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

**Ans.1**

**# Create two int type variables**

first\_variable = 5

second\_variable = 3

**# Perform addition, subtraction, multiplication, and division**

addition\_result = first\_variable + second\_variable

subtraction\_result = first\_variable - second\_variable

multiplication\_result = first\_variable \* second\_variable

division\_result = first\_variable / second\_variable

**# Print the results in the specified format**

print(f"First variable is {first\_variable} & second variable is {second\_variable}.")

print(f"Addition: {first\_variable} + {second\_variable} = {addition\_result}")

print(f"Subtraction: {first\_variable} - {second\_variable} = {subtraction\_result}")

print(f"Multiplication: {first\_variable} \* {second\_variable} = {multiplication\_result}")

print(f"Division: {first\_variable} / {second\_variable} = {division\_result}")

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

(i) ‘/’ & ‘//’

(ii) ‘\*\*’ & ‘^’

**Ans.2**

**(i) '/' and '//' operators:**

* '/' is the standard division operator in Python and returns a floating-point result.
* '//' is the floor division operator in Python and returns the integer part of the division result (floor value).

**(ii) '\*\*' and '^' operators:**

* '\*\*' is the exponentiation operator in Python and is used for raising a number to a power.
* '^' is not a built-in operator for exponentiation in Python. It is often used as
* a symbol for bitwise XOR (exclusive OR) in Python.

Q.3. List the logical operators.

Ans.3

* **And**: Logical AND
* **Or**: Logical OR
* **not**: Logical NOT

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

**Ans.4**

* **Right Shift Operator** (>>): It shifts the bits of a number to the right. It's equivalent to dividing the number by 2 raised to the power of the shift count. For example:

**x = 16**

**result = x >> 2 # Right shift x by 2 bits**

**print(result) # Output: 4 (16 >> 2 is 4)**

* **Left Shift Operator** (<<): It shifts the bits of a number to the left. It's equivalent to multiplying the number by 2 raised to the power of the shift count. For example:

**x = 4**

**result = x << 3 # Left shift x by 3 bits**

**print(result) # Output: 32 (4 << 3 is 32)**

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.

**Ans.5**

**# Create a list of int type data**

my\_list = [2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30]

**# Check if 10 is present in the list**

if 10 in my\_list:

print("10 is present in the list.")

else:

print("10 is not present in the list.")