

## **Walrus Operator (OR) Assignment Expression Operator (:=)**

Walrus operator is introduced in python 3.8 version

Walrus operator is also called assignment expression operator

```
>>> a=10
>>> a
10
>>> b=20
>>> b
20
>>> d=(e=a+b)*(f=a-b)
SyntaxError: invalid syntax. Maybe you meant '==' or ':=' instead of '='?
>>> d=(e:=a+b)*(f:=a-b)
>>> print(d)
-300
>>> print(e)
30
>>> print(f)
-10
>>> x:=10
SyntaxError: invalid syntax
>>> (x:=10) if 20>30 else (y:=30)
30
y
30
```

## **Control Structures (OR) Control Statement**

### **Conditional Control Statements**

1. If
2. Match

### **Looping Control Statements**

1. While
2. For

### **Branching Statements**

1. Break
2. Continue
3. Pass

Control structures are used to control the flow of execution of program.

A given problem is solved in 3 ways or there are 3 types algorithms

1. Sequential Algorithm
2. Selection Algorithm
3. Iterational Algorithm

An algorithm is nothing step by step procedure of solving given problem.

### Conditional Control Statements

Conditional control statements are used to execute block of statements based on condition or selection

Python support 2 conditional control statements

1. If
2. Match

### If statement

If statement is called conditional control statement, which is used to execute block of statements based on condition.

Python support various types of if statements

1. Simple if
2. If..else
3. If..elif..else (if..else ladder)
4. Nested if

### Simple if

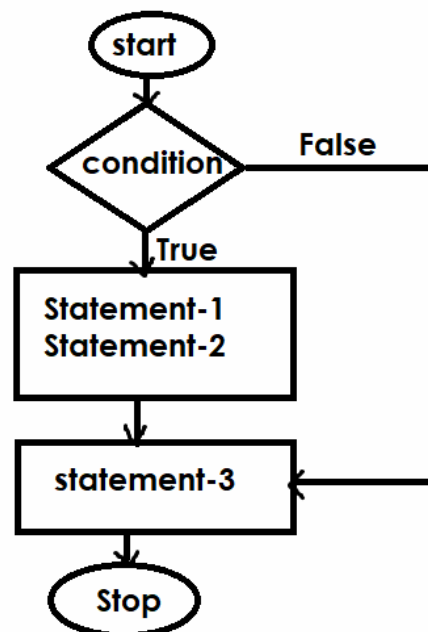
If without else is called simple if

#### Syntax:

```
if <condition>:  
    statement-1  
    statement-2  
statement-3
```

if condition is True, python execute statement-1, statement-2 and statement-3

if condition is False, python execute statement-3



## What is indentation in python?

Indentation is giving space at the beginning of the statement is called indentation. Indentation is used for including statements within block

Empty blocks are not allowed, A block must have at least on statement

<b>Example:</b>  if True: print("Hello")  if False: print("Bye")  if True: print("PYTHON")	<b>Output</b> Hello PYTHON
---	----------------------------------

## What is pass in python?

The pass statement in Python is a placeholder that signifies that a code block is empty or not yet written. It is used to prevent errors and unexpected behavior

“**pass**” is a keyword which represent null operation or null or do nothing operation.

It allows developers to write syntactically correct code without implementing any functionality immediately

<b>Example:</b>  a=100 b=20 if a>b: pass  print(a)	<b>Output</b> 100 20
---	----------------------------

print(b)	
<b>Example</b>  a=10 b=5 if a>b: print("PYTHON") print("Django")  print("MYSQL")	<b>Output</b>  PYTHON Django MYSQL

All the statements inside block must be at same indentation level

### If..else statement

This syntax is having two blocks

1. if block
2. else block

<b>Syntax:</b>  If <condition>: Statement-1 Statement-2 else: Statement-3 Statement-4  Statement-5  If condition is True, Python executes statement-1,statement-2 and statement-5  If condition is False, Python executes statement-3,statement-4 and statement-5	<pre> graph TD     Start([start]) --&gt; Condition{condition}     Condition -- True --&gt; Statements1[statement-1&lt;br/&gt;statement-2]     Condition -- False --&gt; Statements2[statement-3&lt;br/&gt;statement-4]     Statements1 --&gt; Statement5[statement-5]     Statements2 --&gt; Statement5     Statement5 --&gt; Stop([stop]) </pre>
--	---

