Python Development – Day 5 (26th Sep 2025)

# Notes

## 1. Assignment Operators

When performing assignments in Python, you should have at least two variables to practice with.  
Assignment operators allow you to perform an operation on a variable and store the result back into the same variable.

Example:

x = 10  
y = 5  
y \*= 10 # Equivalent to y = y \* 10

Here, 'y' is updated using the assignment operator '\*=' based on its current value.

## 2. Modulus Operator (%)

The modulus operator '%' is used to find the remainder after division.  
It executes the operation on two variables and returns the remainder.

Example:

x = 10  
y = 9  
print(x % y) # Output: 1 (remainder of 10 divided by 9)

Reminder: The modulus operator does not give the quotient; it only returns the leftover value.

## 3. Comparison Operator (==)

The equality operator '==' checks whether two values are equal.  
Returns True if values are equal, False otherwise.

Example:

x = 10  
y = 9  
print(x == y) # Output: False

Explanation: x is 10 and y is 9, so they are not equal.

## 4. Logical Operators

### AND Operator (&)

The AND operator evaluates two conditions.  
It moves to the next condition only if the first condition is True.  
If the first condition is False, the second condition is not evaluated.

Example:

10 <= 20 & 10 == 9 # Checks first condition, then second

Rule: AND gives priority to the first condition.

### OR Operator (|)

The OR operator checks multiple conditions.  
It evaluates the second condition only if the first condition is False.  
The result is True if any one of the conditions is True.

Example:

10 == 9 | 20 == 20 # Output: True

Explanation: The first condition 10 == 9 is False, so Python evaluates the second condition 20 == 20, which is True.  
The OR operator returns True if at least one condition is True.

### Summary of Logical Operators

| Operator | Behavior |  
|----------|--------------------------------------------------------------------------|  
| & | True only if both conditions are True; stops if first is False |  
| | | True if any one condition is True; checks second condition if first is False |

This document explains each concept clearly, with examples and rules for both assignment and logical operators.