**DOCUMENT ON OPERATORS**

Operators are symbols that perform actions on values. Think of them as tools to calculate, compare, or modify data**.**

**There are 5 main types of operators in most programming languages.**

1. Arithmetic Operators  
Perform basic mathematical calculations like addition, subtraction, multiplication, etc.

2. Relational (Comparison) Operators  
Compare two values and return a Boolean (true or false) result.

3. Logical Operators  
Combine multiple conditions or expressions to determine their truth value.

4. Bitwise Operators  
Operate at the binary level (on bits) for operations like AND, OR, XOR, and shifting bits.

5. Assignment Operators  
Assign or update the value of a variable.

*#creating a and b variables*a=10  
b=20  
print(a+b)  
print(a-b)  
print(a\*b)  
print(a/b)  
  
  
*#comparision operators*a=10  
b=20  
print(a<b)  
print(a>b)  
print(a>=b)  
print(a<=b)  
print(a==b)  
print(a!=b)  
  
*#logical operators*a=True  
b=False  
print(a and b)  
print( a or b)  
print(not a)  
print(not b)  
  
*#assignment operators*a = 10  
a -= 3  
a \*= 2  
a /= 4  
print(a)  
print("final value of a:",a)  
  
*#bitwise operators*a = 8 *#1000*b = 5 *#0101*and\_result = a & b  
or\_result = a | b  
not\_result = ~a  
xor\_result = a ^ b  
leftshift\_result = a << b  
rightshift\_result = a >> b  
print(and\_result, or\_result, not\_result, xor\_result, leftshift\_result, rightshift\_result)  
  
*#create a list*my\_list = [1,2,3,'ammu','hema']  
a=(1,2,3,'ammu','hema')  
b=[1,2,3,'ammu','hema']  
identity\_check\_is = (a is my\_list)  
identity\_check\_is\_not = (b is not my\_list)  
check\_in = 2 in my\_list  
check\_not\_in = "ammu" in my\_list  
check\_not\_in = "balu" in my\_list