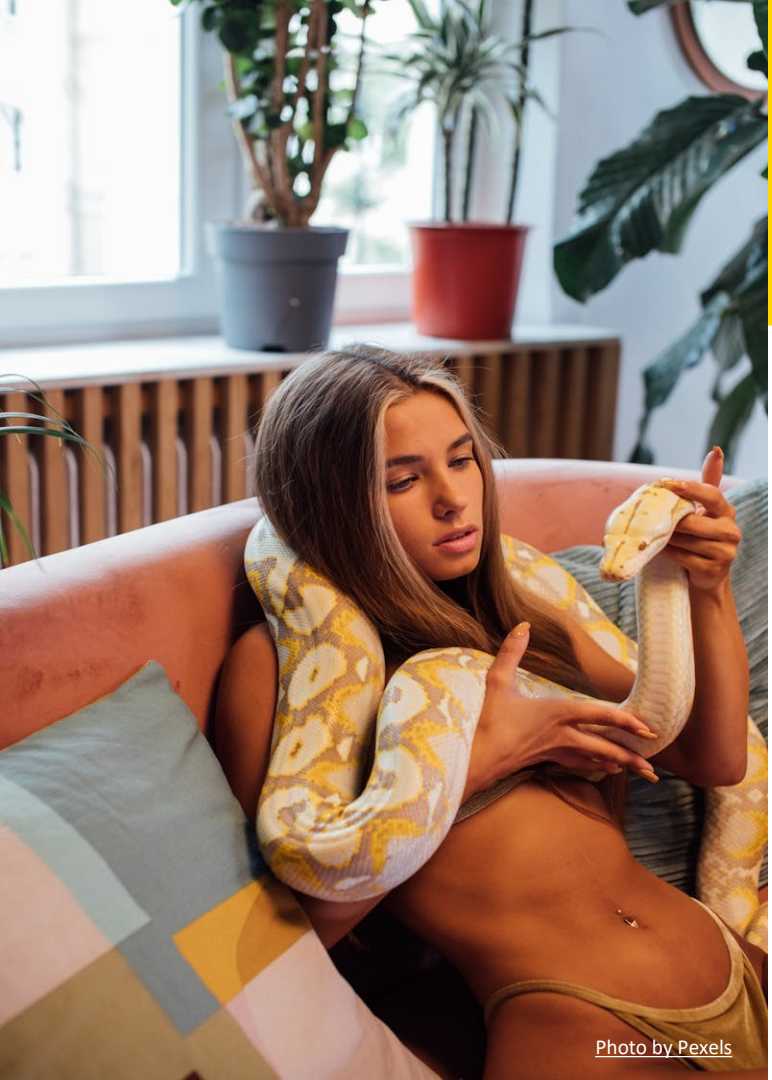

Python Operators

Understanding Operators in Python

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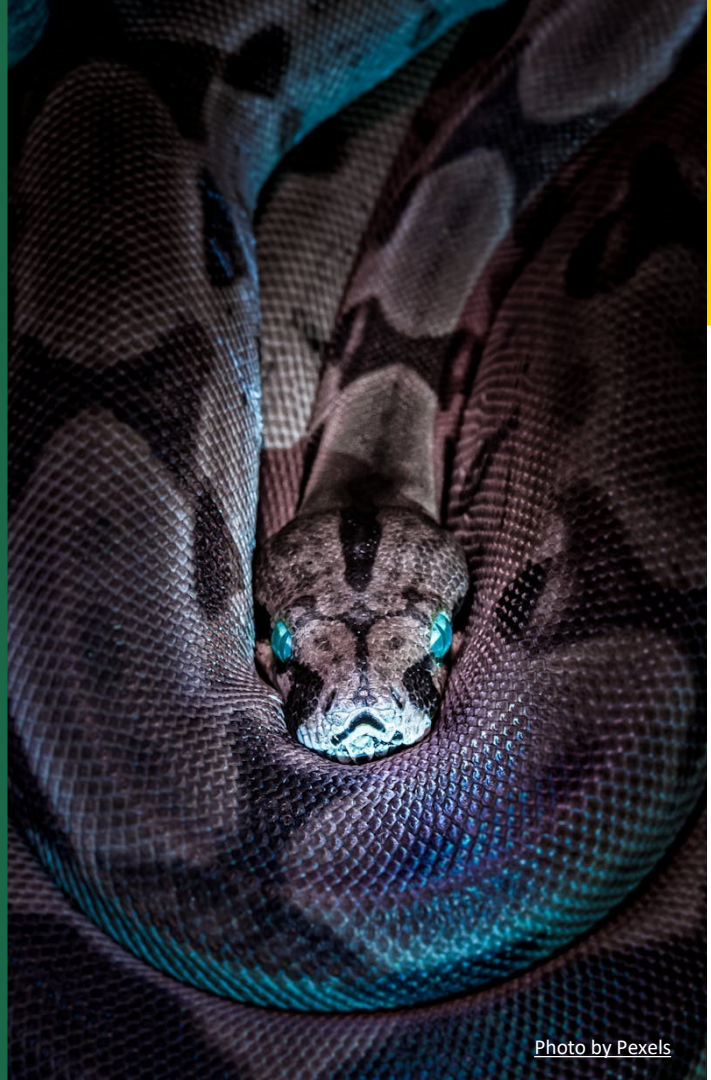
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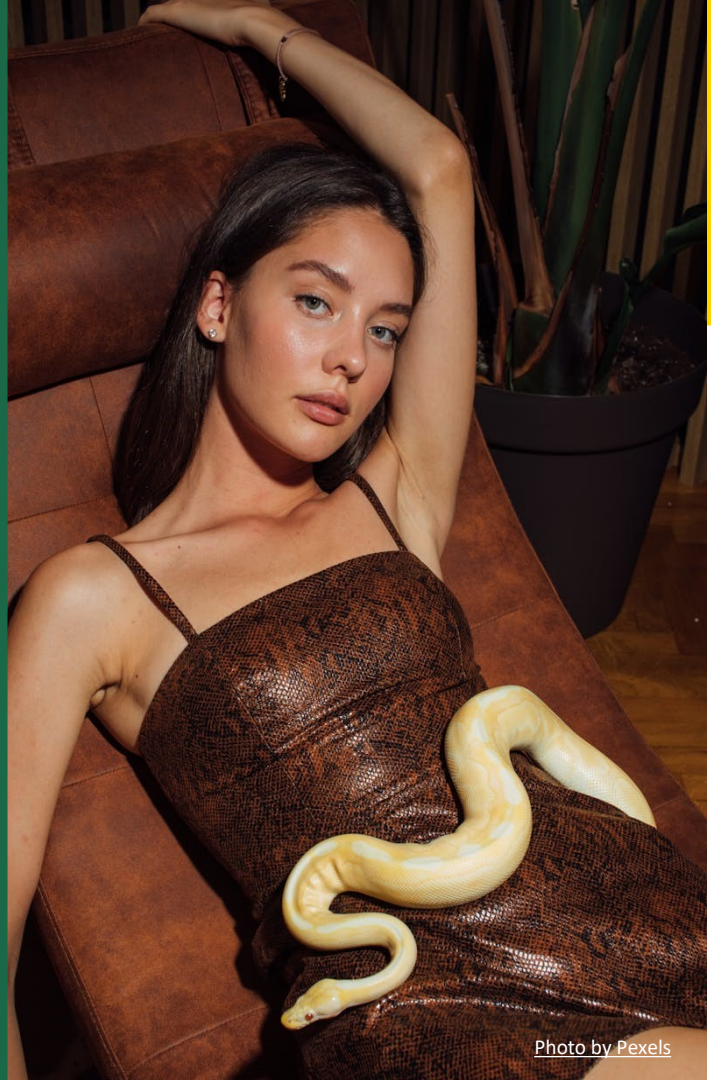
1

Arithmetic Operators

Math Operations

- Arithmetic operators perform mathematical operations like addition, subtraction, multiplication, division, modulus, exponentiation, and floor division in Python.
- They are vital for numeric calculations and can be applied to variables or values.
- For example, a=10 and b=3. The use of arithmetic operators: +, -, *, /, %, **, // on a and b produces different results.
- The image displays mathematical symbols representing arithmetic operations.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2

Comparison Operators

Value Comparison

- Comparison operators are essential for comparing values in Python.
- Operators like ==, !=, >, <, >=, <= help evaluate conditions and return Boolean values.
- For instance, a=10 and b=3. Comparing a and b using operators results in either True or False.
- The image illustrates the comparison symbols for different operations.

Logical Operators

Conditional Logic

- Logical operators are used to combine conditional statements and perform logical operations in Python.
- The operators and, or, and not are fundamental for creating complex conditions.
- For example, a=True and b=False. The logical operations provide output based on the given conditions.
- The image depicts logical symbols representing and, or, and not operations.

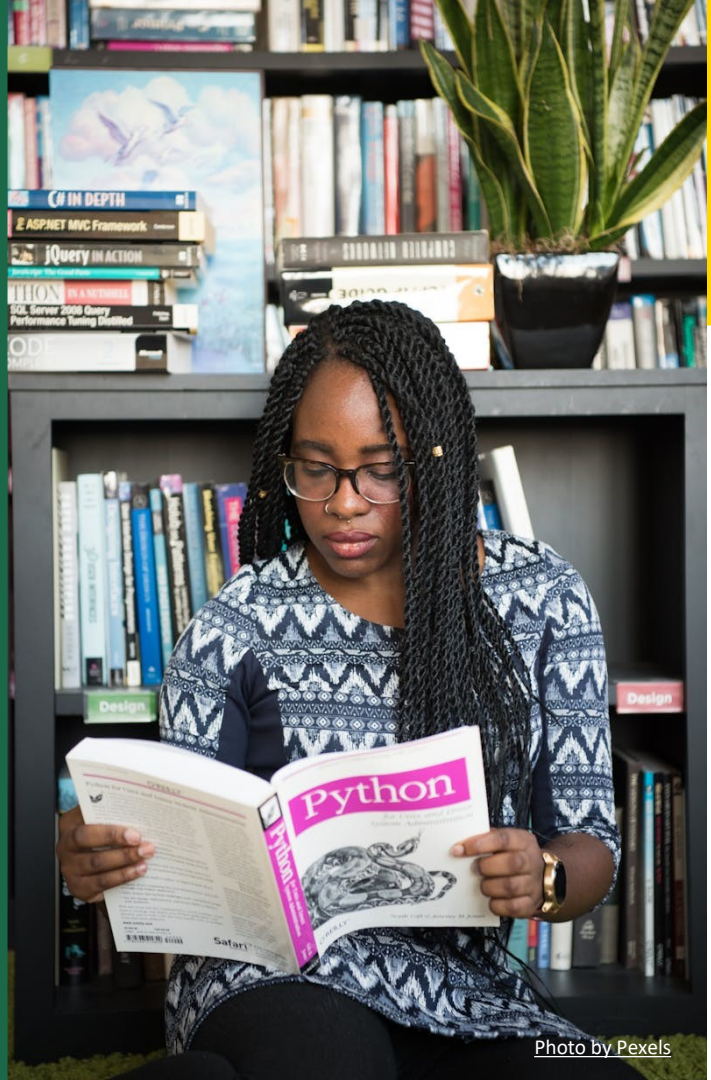
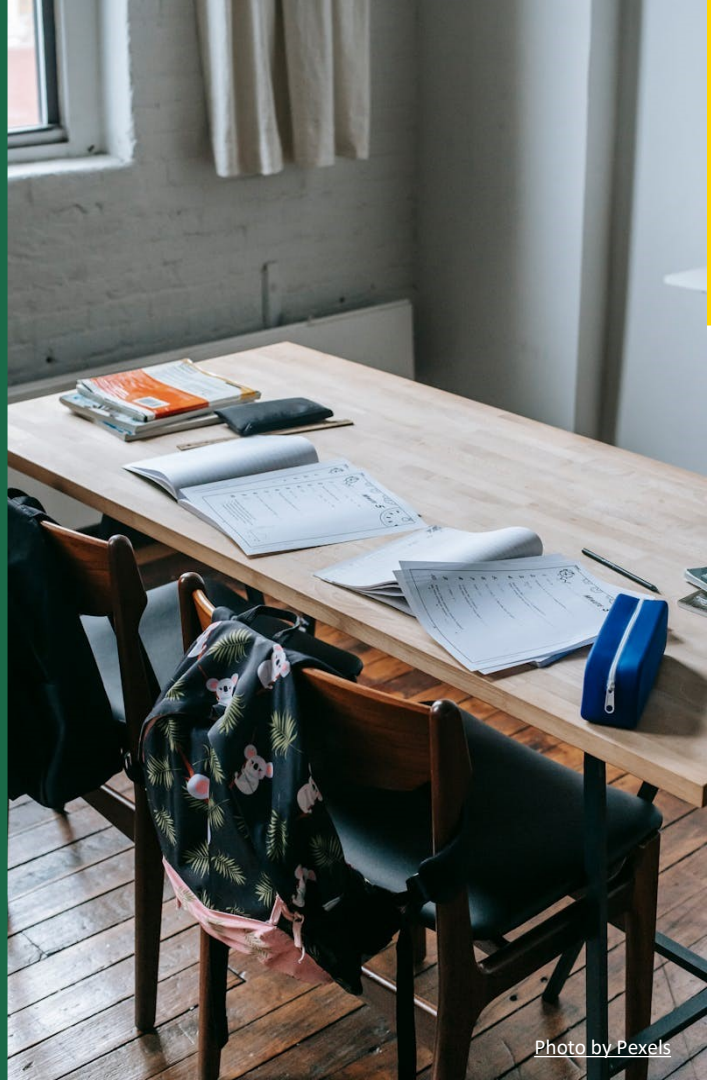


Photo by Pexels

Bitwise Operators

Bit-Level Operations

- Bitwise operators are utilized for bit-level operations in Python.
- Operators like &, |, ^, ~, <<, >> perform operations at the binary level.
- For example, when a=10 and b=4, applying bitwise operators results in different binary computations.
- The image showcases binary symbols representing bitwise operations.



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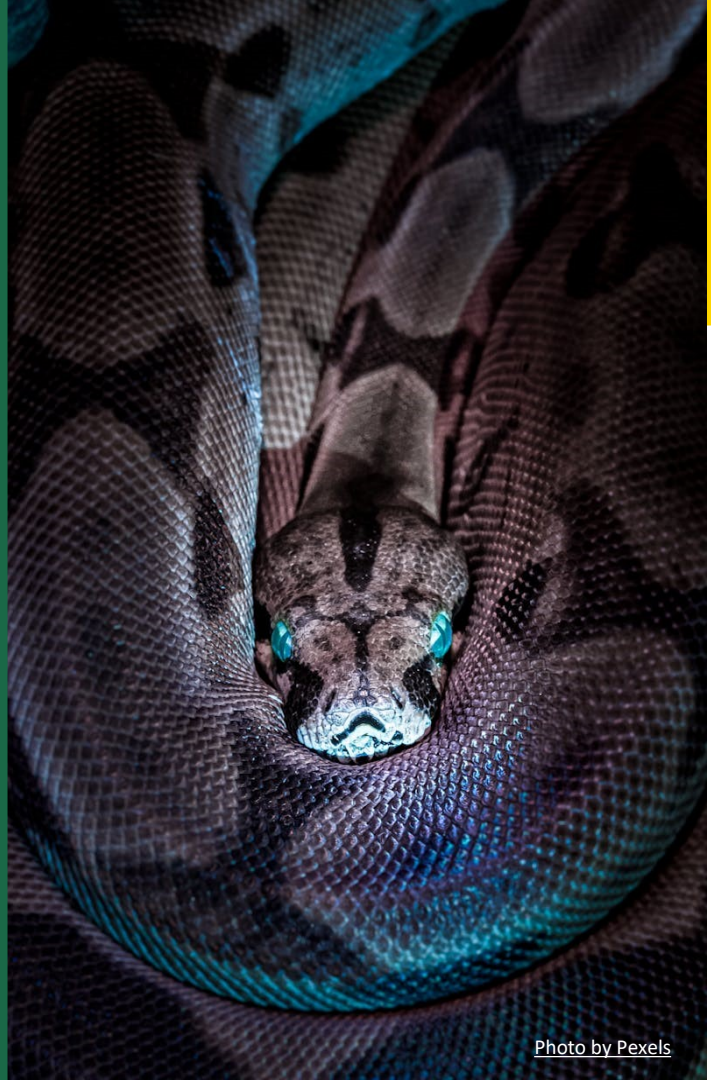
Assignment Operators

Variable Assignments

- Assignment operators are used to assign values to variables in Python.
- Operators like =, +=, -=, *=, /=, %=, //=, **=, etc., are crucial for assigning and operating on variables.
- For example, when a=10 and b=3, applying assignment operators affects the value of a.
- The image symbolizes the assignment operators and their impact on variables.



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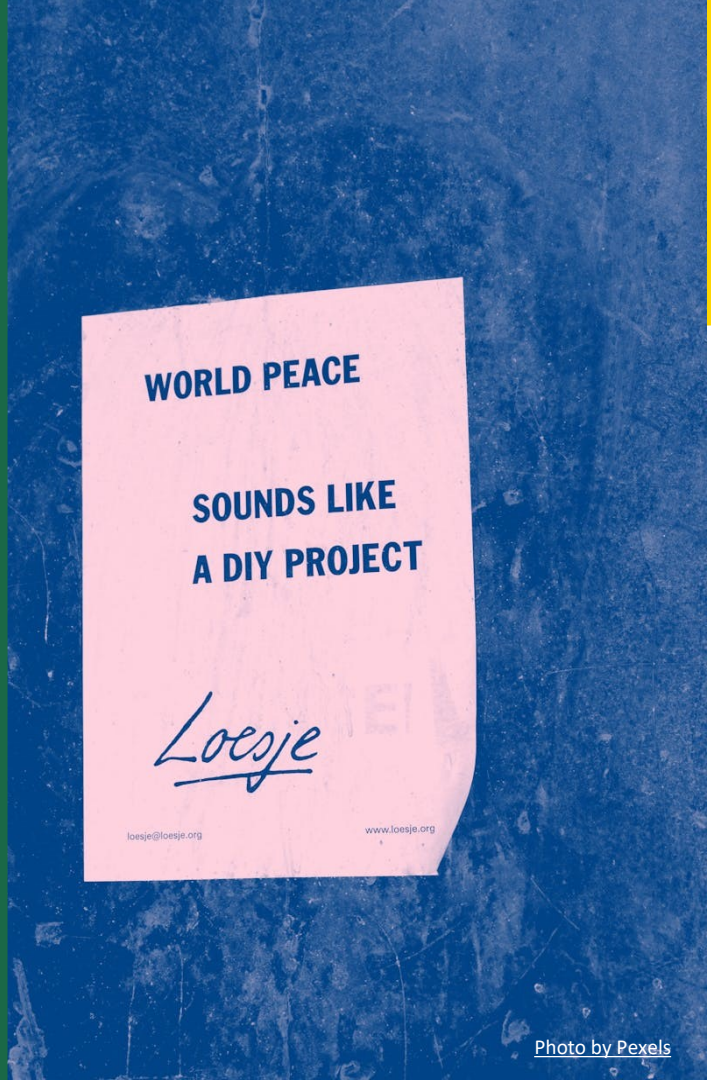
Membership Operators

Sequence Evaluation

- Membership operators are utilized to evaluate the presence of a sequence in an object in Python.
- Operators in and not in help determine if a specific value exists in a sequence.
- For instance, when a=[1,2,3,4,5], using membership operators validates the presence or absence of values in a.
- The image illustrates how membership operators function in Python.



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Identity Operators

Object Comparison

- Identity operators compare the objects in Python to verify if they are the same object or have the same memory location.
- Operators is and is not are crucial for object-level equality and comparison.
- For example, when a=[1,2,3] and b=[1,2,3], identity operators determine their relationship.
- The image symbolizes the concept of object identity using is and is not operators.