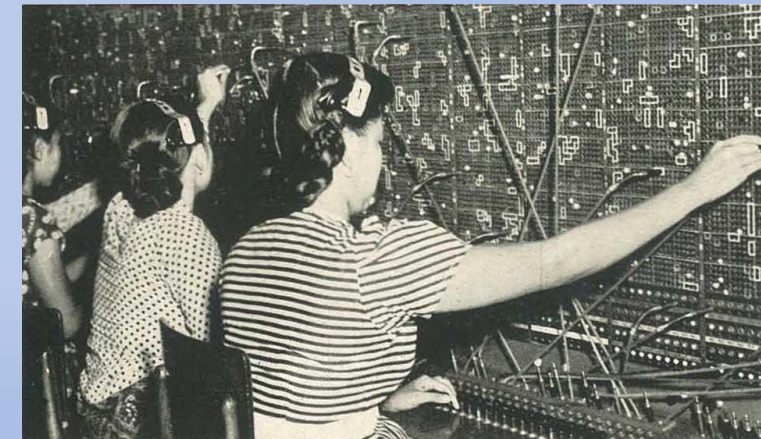


Module 2: Unary Operators



Unary Operators [++, --]

- The operators which require only one operand to work upon are called unary operators.
- There are two unary operators:-

1. Increment Operators:-

- This operator is used to increase the value of by one.
- For Example: If $a=5$; $a++ \Rightarrow$ a value will be 6.

2. Decrement Operators:-

- This operator is used to decrease the value of by one.
- For Example: If $a=5$; $a-- \Rightarrow$ a value will be 4.

- The unary operators are written in two types:-

- Prefix form $[++a, --a]$
- Postfix form $[a++, a--]$

Operator	Example	Meaning
+	$+a$	Indicate positive value
-	$-a$	Indicate negative value
++	$++a$	Increments a value by 1
--	$--a$	Decrements a value by 1
!	$!a$	Inverts a value of boolean

Postfix	$a++$	assign value after increment by 1
	$a--$	assign value after decrement by 1
Prefix	$++a$	increment value by 1 and after assign
	$--a$	decrement value by 1 and after assign

Postfix Vs Prefix

Prefix Form	Postfix Form
1. When the operator is placed before the operands, it is called Prefix form.	1. When the operator is placed after the operand, it is called Postfix form.
2. It works on a principle → First Change then Use.	2. It works on a principle → First Use then Change.
3. For Ex→ $b = ++a;$ SOP(b); SOP(a); $a=6; b=6;$	3. For Ex→ $b=a++;$ SOP(b); SOP (a); $a=5; b=6;$

Some Examples

- If the expression is $y = ++x + x++ + x++ + ++x$. And the value of x is 2. Find the value of y ?

$$Y = 3 + 3 + 4 + 6$$

$$Y = 16$$

- If the expression is $y = ++x + x-- - ++x + --x$. And the value of x is 1. Find the value of y ?

$$Y = 2 + 2 - 2 + 1$$

$$Y = 1$$

Some Examples

- If the expression is $x = y++ + y + ++y + y$. And the value of y is 5. Find the value of x?

X = 25
Y = 7

- If the expression is $x = y + y-- - ++y + y++$. And the value of y is 4. Find the value of x?

X = 0
Y = 5

Practice Questions

$x=1$, , find the value of x & y for each of the case given below:-

i) $y = ++x + x-- - ++x + --x$

ii) $y = x-- + --x - x--$

iii) $y = x + x-- + ++x + ++x$

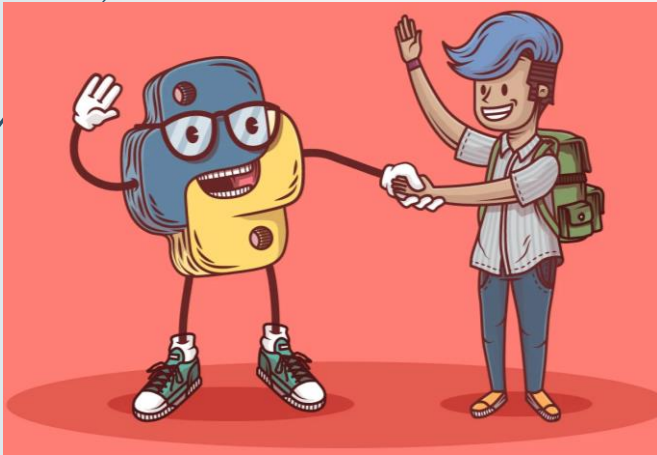
iv) $y = x + x++ - --x + x--$

v) $y = x - x++ + x++ + --x$

vi) $y = ++x + x++ + x++$

vii) $y = x + --x + x-- - x--$

Happy Learning!!



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