Operators

LESSON OBJECTIVES

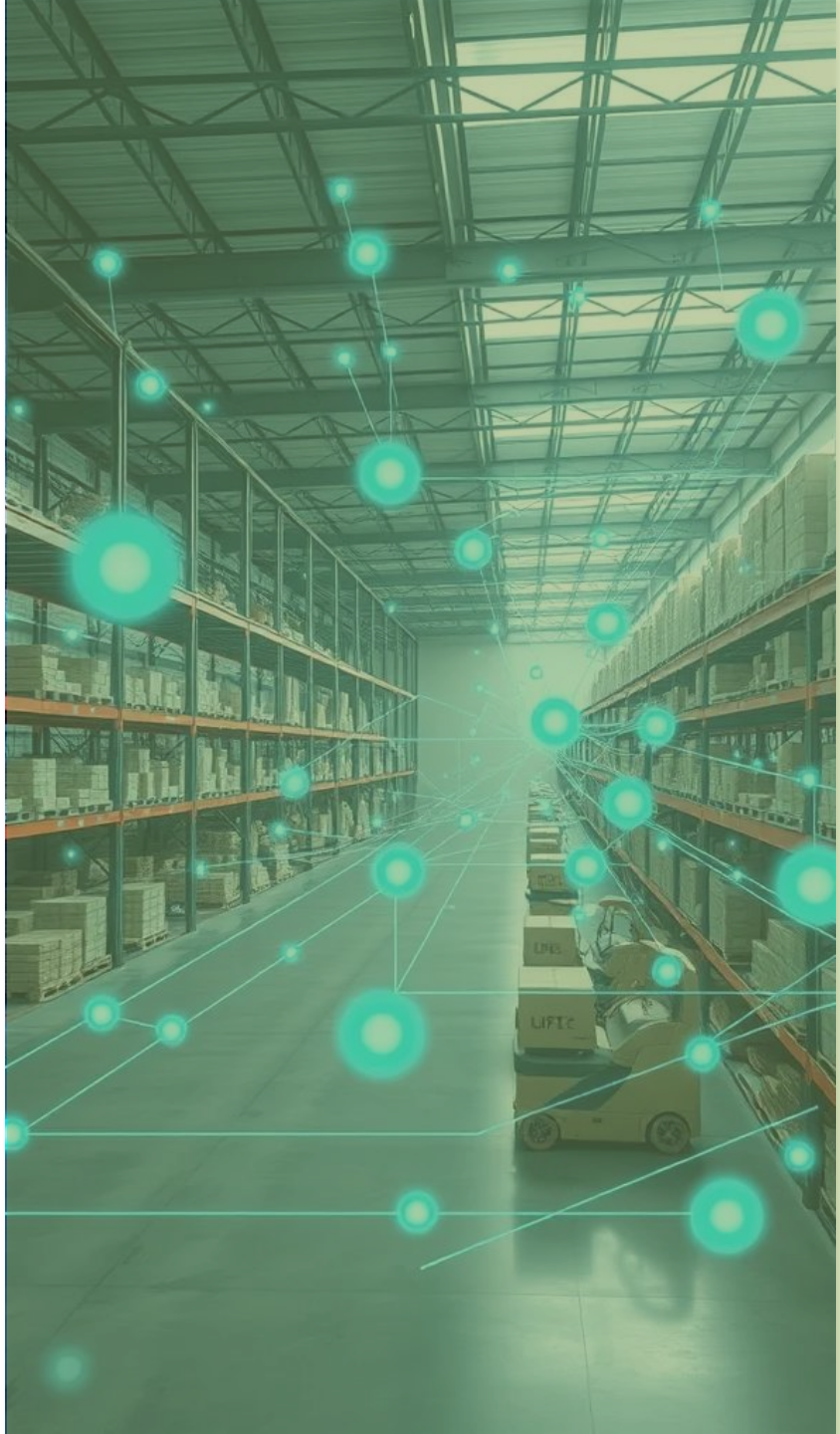
- Explore Python operators
- Functional illustration

What are operators?

- Perform computational operations
- Modify data containers
- Design sophisticated logic flows

Types of operators

- Arithmetic
- Assignment
- Comparison
- Logical



Arithmetic

Arithmetic operators perform mathematical calculations

Operator	Description	Example
+	Addition	5 + 3 = 8
-	Subtraction	5 - 3 = 2
*	Multiplication	5 * 3 = 15
/	Division	5 / 3 = 1.67
%	Modulus (remainder)	5 % 3 = 2

Assignment

Assignment operators are used to assign values to variables. **Let's assume x = 35 for the examples in the table below.**

Operator	Description	Example	Equivalent to	Result
=	Assign value	x = 35	x = 35	35
+=	Add and assign	x += 5	x = x + 5	40
-=	Subtract and assign	x -= 5	x = x - 5	30
*=	Multiply and assign	x *= 2	x = x * 2	70
/=	Divide and assign	x /= 5	x = x / 5	7

Comparison

Comparison operators are used to compare values. They 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 to	5 >= 5 (True)
<=	Less than or equal to	5 <= 3 (False)

Logical

Logical operators are used to combine conditional statements. They also return a Boolean value.

Operator	Description	Example
and	True if both statements are true	(5 > 3) and (5 < 10) (True)
or	True if at least one statement is true	(5 > 3) or (5 > 10) (True)
not	Inverts the result	not(5 > 10) (True)

Functional illustration