Operators in Python

In Python, operators are special symbols used to perform operations on variables and values. Here's a list of the different types of operators in Python:

1. **Arithmetic Operators** - These are used to perform mathematical operations.

Operator	Description	Example
+	Addition	5 + 3 → 8
-	Subtraction	5 - 3 → 2
*	Multiplication	5 * 3 → 15
/	Division	5 / 3 → 1.6667
//	Floor Division	5 // 3 → 1
%	Modulus (Remainder)	5 % 3 → 2
**	Exponentiation	5 ** 3 → 125

2. **Assignment Operator -** These are used to assign values to variables.

Operator	Description	Example
=	Assign value	x = 5
+=	Add and assign	x += 3 → x = x + 3
-=	Subtract and assign	x -= 3 → x = x - 3
*=	Multiply and assign	x *= 3 → x = x * 3
/=	Divide and assign	x /= 3 → x = x / 3
//=	Floor divide and assign	x //= 3 → x = x // 3
%=	Modulus and assign	x %= 3 → x = x % 3
**=	Exponentiate and assign	x **= 3 → x = x ** 3

3. **Relational Operators -** These are used to compare values and return a Boolean result (True or False).

Operator	Description	Example
==	Equal to	5 == 5 → True
!=	Not equal to	5 != 3 → True
>	Greater than	5 > 3 → True
<	Less than	5 < 3 → False
>=	Greater than or equal	5 >= 3 → True
<=	Less than or equal	5 <= 3 → False

4. **Logical Operators -** These operators allow you to perform logical operations such as AND, OR, and NOT.

Operator	Description
AND(and)	Returns True if both operands are True.
OR(or)	Returns True if at least one of the operands is True.
(NOT)not	Returns the opposite Boolean value of the operand.

5. **Membership Operators –** These operators check if a value exists in a sequence (such as a list, tuple, string).

Operator	Description	Example
in	Check if value is present in sequence	5 in [1, 2, 3, 4, 5] → True
not in	Check if value is not present in sequence	5 not in [1, 2, 3, 4] → True