Training Report Day-8

14 June 2024

❖ Python Operators:-

There are seven kinds of operators in Python. They are-

- ➢ Arithmetic Operators
- ➢ Bitwise Operators
- ➢ Assignment Operators
- ➢ Identity Operators
- ➢ Comparison Operators /Relational Operators
- ➢ Membership Operators

➢ Arithmetic Operators:-

Arithmetic Operators are used to perform basic mathematical arithmetic operators like addition, subtraction, multiplication, etc. The following table lists out all the arithmetic operators in Python.

- **Example:-**

```
X = 5
y = 2

addition = X + y
subtraction = X - y
multiplication = x * y
division = x /y
modulus = x % y
exponentiation = x ** y
floor_division = x // y

print (f'x + y = {addition}')
print (f'x - y = {subtraction}' )
print (f 'x * y = {multiplication} ')
print (f'x / y = {division}''')
```

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print(f 'x % y = {modulus}')

print (f'x ** y = {exponentiation}')

print(f'x I/ y = (floor_division)")

> **Bitwise Operators:-**

Bitwise Operators are used to perform bit level operations. The following table lists out all the bitwise operators in Python.

- **Example:-**

```
# AND
X, y = 5, 2
print (x & y) # 0

# OR
X, y = 5, 2
print (x | y) # 7

# XOR
X, y = 5, 2
**
print (x ^ y) # 7

# NOT
X, y = 5, 2
print (x) # -6

# Zero fill left shift
X, y = 5, 2
print (x <« y) # 20

#Signed right shift
x, y = 5, 2
print (x >> y) # 1
```

> **Assignment Operators:-**

Assignment Operators are used to assign or store a specific value in a variable. The following table lists out all the assignment operators in Python.

- **Example:-**

```
x, y = 5, 2
X += y
print (x) # 7

X, y = 5, 2
```

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```
X -= y
print (x) # 3

X, y = 5, 2
X *= y
print (x) # 10

x, y = 5, 2
X /= y
print (x) # 2.5

X, y = 5, 2
x %= y
print (x) # 1

X, y = 5, 2
X **= y
print (x) # 25

X, y = 5, 2
X //= y
print (x) # 2

X, y = 5, 2
X &= y
print (x) # 0


X, y = 5, 2
X = y
print (x) # 7

X, y = 5, 2
X ^= y
print(x) # 7

X, y = 5, 2
X <<= y
print (x) # 20

X, y = 5, 2
X >>= y
print (x) # 1
```

> ## Comparison Operators:-

Comparison Operators are used to compare two operands. The following table lists out all the Comparison operators in Python.

- **Example:-**

Equal to

X, y = 5, 2

print (x == y) # False

Not equal to

X, y = 5, 2

print (x != y) # True

Greater than

X, y = 5, 2

print (x > y) # True

Less than

X, y = 5, 2

print (x« y) # False

Greater than or equal to

X, y = 5, 2

print (x >= y)# True

Less than or equal to

X, y = 5, 2

print (x <= y) # False