21 May

Python Basic - 2

* 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: / =

* The python program for the above question is as follows:

x = int(input(“Enter a number: “))

y = int(input(“Enter another number: ”))

sum = x + y #stores addition result of x and y

sub = x – y #stores subtraction result of x and y

div = x / y #stores division result of x and y

mul = x \* y #stores multiplication result of x and y

print(“First variable is “, x, “ & second variable is “, y, “.”)

print(“Addition: “, x, “ + “, y, “ = “, sum)

print(“Subtraction: “, x, “ - “, y, “ = “, sub)

print(“Multiplication: “, x, “ \* “, y, “ = “, mul)

print(“Division: “, x, “ / “, y, “ = “, div)

* 1. What is the difference between the following operators:

1. ‘/’ & ‘//’

🡪 The ‘/’ operator is used for division (e.g.: 7/2=3.5, 7/4=1.75) whereas the ‘//’ operator is used for floor division (e.g.: 7//2=3, 7//4=1).

1. ‘\*\*’ & ‘^’

🡪 The ‘\*\*’ operator is used for exponentiation (e.g.: 3\*\*2=9, 5\*\*3=125) whereas the ‘^’ operator is used for XOR (e.g.: 1^1=0, 1^2=3).

* 1. List the logical operators.
* The logical operators are
* and operator
* or operator
* not operator
  1. Explain right shift operator and left shift operator with examples.
* Right shift operator:

Python right shift operator is exactly the opposite of the left shift operator. The left side operand bits are moved towards the right side for the given number of times. In simple terms, the right-side bits are removed.

For e.g.:

11>>2 #Output is 2

#11 is 1011 in binary so last 2 bits are removed to give 10 which is 2 in decimal

25>>2 #Output is 6

#25 is 11001 in binary so last 2 bits are removed to give 110 which is 6 in decimal

56>>3 #Output is 7

#56 is 111000 in binary so last 3 bits are removed to give 111 which is 7 in decimal

Left shift operator:

Python bitwise left shift operator shifts the left operand bits towards the left side for the given number of times in the right operand. In simple terms, the binary number is appended with 0s at the end.

For e.g.:

11<<2 #Output is 44

#11 is 1011 in binary so 2 zeroes are appended to give 101100 which is 44 in decimal

19<<1 #Output is 38

#25 is 10011 in binary so 1 zero is appended to give 100110 which is 38 in decimal

4>>3 #Output is 32

#4 is 100 in binary so 3 zeroes are appended to give 100000 which is 32 in decimal

* 1. 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.
* The python program for the above question is as follows:

x = []

print(“Enter 15 integers for forming a list:”)

for i in range(15):

k = int(input())

x.append(k)

if 10 in x:

print(“10 is present in the given list.”)

else:

print(“10 is not present in the given list.”)