**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=3

b=4

sum1=a+b

sub1=a-b

product1=a\*b

div1=a/b

print(f"First variable is {a} , second variable is {b}")

print(f"Addition: {a} + {b} = {sum1}")

print(f"Subtraction: {a} - {b} = {sub1}")

print(f"Multiplication: {a} \* {b} = {product1}")

print(f"Division: {a} / {b} = {div1}")

Output:

First variable is 3 , second variable is 4

Addition: 3 + 4 = 7

Subtraction: 3 - 4 = -1

Multiplication: 3 \* 4 = 12

Division: 3 / 4 = 0.75

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

(i) ‘/’ & ‘//’

(ii) ‘\*\*’ & ‘^’

1. / is true division while // rounds off the division result.

e.g. 7/2=3.5

7//2=3

1. \*\* is used for denoting power. Eg. 2\*\*3 = 2\*2\*2

^ is bitwise operator, this is XOR operator which sets the bit to 1 only if one of the bit is 1.

Q.3. List the logical operators.

1. Logical operator: and, or , not

Q.4. Explain right shift operator and left shift operator with examples.

1. Right shift operator: >> shifts the bits to right by number of places specified.

e.g. 4>>1 =2

binary equivalent of 4= 0100

0100>>1 = 0010 = 2 in decimal system

Other example:

12>>3

1100>>3=0001 = 1 in decimal system

Left shift operator: << shifts the bits to left and fill the empty spaces with zeros

e.g.

6 << 2

0110<<2 =011000 =24 in decimal system

Q.5. 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.

import random

li=[]

for i in range(15):

li.append(random.randint(1,50))

print(li)

if (10 in li):

print("10 exists in the list")

else:

print("10 is not present")

Output:

[28, 7, 47, 21, 30, 21, 33, 36, 25, 41, 16, 23, 30, 38, 26]

10 is not present