python?

Ans. In Python, a variable allows you to refer to a value with a name. To create a variable use =, like this example:

```
x = 5
```

You can now use the name of this variable, x, instead of the actual value, 5.
Remember, = in Python means *assignment*, it doesn't test equality!

Q5. Swap the characters of user given string ?

```
Ans. def swap_case(s):
    text=list(s)
    for i in range(len(text)):
        if text[i]>='A' and text[i]<='Z':
            text[i]=text[i].lower()
        elif text[i]>='a' and text[i]<='z':
            text[i]=text[i].upper()

    return "".join(text)

if __name__ == '__main__':
    s = input()
    result = swap_case(s)
    print(result)
```

Q6. Write the program where the user enters a string and a substring. You have to print the number of times that the substring occurs in the given string. String traversal will take place from left to right, not from right to left.

NOTE: String letters are case-sensitive.

```
Ans. def count_substring(string, sub_string):
    count=0
    sub_length=len(sub_string)
    for i in range(0,(len(string)-sub_length+1)):
        ## print(string[i:sub_length+i])
        if string[i:sub_length+i]==sub_string:
            count +=1
    return count

if __name__ == '__main__':
    string = input().strip()
    sub_string = input().strip()

    count = count_substring(string, sub_string)
    print(count)
```

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        ##      print(string[i:sub_length+i])
            if string[i:sub_length+i].upper()==sub_string.upper():
                count +=1
        return count

if __name__ == '__main__':
    string = input().strip()
    sub_string = input().strip()

    count = count_substring(string, sub_string)
    print(count)
```