21 May

**Python Basic - 2**

Q.1. Create two int type variables, apply addition, subtraction, division and multiplications and store the results in variables. Then print the data in the following format by calling the variables:

First variable is \_\_ & second variable is \_\_. Addition: \_\_ + \_\_ = \_\_  
Subtraction: \_\_ - \_\_ = \_\_  
Multiplication: \_\_ \* \_\_ = \_\_

Division: \_\_ / \_\_ = \_\_

A: a =int(input('Enter first number: '))

b = int(input('Enter Second number: '))

add = a+b

subs = a-b

prod = a\*b

div = a/b

print('First variable is ',(a), '&', 'Second variable is ', (b))

print('Addition:',(a), '+', (b), '=', (add))

print('Subtraction:',(a), '-', (b), '=', (subs))

print('Multiplication:',(a), '\*', (b), '=', (prod))

print('Division:',(a), '/', (b), '=', (div))

Output:

Enter first number: 23

Enter Second number: 21

First variable is 23 & Second variable is 21

Addition: 23 + 21 = 44

Subtraction: 23 - 21 = 2

Multiplication: 23 \* 21 = 483

Division: 23 / 21 = 1.0952380952380953

Q.2. What is the difference between the following operators:

1. (i)  ‘/’ & ‘//’
2. (ii)  ‘\*\*’ & ‘^’

(i) ‘/’ is division operator which returns quotient as floating number whereas, ‘//’ returns quotient as an integer.

(ii) ‘\*\*’ it raises the power of number to desired number. For example, 2\*\*3 will give output 8 because 2 raised to the power 3 is \*. ‘^’ is a bitwise operator.

Q3: List the logical operators.

A: ‘and’, ‘or’ , ‘not’

Q4: Explain right shift operator and left shift operator with examples.

A: The right shift (>>) operator shifts the bits of a number to the right by the specified number of positions. Each shift to the right effectively divides the number by 2. For Example:

X = 16

Y = X>>2

Output will be 4

In left shift operator, The left shift (<<) operator shifts the bits of a number to the left by the specified number of positions. Each shift to the left effectively multiplies the number by 2.

x = 4

y = x<<2

print(y) #output is 16

Q5: Create a list containing int type data of length 15. Then write a code to check if 10 is present in the list or not.

A: list1 = [1,2,3,4,5,6,7,8,9,10,11,12,13,14,15]

if 10 in list1:

print('10 is present')

else:

print('not present')

Output: 10 is present