1. a=5

b=6

Sum= a + b

Difference= a - b

Multiplication= a \* b

Division= a / b

print("First variable is " , a , "&" + " second variable is" , b )

print("Addition: a + b =",Sum )

print("Subtraction: a - b =",Difference)

print("Addition: a \* b =",Multiplication )

print("Addition: a / b =",Division)

2. //-----> floor division operator which does not contain the decimal part after the division.

/-----> division operator which contains the decimal part after the division

For eg: 5/3 = 1.6666666666666667

5//3= 1

\*-----> multiplication operator

^----->XOR operator which compares each bit of the first operand with the other.

For eg: 2\*3=6

2^3=1 2---->0 0 1 0

3---->0 0 1 1

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0 0 0 1 (XOR)

3. Logical operators are **and** (True only when every input is true ), **or** (True when one of the inputs is true ), **not** (complement of the input).

4.They are bitwise shift operator which moves the bits of an integer or enumeration type expression to the right called the ***Right Shift operator(>>)*** and to the left is calledthe ***Left Shift operator(<<).***

**Right shift operator**----> Helps to speed up the division part/power.

**Left Shift Operator** -----> Helps to speed up the multiplication by the power of 2.

Eg: Right Shift operator Left Shift operator

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A = 12 = 1 1 0 0 B = 12 = 1 1 0 0

A>>2 B<<2

o/p---> 0 0 1 1 = 3 o/p---> 1 1 0 0 0 0 = 48

5. List =[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15]

if 10 in List:

print("It is in the list ")

else:

print("It is not in the list ")