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 = int(input("Enter the first number"))
b = int(input("Enter the second number"))
print(f'First variable is {a} & second variable is {b}')
print(f ' Addition: {a} +  {b} = {a+b}')
print(f ' Subtraction: {a} - {b} = {a-b}')
print(f ' Multiplication: {a} *  {b} = {a*b}')
print(f ' Division: {a} / {b} = {a/b}')
```

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

(i) '/' & '//'

'/' operator is used for division in python, it returns quotient in floating point number. Eg : 7/2 , output : 3.5.

'//' operator is used for floor division or integer division, it returns largest integer, i.e less than or equal to the result value. It always gives integer as output, irrespective of operands value. Eg: 7//2 , output : 3

(ii) '**' & '^'

'**' operator is used for exponetiation, a**b , reads a to the power b, b times multiplication of a. Eg: 2**3 = 2*2*2 = 8

'^' operator is a bitwise XOR operator , it performs bitwise exclusive OR operations on the operands Eg: 3^5 =6 : 0011
0101
XOR_____
0110 = 6

Q.3. List the logical operators.

1.AND, - returns true when both are true else false
2. OR, - returns true if either of one operand is true, else false
3. NOT- negates Boolean value, if operand is true, it returns false
4.XOR – returns true if exactly one of the operand is true, else false
5. NOR – returns true if both operands are false, else false
6. XNOR – returns true when both operands are same, either both true or both false.. else return false.

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

Right shift operator

The right shift operator shifts the binary bits of the left operand to the right by the number specified after the operand.

Eg: X = 10

Y = X >> 2 , #shift X by 2 positions 00001010 >> 2 ….. 00000010

Output = 2

Left shift operator

The left shift operator shifts the binary bits of the operand to the left by the number specified after the operand.

Eg: X = 5

Y = X << 3 , #shift X by 3 positions 00000101 >>3 ….. 00101000

Output = 40

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.

```
my_list = [1,3,10, 23, 14, 2,50,12,1,2,34,3,56,78,4]
num = 10
if num in my_list:
    print ("number is present")
else:
    print ("number not present")
```