

LOOPS
OR
CONTROL STATEMENT

ITERATION

CONTROL STATEMENT (LOOPING STATEMENT)

- Program statements are executed sequentially one after another. In some situations, a block of code needs to be repeated many times.
- These are repetitive program codes, the computers have to perform to complete tasks.
- The following are the loop structures available in Python
 - While statement
 - for ...loop statement
 - Nested loop statement

for loop statement

- The for loop is another repetitive control structure, and is used to execute a set of instructions repeatedly, until the condition becomes false.
- The for loop in python is used to iterate over a sequence(list,tuple,string) or other iterable objects. Iterating over a sequence is called traversal.
- Syntax:
 - for val in expression:
 - Body of the for loop



• For VN in [] :

```
range(start,end-1,step_value)
```

range(n) #n>end	end = n-1	Ex.
range(a,n) #a>start,n>end		range(5) ➔ 0,1,2,3,4
range(a,n,sv) #a>start,n>end,sv>step value		range(1,5) ➔ 1,2,3,4
		range(1,8,2) ➔ 1,3,5,7
		range(0,7) ➔ 0,1,2,3,4,5,6

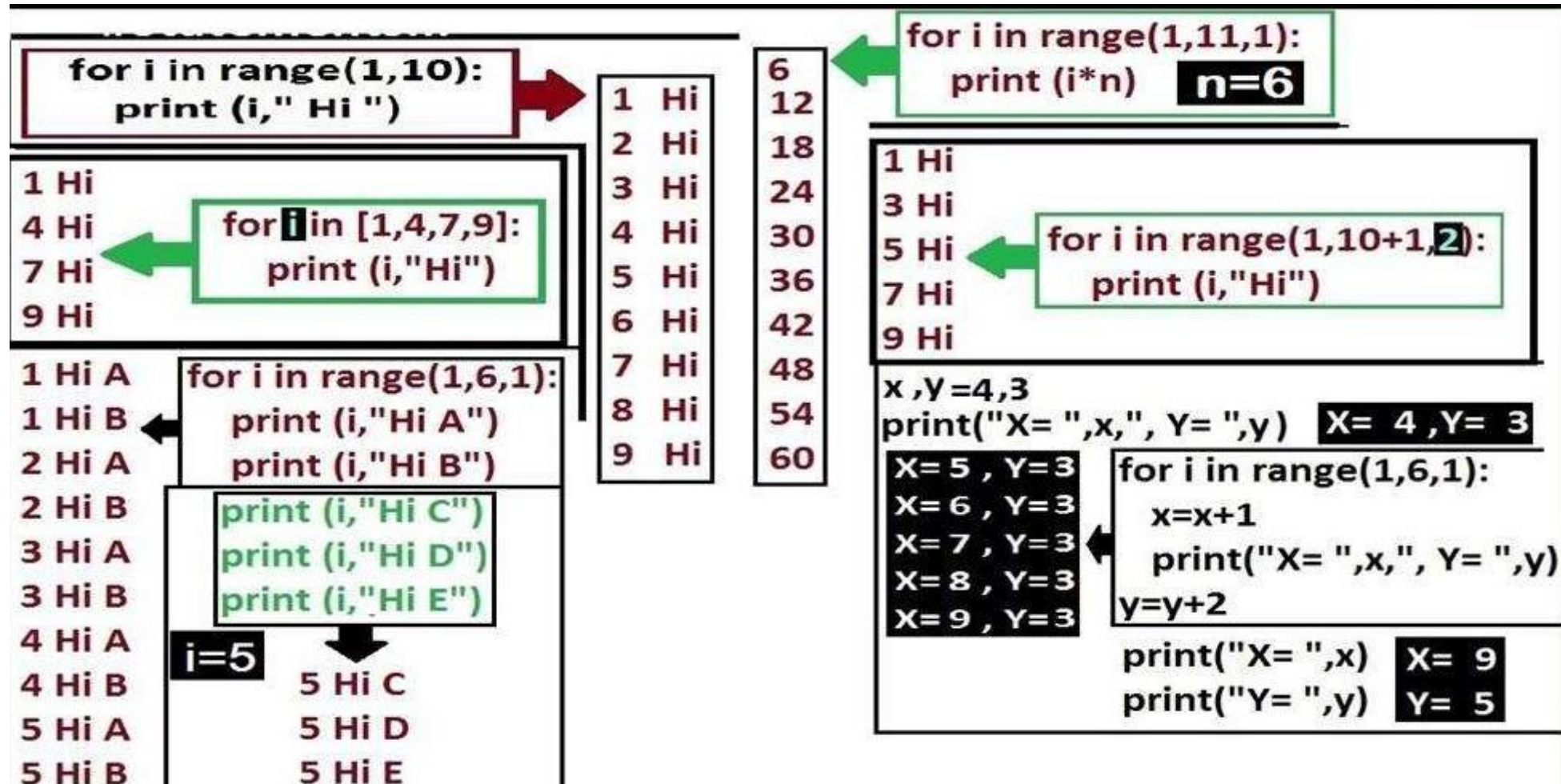
```
for i in [1,4,7]:
    print(a,end=",")
Output: 1,4,7,
```

```
for i in (1,3,5,6):
    print(i,end=",")
Output: 1,3,5,6,
```

```
for ch in "DotPyEdu":
    print(ch,end=",")
Output: D,o,t,P,y,E,d,u,
```

```
for i in {1:"PYTHON",2:"PHP",3:"JAVA"}:
    print(i,end=",")
Output: 1:"PYTHON",2:"PHP",3:"JAVA"
```

**for VN range(SV, EV-1, Interval)
#Statements...**



for loop and for loop with else clause

For - else clause

For loops also may have the optional **else** clause

```
• for var in Group :  
    Statements  
else :  
    Statements
```

```
>>>for x in range(9):  
    print x  
    else :  
        y = x  
>>> print y
```

```
for i in range(10):  
    print("Inside Loop for ",i)  
else:  
    print("Loop is Over Now ")  
    print("The finel value of i is ",i)
```

Output

```
Inside Loop for 0  
Inside Loop for 1  
Inside Loop for 2  
Inside Loop for 3  
Inside Loop for 4  
Inside Loop for 5  
Inside Loop for 6  
Inside Loop for 7  
Inside Loop for 8  
Inside Loop for 9  
Loop is Over Now  
The finel value of i is 9
```