**• Python operators: arithmetic, comparison, logical, bitwise.**

Python offers various types of operators to perform operations on values and variables.

1. Arithmetic Operators:

These operators perform mathematical calculations.

* + (Addition): Adds two operands.
* - (Subtraction): Subtracts the right operand from the left.
* \* (Multiplication): Multiplies two operands.
* / (Division): Divides the left operand by the right, resulting in a float.
* % (Modulus): Returns the remainder of the division.
* \*\* (Exponentiation): Raises the left operand to the power of the right.
* // (Floor Division): Divides and returns the integer part of the quotient.

2. Comparison (Relational) Operators:

These operators compare two values and return a Boolean result (True or False).

* == (Equal): Checks if two operands are equal.
* != (Not equal): Checks if two operands are not equal.
* > (Greater than): Checks if the left operand is greater than the right.
* < (Less than): Checks if the left operand is less than the right.
* >= (Greater than or equal to): Checks if the left operand is greater than or equal to the right.
* <= (Less than or equal to): Checks if the left operand is less than or equal to the right.

3. Logical Operators:

These operators combine conditional statements and return a Boolean result.

* and: Returns True if both operands are True.
* or: Returns True if at least one operand is True.
* not: Reverses the Boolean state of the operand.

4. Bitwise Operators:

These operators perform operations on the individual bits of integer operands.

* & (Bitwise AND): Sets each bit to 1 if both corresponding bits are 1.
* | (Bitwise OR): Sets each bit to 1 if at least one of the corresponding bits is 1.
* ^ (Bitwise XOR): Sets each bit to 1 if only one of the corresponding bits is 1.
* ~ (Bitwise NOT): Inverts all the bits.
* << (Left Shift): Shifts bits to the left, filling with zeros on the right.
* >> (Right Shift): Shifts bits to the right, filling with sign bit (for signed numbers) or zeros (for unsigned numbers) on the left.